Power Points

MEL & CEN Happy as Santa — December 2019

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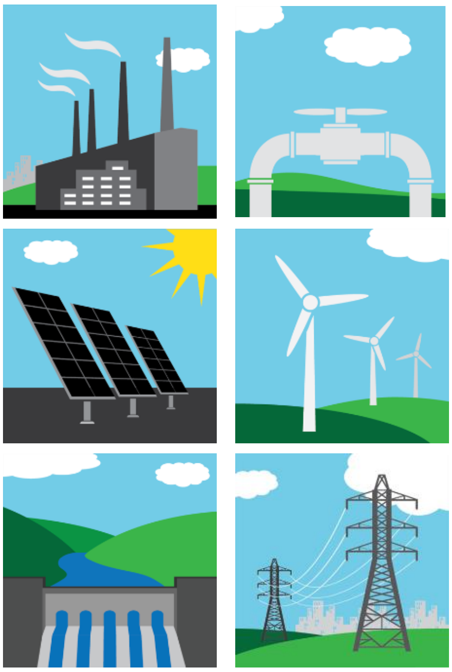
Meridian Energy (MEL) and Contact Energy (CEN) have both had a strong November 2019 for several reasons. First, record hydro inflows into the South Island catchments has replenished storage levels and set them up for the foreseeable future. Second, they have combined to get Transpower to start work on relieving lower South Island transmission constraints earlier than it otherwise would have. Third, Transpower's HVDC charges are going to be lower than anticipated, providing an earnings tailwind in FY21 and beyond. We have lifted our MEL and CEN target prices +14cps and +12cps respectively.



Record breaking month for hydro generators

Over the past four weeks South Island hydro storage has almost doubled, increasing +1,770GWh to 3,492GWh. All of the South Island generators have benefitted. However, whilst wholesale electricity prices fell modestly (Benmore averaged $93/MWh in November 2019, -21% lower than October), $93/MWh is still a high price considering national lake storage is ~155% of average. Plant outages and the ongoing tight gas market have meant the ASX futures prices barely registered the lift in hydro storage volumes. Irrigation load has helped lift November electricity demand +3.2% vs. the pcp (although we note that irrigation demand was low in November 2018).

Strong finish to 2019 for MEL and CEN

MEL and CEN have benefitted from the increased hydro storage but also regulatory transmission decisions which will see HVDC charges fall -36% from 1 April 2020. In addition, the deal that sees Transpower start work on relieving transmission constraints is a significant positive. We have lifted our MEL and CEN FY20 and FY21 EBITDAF forecasts between +2.3% and +4.4% each year.

Tilt Renewables (TLT) demonstrates infrastructure is hot

TLT has successfully sold its Snowtown 2 wind farm for A$1.07b, a very strong price that once again shows infrastructure investments are very popular at present. We see significant upside in TLT, as in our view the market has not fully priced in the Snowtown 2 sales price.

Figure 1. Summary company valuation metric | **Key changes**

Ticker	Price	Target Price	Target Return	Rating	FY20 EV/EBITDA	FY20 PE	FY20 Gr Yld*	EBITDAF NZ$m		EBITDAF		Target Price	Rating Change
CEN	$7.23	$8.15	18.1%	OUTPERFORM	12.8	20.1	6.8%	478	CEN	+$13m	2.8%	+$0.12	-
GNE	$3.03	$3.23	12.4%	OUTPERFORM	14.3	28.7	7.7%	365	GNE	+$0m	0.0%	+$0.00	-
MCY	$4.92	$4.62	-2.8%	NEUTRAL	15.1	26.9	4.5%	516	MCY	+$0m	0.0%	+$0.00	-
MEL	$5.00	$4.25	-10.7%	NEUTRAL	16.7	25.4	5.4%	852	MEL	+$36m	4.4%	+$0.14	-
TLT	$3.37	$3.70	9.8%	OUTPERFORM	14.4	18.2	0.0%	138	TLT	+$0m	0.0%	+$0.00	-
TPW	$7.25	$7.75	11.6%	NEUTRAL	14.3	23.7	6.5%	203	TPW	+$0m	0.0%	+$0.00	-

Source: Eikon, Forsyth Barr analysis *Includes any forecast special dividend

Investment View

We continue to like the long-term outlook for the sector and maintain our view than NZAS will not be closing. Our preferred stocks are CEN, Genesis Energy (GNE) & TLT (OUTPERFORM), whilst the other stocks, (Mercury) MCY, MEL & (Trustpower) TPW are NEUTRAL.

Power Points — December 2019

NZAS November 2019 performance strong

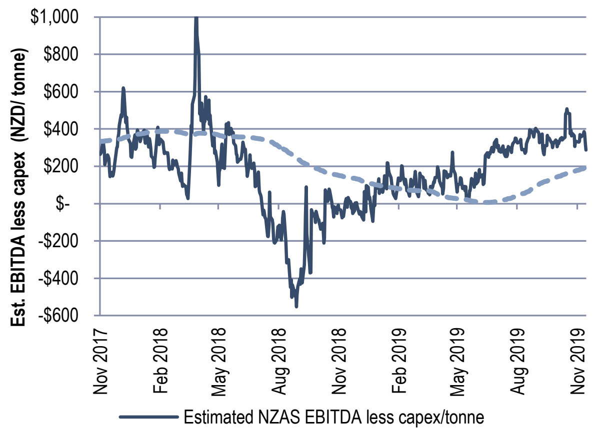
At an average EBITDA/tonne of $514/tonne (up +13% on October 2019), we estimate that NZAS made more than $14m EBITDA in November and that at spot prices (which have dipped slightly in early December in NZD terms) NZAS is making the equivalent of $140m EBITDA per annum. This is a similar level of profitability to the past six months.

Figure 2. Estimated NZAS profitability

		Spot	Nov-19	Rolling 12-mth
LME Aluminium price	US$/tonne	1,751	1,769	1,802
Japan product premia	US$/tonne	66	77	88
Value add premia	US$/tonne	175	177	180
Estimated revenue	US$/tonne	**1,991**	**2023**	**2,070**
Less alumina	US$/tonne	(557)	(564)	(688)
Gross profit	US$/tonne	**1,434**	**1,459**	**1,382**
	NZDUSD	0.656	0.640	0.660
Gross profit	NZ$/tonne	**2,184**	**2,279**	**2,094**
less NZD opex/tonne	NZ$/tonne	(1,766)	(1,766)	(1,778)
EBITDA/tonne	NZ$/tonne	**419**	**514**	**316**
less capex/tonne	NZ$/tonne	(94)	(94)	(123)
(EBITDA - capex)/tonne	NZ$/tonne	**325**	**420**	**194**
(EBITDA - capex) (p.a.)	NZ$m	110	143	65

Source: Forsyth Barr analysis

Figure 3. Estimated EBITDA less capex/tonne



Source: Forsyth Barr analysis

In addition, the strong wholesale electricity prices have again been NZAS's friend. That said, with electricity prices lower in November, we estimate that the gain from its electricity contract was only $0.7m. In addition, with aluminium prices firm in November, we estimate NZAS could have made more money from making aluminium than from its electricity contract — which points to the break-even electricity price being ~$90/MWh.

Transmission deal boosts CEN and MEL's strategic position

The key announcement in November related to NZAS was CEN, MEL & Transpower announcing that the transmission work to alleviate lower South Island transmission constraints will commence this summer. To help get the work under way, CEN and MEL are contributing $5m each to the project.

It is expected Transpower will complete the transmission constraint removal over three summers — one year earlier than would otherwise be achieved. And will complete the work even if NZAS stays open.

Key take-outs:

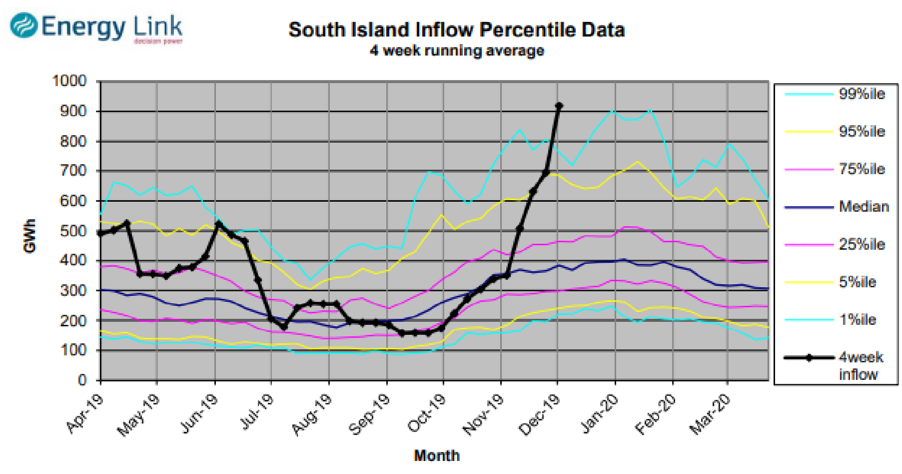
- This helps negotiations with NZAS as it takes away some of NZAS's bargaining power (if the electricity is not stranded in the South Island, there is less incentive on MEL and CEN to offer attractive terms).
- In the event NZAS does close, the transmission constraints bite for one less year. In an average hydrology year, it is estimated ~1,780GWh per annum would be "spilt".
- It also helps MEL's discussions with MCY, GNE and TPW. The North Island generators were expected to offer nothing to NZAS, partly because it is the South Island generators most impacted. Relieving the transmission constraints early "shares" the pain of NZAS closure more widely, as North Island wholesale electricity prices will fall more than they otherwise would have.
- MEL and CEN will be expensing the $5m in the FY20 year, so a modest hit to short-term earnings (but cheap relative to the upsides noted above).
- The fact MEL and CEN are paying the same amount highlights that MEL and CEN are similarly impacted by NZAS closing.

It is important to note that the transmission deal does not reduce the likelihood of the smelter closing. Arguably it increases the chances of closure, to the extent that NZAS genuinely needs a lower electricity price. It improves MEL and CEN's "point of indifference" i.e. the point at which they do not care whether the smelter stays open or closes.

Heavy rain has nationwide storage levels close to maximum, modest reaction in wholesale markets

It has rained and rained in the South Island in November and early December, such that lake storage levels are close to maximum (97% of maximum as at 6 November). Manapouri and Clutha are spilling, and New Zealand's largest storage lake, Lake Pukaki isn't far off. The last four weeks (to 4 December) have seen record inflows into the South Island's lake storage catchments.

Figure 4. South Island hydro inflows – the highest 4 week total on record



Source: EnergyLink

However, the response in the wholesale electricity markets has been relatively muted. Yes, wholesale electricity prices have fallen, but the Otahuhu lowest daily average we have seen was $74/MWh. The average price on Thursday 5 December was $105/MWh, despite lake storage levels being 155% of average and wind generation being very high.

It is not often lakes levels are above 140% of average — it happens once every two or three years and the last time was August 2016. In the four instances lake levels have got this high, wholesale electricity prices always fell below $50/MWh and were often lower.

The electricity futures prices are similarly unmoved. The short-dated ASX futures prices have fallen modestly over the past four weeks. Otahuhu is down -4% to $130/MWh and Benmore down -7% to $102/MWh.

The tight gas market situation and HVDC outages in early 2020 appear to be impacting prices materially. In addition, we suspect the modest signs of electricity growth are also playing a factor. Nevertheless, the key message is that wholesale electricity prices are likely to stay elevated until the gas market is not as tight and the new wind farms under development are completed.

Lifting near-term MEL and CEN earnings forecasts

The hydro conditions have benefited MEL and CEN the most. In addition, as the two largest South Island generators, they also benefit the most from lower than previously forecast transmission costs following the ComCom's recent regulatory decision. At this stage we have left MCY, GNE and TPW forecasts unchanged as we do not expect their earnings outlook to have changed materially.

