

# Power Points

## Yield Powers a Sector Charge – Sept 2020

**ANDREW HARVEY-GREEN**

 andrew.harvey-green@forsythbarr.co.nz  
 +64 4 495 8185

**SCOTT ANDERSON**

 scott.anderson@forsythbarr.co.nz  
 +64 4 914 2219

August is normally dominated by FY result announcements, but in 2020 with the exception of Mercury (MCY), yield and NZAS have been more important factors. All of the generator/retailers performed better than the NZX50, with yield hungry investors being the key drivers of the share price, although increasing confidence NZAS will remain open for longer and MCY's strong FY21 guidance were also a factor. We now view the chances of a deal keeping NZAS open beyond August 2021 is 50/50. We are positive on the long-term sector outlook, with our preferred stocks Contact Energy (CEN), Meridian Energy (MEL) and Tilt Renewables (TLT).

**Figure 1. Summary company valuation metric**

Company	Price	Target price	Target return	Rating	FY21 EV/EBITDA	FY21 PE	FY21 Gross Yld	EBITDAF (NZ\$m)
CEN	\$6.27	\$8.00	32.7%	OUTPERFORM	12.6	19.7	6.1%	437
GNE	\$3.05	\$3.00	3.0%	NEUTRAL	13.4	23.4	6.4%	398
MCY	\$5.07	\$5.30	7.9%	NEUTRAL	15.8	25.4	4.7%	510
MEL	\$5.03	\$5.50	12.7%	OUTPERFORM	18.2	27.6	4.4%	799
TLT	\$3.60	\$4.10	13.9%	OUTPERFORM	15.8	33.6	0.0%	76
TPW	\$6.93	\$6.55	-1.2%	NEUTRAL	14.7	24.7	6.0%	190

Source: IRESS, Forsyth Barr analysis

### Still waiting on Rio Tinto (RIO) call, but confidence of a deal appears to be growing

August news flow was generally positive, with the Government and RIO confirming talks are continuing. In addition, the South Island ASX futures prices surprisingly surged more than +NZ\$20/MWh for FY22 and FY23 on no news. We estimate the electricity futures market is pricing in a 60% to 70% chance that NZAS will remain open beyond August 2021. We are slightly more circumspect, and believe it is more of a 50/50 call as the fundamental issue, transmission prices, has not gone away.

### FY20 results contained no earnings surprises, with MCY the big positive story

There were no earnings surprises from the four generator/retailers to announce FY20 results. However, MCY provided the positive surprise story, with stronger than expected FY21 EBITDAF and dividend guidance. Whilst there was significant NZAS discussion, the outlook, beyond FY21, remains uncertain as the sector awaits RIO's decision.

### Yield drives strong share price performance, not NZAS or FY20 results

August 2020 was a strong month for the electricity stocks. All yield stocks performed well in August 2020, including electricity. Nevertheless, NZAS continues to weigh on the electricity stocks and we expect the sector to benefit once there is more certainty. The spread of gross dividend yields to 10-year swap rates indicates there is more yield upside of the electricity sector, whereas bond proxy stocks are trading on record low spreads.

### Below average hydrology conditions continue

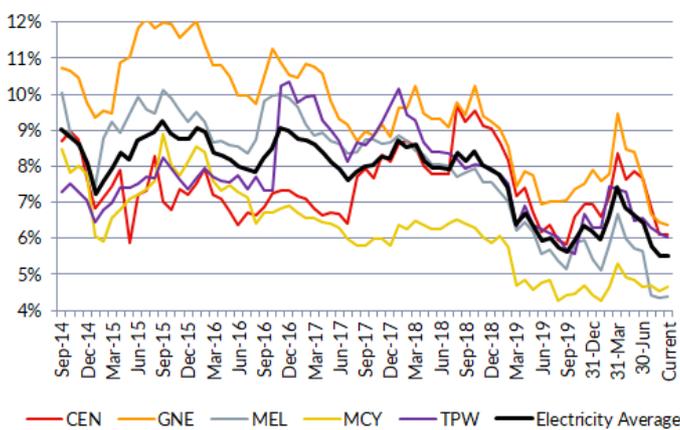
In the wholesale electricity market, dry conditions continued. Hydro generation, across both islands, remains below average (~-5%) and hydro storage is currently ~60% of average, falling -20% during the month. However, wholesale electricity prices softened slightly vs. July, with Otahuhu (OTA) prices down -23% to average NZ\$118/MWh in August. August 2020 electricity demand was relatively soft, -2.1% lower than August 2019, with average temperatures ~+0.5°C warmer. The outlook for spring is warm and windy conditions, but it is more likely to be dry in the South Island hydro catchments.

## Yield trumps NZAS closure impacts

The electricity sector had a strong month in August 2020, outperforming the NZX50. In our view, yield played a bigger role in the positive sector performance, than the moderately positive news flow around NZAS or FY20 results. Regulated assets, Vector (VCT) and Chorus (CNU), had very strong performances, and were two of the top three performers in the market in August, highlighting the continued attractiveness of yield. In August, the average sector gross dividend yield fell -0.3% to 5.5% from 5.8%. The average bond proxy (includes VCT and CNU) gross dividend yield fell even more, down -0.5% to 5.0%.

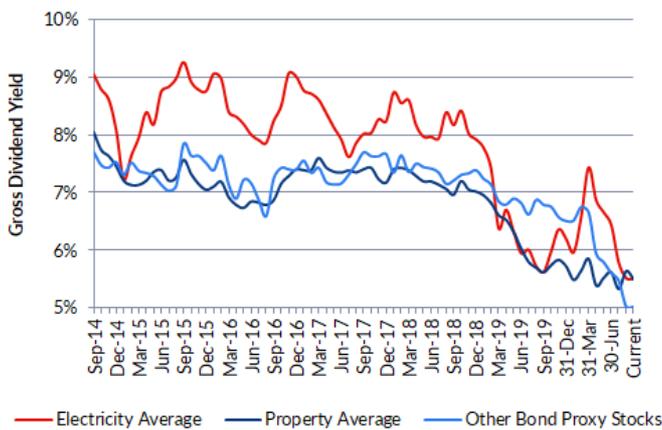
The performance of the yield stocks came from investors being prepared to take on more risk, as the spread to the 10-year swap rate also compressed -0.3% to 4.9%. NZAS uncertainty continues to hold back the electricity stocks as the spread to the 1-year swap rate is still well above the ~4.5% observed between March and October 2019. In comparison, the other bond proxy spread is at a record low.

Figure 2. Electricity sector yields



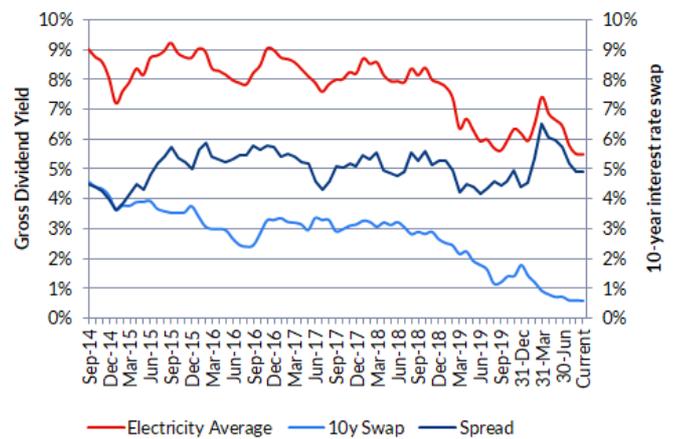
Source: Forsyth Barr analysis

Figure 4. Average sector yields



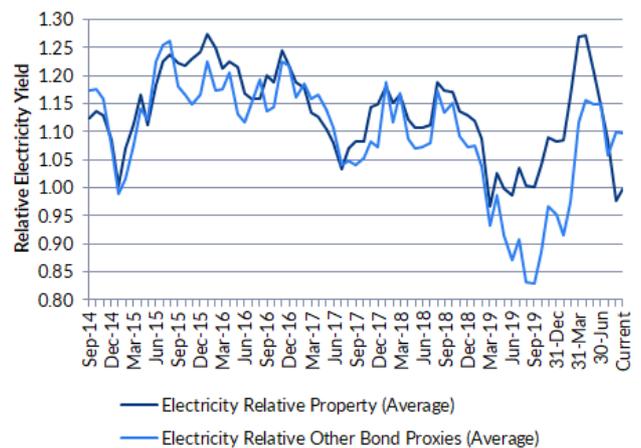
Source: Forsyth Barr analysis

Figure 3. Relative yields



Source: Forsyth Barr analysis

Figure 5. Electricity vs other bond proxy yields



Source: Forsyth Barr analysis

With yield being a more important factor than NZAS in August, we expect the electricity stocks to rally (modestly) if NZAS announces it is staying beyond August 2021. We discuss this in more detail below.

## NZAS saga continues – will it stay or will it go?

Compared to the beginning of August, it appears more likely that NZAS will stay open for an additional one to four years after August 2021, and is probably now a 50/50 call. In the past month there have been the following developments helpful to NZAS remaining open for longer:

- RIO and the Government have confirmed that talks are ongoing, although the Government has also said direct subsidies are not an option. The focus appears to be on transmission costs. However, transmission has been the issue ever since RIO announced its strategic review in October 2019, and nothing has really changed. The Electricity Authority and Transpower will be loathed to be rushed on a precedent-setting prudent discount policy that will potentially lower NZAS's transmission charges. It appears that if the Government wants to support NZAS, it will have to offer a subsidy (albeit disguised as transmission relief).
- Political pressure to facilitate an extension increased, with National indicating that if elected it will look to broker a deal (although from our perspective, this appears to be what the Government is trying to achieve now).
- ASX prices surged in the last week of August. FY22 South Island Benmore (BEN) prices lifted +48% (+NZ\$26/MWh) to NZ\$79/MWh, not far below the pre-close announcement ASX futures price on 8 July. In itself the surge in the ASX futures price does not mean anything, however, it indicates there are some players within the electricity sector that are now confident that NZAS will be remaining open for longer.
- Aluminium prices firmed in August, with the LME price increasing +5% to US\$1,765/tonne (+2% to NZ\$2,610/tonne). Aluminium prices are now not far below pre COVID-19 levels.

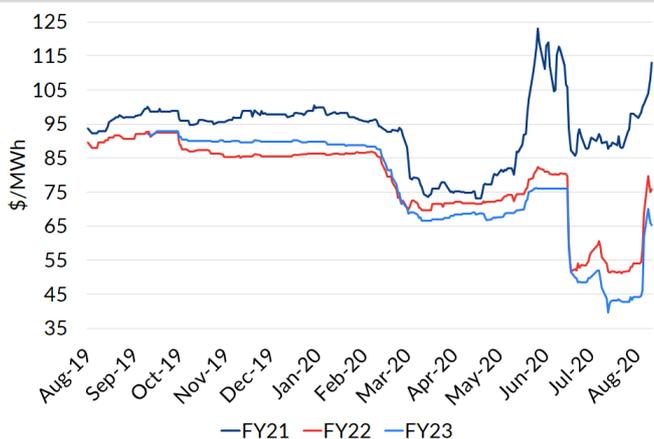
When RIO's global head of the aluminium business, Alf Barrios, spoke to NZAS staff in early August, he indicated a final decision would be announced in four to six weeks i.e. about now. It is hard to judge whether that time frame is realistic, or whether RIO may take longer. The latest COVID-19 outbreak in Auckland and the decision to postpone the election has probably not helped speed up decision making.

On balance, we now view the chance of NZAS remaining open beyond August 2021 a 50/50 call. However, whilst there have been encouraging signs in the past month that NZAS will remain open for longer, we are not convinced a deal on transmission will get done for the reasons noted above. That may yet prove to be the biggest sticking point. Our earnings forecasts for the electricity sector continue to assume NZAS closes in August 2021.