Figure 5. Summary forecast changes

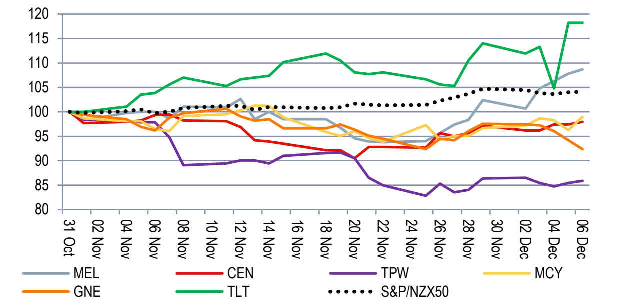
	Contact Energy (CEN)									Meridian Energy (MEL)								
	FY20			FY21			FY22			FY20			FY21			FY22		
	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg
EBITDAF ($m)	466	478	2.8%	483	495	2.3%	490	493	0.5%	816	852	4.4%	752	778	3.5%	767	768	0.1%
EBIT ($m)	264	276	4.9%	282	294	4.0%	291	294	0.9%	507	543	7.1%	450	476	5.9%	470	471	0.2%
NPAT ($m)	148	157	6.5%	161	170	5.4%	167	170	1.6%	294	322	9.6%	250	273	9.0%	263	267	1.8%
EPS (cps)	34.7	36.0	3.8%	36.2	37.4	3.3%	36.8	37.1	1.0%	11.5	12.6	9.6%	9.8	10.6	9.0%	10.2	10.4	1.8%
DPS (cps)	39.0	39.0	0.0%	39.5	39.5	0.0%	40.0	40.0	0.0%	21.5	21.5	0.1%	21.6	21.8	0.7%	20.4	20.6	0.9%

Source: Forsyth Barr analysis

Share market performance: Nov 2019

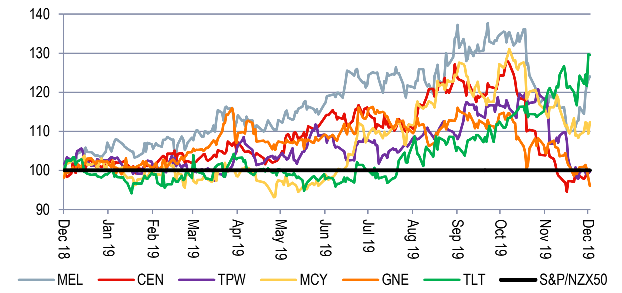
November was a relatively volatile month for the electricity stocks. TLT was the clear best performer following the sale of Snowtown 2, up +18% since the end of October 2019. The announcement that MCY was going to enter the MSCI was expected, but with CEN missing out, it underperformed in the early part of November, before recovering in the two weeks following its Transpower announcement. MEL also rallied on the Transpower announcement and was the only other generator/retailer to outperform the S&P/NZX50C, up +9%. TPW was the main disappointment, down -14% following a soft 1H20 result.

Figure 6. Stock performance vs. S&P/NZX50C



Source: Thomson Reuters, Forsyth Barr analysis

Figure 7. 12 month performance relative to S&P NZX50C



Source: Thomson Reuters, Forsyth Barr analysis

Market multiples and target returns

- Our electricity target prices are based on a combination of our DCF valuation (30%), market multiples (30%) and gross dividend yield (40%). We focus on year two earnings to avoid short-term hydrological conditions impacting the multiples. We continue to like the long-term outlook for the sector and maintain our view than NZAS will not be closing. Our preferred stocks are CEN, GNE & TLT (OUTPERFORM), whilst the other stocks, MCY, MEL & TPW are NEUTRAL.

Figure 8. EBITDAF multiples

			Target	Target		Mkt Cap	EBITDAF (x)		EBITDAF - capex (x)	
Company	**Code**	**Price**	**Price**	**Return**	**Rating**	**$m**	**FY20**	**FY21**	**FY20**	**FY21**
Contact Energy	CEN	$7.23	$8.15	18.1%	OUTPERFORM	5,173	12.8	12.4	15.2	14.6
Genesis Energy (excl Kupe)	GNE	$3.03	$3.23	12.4%	OUTPERFORM	2,733	14.3	12.1	17.5	14.3
Mercury	MCY	$4.92	$4.62	-2.8%	NEUTRAL	6,689	15.1	14.8	17.6	17.2
Meridian Energy	MEL	$5.00	$4.25	-10.7%	NEUTRAL	12,815	16.7	18.3	18.0	19.8
Trustpower	TPW	$7.25	$7.75	11.6%	NEUTRAL	2,269	14.3	13.9	16.3	15.8
Sector average							**14.6**	**14.1**	**16.9**	**16.2**
Tilt Renewables	TLT	$3.37	$3.70	9.8%	OUTPERFORM	1,582	14.4	17.5	15.5	19.2
Genesis Energy (incl Kupe)	GNE	$3.03	$3.23	12.4%	OUTPERFORM	3,119	11.8	10.5	13.9	12.1

Source: Forsyth Barr analysis

Figure 9. PE multiples and dividend yields

	PE (x)		Adjusted PE (x)		Cash Div Yield		Gross Div Yield		Free Cash Flow Yield	
Company	**FY20**	**FY21**	**FY20**	**FY21**	**FY20**	**FY21**	**FY20**	**FY21**	**FY20**	**FY21**
Contact Energy	31.1	29.2	20.1	19.3	5.4%	5.5%	6.8%	7.0%	5.0%	5.7%
Genesis Energy (excl Kupe)	108.1	44.3	28.7	19.3	4.0%	4.7%	5.3%	6.4%	3.6%	5.2%
Mercury	43.1	36.8	26.9	24.2	3.2%	3.3%	4.5%	4.6%	1.7%	1.2%
Meridian Energy	39.3	46.6	25.4	28.5	4.3%	4.4%	5.4%	5.5%	4.0%	3.8%
Trustpower	26.6	24.7	23.7	22.1	4.7%	4.7%	6.5%	6.5%	2.7%	4.4%
Sector average	**43.3**	**35.3**	**24.8**	**22.4**	**4.3%**	**4.5%**	**5.7%**	**6.0%**	**3.4%**	**4.1%**
Tilt Renewables	30.6	36.8	18.2	23.4	0.0%	0.0%	0.0%	0.0%	3.1%	6.2%
Genesis Energy (incl Kupe)	68.7	35.7	19.8	15.5	5.7%	5.8%	7.7%	8.0%	5.6%	6.6%

Source: Forsyth Barr analysis

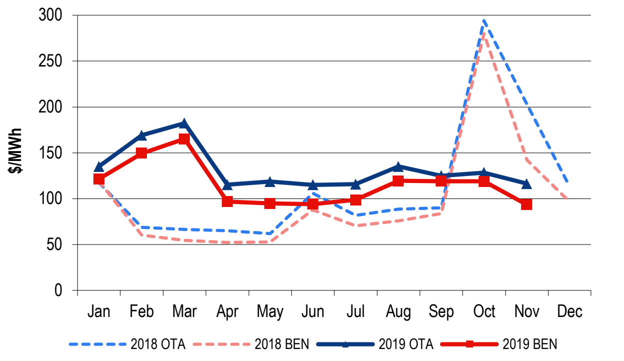
Electricity market: November 2019

Spot wholesale electricity prices and ASX futures

Wholesale electricity prices fall (slightly) in November following heavy rain

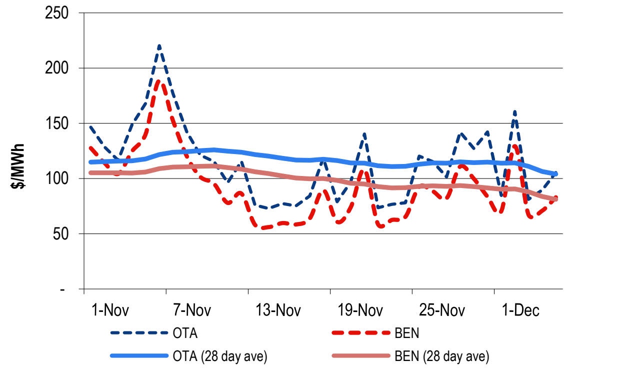
- The average Otahuhu (OTA) wholesale electricity price in November 2019 was $116/MWh, -9% down on the prior month. As discussed earlier, the decline is relatively slight given the strong hydro inflows. The average Benmore (BEN) price was $93/MWh, -21% down on October 2019 with the heavy inflows increasing the price split between the North and South islands.
- The daily fluctuations bounced around the $100/MWh mark, with the price spike on 6 November related to reduced plant availability. Interestingly, there is no obvious decline in wholesale electricity prices as hydro storage peaked. The gap between NI and SI prices widened +$13/MWh to $23/MWh, which is a function of lots of water in the South Island.

Figure 10. Average monthly wholesale electricity prices



Source: NZX Energy, Forsyth Barr analysis

Figure 11. Average daily wholesale electricity prices

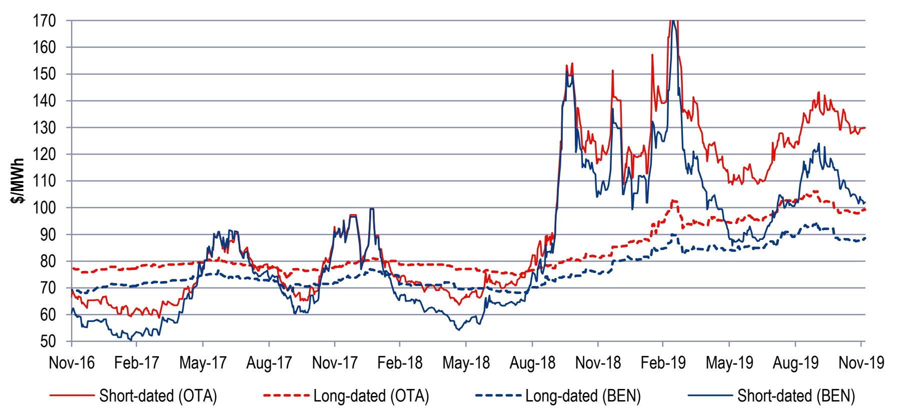


Source: NZX Energy, Forsyth Barr analysis

ASX futures largely unchanged despite the lift in hydro storage

- Only BEN prices have reacted to the influx of water in November, with short-dated prices falling just -5% to $104/MWh, higher than the November 2019 average price. The short-dated OTA futures price actually increased +1% to $130/MWh.
- Long-dated prices were largely flat, up +1% at both OTA and BEN to $99/MWh and $86/MWh respectively. The announcement that Transpower is accelerating lower South Island transmission work has had no noticeable effect on 2023 futures prices.

Figure 12. ASX futures prices (last three years)



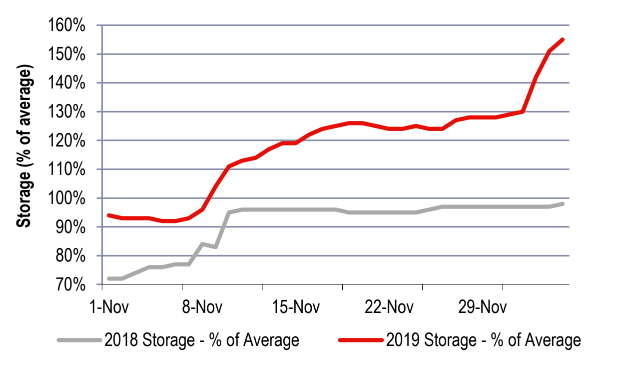
Source: Electricity Authority, Forsyth Barr analysis

Hydro storage volumes

Biggest one month increase in hydro storage for 20 years

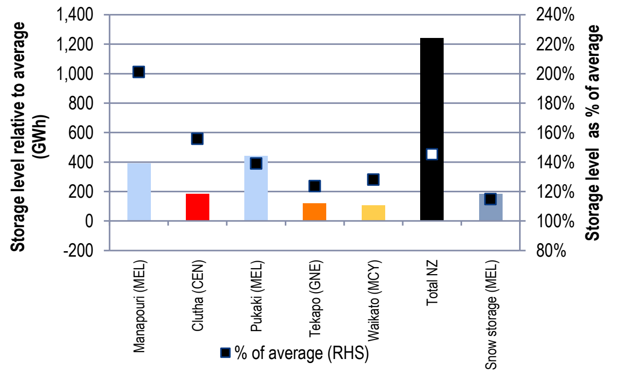
- The past four weeks has seen average hydro storage levels increase from 93% to 155% as of 5 December (per NZX Energy data). In absolute, EnergyLink is reporting an increase of +1,779GWh, up +81% from four weeks ago. EnergyLink is reporting South Island inflows are the highest on record, although there was a similar occurrence in November 1999.
- All storage systems are well above average, at least +124% above average and at least +100GWh above average. The last time that happened was 2011. Manapouri has the most water to normal (200% of average) and is well above its normal operating limits.

Figure 13. Average lake storage levels



Source: NZX Energy, Forsyth Barr analysis

Figure 14. Key storage levels relative to average (as at 4 December)



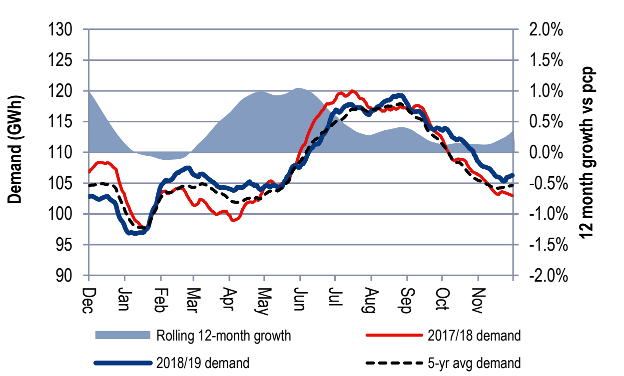
Source: EnergyLink, MEL, Forsyth Barr analysis

Demand and generation analysis

Strong national demand growth

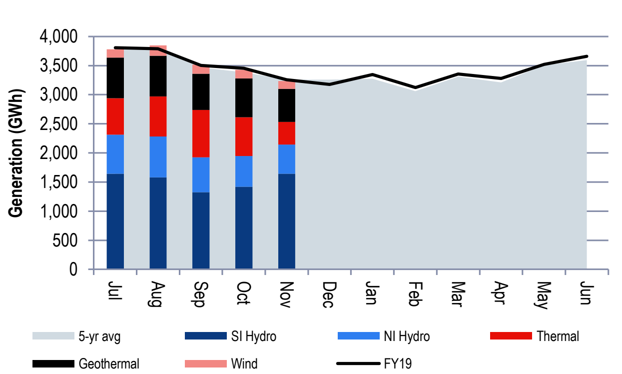
- November 2019 electricity demand increased +3.2% vs. the pcp to 106.4 GWH/day (+3.9% excluding NZAS growth). Most of the growth appears to have come from irrigation load in the South Island. Rolling 12-month growth is up +0.3%, but down -0.3% excluding NZAS demand. NZAS load was down slightly (-0.7%) in November vs. October.
- Total November 2019 generation was 3,235GWh, -0.7% below the pcp indicating line losses were down vs. pcp. Unsurprisingly, South Island hydro generation had a big increase, its market share up +10% to 51%, the first time South Island hydro generation has been more than half total generation since February 2017 and the highest market share since January 2014. Thermal generation was down the most, although average daily geothermal generation slipped -12% vs. October 2019 as various plants were out for scheduled maintenance.

Figure 15. Rolling 28-day average demand & rolling 12-mth growth



Source: Electricity Authority, Forsyth Barr analysis

Figure 16. NZ generation (by technology) – fiscal year to June



Source: EnergyLink, Forsyth Barr analysis

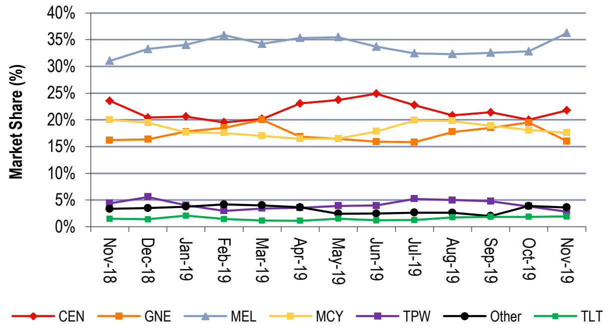
Generation market share — CEN and MEL the big gainers

- Unsurprisingly CEN and MEL increased their market shares the most, up +1.8% and +3.4% to 21.8% and +36.2% respectively. It is MEL's highest market share since February 2017. With limited thermal generation, GNE slipped the most, down -3.5% to 16.0%.

CEN — Thermal generation minimal

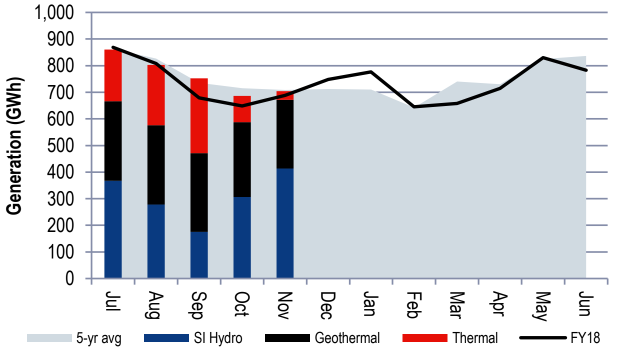
- Thermal generation was only 32GWh in November 2019, the lowest month total on record and most of it came from CEN's Te Rapa co-generation plant. Its TCC unit did not generate at all (and was out for maintenance for much of the month) and the Stratford Peakers only produced 2GWh. Hydro generation was well up to compensate. This is a good mix for CEN as the cost of generation will be low. At month end CEN hydro storage was 512GWh (156% of average), up +354GWh in November.

Figure 17. Monthly generation market share



Source: EnergyLink, Forsyth Barr analysis

Figure 18. CEN monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, Forsyth Barr analysis

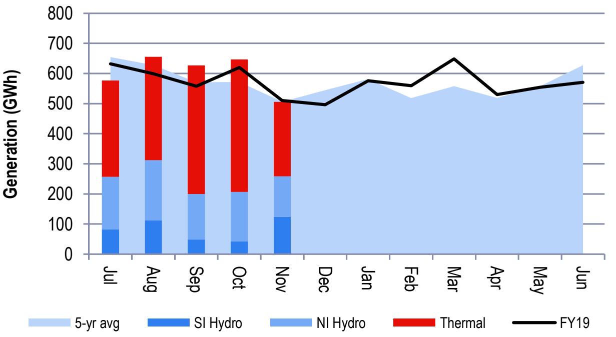
GNE — Big dip in thermal generation volumes, offset by record SI hydro generation

- GNE's thermal generation was only 247GWh, the lowest since April 2017. Unit 5 generation was ~50% of normal due to the significant Kupe planned outage. Hydro generation from Tekapo increased materially to 124GWh, the highest monthly total since GNE acquired Tekapo from MEL in June 2011. Nevertheless, hydro storage increased +333GWh (~three months of generation) in November to 627GWh (124% of average).

MCY — Soft geothermal generation due to planned plant outages

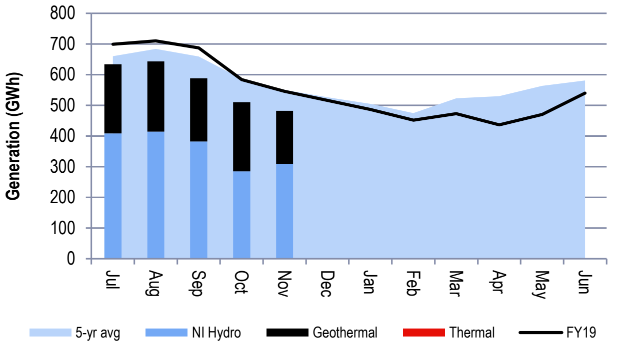
- MCY's November 2019 generation was again well down on the pcp and the 5-year average. Geothermal generation was particularly weak at 172GWh, the lowest month total since April 2013 when Ngatamariki just started commissioning. Its Nga Awa Purua plant only produced 36GWh, ~37% of normal. Hydro generation was slightly below average, but hydro storage remains healthy at 128% of average.

Figure 19. GNE monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, Forsyth Barr analysis

Figure 20. MCY monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, Forsyth Barr analysis

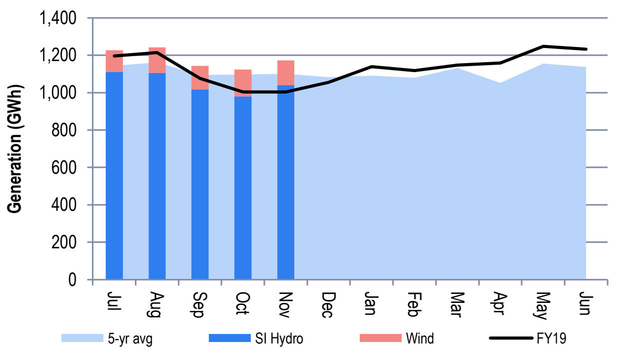
MEL — Strongest generation volumes in nine years

- MEL has had another strong month, generating 1,172GWh, the highest November total since November 2010. Both hydro and wind generation were above average, although in absolute terms hydro generation was ~+60GWh (+6%) above average. MEL's hydro storage position is very strong. Storage increased ~1,100GWh in the past month and currently sits at 2,353GWh, 155% of average. Snow storage is also above average.

TPW — Waipori unavailable as work is undertaken to improve earthquake resilience

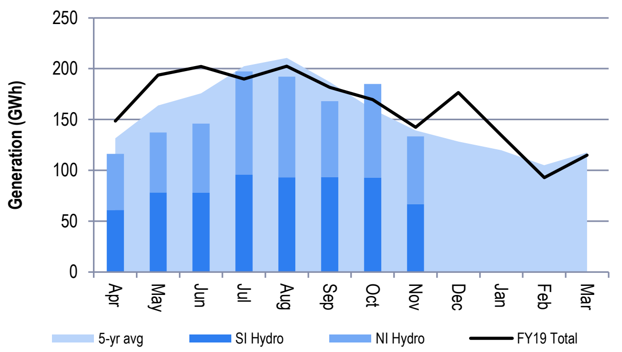
- We estimate TPW generation was 133GWh in November, slightly below average. Waipori (near Dunedin) was out of action and produced nothing as blockwork is removed that was deemed to be an earthquake risk. This will have no impact in ongoing generation volumes from Waipori.

Figure 21. MEL monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, Forsyth Barr analysis

Figure 22. TPW monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, EA, Forsyth Barr analysis

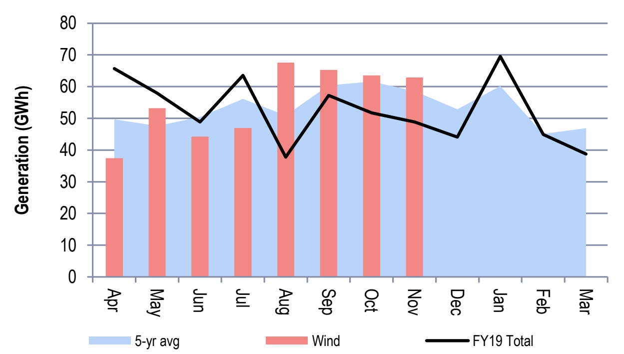
TLT — Good wind month

- We estimate that November 2019 NZ wind generation was 63GWh, similar to October and the fourth consecutive month above average (~+7% above average) and above the pcp.