### ASX price surge curious, but suggests a 60% to 70% chance of staying open

The ASX price surge is very curious given it largely happened in a single day and comes off the back of little news. There was no obvious trigger for the +48%/59% increases in FY22/FY23 BEN ASX futures prices – but clearly the electricity futures market is now of the view NZAS is more likely to stay open for longer. Our estimation that the futures market is now pricing in a 60% to 70% change of staying open (a ~+40% increase) is based on FY22 ASX futures price movements from October 2019 (before RIO announced the NZAS strategic review) to prices in July & August 2020.

Figure 6. Benmore (BEN) futures prices

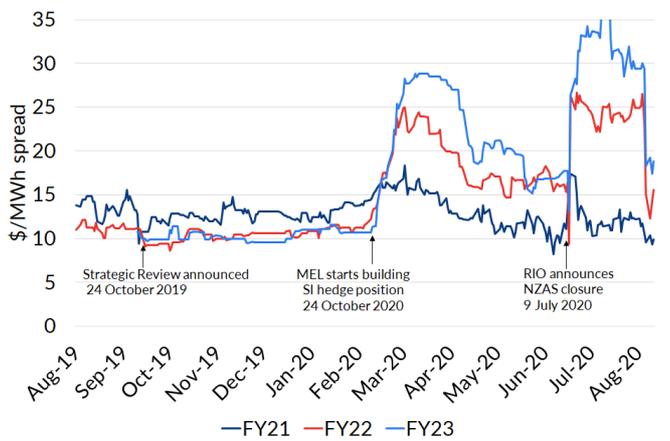


Source: IRESS, Forsyth Barr analysis

Figure 7. Otahuhu (OTA) futures prices



Source: IRESS, Forsyth Barr analysis

**Figure 8. OTA – BEN futures spreads**


Source: IRESS, Forsyth Barr analysis

**Figure 9. Futures prices changes**

	Chg	8-Jul-20	26-Aug-20	NZ\$/MWh chg from 8-Jul	2-Sep-20	NZ\$/MWh chg from 26-Aug
BEN	FY21	106	98	-\$7	113	\$15
	FY22	80	54	-\$25	76	\$21
	FY23	76	45	-\$31	65	\$21
OTA	FY21	119	110	-\$9	123	\$13
	FY22	96	81	-\$15	91	\$11
	FY23	94	75	-\$19	84	\$9
NZ	FY21	115	107	-\$9	120	\$13
Weighted	FY22	92	74	-\$18	87	\$14
Average	FY23	89	66	-\$23	79	\$13
NI/SI spread	FY21	13	12	-\$2	10	-\$2
	FY22	16	26	\$10	16	-\$11
	FY23	18	30	\$12	19	-\$11

Source: IRESS, Forsyth Barr analysis

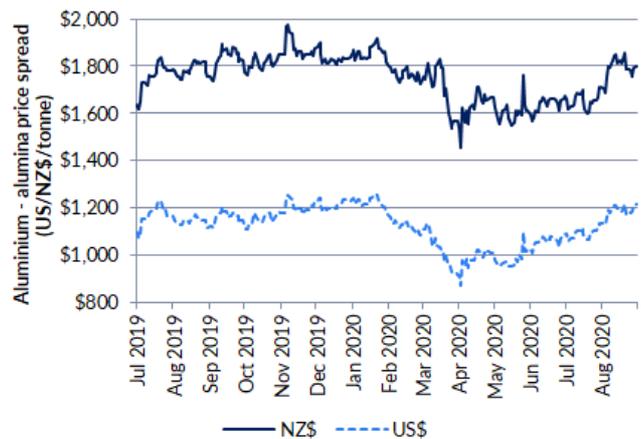
**Aluminium prices continue to rise in August, not far off pre COVID-19 levels**

Aluminium prices have continued to lift over the past month. Since the 9 July announcement, the LME price has increased ~+US\$160/tonne (+11%) to ~US\$1,760/tonne, similar to pre COVID-19 levels. The NZ\$/tonne increase is less, due to the rise in the NZDUSD, and has lifted ~+NZ\$180/tonne (+6%) to NZ\$2,600/tonne, ~-NZ\$200/tonne less than pre COVID-19 levels.

Whilst the strengthening aluminium price is helpful, we do not believe the short-term aluminium price will have a material impact on RIO's decision (and do not believe it had a material impact on RIO's close decision either).

**Figure 10. Aluminium prices**


Source: Forsyth Barr analysis

**Figure 11. Aluminium/alumina price spread**


Source: Forsyth Barr analysis

**GNE the biggest winner if NZAS stays around for longer (in a relative sense)**

Our base case remains that NZAS closes by August 2021. However, if NZAS does decide to enter a staged exit, the biggest increase in FY22 EBITDAF and beyond forecasts will be GNE, on a relative basis. On an absolute basis, the EBITDAF increases of the big four generator/retailers will be between NZ\$60m and NZ\$65m. Whilst CEN and MEL have the largest earnings decreases if NZAS closes, if NZAS remains open for longer, CEN and MEL will be receiving materially less from NZAS. i.e. CEN and MEL's earnings upside if NZAS remains open is less than the earnings downside if NZAS closes. We understand the combined CEN/MEL offer is between the NZ\$70m per annum top end offer that RIO rejected and the 33% electricity price reduction (~NZ\$115m) RIO had been seeking.

**Figure 12. NZAS closure impact on company's EBITDAF**

	Pre-NZAS closure announcement FY22 forecast	Current FY22 EBITDAF forecast	EBITDAF decline due to closure	EBITDAF uplift if NZAS remains open	
	NZ\$m	NZ\$m	NZ\$m	NZ\$m	% increase
	CEN	490	398	(92)	62
GNE	437	374	(63)	63	16.8%
MCY	554	495	(59)	59	11.9%
MEL	808	670	(139)	64	9.5%
TPW	207	191	(17)	17	8.8%
<b>Sector</b>	<b>2,497</b>	<b>2,127</b>	<b>(369)</b>	<b>264</b>	<b>12.4%</b>

Source: Forsyth Barr analysis

It is impossible to be certain what probability the market is factoring in of NZAS remaining open. Nevertheless, if NZAS remains open for longer we expect the electricity stocks to perform well. The exact amount will depend on the nature of the final deal with NZAS. The big advantage of NZAS remaining open for longer is it allows the sector to gradually transition to the new reality, and allows greater time for new electricity demand to replace the lost NZAS load. That in turn will de-risk the electricity sector, providing investors with confidence in sector earnings (and dividends) and will help underpin electricity share prices in the low interest rate environment.

## FY20 reporting season wrap

### NZAS company commentary matches own position (unsurprisingly)

CEN, GNE, MCY and MEL all commented on the impacts of NZAS closing. Taken at face value, the key take-outs were:

- No thermal generation is going to close, even though the need for thermal generation will be materially less if NZAS closes
- A retail price war is likely, with MEL keen to grow its market share, but no other retailer prepared to cede share
- All new build (in particular CEN's Tauhara geothermal option, MEL's Harapaki wind option and GNE's support for a solar option) has been paused, although it's fair to say there is a degree of reluctance to do so

Whilst it is possible to take a pessimistic view (there is going to be generation over supply and a retail price war), it is also clear that initial discussions are taking place regarding possible hedging and energy contracts in the event NZAS closes. The NZAS commentary from each company should be viewed in the context of each company stating its opening position to contract negotiations. We remain reasonably optimistic that thermal plant will close and that the worst of a retail price war will be avoided.

### Reported FY20 EBITDAF declined as expected

FY19 EBITDAF proved to be a record, with only MEL increasing FY20 EBITDAF. Sector EBITDAF declined -4%. A key factor behind FY19 earnings was the Pohokura gas outage lifting wholesale electricity prices, during a year with above average hydro generation, benefitting CEN and MEL in particular. Second, in FY20, with the exception of MEL, all other generators had to deal with a decline in low-cost renewable electricity generation – resulting in a lift in high cost thermal generation. In addition, asset sales that took place in FY19 impacted CEN and MCY earnings.

**Figure 13. FY20 vs FY19 comparison**

	CEN			GNE			MCY			MEL			Reported Gentailers		
	FY19 NZ\$m	FY20 NZ\$m	% Diff	FY19 NZ\$m	FY20 NZ\$m	% Diff	FY19 NZ\$m	FY20 NZ\$m	% Diff	FY19 NZ\$m	FY20 NZ\$m	% Diff	FY19 NZ\$m	FY20 NZ\$m	% Diff
NZ Energy EBITDAF	518	451	-13%	260	262	1%	485	476	-2%	745	756	1%	2,008	1,945	-3%
Other EBITDAF	-	-		109	94	-14%	20	-	-100%	93	99	6%	222	193	-13%
<b>TOTAL EBITDAF</b>	<b>518</b>	<b>451</b>	<b>-13%</b>	<b>369</b>	<b>356</b>	<b>-4%</b>	<b>505</b>	<b>476</b>	<b>-6%</b>	<b>838</b>	<b>855</b>	<b>2%</b>	<b>2,230</b>	<b>2,138</b>	<b>-4%</b>
<b>Normalised NPAT</b>	<b>176</b>	<b>129</b>	<b>-27%</b>	<b>64</b>	<b>53</b>	<b>-17%</b>	<b>161</b>	<b>164</b>	<b>2%</b>	<b>333</b>	<b>317</b>	<b>-5%</b>	<b>718</b>	<b>663</b>	<b>-8%</b>
Final dividend	23.0	23.0	0%	8.6	8.7	1%	9.3	9.4	1%	10.7	11.2	4%	653	669	2%
<b>Ordinary FY dividend</b>	<b>39.0</b>	<b>39.0</b>	<b>0%</b>	<b>17.1</b>	<b>17.2</b>	<b>1%</b>	<b>15.5</b>	<b>15.8</b>	<b>2%</b>	<b>16.4</b>	<b>16.9</b>	<b>3%</b>	<b>1,084</b>	<b>1,104</b>	<b>2%</b>
Special FY dividend	0.0	0.0		0.0	0.0		0.0	0.0		4.9	2.4	-50%	125	63	-50%
<b>Total FY dividend</b>	<b>39.0</b>	<b>39.0</b>	<b>0%</b>	<b>17.1</b>	<b>17.2</b>	<b>1%</b>	<b>15.5</b>	<b>15.8</b>	<b>2%</b>	<b>21.3</b>	<b>19.3</b>	<b>-9%</b>	<b>1,209</b>	<b>1,167</b>	<b>-4%</b>
Renewable generation	7,489	7,083	-5%	2,835	2,340	-17%	6,900	6,520	-6%	13,570	14,224	5%	30,794	30,167	-2%
Thermal generation	1,422	1,360	-4%	3,996	4,461	12%	-	-		-	-		5,418	5,821	7%
% Renewable	84.0%	83.9%		41.5%	34.4%		100.0%	100.0%		100.0%	100.0%		85.0%	83.8%	

Source: Company reports, Forsyth Barr analysis

Whilst MEL was the only generator/retailer to increase FY20 EBITDAF vs. pcp, it was also the only generator/retailer to see 2H20 earnings decline vs. 2H19. 1H20 was where all the action took place for MEL. 1H19 was also when the Pohokura outage took place and CEN sold its businesses (MCY sold Metrix early in 2H19), meaning it was easier for CEN and MCY to beat 2H20 earnings.

**Figure 14. 2H20 vs 2H19 comparison**

	CEN			GNE			MCY			MEL			Reported Gentailers		
	2H19 NZ\$m	2H20 NZ\$m	% Diff	2H19 NZ\$m	2H20 NZ\$m	% Diff	2H19 NZ\$m	2H20 NZ\$m	% Diff	2H19 NZ\$m	2H20 NZ\$m	% Diff	2H19 NZ\$m	2H20 NZ\$m	% Diff
NZ Energy EBITDAF	227	230	1%	118	138	17%	198	221	12%	397	357	-10%	940	946	1%
Other EBITDAF	-	-		56	51	-10%	5	-	-100%	52	33	-37%	113	84	-26%
<b>TOTAL EBITDAF</b>	<b>227</b>	<b>230</b>	<b>1%</b>	<b>174</b>	<b>189</b>	<b>8%</b>	<b>203</b>	<b>221</b>	<b>9%</b>	<b>449</b>	<b>390</b>	<b>-13%</b>	<b>1,053</b>	<b>1,030</b>	<b>-2%</b>
<b>Normalised NPAT</b>	<b>69</b>	<b>71</b>	<b>3%</b>	<b>21</b>	<b>37</b>	<b>79%</b>	<b>47</b>	<b>74</b>	<b>57%</b>	<b>189</b>	<b>133</b>	<b>-30%</b>	<b>310</b>	<b>315</b>	<b>2%</b>
Renewable generation	3,792	3,386	-11%	1,133	638	-44%	2,999	2,619	-13%	7,023	7,677	9%	14,947	14,320	-4%
Thermal generation	586	524	-11%	2,306	2,771	20%	-	-		-	-		2,892	3,295	14%
% Renewable	86.6%	86.6%		32.9%	18.7%		100.0%	100.0%		100.0%	100.0%		83.8%	81.3%	

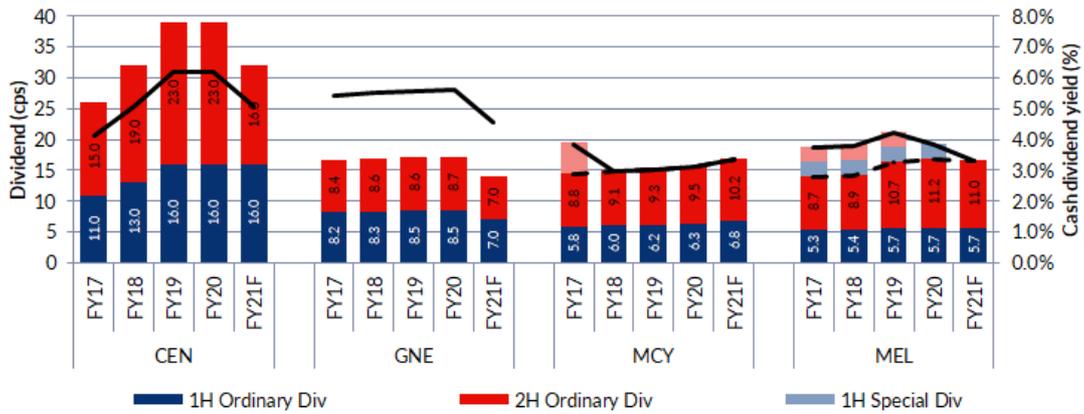
Source: Company reports, Forsyth Barr analysis

### Dividends contained a few upside surprises

The sector is either taking the view it is too early to make a call on dividends (i.e. there is a degree of hope that NZAS will stay open for a little longer) or there is confidence that even if NZAS closes, current dividend levels are sustainable. We would place CEN and GNE in the former category and MCY and MEL (having suspended its capital management program) in the latter camp.

MCY provided the biggest positive surprise, lifting FY21 dividend guidance +1.2cps (+7.6%) to 17.0cps. GNE surprised to the extent it held its dividend, although given FY21 earnings will grow and it is possible that NZAS will remain open for longer, the Board probably felt it was premature to be cutting the dividend. In providing no FY21 dividend guidance, CEN has left the market to estimate its likely path. It has promised to provide guidance once there is more certainty on the NZAS closure date.

Figure 15. Company dividend paths



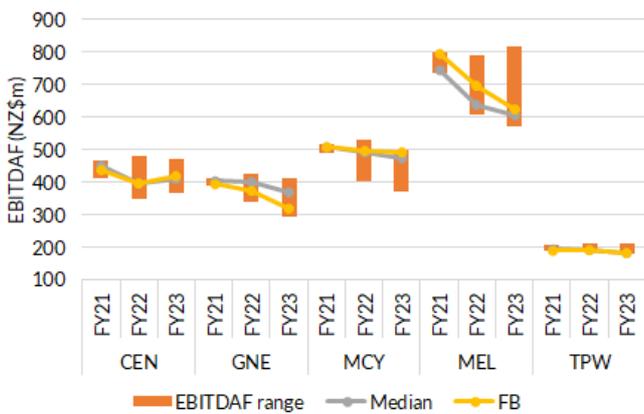
Source: Company reports, Forsyth Barr analysis

**Outlook remains uncertain – hopefully more clarity soon**

MCY and GNE provided FY21 EBITDAF guidance and MCY provided dividend guidance as usual. However, as noted above CEN has decided not to provide FY21 dividend guidance yet due to the level of long-term earnings uncertainty.

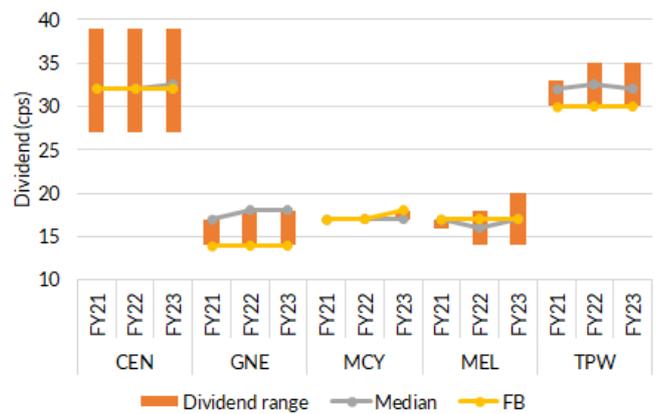
The outlook beyond FY21 remains particularly uncertain and is evident in the divergent market EBITDAF and dividend forecasts. With the exception of TPW, all of the other generator/retailers are showing higher than normal forecast ranges. It is also notable the effectiveness of company guidance on the level of divergence, with forecast EBITDAF ranges increasing significantly in FY22 and FY23.

Figure 16. EBITDAF forecasts



Source: Bloomberg, Forsyth Barr analysis

Figure 17. Dividend forecasts

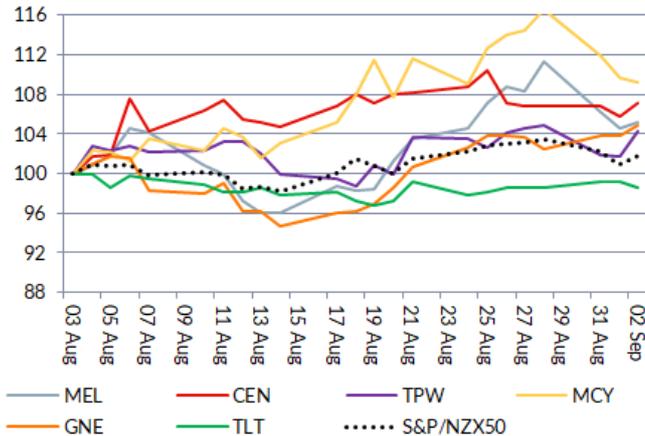


Source: Bloomberg, Forsyth Barr analysis

## Share market performance: August 2020

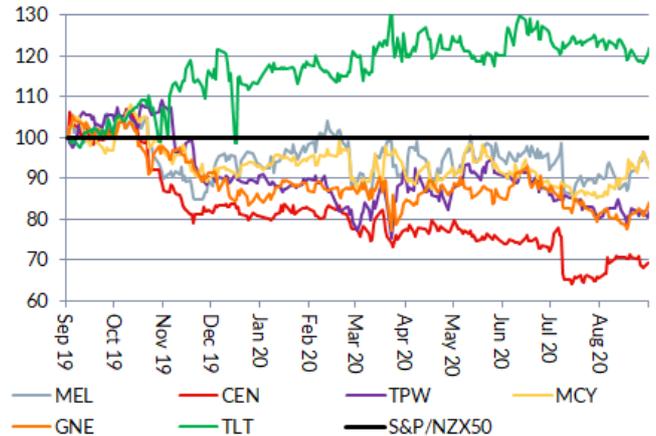
August was a strong month for the listed electricity stocks, with all companies rising by more than the S&P/NZX50C index from 3 August to 2 September with TLT the only exception. MCY had the best month, up +9.3% over the period, followed by CEN (which went ex-div in August), MEL, GNE and TPW which were up +7.2%, +5.2%, +4.8% and +4.2% respectively, all materially outperforming the index which was up +1.9%. TLT was down -1.4% on the back of issues with connection to the grid of its Dundonnell wind farm.

Figure 18. Stock performance vs. S&P/NZX50C



Source: Thomson Reuters, Forsyth Barr analysis

Figure 19. 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. Our preferred stocks are CEN, MEL and TLT (OUTPERFORM), whilst we rate MCY, GNE and TPW as NEUTRAL.

Figure 20. EBITDAF multiples

Company	Code	Price	Target	Target	Rating	Mkt Cap \$m	EBITDAF (x)		EBITDAF - capex (x)	
			Price	Return			FY21	FY22	FY21	FY22
Contact Energy	CEN	\$6.27	\$8.00	32.7%	OUTPERFORM	4,486	12.6	13.9	15.2	17.1
Genesis Energy (excl Kupe)	GNE	\$3.05	\$3.00	3.0%	NEUTRAL	2,849	13.4	15.4	16.1	19.0
Mercury	MCY	\$5.07	\$5.30	7.9%	NEUTRAL	6,900	15.8	16.3	18.5	19.2
Meridian Energy	MEL	\$5.03	\$5.50	12.7%	OUTPERFORM	12,892	18.2	21.7	19.6	23.8
Trustpower	TPW	\$6.93	\$6.55	-1.2%	NEUTRAL	2,169	14.7	14.6	16.9	16.8
<b>Sector average</b>							<b>14.8</b>	<b>16.1</b>	<b>17.2</b>	<b>19.0</b>
Tilt Renewables	TLT	\$3.60	\$4.10	13.9%	OUTPERFORM	1,354	15.7	10.3	18.1	11.3
Genesis Energy (incl Kupe)	GNE	\$3.05	\$3.00	3.0%	NEUTRAL	3,164	11.1	11.8	12.9	13.8

Source: IRESS, Forsyth Barr analysis

Figure 21. PE multiples and dividend yields

Company	PE (x)		Adjusted PE (x)		Cash Div Yield		Gross Div Yield		Free Cash Flow Yield	
	FY21	FY22	FY21	FY22	FY21	FY22	FY21	FY22	FY21	FY22
Contact Energy	45.2	50.2	19.7	22.4	5.1%	5.1%	6.1%	6.1%	5.6%	5.9%
Genesis Energy (excl Kupe)	89.2	103.6	23.4	24.2	3.3%	3.1%	4.6%	4.3%	6.4%	4.3%
Mercury	41.9	51.2	25.4	27.9	3.4%	3.4%	4.7%	4.5%	1.1%	2.3%
Meridian Energy	44.7	61.8	27.6	33.6	3.4%	3.4%	4.4%	4.3%	3.2%	2.5%
Trustpower	30.2	29.8	24.7	24.5	4.3%	4.3%	6.0%	6.0%	4.9%	4.9%
<b>Sector average</b>	<b>46.9</b>	<b>54.7</b>	<b>24.0</b>	<b>26.2</b>	<b>3.9%</b>	<b>3.9%</b>	<b>5.2%</b>	<b>5.1%</b>	<b>4.2%</b>	<b>4.0%</b>
Tilt Renewables	513.3	360.2	33.6	21.5	0.0%	0.0%	0.0%	0.0%	1.8%	7.3%
Genesis Energy (incl Kupe)	44.6	43.8	17.1	16.4	4.6%	4.6%	6.4%	6.4%	8.8%	7.1%

Source: IRESS, Forsyth Barr analysis

Note: In calculating the GNE excl Kupe multiples, the value of Kupe is assumed to be \$225m. Debt and interest has been apportioned 5% to Kupe and 95% to Energy (in line with EV proportion) and dividend in line with adjusted NPAT.