Generation prices — big split between SI and NI generators

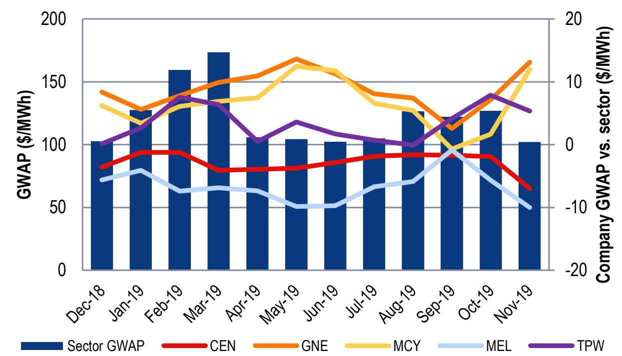
- The average generation weighted average price (GWAP) was ~$102/MWh. With OTA and BEN average wholesale prices in November diverging, the same occurred for the generators, with CEN and MEL average prices falling -24% each, whereas GNE's and MCY's average price only fell -14% and -11% respectively.

Figure 23. TPW monthly generation mix (current, pcp and 5-yr avg.)



Source: EnergyLink, EA, Forsyth Barr analysis

Figure 24. Average generation weighted average price (GWAP)



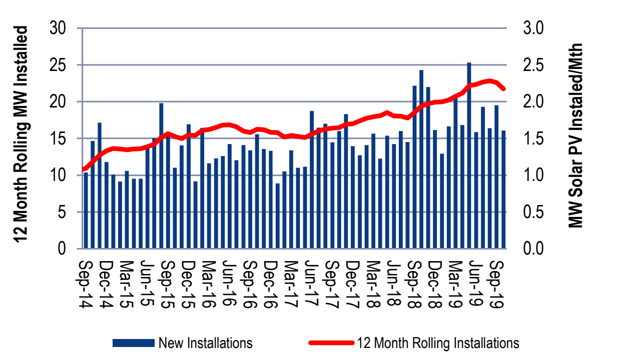
Source: EnergyLink, Forsyth Barr analysis

Solar PV installations

Solar installations continue to trend downwards

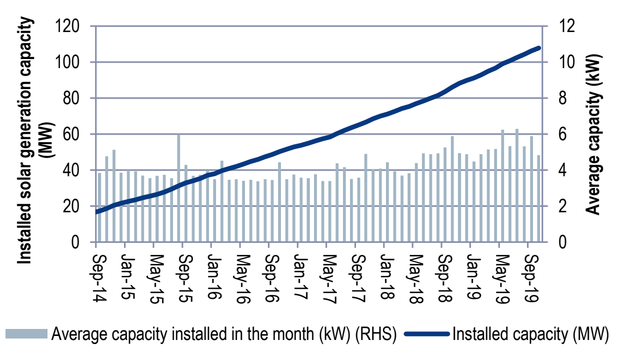
- There were 348 solar installations in October 2019, -15% lower than the pcp. Only 1.61MW was installed, -34% lower than the pcp and the rolling 12-mth MW installed fell -3.6% to 21.6MW.
- The total number of installations is now 25,415 with a total of almost 108MW.

Figure 25. Solar PV capacity installed



Source: Electricity Authority, Forsyth Barr analysis

Figure 26. Average size of system and total capacity installed



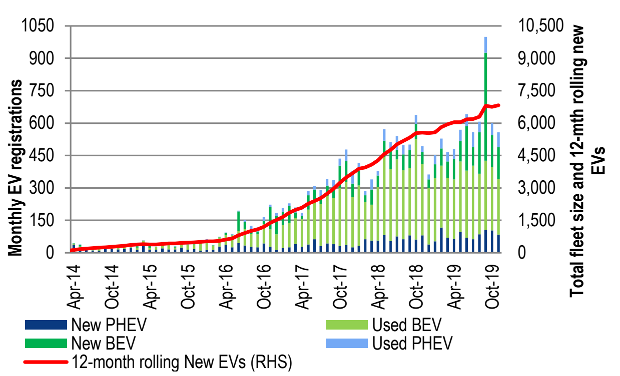
Source: Electricity Authority, Forsyth Barr analysis

Electric vehicle (EV) registrations

November EV registrations slip again as a percentage of new registrations

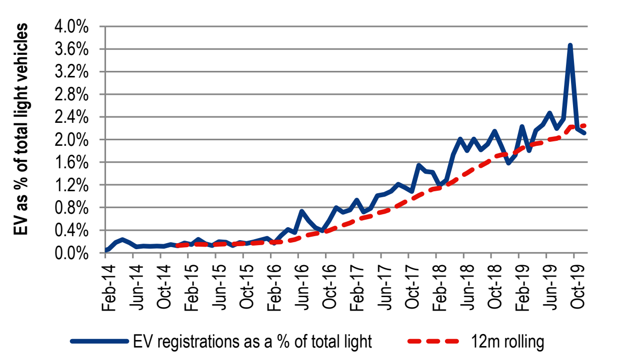
- 557 EVs were registered in November 2019, +63 more than the pcp, but -43 down on October. The main dip was in used battery electric vehicles (BEV), -35 lower than October. The total number of EVs registered in the country is now ~17,600.
- 2.1% of new November 2019 registrations were an EV, the lowest market share since March 2019 and below the rolling 12-mth figure of 2.2%. Another sign that EV growth is slowing.

Figure 27. EV registrations



Source: Ministry of Transport, Forsyth Barr analysis

Figure 28. EV registrations as % of total light vehicle registrations



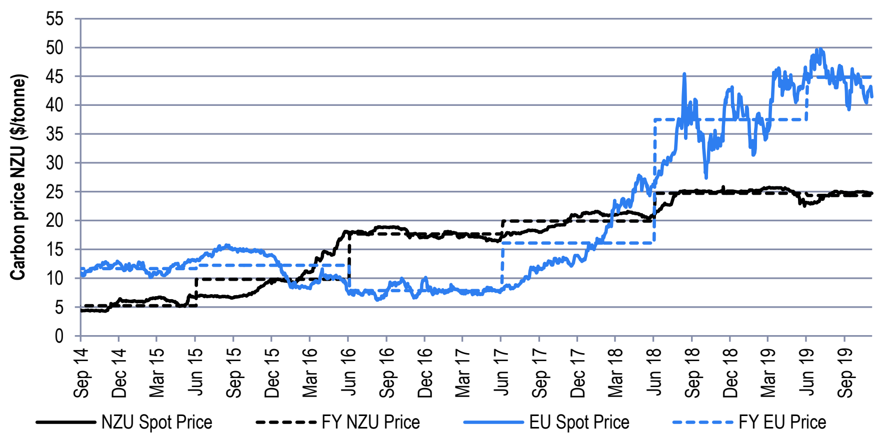
Source: Ministry of Transport, Forsyth Barr analysis

Carbon prices

NZ carbon prices remain close to $25/unit cap

- Prices for NZ carbon units continue to trade around the $25/unit cap, ending the November 2019 at $24.7/unit.
- EU units fell slightly in price in November, ending the month at €25.2/unit (NZ$43.3/unit), down -1.5% from the end of October.

Figure 29. Price of carbon (NZ$/tonne)



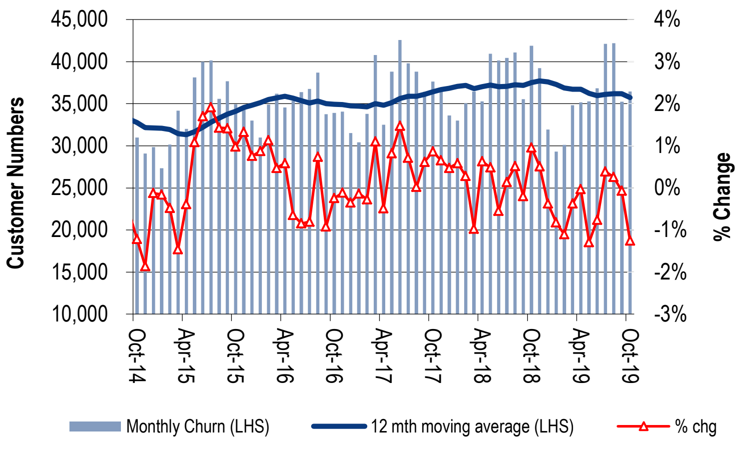
Source: Bloomberg, Forsyth Barr analysis

Retail electricity customers

Connection churn

- Customer switches totalled 36,450 in October 2019, well down on the pcp of almost 42,000. Annual churn has dipped below 20% for the first time since September 2015.

Figure 30. Electricity connection churn

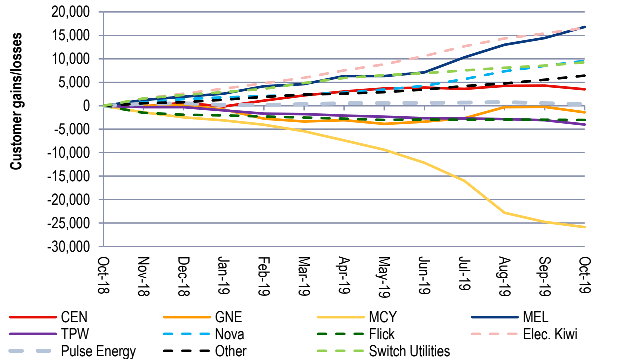


Source: Electricity Authority, Forsyth Barr analysis

Customer number changes — only MEL increases its customer base of the big five

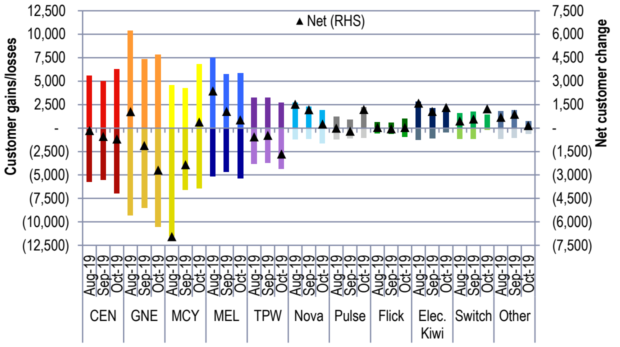
- Only MEL increased connection numbers in October 2019, up +2,380. In comparison, all of the other big five retailers lost between -750 (CEN) connections and -1,160 (GNE) connections. MCY continues to have significant losses, but at -1,100 it is the best month since February 2019 (although it is now 22 consecutive months of losses). Outside of the MEL, the biggest gainers were Electric Kiwi (up +1,215) and Nova (up +1,050).
- Looking at customer switches only, MCY had a good month adding +377 connections due to a material increase in the number of additions, up +~2,500 on September 2019. Most other retailers are showing a negative trend with net switching numbers declining, Pulse being a notable exception.

Figure 31. Cumulative 12-mth electricity customer gains/losses



Source: Forsyth Barr analysis

Figure 32. Customer switches (excludes market growth)



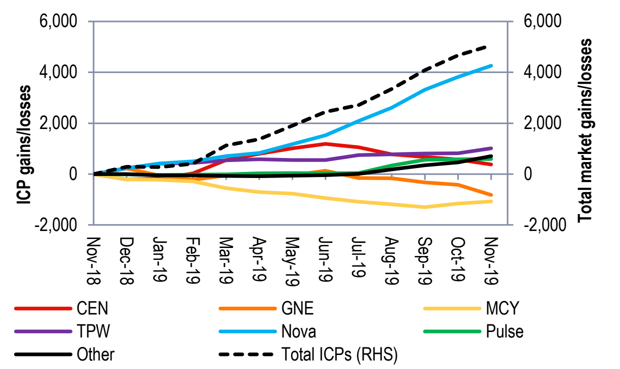
Source: Forsyth Barr analysis

Retail gas customers

Nova continues it push

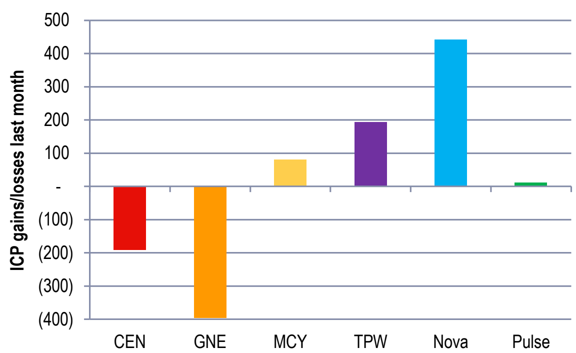
- Nova continues to be the main market mover in the gas market, adding +442 connections in November. In contrast, GNE lost -396 and CEN -190. In a sign that MCY is pushing harder in the retail space, it added +80 connections, the second month of additions after a period of losses.
- Looking at the past 12-months, Nova is the clear leader, adding more than 4,000 gas customers to its book. MCY and GNE are the biggest losers.

Figure 33. Gas connection gains/losses over the past 12-months



Source: Gas Industry Council, Forsyth Barr analysis

Figure 34. Gas connection gains/losses in November 2019



Source: Gas Industry Council, Forsyth Barr analysis

Key statistics

Figure 35. Key operating statistics

	Nov-18	Oct-19	Nov-19	% Chg pcp	% Chg mom
Average Monthly Prices					
OTA avg ($/MWh)	$202.9	$128.4	$116.4	-42.6%	-9.3%
HAY avg ($/MWh)	$186.5	$121.9	$101.5	-45.6%	-16.8%
BEN avg ($/MWh)	$142.2	$118.9	$93.5	-34.3%	-21.4%
Avg Daily Generation (GWh)					
CEN	25.5	22.1	23.5	-8.0%	6.1%
% of NZ Generation	23.7%	20.0%	21.8%	-8.2%	8.7%
GNE	17.5	21.6	17.3	-1.2%	-19.9%
% of NZ Generation	16.3%	19.5%	16.0%	-1.5%	-17.9%
MCY	21.6	20.0	18.9	-12.3%	-5.4%
% of NZ Generation	20.1%	18.1%	17.6%	-12.6%	-3.0%
MEL	33.5	36.2	39.1	16.8%	7.8%
% of NZ Generation	31.1%	32.8%	36.2%	16.4%	10.5%
TPW	6.4	8.0	6.5	2.7%	-18.3%
% of NZ Generation	5.9%	7.3%	6.1%	2.4%	-16.3%
Daily Demand (GWh)					
Demand (excl Tiwai)	89.0	95.4	92.1	3.5%	-3.5%
NZAS demand	14.3	14.3	14.2	-0.8%	-0.7%
Total NZ Demand	103.2	109.7	106.2	2.9%	-3.1%
Hydrology (% of average)					
Average hydro inflows	118%	81%	110%	-6.6%	35.4%
Average hydro storage	90%	89%	114%	26.5%	28.5%
Month end hydro storage	97%	95%	128%	32.0%	34.7%
ASX futures as at:	**29-Nov-18**	**31-Oct-19**	**29-Nov-19**		
Short-dated OTA	$116.9	$129.1	$129.7	11.0%	0.4%
Long-dated OTA	$81.4	$98.1	$98.5	21.0%	0.4%
Short-dated BEN	$104.2	$107.2	$103.0	-1.2%	-3.9%
Long-dated BEN	$75.4	$88.0	$87.9	16.7%	-0.1%

Source: Forsyth Barr analysis

Industry news — November 2019

Listed sector company news

Contact Energy (CEN)

- CEN's Tauhara steamfield drilling campaign remains on hold as the rig it has hired awaits repairs and replacement works. A second rig has been brought in to complete the top-section work on two of its sites, which CEN says will recover some of the time lost. As yet, the delays are not expected to materially impact CEN's decision making process around Tauhara.
- CEN is supplying geothermal energy to a new 18MW Nature's Flame wood pellet manufacturing plant in Taupo. Most of the energy is coming from "used" geothermal fluid from the nearby Tenon plant.

Mercury (MCY)

- MCY has committed to building the remaining 27 wind turbines that have been consented at its Turitea wind farm. The estimated cost to build the remaining turbines is $208 million, and construction is due to start in summer in conjunction with current building ongoing for the initial project. Combined with stage 1 development Turitea will be the largest wind farm in NZ at 222 MW.

  We are positive on the decision and added +5cps to our MCY valuation as a result. Further details can be found in *Winding Up Turitea Stage 2.*
- Outgoing CEO Fraser Whineray, won CEO of the year at the 2019 Deloitte Top 200 Awards.

Meridian Energy (MEL)

- MEL has said it now believes it can access the remaining 367 GWh at Lake Pukaki that has until now been unavailable. This will bring the total amount accessible to MEL at Pukaki 545 GWh. Previously engineering and operational constraints had limited MEL, but a review means it believes accessing the additional water during dry periods is feasible (albeit that's not an issue currently…).
- MEL has announced that Jason Stein has been appointed to Chief Executive of Meridian Energy Australia, starting on 1 January 2020. Stein has worked for Meridian for nearly 12 years and is currently MEL's general counsel.

New Zealand Refinery (NZR)

- NZR has announced that the power outage on 27 November is expected to cut net profit by NZ$1.5m–NZ$2.5m due to the plant having to be completely shut down and then restarted.

Tilt Renewables (TLT)

- TLT's Palmer Wind Farm project has been ruled in favour of by the Supreme Court of South Australia. This follows some local opposition to the 300 MW wind farm, which has also been through the Environment, Resources and Development court. TLT has said it will "continue to assess the project against other options in its portfolio and further progress development activities at an appropriate time to meet market opportunities". Its near-term focus remains building the Waipipi and Dundonnell wind farms.
- TLT has sold its Snowtown 2 (ST2) windfarm to Palisade Investment Partners and First State Super for A$1,073m (A$1,056m after transaction costs). This is a great result for TLT and Infratil (IFT).

  The deal frees up cash for TLT to invest in other projects, however, we expect much of it to be returned to IFT as TLT has sufficient funding for its Dundonnell and Waipipi developments that are currently under construction. The deal is expected to be completed before the end of 2019. For further details on the sale and the implications for TLT, refer to *It's a White Christmas.*

Trustpower (TPW)

- TPW's 1H20 result was disappointing with EBITDAF -17% lower than the pcp and -$11m lower than our forecast. Rising operating costs were the main concern. For further details please refer to *Opex Rising — 1H20 Result Review*.

- TPW has sold its legacy electricity metering business. The metering business was purchased by Financial Corporation Limited, a subsidiary of The Lines Company. The sale means FCL will acquire around 125,000 connections for an undisclosed price (although we estimate the sales price was ~$18m), which appears to be a good, albeit immaterial deal for TPW. Strategically this makes sense as the metering business is winding down following TPW's deal with Intellihub to roll out smart meters across the TPW's retail network connections. The -$4.5m reduction in FY20 EBITDAF (4.5 months of earnings) means TPW expects to be towards the bottom of its EBITDAF guidance range ($200m to $215m). The FY21/FY22/FY23 reductions are -$7.9m/-$4.6m/-$3.4m respectively.

Vector (VCT)

- VCT is selling its Kapuni assets to Todd Energy. Instead of receiving an upfront price, it will be receiving ongoing payments, mimicking the payments it would have received had VCT owned the assets. The main rationale for the transaction is to align the two parties' commercial interests and cease ongoing litigation.

Political / regulatory news

- The "Zero Carbon Bill" has passed into law with near unanimous support. The law will set targets of zero net carbon emissions and a reduction of -24% to -47% in methane emissions by 2050. An independent climate change commission will also be set up to advise governments on how to meet the targets, and will also produce an emissions "budget" every five years. Last week we published a report *The Carbon Report — Counting Carbon Costs: Climate Change and NZX Companies* detailing what New Zealand is doing to tackle climate change and how that is impacting NZX listed companies — including the electricity generator retailers.
- The sister bill to the Zero Carbon Bill, the Emissions Trading Reform Amendment Bill has passed its first reading in Parliament and is now at the Select Committee stage.
- The Electricity Authority (EA) has said it expects to make a final decision on guidelines of the new transmission pricing model in the second quarter of 2020. The authority's consultation paper was released in July and estimated a net benefit of NZ$2.7 billion to consumers between its implementation and 2050. However, the cost-benefit analysis in the paper has been strongly criticised by submitters.
- The EA has written to lines companies, putting pressure on them to amend pricing quickly. The EA itself is under pressure from the Government following the Electricity Price Review (EPR), with the slow pace of pricing reform one of the issues raised.
- The EA plans to push through urgent amendments to the Participation Code that will impose new conditions on futures market makers if they fail to voluntarily meet proposed changes. Improved market making was one of the recommendations from the EPR.
- The Government has allocated $3.16 million from its Provincial Growth Fund to build two 95 kW wind turbines in Stewart Island.

Other industry news

- The ComCom's regulatory decisions for lines company and Transpower default price paths (DPP3) starting 1 April 2020, will see a fall in distribution and Transpower revenues. Transpower's revenues are falling -15% and the average lines company charges will fall -7% (Vector is -7%), although it ranges between -29% and +3% depending on the lines company.

  The fall in lines company charges is a positive for retailers and it provides some wriggle room to help offset rising energy costs. The fall in Transpower revenue is a big plus for most of the South Island generators, with HVDC revenue falling -36%, materially benefitting CEN and MEL in particular.
- SolarCity has a new CEO, with Neil Cowie replacing founding CEO Andy Booth. SolarCity was founded in 1981 (and is unrelated to the US company of the same name). Andy Booth is still involved in the business, and will become executive director.
- Hydro Developments has applied to local West Coast authorities to extend its resource consents for its proposed 25MW hydro scheme at the Stockton mine. Production is once again increasing at the mine, bringing the project back into focus. Hydro Developments is seeking to extend the resource consent +6 year to 2026.

Contact Energy Limited (CEN)	Priced as at 06 Dec 2019: NZ$7.23					June year end

Forsyth Barr valuation			
Valuation methodology	Blend of spot valuations, weighted to multiples		
12-month target price (NZ$)*	**8.03**	**Spot valuations (NZ$)**	
Expected share price return	11.1%	1. DCF	7.23
Net dividend yield	5.4%	2. Market multiples	7.99
Estimated 12-month return	16.5%	3. Dividend yield	8.89
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	6,364
Equity beta	0.88	(Net debt)/cash	(1,108)
WACC	6.7%	Value of equity	5,257
Terminal growth	1.5%	Shares (m)	716

Profit and Loss Account (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	2,275	2,519	2,363	2,273	2,231
Normalised EBITDA	**479**	**518**	**466**	**483**	**490**
Depreciation and amortisation	(220)	(205)	(202)	(201)	(199)
Normalised EBIT	**259**	**313**	**264**	**282**	**291**
Net interest	(84)	(70)	(58)	(59)	(58)
Depreciation capex adjustment	99	104	100	98	96
Tax	(48)	(72)	(58)	(63)	(65)
Minority interests	-	-	-	-	-
Adjusted normalised NPAT	**227**	**280**	**248**	**259**	**263**
Abnormals/other	(97)	65	(100)	(98)	(96)
Reported NPAT	**130**	**345**	**148**	**161**	**167**
Normalised EPS (cps)	31.7	39.2	34.7	36.2	36.8
DPS (cps)	32.0	39.0	39.0	39.5	40.0

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	9.4	10.7	-6.2	-3.8	-1.8
EBITDA (%)	-4.4	8.1	-10.1	3.8	1.4
EBIT (%)	-11.6	20.8	-15.8	7.2	3.1
Normalised NPAT (%)	9.1	23.4	-11.5	4.4	1.6
Normalised EPS (%)	9.1	23.4	-11.5	4.4	1.6
DPS (%)	23.1	21.9	0.0	1.3	1.3