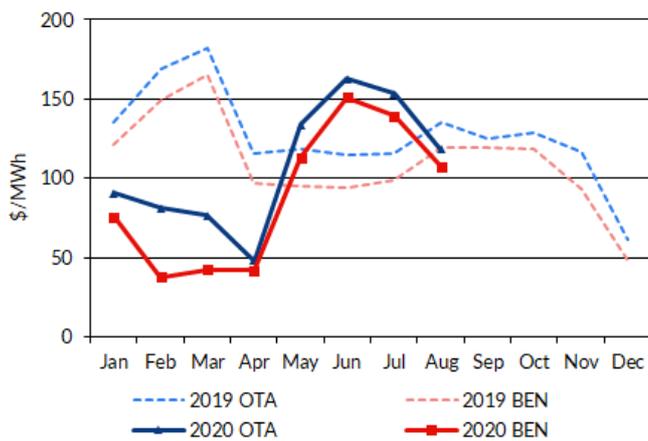
# Wholesale electricity market: July 2020

## Spot wholesale electricity prices and ASX futures

### Wholesale prices decline

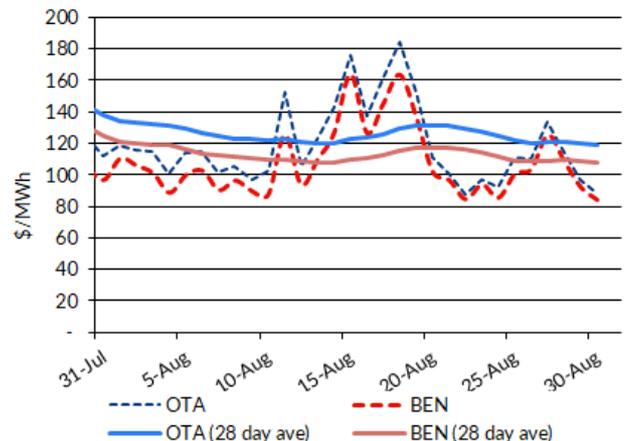
- Benmore (BEN) wholesale electricity prices averaged \$107/MWh in August 2020, down -10% on the pcp and -23% on the prior month. Otahuhu (OTA) declined by a similar factor, down -13% on the pcp and -23% on July 2020 to average \$118/MWh. This decline in wholesale prices is likely due to reduced electricity demand vs both the prior month and the pcp.
- The price gap between the North Island (OTA) and South Island (BEN) was \$11/MWh in August, a decline from the \$14/MWh differential in July 2020.
- Volatility in wholesale electricity prices declined in August, with daily OTA prices fluctuating between \$87/MWh and \$184/MWh, while BEN daily prices were between \$84/MWh and \$164/MWh throughout July.

Figure 22. Average monthly wholesale electricity prices



Source: NZX Energy, Forsyth Barr analysis

Figure 23. Average daily wholesale electricity prices

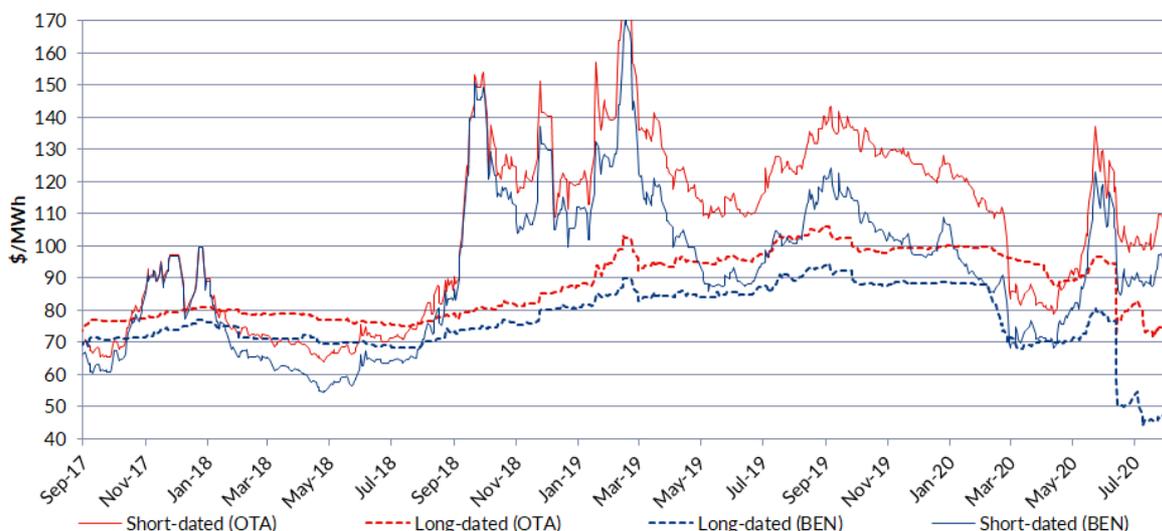


Source: NZX Energy, Forsyth Barr analysis

### Long-dated BEN futures spike at the end of August

- Long dated BEN futures were up +27%, following a sharp increase in the last days of the month, to sit at \$64/MWh. This increase in long-dated BEN prices is likely due to rumours around the possibility of RIO extending its NZAS closure date. In contrast, long-dated OTA futures were the only futures that declined from the end of July to the end of August 2020, down -1.2% to sit at \$81/MWh as at 28 August.
- Short-dated BEN and OTA futures were up +13% and +10% to end August at \$110/MWh and \$100/MWh respectively.

Figure 24. ASX futures prices (last three years)



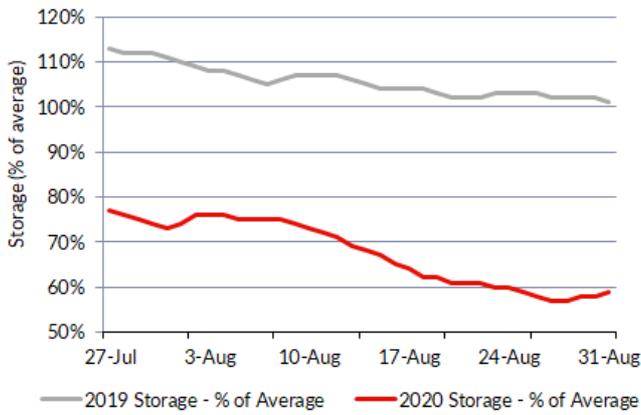
Source: Electricity Authority, Forsyth Barr analysis

## Hydro storage volumes

### All lakes below average

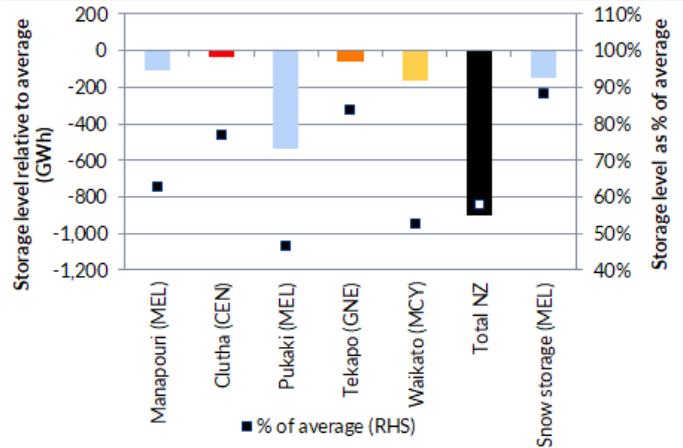
- Hydro storage levels remain well below average, with total New Zealand storage at 58% of mean for this time of year. GNE's Lake Tekapo is the highest at 84% and MEL's Pukaki (New Zealand's largest hydro storage lake) is the lowest at 47% of average.
- MEL's estimate its snow storage is 1,132GWh, and is currently -151GWh below average.

Figure 25. Average lake storage levels



Source: NZX Energy, Forsyth Barr analysis

Figure 26. Key storage lake levels relative to avg (as at 27 Aug)



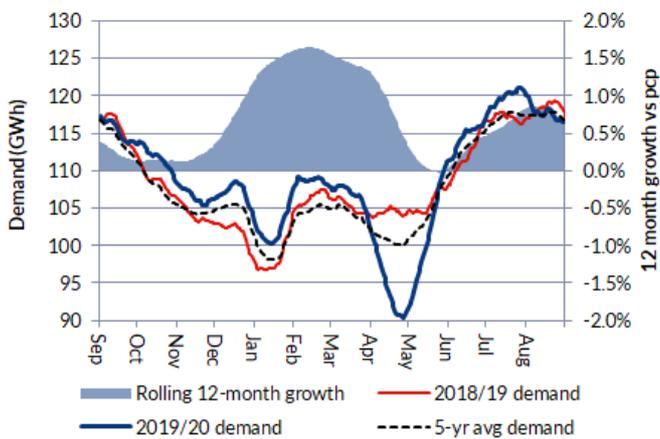
Source: EnergyLink, MEL, Forsyth Barr analysis

## Demand and generation analysis

### Demand down on warmer temperatures

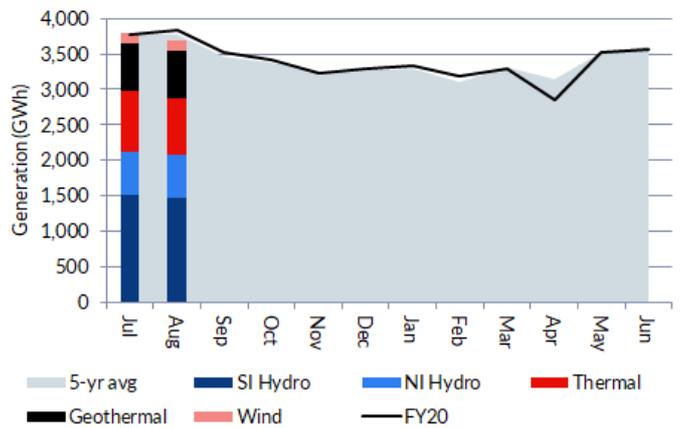
- New Zealand electricity demand averaged 116.0GWh/day, down -2.1% on the pcp and -4.3% on July 2020. This decline in demand will be due to warmer temperatures in the month, up +5.0% (+0.7°C) compared to August 2019 and +9.0% (+1.6°C) on the prior month.
- Total New Zealand generation of 3,698GWh in August 2020 was down -4% on the pcp, as generation from all fuel types declined on the prior year. The percentage of generation from thermal was down -1.5% from July to total 19.1% of generation, although down on the past month this is still above average due to continued low hydro levels. North Island and South Island hydro generation as a percentage of total were largely flat at 16.2% and 39.7% respectively, whilst generation from geothermal increased +0.6% to be 18.1% of total. Overall, the percentage of generation from renewable sources increased to 78% of total generation, although this remains below average.

Figure 27. Rolling 28-day average demand & rolling 12-m growth



Source: NZX energy, Forsyth Barr analysis

Figure 28. NZ generation (by technology) – fiscal year to June



Source: NZX energy, Forsyth Barr analysis

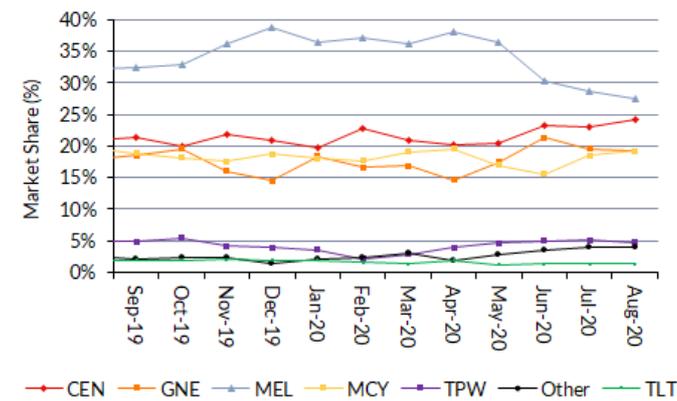
**Generation market share – CEN highest percentage in a year**

- CEN gained +1% market share in August 2020 compared to the prior month, to reach 24.1% of market share, MCY also gained +0.7% to reach 19.1%. MEL lost -1.1% whilst GNE and TPW both lost -0.3% to have 27%, 19.2% and 4.7% of market share respectively. TLT was flat at 1.3% of generation.