Cash Flow (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**479**	**518**	**466**	**483**	**490**
Working capital change	38	(19)	(6)	(6)	(1)
Interest & tax paid	(111)	(112)	(117)	(126)	(131)
Other	(27)	14	-	-	-
Operating cash flow	**379**	**401**	**342**	**351**	**358**
Capital expenditure	(82)	(63)	(93)	(65)	(66)
(Acquisitions)/divestments	6	382	-	-	-
Other	(7)	-	-	-	-
Funding available/(required)	**296**	**720**	**249**	**286**	**292**
Dividends paid	(201)	(251)	(279)	(279)	(283)
Equity raised/(returned)	1	-	-	-	-
Increase/(decrease) in net debt	**(96)**	**(469)**	**30**	**(7)**	**(9)**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	(22)	(3)	3	9	11
Fixed assets	4,253	4,126	4,017	3,881	3,748
Intangibles	441	425	425	425	425
Other assets	404	132	132	132	132
Total funds employed	**5,076**	**4,680**	**4,577**	**4,447**	**4,316**
Net debt/(cash)	1,448	943	973	966	957
Other non current liabilities	901	955	950	941	931
Shareholder's funds	2,727	2,782	2,654	2,540	2,428
Minority interests	-	-	-	-	-
Total funding sources	**5,076**	**4,680**	**4,577**	**4,447**	**4,316**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	13.9	12.3	13.1	12.7	12.5
EV/EBIT (x)	25.8	20.3	23.2	21.7	21.1
PE (x)	22.8	18.5	20.9	20.0	19.7
Price/NTA (x)	2.3	2.2	2.3	2.4	2.6
Free cash flow yield (%)	5.7	6.5	4.8	5.5	5.6
Net dividend yield (%)	4.4	5.4	5.4	5.5	5.5
Gross dividend yield (%)	5.3	6.7	6.7	7.0	7.1
Imputation (%)	48	64	60	70	75
Pay-out ratio (%)	101	100	113	109	109

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	3.3	4.8	5.0	5.3	5.4
Interest cover EBITDA (x)	5.7	7.4	8.0	8.2	8.4
Net debt/ND+E (%)	34.7	25.3	26.8	27.6	28.3
Net debt/EBITDA (x)	3.0	1.8	2.1	2.0	2.0

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	4.9	9.8	5.4	6.0	6.4
Return on equity (%)	4.7	6.3	5.6	6.3	6.9
Return on funds employed (%)	4.5	9.4	5.2	5.8	6.2
EBITDA margin (%)	21.1	20.6	19.7	21.3	22.0
EBIT margin (%)	11.4	12.4	11.2	12.4	13.0
Capex to sales (%)	3.6	2.5	3.9	2.9	3.0
Capex to depreciation (%)	37	31	46	32	33

Operating Performance	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Divisional Revenue ($m)					
Wholesale electricity	1,157	1,463	1,336	1,215	1,146
Retail electricity	883	863	873	890	905
Retail gas sales	71	73	81	83	86
LPG sales	121	58	-	-	-
Other	31	32	33	33	33
Total Revenue	**2,263**	**2,489**	**2,323**	**2,221**	**2,170**
Operating Statistics					
Hydro generation (GWh)	3,479	4,232	3,722	3,887	3,887
Geothermal generation (GWh)	3,323	3,257	3,346	3,346	3,346
Thermal generation (GWh)	1,812	1,422	1,694	1,704	1,784
Total Generation (GWh)	**8,614**	**8,911**	**8,763**	**8,937**	**9,018**
GWAP ($/MWh)	85	129	121	98	88
Gas consumed (PJ)	17.5	13.9	16.1	16.1	16.9
Gas price ($/GJ)	6.1	7.1	7.2	7.3	7.4
Retail electricity volumes (GWh)	6,997	6,554	6,108	6,234	6,229
Electricity customers (000)	413	411	411	408	406
Average usage/customer (MWh)	8.7	8.6	8.6	8.6	8.7
Average retail price ($/MWh)	242	244	247	252	257
LWAP ($/MWh)	91	138	132	107	96
LWAP/GWAP	1.07	1.07	1.09	1.09	1.09
Retail gas volumes (PJ)	2.9	3.1	3.2	3.2	3.2
Gas customers (000)	65	67	67	68	68
Average gas sales price ($/GJ)	24.6	23.6	25.5	26.0	26.5

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Genesis Energy Limited (GNE) Priced as at 06 Dec 2019: NZ$3.03 June year end

Forsyth Barr valuation

Valuation methodology: Mix of market multiple and DCF

12-month target price (NZ$)*	**3.23**	**Spot valuations (NZ$)**	
Expected share price return	6.6%	1. DCF	2.93
Net dividend yield	5.8%	2. Market multiple	3.15
Estimated 12-month return	12.4%	3. Dividend yield	3.60

Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	4,324
Equity beta	0.88	(Net debt)/cash	(1,255)
WACC	6.7%	Value of equity	3,068
Terminal growth	1.5%	Shares (m)	1,029

Profit and Loss Account (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	2,305	2,701	2,656	2,433	2,395
Normalised EBITDA	**361**	**363**	**365**	**410**	**453**
Depreciation and amortisation	(206)	(197)	(210)	(214)	(231)
Normalised EBIT	**155**	**167**	**155**	**196**	**221**
Net interest	(74)	(73)	(73)	(66)	(61)
Associate income	-	-	-	-	-
Tax	(22)	(27)	(23)	(37)	(45)
Deprecation capex adjustment	71	92	98	107	134
Adjusted normalised NPAT	**129**	**159**	**157**	**201**	**250**
Abnormals/other	(109)	(100)	(98)	(107)	(134)
Reported NPAT	**20**	**59**	**59**	**94**	**115**
Normalised EPS (cps)	5.8	6.5	5.7	9.0	11.0
DPS (cps)	16.9	17.1	17.4	17.7	18.0

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	18.1	17.2	-1.6	-8.4	-1.6
EBITDA (%)	8.4	0.8	0.4	12.3	10.5
EBIT (%)	-2.0	7.8	-7.4	27.0	12.7
Normalised NPAT (%)	-18.9	23.5	-1.0	28.0	23.9
Normalised EPS (%)	-19.6	21.7	-2.1	26.7	23.3
DPS (%)	1.8	0.9	1.8	1.7	1.7

Cash Flow (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**361**	**363**	**365**	**410**	**453**
Working capital change	33	(27)	(1)	(12)	(8)
Interest & tax paid	(120)	(123)	(109)	(118)	(129)
Other	(7)	17	-	-	-
Operating cash flow	**266**	**231**	**256**	**280**	**315**
Capital expenditure	(108)	(69)	(74)	(64)	(57)
(Acquisitions)/divestments	0	(0)	-	-	-
Other	-	-	-	-	-
Funding available/(required)	**159**	**162**	**182**	**215**	**258**
Dividends paid	(148)	(132)	(139)	(143)	(167)
Equity raised/(returned)	(1)	(1)	-	-	-
Increase/(decrease) in net debt	**(10)**	**(29)**	**(43)**	**(72)**	**(91)**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	90	111	112	124	132
Fixed assets	3,430	3,717	3,664	3,536	3,371
Intangibles	364	364	368	362	355
Other assets	84	121	121	121	121
Total funds employed	**3,968**	**4,313**	**4,264**	**4,143**	**3,979**
Net debt/(cash)	1,206	1,228	1,272	1,216	1,126
Other non current liabilities	806	934	921	905	881
Shareholder's funds	1,956	2,151	2,071	2,023	1,971
Minority interests	-	-	-	-	-
Total funding sources	**3,968**	**4,313**	**4,264**	**4,143**	**3,979**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	12.0	11.8	11.9	10.6	9.6
EV/EBIT (x)	27.9	25.8	28.0	22.2	19.7
PE (x)	23.7	19.5	19.9	15.7	12.8
Price/NTA (x)	1.9	1.7	1.8	1.9	2.0
Free cash flow yield (%)	5.1	5.2	5.8	6.9	8.3
Net dividend yield (%)	5.6	5.6	5.7	5.8	5.9
Gross dividend yield (%)	7.3	7.4	7.7	8.0	8.1
Imputation (%)	80	80	90	95	95
Pay-out ratio (%)	132	110	114	92	76

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	1.4	2.1	2.1	3.0	3.6
Interest cover EBITDA (x)	4.9	5.0	5.0	6.3	7.4
Net debt/ND+E (%)	37.7	35.5	37.3	36.7	35.5
Net debt/EBITDA (x)	3.3	3.3	3.4	2.9	2.4

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	2.4	3.4	3.4	4.5	5.2
Return on equity (%)	3.0	3.1	2.9	4.7	5.9
Return on funds employed (%)	3.6	3.6	3.4	4.4	5.2
EBITDA margin (%)	15.6	13.5	13.7	16.8	18.9
EBIT margin (%)	6.7	6.2	5.8	8.1	9.2
Capex to sales (%)	4.7	2.5	2.8	2.6	2.4
Capex to depreciation (%)	52	35	35	30	25

Operating Performance	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Renewable generation	3,084	2,835	2,611	2,717	2,717
Gas generation	3,392	2,586	2,836	2,783	2,783
Coal generation	657	1,410	1,121	876	876
Total GNE generation (GWh)	**7,133**	**6,831**	**6,568**	**6,377**	**6,377**
GWAP ($/MWh)	92	143	132	108	97
Coal used (tonnes)	348	720	580	453	453
Coal price ($/tonne)	120	139	142	125	126
Gas used (PJ)	26.7	20.2	21.0	20.5	20.5
Gas price ($/GJ)	7.9	8.6	8.7	8.5	8.5
Electricity customers (000)	503.7	499.5	499.5	494.5	492.0
MM/SME volumes	4,169	4,077	4,067	4,057	4,036
TOU volumes	1,811	1,992	2,061	2,082	2,102
Total fixed price volumes (GWh)	**5,980**	**6,068**	**6,128**	**6,139**	**6,138**
Average MM usage/cust (kWh/yr)	8,240	8,126	8,122	8,162	8,191
Average FPVV price ($/MWh)	206	207	212	214	217
LWAP ($/MWh)	92	139	133	109	97
LWAP/GWAP	1.01	0.97	1.01	1.01	1.01
Line losses (%)	5.3	5.4	5.6	5.6	5.6
Retail gas customers (000)	106.2	107.1	107.2	107.7	108.2
Retail gas volumes (PJ)	7.5	8.2	8.4	8.5	8.6
Gas volume/cust (GJ/yr)	70.5	76.7	78.6	79.0	79.4
LPG retail sales (tonnes)	35,005	38,507	42,925	46,590	49,141
Kupe production					
Gas production (PJ)	11.8	11.8	10.5	10.0	11.5
Oil production (k barrels)	533	473	381	355	564
LPG production (k tonnes)	45.9	50.6	45.2	42.4	47.8
Kupe EBITDAF ($m)	115	109	98	94	121
Energy EBITDAF ($m)	245	255	267	315	331
GNE EBITDAF ($m)	**361**	**363**	**365**	**410**	**453**

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Mercury NZ Limited (MCY)	Priced as at 06 Dec 2019: NZ$4.91			June year end

Forsyth Barr valuation			
Valuation methodology	Mix of market multiple and DCF		
12-month target price (NZ$)*	**4.62**	**Spot valuations (NZ$)**	
Expected share price return	-6.0%	1. DCF	4.35
Net dividend yield	3.3%	2. Market multiple	5.03
Estimated 12-month return	-2.7%	3. Dividend yield	4.49
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	7,234
Equity beta	0.88	(Net debt)/cash	(1,223)
WACC	6.6%	Value of equity	6,012
Terminal growth	1.5%	Shares (m)	1,361

Profit and Loss Account (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	1,798	2,000	1,963	1,809	1,768
Normalised EBITDA	**566**	**505**	**516**	**527**	**557**
Depreciation and amortisation	(201)	(204)	(205)	(207)	(209)
Normalised EBIT	**365**	**301**	**311**	**320**	**348**
Net interest	(91)	(75)	(66)	(69)	(74)
Associate income	2	1	3	3	3
Tax	(91)	(73)	(72)	(73)	(80)
Depreciation capex adj	58	78	72	95	94
Adjusted normalised NPAT	**256**	**239**	**249**	**277**	**292**
Abnormals/other	(7)	118	(72)	(95)	(94)
Reported NPAT	**249**	**357**	**177**	**182**	**198**
Normalised EPS (cps)	18.8	17.6	18.3	20.3	21.5
DPS (cps)	15.1	15.5	15.8	16.2	18.8

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	12.6	11.2	-1.9	-7.9	-2.2
EBITDA (%)	8.2	-10.8	2.2	2.1	5.6
EBIT (%)	7.9	-17.7	4.2	2.9	8.5
Normalised NPAT (%)	1.8	-6.5	4.1	11.2	5.5
Normalised EPS (%)	2.9	-6.4	4.1	11.2	5.5
Ordinary DPS (%)	3.4	2.6	1.9	2.5	16.0

Cash Flow (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**566**	**505**	**516**	**527**	**557**
Working capital change	4	2	52	(40)	(21)
Interest & tax paid	(192)	(148)	(158)	(162)	(173)
Other	(4)	(33)	-	-	-
Operating cash flow	**374**	**326**	**410**	**326**	**363**
Capital expenditure	(127)	(122)	(300)	(245)	(151)
(Acquisitions)/divestments	(139)	215	-	-	-
Other	6	5	1	1	1
Funding available/(required)	**114**	**424**	**111**	**81**	**212**
Dividends paid	(273)	(208)	(212)	(218)	(225)
Equity raised/(returned)	(55)	7	-	-	-
Increase/(decrease) in net debt	**214**	**(223)**	**102**	**137**	**12**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	63	63	11	51	71
Fixed assets	5,370	5,528	5,632	5,680	5,632
Intangibles	85	62	55	50	46
Other assets	385	521	523	526	529
Total funds employed	**5,903**	**6,174**	**6,222**	**6,307**	**6,278**
Net debt/(cash)	1,264	1,096	1,198	1,334	1,347
Other non current liabilities	1,306	1,498	1,479	1,464	1,450
Shareholder's funds	3,333	3,580	3,545	3,509	3,482
Minority interests	-	-	-	-	-
Total funding sources	**5,903**	**6,174**	**6,222**	**6,307**	**6,278**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	13.6	15.0	14.6	14.4	13.6
EV/EBIT (x)	20.9	25.2	23.9	23.4	21.6
PE (x)	26.2	28.0	26.9	24.2	22.9
Price/NTA (x)	2.1	1.9	1.9	2.0	2.0
Free cash flow yield (%)	3.7	3.0	1.6	1.2	3.2
Net dividend yield (%)	3.1	3.2	3.2	3.3	3.8
Gross dividend yield (%)	4.3	4.4	4.5	4.6	5.2
Imputation (%)	100	100	100	100	95
Pay-out ratio (%)	80	88	86	80	88

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	4.7	6.7	4.8	4.7	4.8
Interest cover EBITDA (x)	6.2	6.7	7.8	7.7	7.6
Net debt/ND+E (%)	27.8	23.7	25.5	27.8	28.1
Net debt/EBITDA (x)	2.2	2.2	2.3	2.5	2.4

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	7.1	7.8	4.8	4.9	5.4
Return on equity (%)	6.0	4.6	5.1	5.2	5.8
Return on funds employed (%)	5.8	4.7	4.8	4.8	5.2
EBITDA margin (%)	31.5	25.3	26.3	29.2	31.5
EBIT margin (%)	20.4	15.1	16.0	17.9	19.9
Capex to sales (%)	7.1	6.1	15.3	13.6	8.6
Capex to depreciation (%)	69	67	161	129	78

Operating Statistics	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Hydro	4,947	4,006	4,088	4,016	4,016
Geothermal	2,757	2,894	2,810	2,829	2,829
Wind	-	-	-	181	562
Total MCY Generation (GWh)	**7,704**	**6,900**	**6,898**	**7,026**	**7,407**
GWAP ($/MWh)	86.3	138.7	131.6	104.4	92.8
Electricity customers (000)	388	373	354	351	347
MM volumes	3,278	3,182	2,972	2,908	2,885
TOU volumes	1,200	1,319	1,526	1,616	1,624
Total Fixed Price volumes (GWh)	**4,478**	**4,501**	**4,498**	**4,524**	**4,509**
Spot Sales	891	780	731	734	738
Net CFD's	2,110	1,624	1,563	1,563	1,563
Total Sales (GWh)	**7,479**	**6,905**	**6,791**	**6,821**	**6,810**
Average usage per cust (MWh/yr)	11.4	11.8	12.5	12.8	12.9
LWAP ($/MWh)	91.6	144.2	137.7	109.7	98.0
LWAP/GWAP	1.06	1.04	1.05	1.05	1.06
Average FPVV price ($/MWh)	112.5	113.4	114.3	117.2	119.8
Line losses (%)	5.6	5.1	5.4	5.3	5.3
Retail gas customers (000)	48	47	46	46	47
Retail gas volumes (PJ)	1.1	1.1	1.0	1.0	1.0
Gas volume/cust (GJ/yr)	22.5	22.5	22.5	22.5	22.5
Energy margin ($m)	730	667	700	709	747
Operating costs ($m)	(205)	(199)	(203)	(202)	(210)
Other revenue ($m)	41	37	19	20	20
MCY EBITDAF ($m)	**566**	**505**	**516**	**527**	**557**

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Meridian Energy Limited (MEL) Priced as at 06 Dec 2019: NZ$5.00 June year end

Forsyth Barr valuation			
Valuation methodology		Mix of market multiple and DCF	
12-month target price (NZ$)*	**4.11**	**Spot valuations (NZ$)**	
Expected share price return	-17.8%	1. DCF	3.75
Net dividend yield	4.3%	2. Market multiple	4.18
Estimated 12-month return	-13.5%	3. Dividend yield	4.48
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	11,377
Equity beta	0.84	(Net debt)/cash	(1,761)
WACC	6.7%	Value of equity	9,615
Terminal growth	1.5%	Shares (m)	2,563

Profit and Loss Account (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	3,297	4,104	3,725	3,490	3,411
Normalised EBITDA	**666**	**838**	**816**	**752**	**767**
Depreciation and amortisation	(268)	(276)	(309)	(302)	(296)
Normalised EBIT	**398**	**562**	**507**	**450**	**470**
Net interest	(81)	(83)	(81)	(83)	(87)
Associate income & other	(19)	(14)	(17)	(19)	(19)
Tax	(95)	(133)	(114)	(97)	(102)
Minority interests	-	-	-	-	-
Reported NPAT	**203**	**332**	**294**	**250**	**263**
Abnormals/other	158	149	183	177	171
Adjusted normalised NPAT	**361**	**481**	**477**	**427**	**434**
Adjusted normalised EPS (cps)	14.1	18.8	18.6	16.7	16.9
DPS (cps)	19.2	21.3	21.5	21.6	20.4

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	16.7	24.5	-9.2	-6.3	-2.3
EBITDA (%)	1.4	25.8	-2.6	-7.9	2.0
EBIT (%)	1.3	41.2	-9.8	-11.3	4.6
Normalised NPAT (%)	-3.1	33.4	-0.8	-10.5	1.6
Normalised EPS (%)	-3.1	33.4	-0.8	-10.5	1.6
DPS (%)	1.5	10.9	0.9	0.8	-5.7

Cash Flow (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**666**	**838**	**816**	**752**	**767**
Working capital change	(34)	(36)	7	13	16
Interest & tax paid	(186)	(200)	(237)	(222)	(231)
Other	(19)	33	(17)	(19)	(19)
Operating cash flow	**427**	**635**	**569**	**523**	**533**
Capital expenditure	(247)	(69)	(75)	(76)	(58)
(Acquisitions)/divestments	23	-	-	-	-
Other	-	-	-	-	-
Funding available/(required)	**203**	**566**	**494**	**447**	**475**
Dividends paid	(486)	(500)	(550)	(555)	(557)
Equity raised/(returned)	(2)	(2)	-	-	-
Increase/(decrease) in net debt	**285**	**(64)**	**56**	**108**	**82**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	(17)	(24)	(14)	(7)	(4)
Fixed assets	7,941	8,825	8,599	8,377	8,139
Intangibles	60	59	51	47	47
Other assets	291	383	366	347	328
Total funds employed	**8,275**	**9,243**	**9,002**	**8,764**	**8,510**
Net debt/(cash)	1,461	1,424	1,480	1,588	1,670
Other non current liabilities	1,991	2,362	2,321	2,280	2,238
Shareholder's funds	4,823	5,457	5,201	4,897	4,602
Minority interests	-	-	-	-	-
Total funding sources	**8,275**	**9,243**	**9,002**	**8,764**	**8,510**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	21.2	17.0	17.5	19.0	18.6
EV/EBIT (x)	35.5	25.4	28.1	31.8	30.4
PE (x)	35.5	26.6	26.9	30.0	29.5
Price/NTA (x)	2.7	2.4	2.5	2.6	2.8
Free cash flow yield (%)	1.4	4.4	3.9	3.5	3.7
Net dividend yield (%)	3.8	4.3	4.3	4.3	4.1
Gross dividend yield (%)	4.9	5.4	5.4	5.4	5.2
Imputation (%)	68	66	65	65	70
Pay-out ratio (%)	136	113	115	130	121

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	4.7	6.6	6.0	5.2	5.2
Interest cover EBITDA (x)	8.2	10.1	10.0	9.0	8.8
Net debt/ND+E (%)	23.2	20.7	22.1	24.5	26.6
Net debt/EBITDA (x)	2.2	1.7	1.8	2.1	2.2

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	4.4	5.7	5.2	4.7	5.1
Return on equity (%)	4.3	6.1	5.7	5.1	5.7
Return on funds employed (%)	4.6	5.9	5.5	5.0	5.4
EBITDA margin (%)	20.2	20.4	21.9	21.5	22.5
EBIT margin (%)	12.1	13.7	13.6	12.9	13.8
Capex to sales (%)	7.5	1.7	2.0	2.2	1.7
Capex to depreciation (%)	100	28	27	27	21

Operating Statistics	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Hydro generation	11,266	12,326	11,967	11,701	11,701
Wind generation	1,263	1,244	1,470	1,474	1,474
Total NZ generation (GWh)	**12,528**	**13,570**	**13,436**	**13,175**	**13,175**
GWAP ($/MWh)	83.0	123.3	114.0	96.4	85.8
Overseas generation (GWh)	581	730	725	800	800
Overseas GWAP ($/MWh) (NZD)	151	100	137	105	96
Overseas customer numbers (000)	97	110	127	143	153
Powershop customers (000)	66	74	80	82	83
Meridian branded customers (000)	225	228	235	240	245
NZ electricity customers (000)	**291**	**302**	**315**	**321**	**328**
Average usage per cust (MWh/yr)	13.5	13.2	12.9	12.9	12.9
Mass market volumes	3,824	3,901	3,989	4,094	4,180
Time of use volumes	2,157	2,338	2,721	2,742	2,764
Total fixed price volumes (GWh)	**5,981**	**6,239**	**6,710**	**6,836**	**6,944**
NZAS sales	5,011	5,310	5,464	5,449	5,449
Sell CFDs	2,278	2,239	1,967	1,967	1,967
Buy CFDs	-2,222	-1,965	-1,938	-1,740	-1,740
Total Sales (GWh)	**11,047**	**11,823**	**12,202**	**12,511**	**12,619**
Average FPVV price ($/MWh)	105.2	104.8	106.8	108.3	109.5
LWAP ($/MWh)	88	132	123	104	93
LWAP/GWAP	1.06	1.07	1.08	1.07	1.08
Lines losses (%)	5.3	5.9	5.5	5.5	5.5
New Zealand Energy Margin ($m)	944	1,108	1,077	1,001	1,004
Overseas Energy Margin ($m)	86	118	118	114	114
Meridian Energy Margin ($m)	**1,030**	**1,226**	**1,195**	**1,116**	**1,118**

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Tilt Renewables Limited (TLT)	Priced as at 05 Dec 2019: NZ$3.37				March year end

Forsyth Barr valuation			
Valuation methodology	Mix of market multiple (33%) and DCF (67%)		
12-month target price (NZ$)*	**3.70**	**Spot valuations (NZ$)**	
Expected share price return	9.8%	1. DCF	3.46
Net dividend yield	0.0%	2. Multiple	3.72
Estimated 12-month return	9.8%	3. n/a	n/a
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.0%	Total firm value	2,042
Equity beta	0.94	(Net debt)/cash	(419)
WACC	7.3%	Value of equity	1,623
Terminal growth	1.5%	Shares (m)	469