**CEN – Hydro improves**

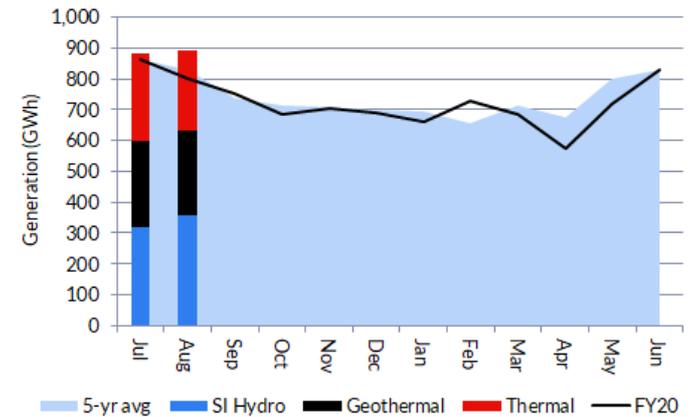
- Total CEN generation was 891GWh in August 2020, a +1% increase from the prior month, and an +11% increase on the pcp. This increase is due to CEN's Clutha hydro plant increasing generation by +13% on the prior month as well the Te Rapa co-generation plant more than doubling from July to August.

**Figure 29. Monthly generation market share**



Source: EnergyLink, Forsyth Barr analysis

**Figure 30. CEN monthly generation mix (current, pcp & 5y avg)**



Source: EnergyLink, Forsyth Barr analysis

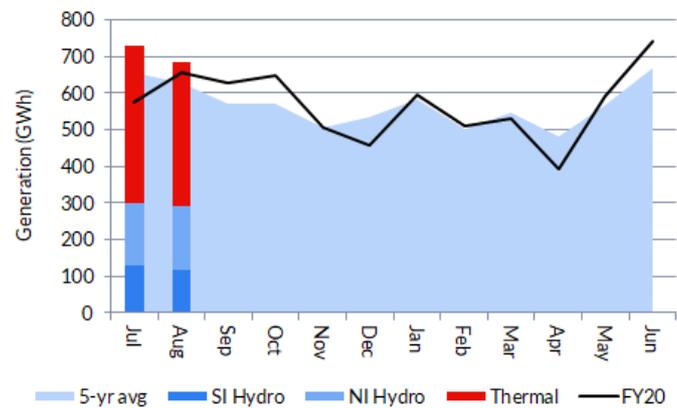
**GNE – Thermal generation declines**

- GNE generation was down -6% on the prior month to total 686GWh in August 2020. This decrease was due to GNE's South Island hydro (Tekapo) generation declining by -11%, albeit it remains well above average with August generation of 116GWh. Both Huntly and Unit 5 thermal generation levels declined by -6% and 9% compared to the prior month respectively. GNE continues to run its Tekapo generation hard due to high inflows at the start of the year.

**MCY – Generation flat**

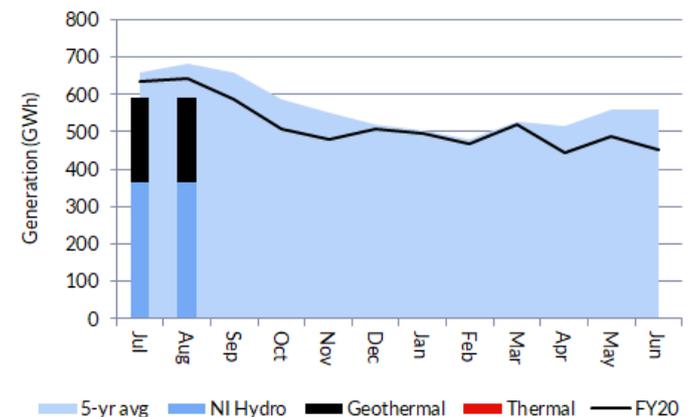
- MCY's August generation of 707GWh was largely flat on the prior month (+0.7%) but was down -7% on the pcp. Compared to last month, MCY's Waikato hydro generation, as well as geothermal generation from Nga Awa Purua and Ngatamariki plants were all unchanged. The main increase was from the Mokai geothermal generation which increased by +6% (5GWh). MCY's hydro generation remains well below average for this time of year, down -11% vs the long term mean.

**Figure 31. GNE monthly generation mix (current, pcp & 5y avg)**



Source: EnergyLink, Forsyth Barr analysis

**Figure 32. MCY monthly generation mix (current, pcp & 5y avg)**



Source: EnergyLink, Forsyth Barr analysis

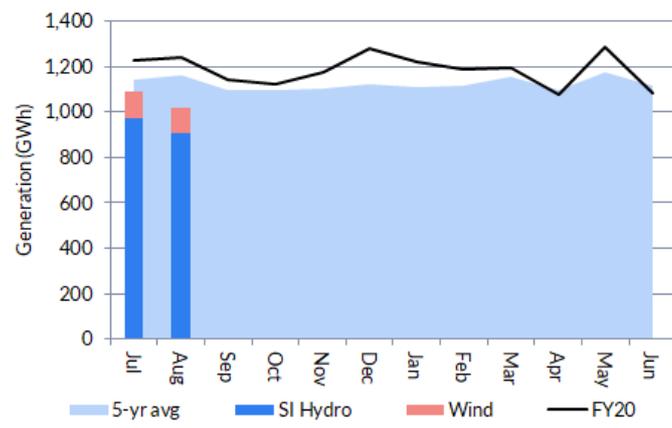
**MEL – Hydro generation down on low storage levels**

- MEL generation of 1,019GWh in August was down -7% on the prior month. This is due to reduced hydro generation from MEL's Waitaki hydro system, which generated -13% less (-80GWh) in the month. Wind generation was flat on last month at 114GWh.
- MEL's hydro storage levels continue to decline, with its Pukaki storage at 47% of average and Manapouri storage at 63% of average. MEL's snow storage is also down, currently at ~88% of mean for this time of year.

**TPW – Generation improving**

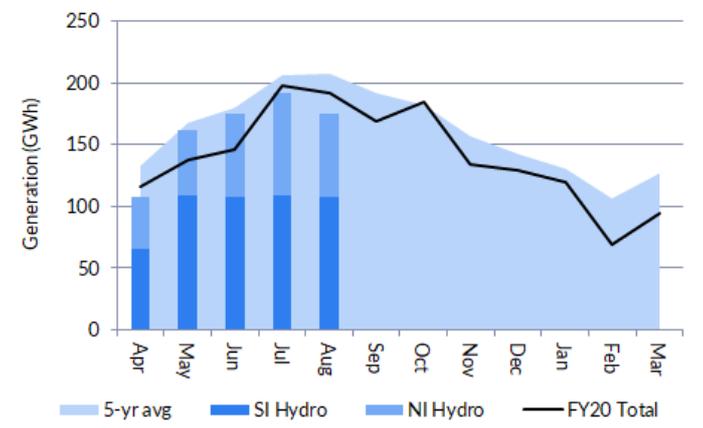
- We estimate that TPW generation was 174GWh in August, down -9% on July, albeit July was TPW's highest monthly generation since August 2019. The decline in generation came predominantly from TPW's North Island hydro assets which generated -19% less in August than July.

Figure 33. MEL monthly generation mix (current, pcp & 5y avg)



Source: EnergyLink, Forsyth Barr analysis

Figure 34. TPW monthly generation mix (current, pcp & 5y avg)



Source: EnergyLink, Forsyth Barr analysis

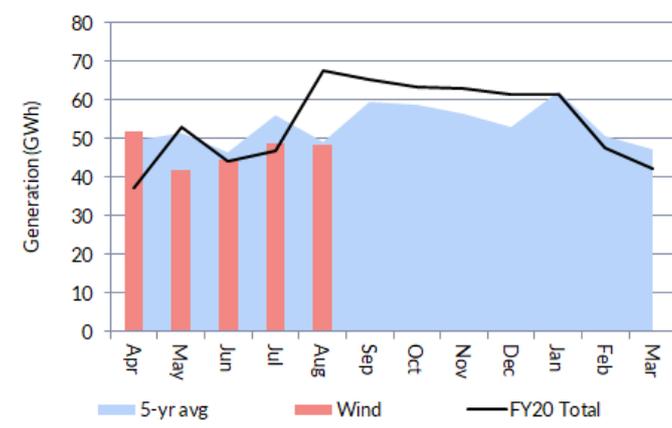
**TLT – No change in generation**

- Our estimate of TLT's August NZ generation of 49GWh is unchanged from July and is slightly below the long average generation, as well as being sharply down on the pcp. This is the fourth consecutive month of below average generation for TLT following the elevated wind levels experienced in late calendar year 2019.

**Generation prices – GWAPs fall as a result of reduced demand**

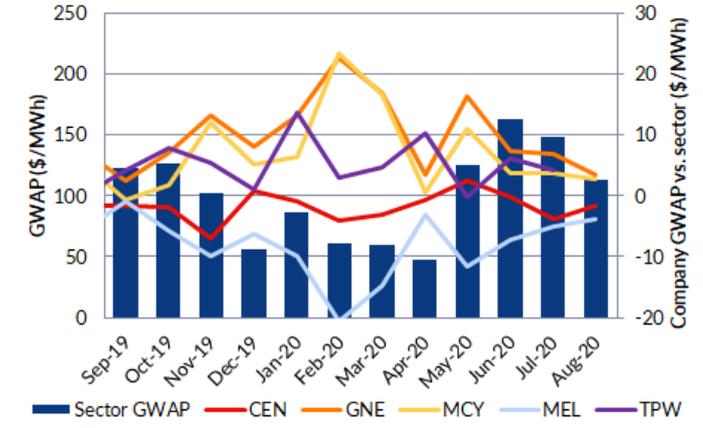
- The average generation weighted average price (GWAP) was \$112/Wh in August, a -24% decline from July. All of the big five generators experienced a decline in prices. TPW and GNE had the highest GWAPs at \$116/MWh, while MEL received the lowest GWAP over the month of \$109/MWh. CEN and MCY received \$111/MWh and \$115/MWh respectively.

Figure 35. TLT monthly generation mix (current, pcp & 5y avg)



Source: EnergyLink, Forsyth Barr analysis

Figure 36. Avg generation weighted average price (GWAP)



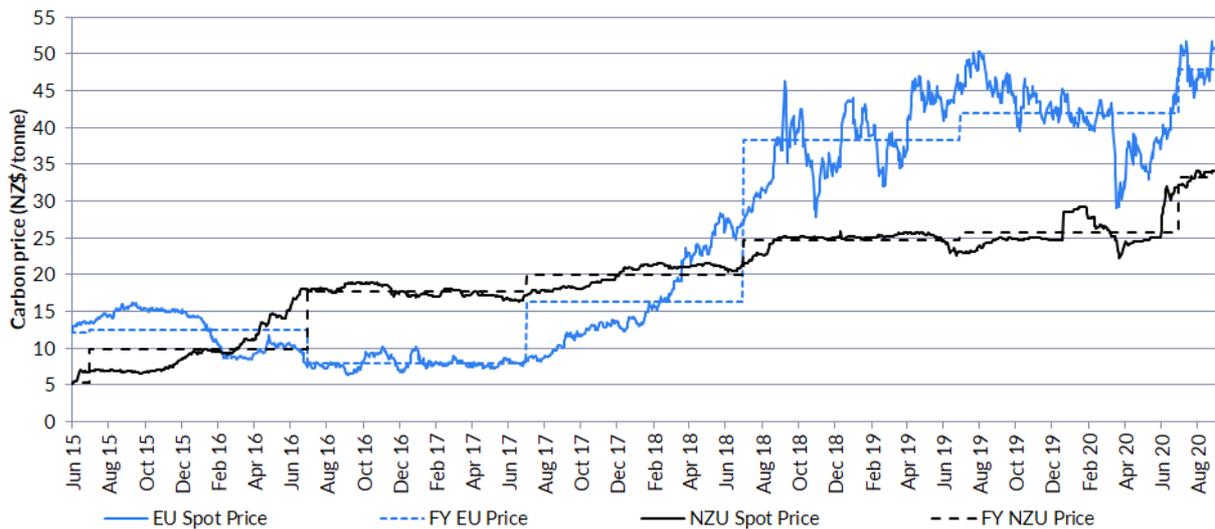
Source: EnergyLink, Forsyth Barr analysis

## Carbon prices

### NZ carbon prices – Units at record highs

- NZ carbon units ended August at \$34.12/unit after bottoming out at \$33.40/unit earlier in the month. This is the highest unit price recorded, slightly above the \$34.10/unit recorded in late July 2020. Prices are gradually rising toward the Fixed Price Option (FPO) of \$35 that was raised from \$25 in June 2020.
- EU carbon units were €28.7/unit (~NZ\$50.8/unit) at the end of August, a +9% increase from the €26.3/unit (~NZ\$46.7/unit) price recorded at the end of July.

Figure 37. Price of carbon (NZ\$/tonne)



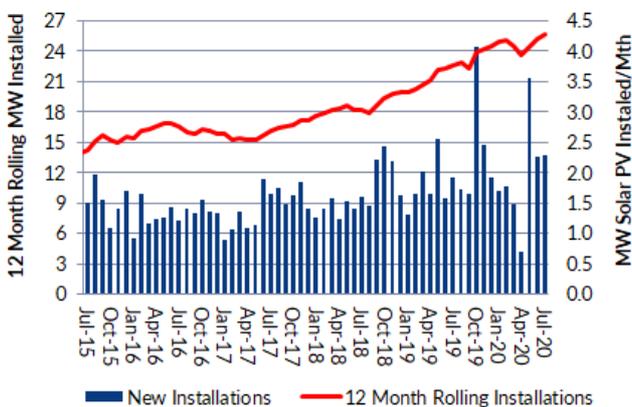
Source: Bloomberg, Forsyth Barr analysis

## Solar PV installations

### Rate of installation plateaus

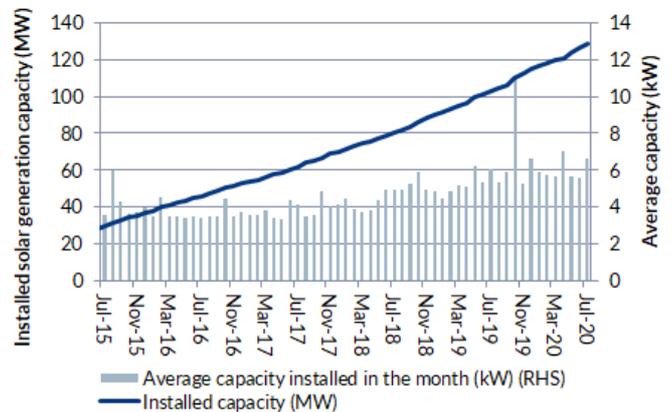
- New solar capacity installed in July 2020 was 2.29MW, which is largely flat on the 2.26MW installed the month prior, but follows the large spike in May as a result of pent up demand through Alert Level 4. This brings the total installed capacity to 128.4MW with 28,301 solar ICPs, and an ICP uptake rate of 1.3%.

Figure 38. Solar PV capacity installed



Source: Electricity Authority, Forsyth Barr analysis

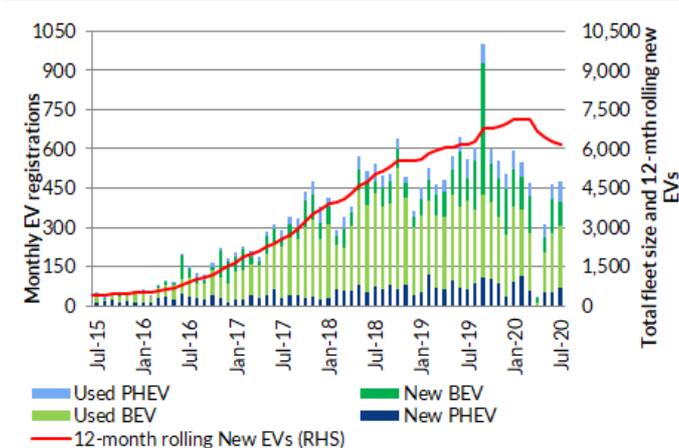
Figure 39. Average size of system and total capacity installed



Source: Electricity Authority, Forsyth Barr analysis

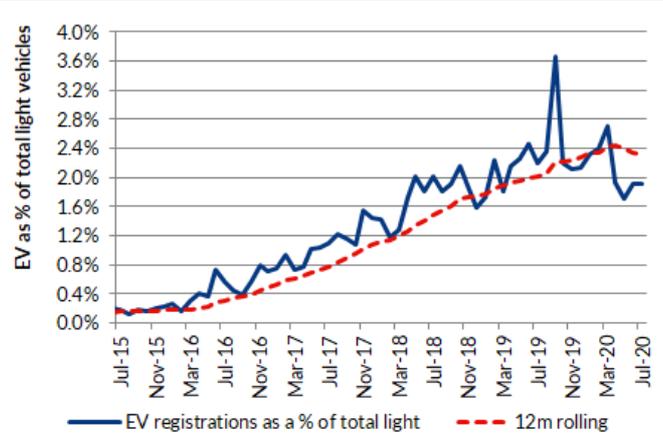
**Electric vehicle (EV) registrations**

**Figure 40. EV registrations**



Source: Ministry of Transport, Forsyth Barr analysis

**Figure 41. EV registrations % of total light vehicle registrations**

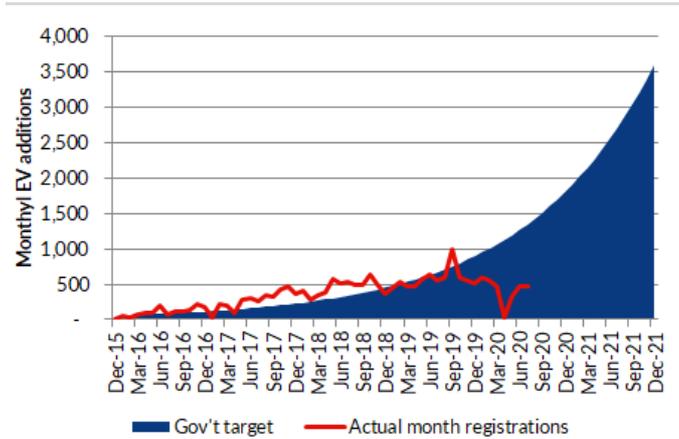


Source: Ministry of Transport, Forsyth Barr analysis

**EV registrations largely flat month on month**

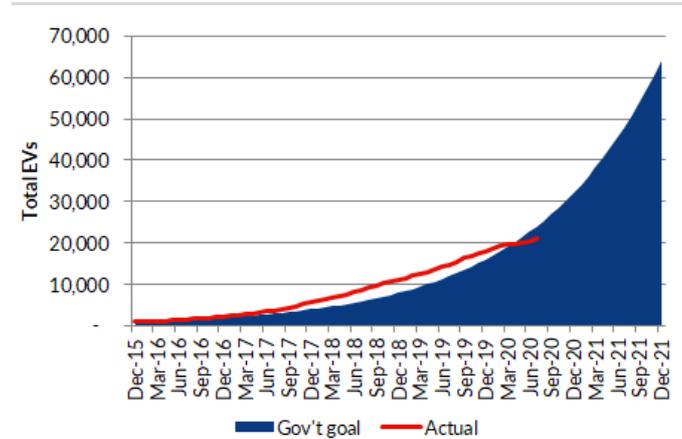
- In July 2020 there were 477 EVs registered, of which 160 were new. The number of EVs registered was largely flat on last month's 463 registrations. July registrations remain below levels experienced in the months pre COVID-19. The total number of EVs registered is now 21,011, -2,962 below the government target number of EVs to have been registered by now. It appears that monthly EV registrations have flattened out since May 2018, averaging ~500 per month.
- New EVs made up 1.3% of total new light vehicles registered in July 2020, which is down from 1.7% in June, whilst overall number of EVs per light vehicle registered (including used vehicles) was flat mom at 1.9%. The rolling 12-month percentage of EVs per light vehicle has dipped slightly following three months of low registration numbers and is currently at 2.3%. This is supportive of commentary around consumers apprehensive to purchase EVs in recent months due to relatively high sticker prices.

**Figure 42. Monthly EV registrations vs. govt target**



Source: Ministry of Transport, Forsyth Barr analysis

**Figure 43. Total EVs registered vs. govt target**



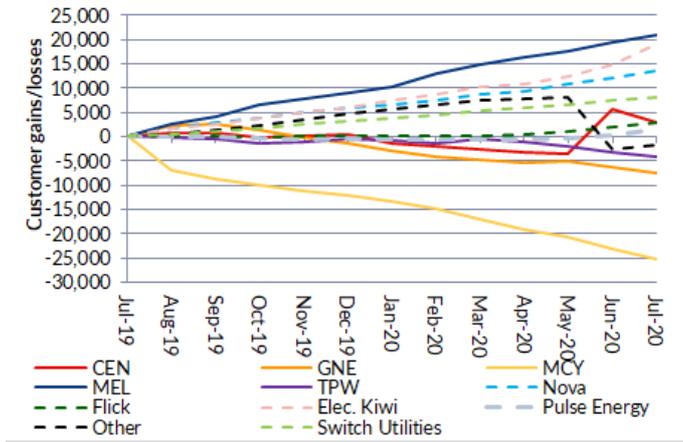
Source: Ministry of Transport, Forsyth Barr analysis

**Retail electricity customers**

**Electric Kiwi continues to grow**

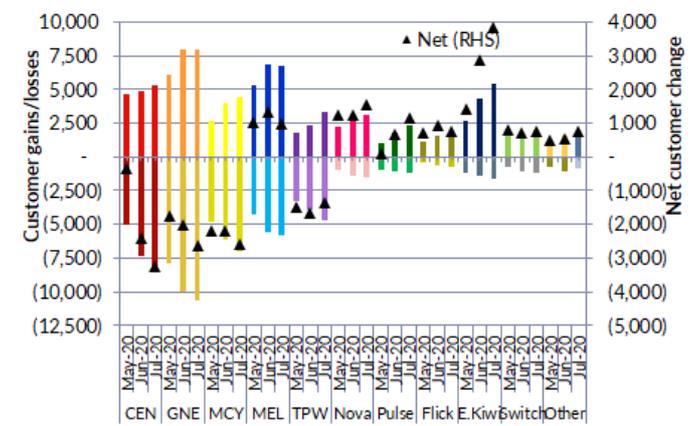
- CEN had the worst month of the large generator/retailers, losing -2,864 connections as it lost some of the +9,221 added connections from June as it acquired energyclubnz's customer book. TPW, GNE and MCY lost -864, -1,202 and -2,209 customers respectively, with MEL the only large retailer to gain connections, adding +1,308.
- Electric Kiwi gained +4,115 connections, and had the best month of all retailers. All other tier 2 retailers also gained connections in July, with Pulse Energy, Flick Electric, Switch Utilities and Todd Energy adding +1,211, +771, +810 and +1,555 respectively.
- In July, MEL was also the only large retailer to gain customers through switching (which excludes market growth), gaining +970 connections.

**Figure 44. Cumulative 12-mth electricity customer gains/losses**



Source: EA, Forsyth Barr analysis

**Figure 45. Customer switches (excludes market growth)**

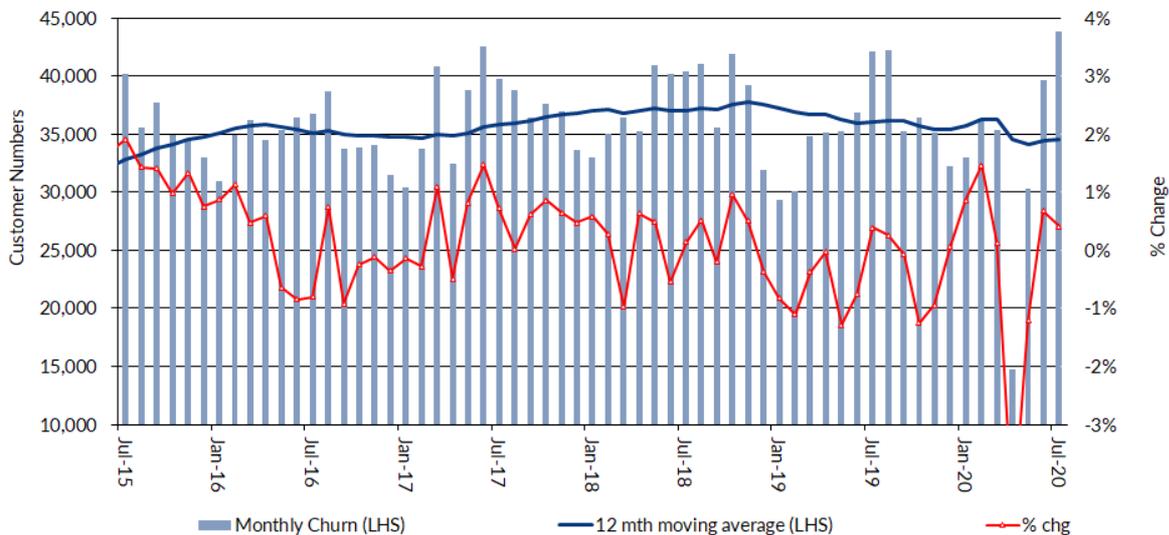


Source: EA, Forsyth Barr analysis

**Connection churn**

- There were ~43,800 customer switches in July 2020, up +4% on the pcp and +11% on the prior year, and is a record number of switches. Switching numbers appear to have returned to largely normal levels since churn reduced in April 2020 as a result of Alert Level 4.
- The percentage of switches from traders increased by +4% to 40% of total churn, whilst moving changes reduced -4% to 60% in July.

**Figure 46. Electricity connection churn**



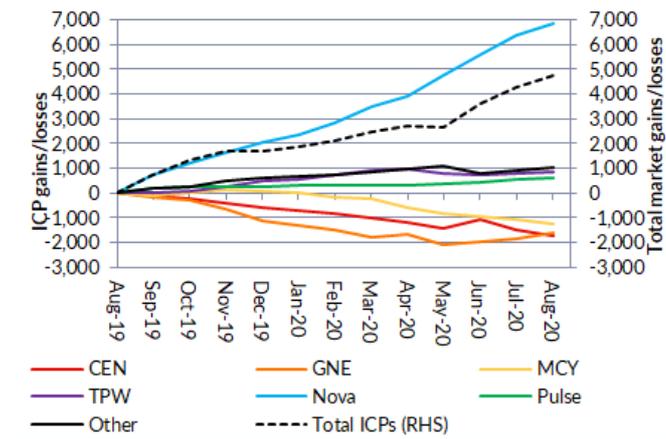
Source: EA, Forsyth Barr analysis

**Retail gas customers**

**CEN's losses continue**

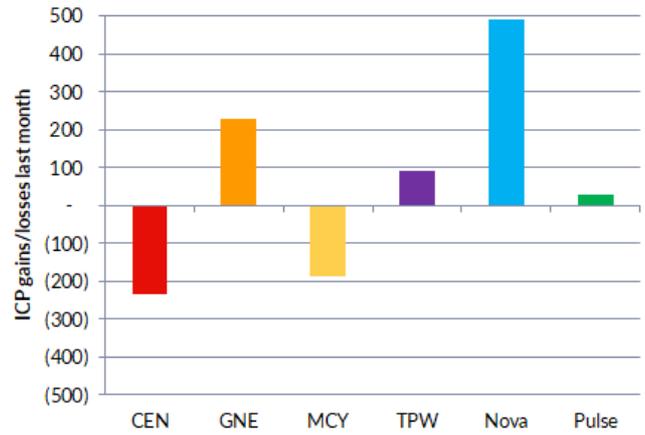
- CEN and MCY had the worst month of the large retailers, losing -233 and -188 gas connections respectively in August 2020. GNE and TPW both gained connections, with +230 and +90 extra connections respectively. However, it was again Nova that gained the most, adding +490 customers over the month. This brings Nova's 12-month additional connections to +6,845.
- CEN, GNE and MCY have lost -1,716, -1,596 and -1,256 customers over the past 12 months, with TPW the only listed retailer to gain connections in the year, adding +869.

**Figure 47. Gas connection gains/losses over the past 12-months**



Source: Gas Industry Co, Forsyth Barr analysis

**Figure 48. Gas connection gains/losses in August 2020**



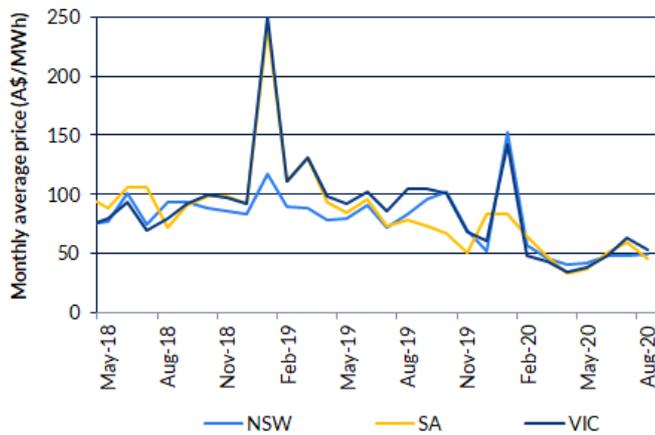
Source: Gas Industry Co, Forsyth Barr analysis

## Australian electricity market

### Wholesale electricity prices remain down on prior year

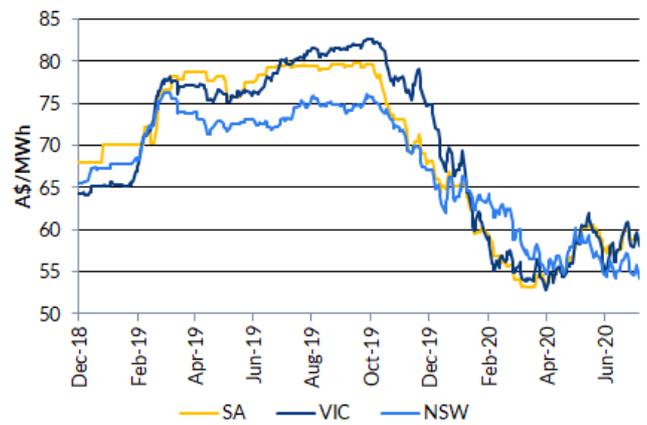
- NSW, VIC and SA prices were all down over -40% on the pcp in August. Compared to last month, however, NSW prices improved, up +4% on July to average \$49.9/MWh. SA and VIC prices both fell compared to the prior month, down -23% and -16% to average A\$45.6/MWh and A\$53.7/MWh over the month respectively.
- 2021 futures were also down in August. SA had the largest decline, down -4% compared to the end of July to finish the month at A\$56.4/MWh. NSW and VIC futures were down -1% and -2% to end the month at A\$55.3/MWh and A\$58.6/MWh respectively.

Figure 49. Australian wholesale electricity price (A\$/MWh)



Source: AEMO, Forsyth Barr analysis

Figure 50. Australian 2021 futures prices (A\$/MWh)

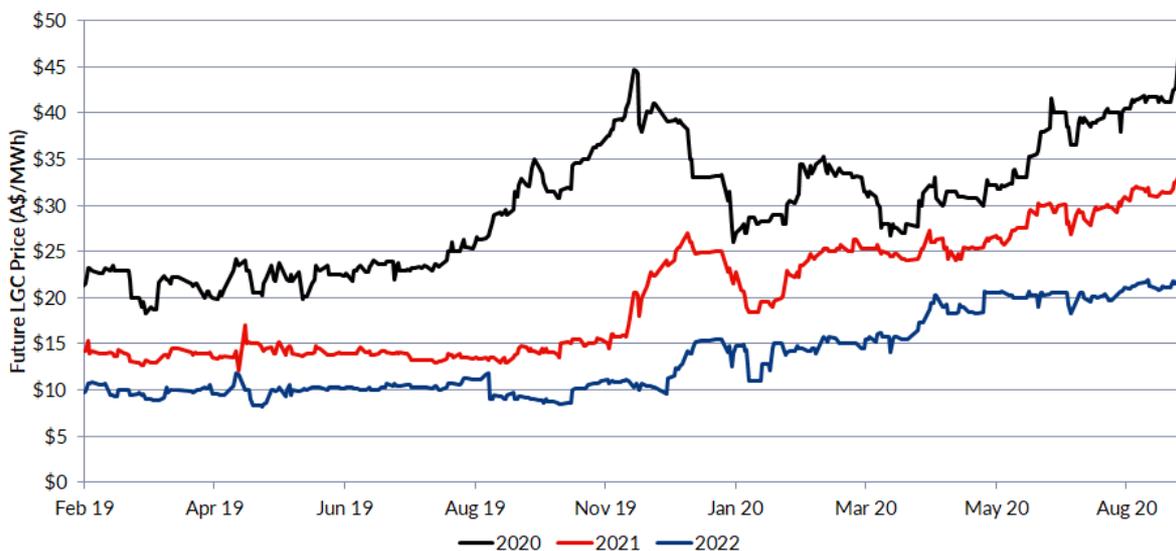


Source: Thomson Reuters, Forsyth Barr analysis

### Renewable energy certificates (LGC) spot prices up sharply

- 2020 LGC prices were up +13.6% from the end of July to the end of August and are currently A\$46.0/MWh. This is well above the pcp where the LGC price was A\$26.3/MWh.
- Long-dated 2021 LGC prices also increased materially in August, up +6% to currently be trading at A\$32.8/MWh. 2022 prices increased to A\$22.0/MWh, a +4.3% increase on the prior month.

Figure 51. Renewable energy certificate prices (LGC)



Source: Bloomberg, Forsyth Barr analysis

## Key statistics

### New Zealand electricity market statistics

Figure 52. Key statistics – New Zealand

	Aug-19	Jul-20	Aug-20	% Chg pcp	% Chg mom
<b>Average Monthly Prices</b>					
OTA avg (\$/MWh)	\$ 135.1	\$ 153.3	\$ 118.0	-12.7%	-23.0%
HAY avg (\$/MWh)	\$ 123.0	\$ 142.8	\$ 110.3	-10.3%	-22.8%
BEN avg (\$/MWh)	\$ 119.6	\$ 139.1	\$ 107.4	-10.2%	-22.8%
<b>Avg Daily Generation (GWh)</b>					
<b>CEN</b>	25.9	28.4	28.7	11.0%	1.2%
% of NZ Generation	20.9%	23.2%	24.1%	15.5%	4.0%
<b>GNE</b>	22.0	24.0	22.9	4.2%	-4.4%
% of NZ Generation	17.7%	19.6%	19.2%	8.4%	-1.7%
<b>MCY</b>	24.5	22.7	22.8	-7.0%	0.7%
% of NZ Generation	19.8%	18.5%	19.1%	-3.3%	3.5%
<b>MEL</b>	40.1	35.1	32.9	-18.0%	-6.5%
% of NZ Generation	32.3%	28.7%	27.5%	-14.7%	-3.9%
<b>TPW</b>	8.4	7.7	7.2	-14.1%	-7.1%
% of NZ Generation	6.8%	6.3%	6.0%	-10.7%	-4.6%
<b>Daily Demand (GWh)</b>					
Demand (excl Tiwai)	104.1	107.8	102.5	-1.6%	-4.9%
NZAS demand	14.3	13.5	13.5	-5.6%	0.2%
Total NZ Demand	118.4	121.2	116.0	-2.1%	-4.3%
<b>Hydrology (% of average)</b>					
Average hydro inflows	90%	138%	92%	2.4%	-33.6%
Average hydro storage	105%	77%	66%	-36.6%	-13.6%
Month end hydro storage	101%	78%	59%	-41.6%	-24.4%
<b>ASX futures as at:</b>					
	<b>30-Aug-19</b>	<b>31-Jul-20</b>	<b>28-Aug-20</b>		
Short-dated OTA	\$ 124.4	\$ 100.2	\$ 110.0	-11.6%	9.8%
Long-dated OTA	\$ 102.9	\$ 81.6	\$ 80.6	-21.7%	-1.2%
Short-dated BEN	\$ 101.5	\$ 88.8	\$ 100.5	-1.0%	13.2%
Long-dated BEN	\$ 90.0	\$ 50.0	\$ 63.6	-29.4%	27.1%

Source: NZX Energy, EnergyLink, Thomson Reuters, Forsyth Barr analysis

### Australian electricity market statistics

Figure 53. Key statistics Australia

	Aug-19	Jul-20	Aug-20	% Chg pcp	% Chg mom
<b>Average Monthly Prices</b>					
NSW avg (A\$/MWh)	\$ 84.0	\$ 48.0	\$ 49.9	-40.7%	3.9%
SA avg (A\$/MWh)	\$ 78.8	\$ 59.3	\$ 45.6	-42.2%	-23.2%
VIC avg (A\$/MWh)	\$ 105.0	\$ 63.6	\$ 53.7	-48.8%	-15.6%
<b>Electricity Futures for 2021:</b>					
	<b>30-Aug-19</b>	<b>31-Jul-20</b>	<b>31-Aug-20</b>		
NSW avg (A\$/MWh)	\$ 75.6	\$ 54.2	\$ 55.3	-26.6%	2.3%
SA avg (A\$/MWh)	\$ 79.4	\$ 58.8	\$ 56.4	-29.0%	-4.1%
VIC avg (A\$/MWh)	\$ 81.4	\$ 58.0	\$ 58.8	-27.8%	1.4%
<b>Spot and Future LGC Prices</b>					
	<b>31-Aug-19</b>	<b>31-Jul-20</b>	<b>31-Aug-20</b>		
2020 (A\$/MWh)	\$ 26.3	\$ 40.5	\$ 46.0	75.2%	13.6%
2021 (A\$/MWh)	\$ 13.5	\$ 30.9	\$ 32.8	143.5%	6.0%
2022 (A\$/MWh)	\$ 11.2	\$ 21.1	\$ 22.0	96.4%	4.3%

Source: Bloomberg, AEMO, Thomson Reuters, Forsyth Barr analysis

## Industry news

### Listed sector company news

#### Contact (CEN)

- Open Country Dairy's 13MW electroboiler was starting in August, with electricity being purchased from CEN for the boiler. Open Country considered biomass and coal before deciding on electricity for the boiler that will provide steam for a new dryer at the company's Awarua plant.
- CEN has taken full control of Simply Energy, a JV between CEN and the Simply Group. Simply Energy sells power to nearly 2,600 installation control points across commercial and industrial sites, with the aim to help facilitate customers adoption of new technologies.

#### NZ Wind Farms (NWF)

- NWF reported strong FY20 profit growth. Growth was driven by high wholesale electricity and hedge prices as well as favourable generation conditions, leading to an EBITDAF increase from NZ\$3.5m to NZ\$8m which was in line with guidance.

#### Tilt Renewables (TLT)

- Transpower has sent its mobile substation to Waverly substation to facilitate the connection of TLT's 130MW Waipipi windfarm to the grid. The substation will provide coverage to keep the power on over the coming months as a greener alternative to a diesel generator.

#### Vector (VCT)

- VCT subsidiary, Vector Powersmart has installed a 1MW floating solar installation on Watercare's wastewater treatment pond in Rosedale. It is the largest solar installation in New Zealand, with over 2,700 solar panels and 3,000 floating pontoons.

## Political / regulatory news

### Undesirable Trading Situation (UTS)

The Electricity Authority (EA) has found that MEL caused a UTS by spilling excess water at its hydro schemes in late 2019. Submissions on the initial finding by the EA were released in August:

- MEL has made a submission to the EA in response to the authority's initial finding that its hydro spilling in December 2019 constituted a UTS. MEL has said that its priority at the time was to mitigate safety and environmental risks and not to maximise revenue. MEL also noted that it thinks the EA's modelling around the amount of spill that could have been avoided is overstated as it fails to take into account planned generation outages.
- GNE has said in its submission to the EA that the UTS in December last year was due to concentrated South Island market power. GNE said that whilst MEL's actions were rational given the way the market is structured, that it is not the sort of market conduct that consumers and participants would find acceptable.
- The six companies behind the original Undesirable Trading Situation (UTS) complaint have said that the initial findings from the EA that only MEL was at fault is not enough, and that CEN's actions also constituted a UTS. The companies have provided a submission to the authority that CEN also would have suppressed nodal pricing separation even if it were the only South Island generator to spill water.
- The EA has begun its high standard of trading conduct (HSOTC) investigations into the spilling of water by CEN in December last year. The EA initially found that CEN's actions, unlike MEL's, had not constituted a UTS, but may constitute a breach of the HSOTC.

### Other political/regulatory news

- The Electricity Authority (EA) has appointed Nicki Crauford as the next board Chair starting on 1 November 2020. Crauford has been an executive at Transpower as well as in governance roles with GNE, Orion New Zealand and Pioneer Energy. The EA has also appointed Rob Bernau as director of the Transmission Pricing Methodology (TPM) project, on secondment from his role as general manager of market design.
- The EA is investigating if there is further disclosure necessary around generator/retailer internal transfer pricing to maintain confidence in the wholesale electricity market. The authority says the process is to ensure "competition, trust and confidence" in the wholesale market.

- Transpower opened a consultation period from 24 to 31 August for ideas on how to solve the 'first-mover' disadvantage for connection investments. Transpower will submit its feedback on the TPM changes relating to connection next June and says it will continue to explore options and hear feedback until then.
- The EA is looking at the early closure of the debt deferral scheme that was introduced during COVID-19. The scheme was intended to protect retailers from exiting the market due to financial pressures, however, to date there have been no successful applications under the scheme. The scheme was originally intended to be closed in February 2021.

## Other industry news

- Gas Industry Council CEO Andrew Knight has said that a large gas storage facility is a viable alternative for the proposed Lake Onslow pumped hydro scheme. Knight said that the cost to build a gas storage facility of the same magnitude would be ~NZ\$400m, only ~10% of the NZ\$4b expected cost of the Lake Onslow scheme, although Knight acknowledges that this is not the sole criteria for the decision and that environmental impacts need to be considered.
- MainPower is currently reviewing the time line for its Mt Cass wind farm in Canterbury. Works were delayed on the wind farm due to COVID-19, however, the announced exit of NZAS has led MainPower to review its assumptions for the project. Early works are continuing in the mean time.
- Production from the Pohokura gas field continues to be limited, with a drop experienced in early to mid August. OMV continues to do extensive maintenance work at Pohokura, with a revised maintenance plan through to early September including reductions of up to 100TJ per day.
- Oji Fibre Solutions is looking to expand its existing bioenergy plant at its Kinleith pulp and paper mill. The purpose is to use the biofuel that is produced from the pulp-making project to put in baseload renewable generation. The upgrade would deliver roughly 100MW of baseload generation through the more efficient use of 15PJ per annum of process heat.
- Hiringa Energy has announced it plans to deploy 20 hydrogen fuel cell heavy trucks next year as a testing phase, with plans for wider commercial deployment from 2022. Hiringa has signed deals with truck leasing company TR group and logistics company TIL group earlier in the year, as well as receiving NZ\$20m from the Government's COVID-19 recovery fund to begin building its heavy vehicle hydrogen fuel station network.
- The Ministry of Business, Innovation and Employment (MBIE) has released its annual energy report for 2019. The report highlights that thermal coal generation increased in 2019 to make up for reduced hydro and gas powered generation, as well as a ~+3% increase in national energy demand.
- A report produced for MBIE has found that New Zealand will struggle to be a green hydrogen exporter, largely due to New Zealand being unable to compete on a cost basis with other countries. The report found that the location of hydrogen production will be key, with the cost of getting hydrogen to point of use likely higher for New Zealand than other countries such as Australia, Qatarai and Canada. Electricity cost is also key, with the power likely to come from either captive wind farms or captive wind farm plus grid-powered configuration.
- New Zealand Steel and Pacific Steel made an underlying loss of A\$5.8m in FY20, as reported by owner BlueScope. The company also provided commentary around the current strategic review of the Glenbrook steel mill, saying that the review had now substantially progressed and that the company is currently planning to reconfigure the business. If the reconfiguration is unsuccessful in turning around the business then BlueScope has said operations at the Glenbrook steel mill may cease.

**Analyst certification:** The research analyst(s) primarily responsible for the preparation and content of this publication ("Analysts") are named on the first page of this publication. Each such Analyst certifies (other than in relation to content or views expressly attributed to another analyst) that (i) the views expressed in this publication accurately reflect their personal views about each issuer and financial product referenced and were prepared in an independent manner, including with respect to Forsyth Barr Limited and its related companies; and (ii) no part of the Analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that Analyst in this report.

**Analyst holdings:** For information about analyst holdings in a particular financial product referred to in this publication, please refer to the most recent research report for that financial product.

**Ratings distributions:** As at 2 Sep 2020, Forsyth Barr's research ratings were distributed as follows:

OUTPERFORM	NEUTRAL	UNDERPERFORM
44.4%	42.6%	13.0%

Forsyth Barr's research ratings are OUTPERFORM, NEUTRAL, and UNDERPERFORM. The ratings are relative to our other equity security recommendations across our New Zealand market coverage and are based on risk-adjusted Estimated Total Returns for the securities in question. Risk-adjusted Estimated Total Returns are calculated from our assessment of the risk profile, expected dividends and target price for the relevant security.

**Disclosure:** Forsyth Barr Limited and its related companies (and their respective directors, officers, agents and employees) ("Forsyth Barr") may have long or short positions or otherwise have interests in the financial products referred to in this publication, and may be directors or officers of, and/or provide (or be intending to provide) investment banking or other services to, the issuer of those financial products (and may receive fees for so acting). Forsyth Barr is not a registered bank within the meaning of the Reserve Bank of New Zealand Act 1989. Forsyth Barr may buy or sell financial products as principal or agent, and in doing so may undertake transactions that are not consistent with any recommendations contained in this publication. Other Forsyth Barr business units may hold views different from those in this publication; any such views will generally not be brought to your attention. Forsyth Barr confirms no inducement has been accepted from the issuer(s) that are the subject of this publication, whether pecuniary or otherwise, in connection with making any recommendation contained in this publication. In preparing this publication, non-financial assistance (for example, access to staff or information) may have been provided by the issuer(s) being researched.

**Investment banking engagements:** For information about whether Forsyth Barr has within the past 12 months been engaged to provide investment banking services to an issuer that is the subject of this publication, please refer to the most recent research report for that issuer's financial products.

**Not personalised financial advice:** The recommendations and opinions in this publication do not take into account your personal financial situation or investment goals. The financial products referred to in this publication may not be suitable for you. If you wish to receive personalised financial advice, please contact your Forsyth Barr Investment Adviser. The value of financial products may go up and down and investors may not get back the full (or any) amount invested. Past performance is not necessarily indicative of future performance. Disclosure statements for Forsyth Barr Investment Advisers are available on request and free of charge.

**Disclaimer:** This publication has been prepared in good faith based on information obtained from sources believed to be reliable and accurate. However, that information has not been independently verified or investigated by Forsyth Barr. Forsyth Barr does not make any representation or warranty (express or implied) that the information in this publication is accurate or complete, and, to the maximum extent permitted by law, excludes and disclaims any liability (including in negligence) for any loss which may be incurred by any person acting or relying upon any information, analysis, opinion or recommendation in this publication. Forsyth Barr does not undertake to keep current this publication; any opinions or recommendations may change without notice to you. Any analyses or valuations will typically be based on numerous assumptions; different assumptions may yield materially different results. Nothing in this publication should be construed as a solicitation to buy or sell any financial product, or to engage in or refrain from doing so, or to engage in any other transaction. This publication is not intended to be distributed or made available to any person in any jurisdiction where doing so would constitute a breach of any applicable laws or regulations or would subject Forsyth Barr to any registration or licensing requirement within such jurisdiction.

**Terms of use:** Copyright Forsyth Barr Limited. You may not redistribute, copy, revise, amend, create a derivative work from, extract data from, or otherwise commercially exploit this publication in any way. By accessing this publication via an electronic platform, you agree that the platform provider may provide Forsyth Barr with information on your readership of the publications available through that platform.