Profit and Loss Account (A$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	158	193	186	169	198
Normalised EBITDA	**104**	**135**	**125**	**103**	**117**
Depreciation and amortisation	(77)	(84)	(56)	(43)	(74)
Normalised EBIT	**27**	**51**	**68**	**60**	**42**
Net interest	(29)	(30)	(9)	(10)	(26)
Other	26	(2)	(10)	-	-
Tax	(7)	(7)	(14)	(15)	(5)
Deprecation capex adjustment	49	57	36	26	49
Normalised NPAT	**47**	**70**	**79**	**61**	**60**
Abnormals/other	(30)	(58)	413	(26)	(49)
Reported NPAT	**17**	**12**	**491**	**35**	**12**
Normalised EPS (cps)	15.1	14.9	16.7	13.0	12.9
DPS (cps)	3.1	1.1	-	-	-

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	n/a	n/a	n/a	n/a	n/a
EBITDA (%)	-46.6	91.7	33.2	-12.1	-29.2
EBIT (%)	n/a	n/a	n/a	n/a	n/a
Normalised NPAT (%)	3.9	-52.3	>100	-92.9	-66.5
Normalised EPS (%)	-41.9	-47.5	-100.0	n/a	n/a
DPS (%)	n/a	n/a	n/a	n/a	n/a

Cash Flow (A$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**104**	**135**	**125**	**103**	**117**
Working capital change	(19)	1	(0)	(1)	2
Interest & tax paid	(42)	(42)	(23)	3	(12)
Other	14	(9)	(47)	-	-
Operating cash flow	**57**	**85**	**55**	**105**	**107**
Capital expenditure	(84)	(91)	(387)	(406)	(7)
(Acquisitions)/divestments	-	-	1,056	-	-
Other	-	-	-	-	-
Funding available/(required)	**(27)**	**(6)**	**724**	**(302)**	**100**
Dividends paid	(11)	(11)	-	-	-
Equity raised/(returned)	(0)	260	(1)	-	-
Increase/(decrease) in net debt	**38**	**(243)**	**(723)**	**302**	**(100)**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	18	14	15	16	15
Fixed assets	1,171	1,067	916	1,280	1,212
Intangibles	1	1	1	1	1
Other assets	101	114	74	74	74
Total funds employed	**1,290**	**1,196**	**1,005**	**1,370**	**1,301**
Net debt/(cash)	593	369	(335)	(33)	(133)
Other non current liabilities	186	171	219	247	265
Shareholder's funds	510	656	1,122	1,157	1,169
Minority interests	-	-	-	-	-
Total funding sources	**1,290**	**1,196**	**1,005**	**1,370**	**1,301**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	19.5	14.5	12.1	11.3	9.8
EV/EBIT (x)	75.7	38.1	2.9	19.3	27.0
PE (x)	20.6	21.1	19.0	24.4	24.5
Price/NTA (x)	n/a	5.8	5.7	5.7	5.7
Free cash flow yield (%)	3.0	5.1	3.1	6.2	6.3
Net dividend yield (%)	1.0	0.3	0.0	0.0	0.0
Gross dividend yield (%)	1.0	0.3	0.0	0.0	0.0
Imputation (%)	0	0	0	0	0
Pay-out ratio (%)	20	7	0	0	0

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	0.9	1.7	57.5	5.9	1.6
Interest cover EBITDA (x)	3.5	4.5	13.7	10.0	4.5
Net debt/ND+E (%)	53.8	36.0	-42.6	-3.0	-12.8
Net debt/EBITDA (x)	5.7	2.7	n/a	n/a	n/a

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	2.0	3.3	25.7	2.5	1.8
Return on equity (%)	9.3	10.7	7.0	5.3	5.2
Return on funds employed (%)	1.7	3.5	6.2	3.8	2.9
EBITDA margin (%)	65.7	69.7	67.1	60.8	59.0
EBIT margin (%)	16.9	26.5	282.1	35.6	21.4
Capex to sales (%)	52.9	47.0	208.4	240.8	3.5
Capex to depreciation (%)	108	109	686	956	9

Operating Performance	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Australia installed capacity (MW)	386	440	305	506	506
NZ installed capacity (MW)	197	197	197	197	330
TLT installed capacity (MW)	**583**	**637**	**502**	**703**	**836**
Australia wind generation (GWh)	1,225	1,395	1,208	1,350	1,771
NZ wind generation (GWh)	571	658	665	672	1,119
TLT wind generation (GWh)	**1,796**	**2,053**	**1,874**	**2,022**	**2,890**
Price assumptions					
Australia REC price (A$/MWh)	83	78	55	25	12
SA wholesale price (A$/MWh)	69	87	89	77	61
VIC wholesale price (A$/MWh)		105	110	91	71
Australia PPA price (A$/MWh)	98	94	93	58	58
NZ PPA price (NZ$/MWh)	65	65	64	65	66
Australia spot sales (GWh)	23	155	428	657	524
Australia PPA sales (GWh)	1,202	1,239	780	693	1,247
Australia spot revenue (A$m)	3	34	72	87	56
Australia PPA revenue (A$m)	118	117	72	40	72
Australia revenue (A$m)	122	151	144	127	128
NZ revenue (A$m)	36	42	42	42	70
Australia EBITDAF (A$m)	82	109	100	78	71
NZ EBITDAF (A$m)	22	25	25	25	46

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

Trustpower Ltd (TPW)	Priced as at 06 Dec 2019: NZ$7.25				March year end

Forsyth Barr valuation

Valuation methodology	Blend of spot valuations, weighted to multiples		
12-month target price (NZ$)*	**7.75**	**Spot valuations (NZ$)**	
Expected share price return	6.9%	1. DCF	7.29
Net dividend yield	4.7%	2. Market multiples	7.58
Estimated 12-month return	11.6%	3. Dividend Yield	7.92
Key WACC assumptions		**DCF valuation summary (NZ$m)**	
Risk free rate	2.00%	Total firm value	2,955
Equity beta	0.88	(Net debt)/cash	(634)
WACC	6.6%	Value of equity	2,305
Terminal growth	1.5%	Shares (m)	313

Profit and Loss Account (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Sales revenue	979	1,030	1,000	994	994
Normalised EBITDA	**270**	**222**	**203**	**209**	**220**
Depreciation and amortisation	(47)	(47)	(39)	(40)	(40)
Normalised EBIT	**223**	**175**	**164**	**169**	**179**
Net interest	(34)	(28)	(35)	(35)	(35)
Depreciation capex adjustment	8	19	9	11	11
Tax	(55)	(48)	(40)	(42)	(44)
Minority interests	(1)	(2)	(2)	(2)	(2)
Normalised NPAT	**141**	**117**	**96**	**103**	**109**
Abnormals/other/depn adj	(13)	(26)	(17)	(8)	(8)
Reported NPAT	**128**	**91**	**79**	**94**	**101**
Normalised EPS (cps)	44.9	37.1	30.5	32.7	34.9
DPS (cps)	34.0	34.0	34.0	34.0	35.0

Growth Rates	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Revenue (%)	4.2	5.2	-2.9	-0.6	0.0
EBITDA (%)	15.0	-17.6	-8.6	3.0	5.0
EBIT (%)	19.3	-21.6	-6.5	3.6	5.8
Normalised NPAT (%)	8.5	-17.3	-17.8	7.1	6.7
Normalised EPS (%)	8.5	-17.3	-17.8	7.1	6.7
DPS (%)	3.0	0.0	0.0	0.0	2.9

Cash Flow (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EBITDA	**270**	**222**	**203**	**209**	**220**
Working capital change	25	(47)	(41)	3	9
Interest & tax paid	(64)	(75)	(83)	(73)	(76)
Other	(23)	20	20	-	-
Operating cash flow	**208**	**120**	**99**	**140**	**152**
Capital expenditure	(42)	(31)	(31)	(28)	(29)
(Acquisitions)/divestments	118	8	-	-	-
Other	4	(2)	-	-	-
Funding available/(required)	**288**	**96**	**68**	**111**	**123**
Dividends paid	(110)	(190)	(154)	(106)	(108)
Equity raised/(returned)	(0)	-	-	-	-
Increase/(decrease) in net debt	**(178)**	**95**	**85**	**(5)**	**(15)**

Balance Sheet (NZ$m)	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Working capital	(28)	(0)	24	24	25
Fixed assets	2,102	1,925	1,913	1,899	1,884
Intangibles	44	37	40	43	46
Other assets	60	115	173	170	161
Total funds employed	**2,178**	**2,076**	**2,151**	**2,136**	**2,116**
Net debt/(cash)	467	557	646	641	626
Other non current liabilities	276	270	314	315	315
Shareholder's funds	1,413	1,224	1,165	1,153	1,147
Minority interests	22	25	25	27	28
Total funding sources	**2,178**	**2,076**	**2,151**	**2,136**	**2,116**

Valuation Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
EV/EBITDA (x)	10.6	12.6	14.2	14.0	13.3
EV/EBIT (x)	12.8	16.0	17.6	17.3	16.3
PE (x)	16.2	19.5	23.8	22.2	20.8
Price/NTA (x)	1.6	1.9	2.0	2.1	2.1
Free cash flow yield (%)	7.3	3.9	3.0	4.9	5.4
Net dividend yield (%)	4.7	4.7	4.7	4.7	4.8
Gross dividend yield (%)	6.5	5.7	6.5	6.5	6.7
Imputation (%)	100	55	100	100	100
Pay-out ratio (%)	76	92	111	104	100

Capital Structure	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Interest cover EBIT (x)	7.0	6.8	5.0	5.2	5.4
Interest cover EBITDA (x)	7.9	7.9	5.9	6.0	6.2
Net debt/ND+E (%)	24.8	31.3	35.7	35.7	35.3
Net debt/EBITDA (x)	1.7	2.5	3.2	3.1	2.9

Key Ratios	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
Return on assets (%)	9.2	7.2	6.6	7.6	8.1
Return on equity (%)	9.9	9.7	8.5	9.3	9.9
Return on funds employed (%)	8.5	7.2	6.5	6.6	7.1
EBITDA margin (%)	27.5	21.6	20.3	21.0	22.1
EBIT margin (%)	22.8	17.0	16.4	17.0	18.0
Capex to sales (%)	4.2	3.0	3.1	2.9	2.9
Capex to depreciation (%)	134	98	104	97	99

Divisional Revenue	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
NZ electricity revenue	810	861	828	822	814
Australia electricity revenue	33	-	-	-	-
Gas revenue	29	29	30	32	34
Telecommunication revenue	81	88	92	96	103
Other revenue	27	52	50	45	44
Total revenue	**979**	**1,030**	**1,000**	**994**	**994**

Operating Statistics	**2018A**	**2019A**	**2020E**	**2021E**	**2022E**
NZ generation (GWh)	2,235	1,995	1,815	1,896	1,896
Australian generation (GWh)	284	-	-	-	-
Total generation (GWh)	**2,519**	**1,995**	**1,815**	**1,896**	**1,896**
NZ GWAP $/MWh	88	125	118	106	86
Mass market sales (GWh)	1,887	1,845	1,794	1,791	1,782
TOU sales (GWh)	842	880	866	869	872
Spot sales (GWh)	1,086	1,021	1,034	1,037	1,041
Total Sales (GWh)	**3,815**	**3,746**	**3,693**	**3,696**	**3,694**
LWAP $/MWh	91	131	124	113	93
LWAP/GWAP	1.04	1.04	1.05	1.07	1.07
Electricity customers (000)	273	267	265	264	263
Usage/customer (MWh)	6.9	6.8	6.7	6.8	6.8
Revenue/MWh sold ($)	212	230	224	222	220
Gas customers (000)	37	39	41	42	43
Volume/customer (GJ)	27.5	26.5	24.5	24.5	24.5
Telco customers (000)	87	96	104	111	116
Revenue/customer ($)	991	963	959	968	978

* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend