FORSYTH BARR

# Power Points

## October 2019 — ASX Futures Prices Power On Up

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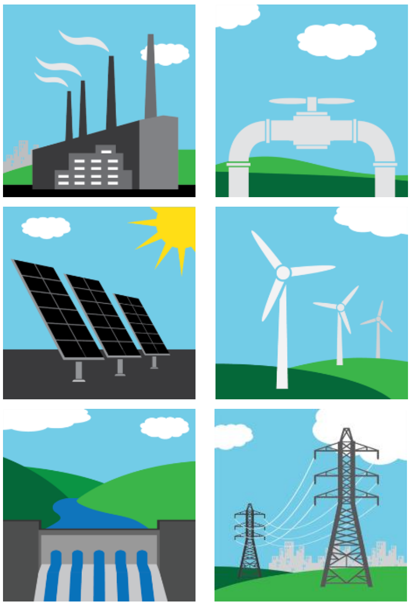
**It was another positive month for the electricity sector, with the Electricity Price Review (EPR) containing no big surprises, ASX futures prices firming to record levels and share prices once again outperforming the S&P/NZX50. Wholesale electricity prices were again firm and rose noticeably after month end as hydro lakes continued to fall and a cold snap came over the country.**



### EPR outcomes lower regulatory risk, for now

The long-awaited EPR contained few surprises. As expected prompt payment discounts, win-backs and the low fixed charge tariffs are to be phased out. There is also expected to be stricter rules on futures market making. The Government is expecting the Electricity Authority (EA) to implement most of the recommendations and plans to review the implementation in two to three years.

### Wholesale electricity prices firm as South Island hydro lakes fall

The average OTA price in September was $119/MWh, flat on the pcp, but since month end prices have been above $200/MWh, with hydro lake storage levels now 83% of average due to low South Island storage. The ASX futures prices have risen to record levels, with long-dated BEN prices above $90/MWh for the first time and OTA prices above $102/MWh. Electricity demand was again slightly up on the pcp (+1.2%, +0.8% excluding NZAS demand). We expect Meridian Energy (MEL) has had another good month; however, the outlook is less certain given the lower lake levels. Contact Energy (CEN) has had a more difficult month, with record low hydro generation for September.

### MSCI Index changes on a knife-edge for CEN

MSCI Index changes will be set based on prices in the last two weeks of October. At this stage, we expect Mercury (MCY) will enter the MSCI Index. There is a good chance that CEN will also enter the Index, but that requires the number of constituent stock to increase (which we believe is a little more likely than not) and for CEN to not underperform Fletcher Building (FBU) in the coming weeks. All will be revealed on Friday 8 November.

**Figure 1. Summary company valuation metric**

| Ticker | Price | Target Price | Target Return | Rating | EV/ EBITDA(x) | FY20 Adj PE (x) | Gr Yld * | EBITDAF NZ$m |
|---|---|---|---|---|---|---|---|---|
| CEN | $8.72 | $8.22 | -1.3% | NEUTRAL | 14.7 | 23.5 | 5.7% | 488 |
| GNE | $3.50 | $3.28 | -1.3% | NEUTRAL | 15.9 | 33.4 | 6.9% | 367 |
| MCY | $5.40 | $4.45 | -14.7% | UNDERPERFORM | 17.3 | 32.2 | 4.1% | 488 |
| MEL | $5.27 | $4.20 | -16.2% | UNDERPERFORM | 19.4 | 30.5 | 5.1% | 769 |
| TLT | $2.84 | $2.99 | 5.4% | OUTPERFORM | 11.8 | 15.9 | 0.0% | 145 |
| TPW | $8.23 | $8.00 | 1.4% | OUTPERFORM | 15.0 | 24.5 | 5.6% | 209 |

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

**Investment View**

We are positive on the long-term outlook for the sector. However, all of the electricity stocks are trading on record multiples, and any change in the interest rate environment is likely to impact on share prices. If interest rates stay low, we expect continued support for the sector.

# Power Points — October 2019

## Electricity Price Review conclusions contain no surprises

The long-awaited Electricity Price Review (EPR) has finally been publicly released. The report was finalised on 21 May and the Government only released the report, along with its response, in the past week, more than four months later.

Overall the key findings/recommendations are consistent with the EPR draft report. There is nothing here that has not previously been raised and much of it already implemented (or is in the process of being implemented). Unsurprisingly, the rhetoric around the report's release somewhat overstated things, in our opinion.

### Key points

- **The Government expects the sector to discontinue prompt payment discounts**, but a modest late payment penalty charge can be implemented. Whilst there is no formal regulation, the threat is there. This was expected — Meridian and Contact (for new customers) have already moved to end prompt payment discounts.
- **No saves and win-backs** — again this was expected.
- **Encourage more switching** and establish a pilot scheme to help non-switching consumers find better deals — this had been a key focus.
- **Enforce stricter market-making rules** on generators offering energy into the futures market (if not already done voluntarily) — the EA and the big four generators have already tightened up the market making rules, which has reduced the spreads and made it harder for them walk away from market-making obligations. We understand the EA will look to see whether the rules should be tightened further.
- **Removing the low fixed charge tariffs** — this is a significant positive for the sector. It will result in higher fixed costs and lower variable costs charged to consumers, which in turn will encourage EVs but discourage roof-top solar.
- **The EPR recommends a Government Policy Statement (GPS) on transmission and distribution pricing**. The Government is letting the EA complete the TPM process, but notes a GPS may be required if the outcome is unsatisfactory. In our view this can only slow down the TPM as the EA will be even more cautious on an issue it has been working on for so many years already…
- The EPR found that "wholesale prices appear reasonable compared to the cost of building new power stations" — this is an important statement given the current high wholesale electricity prices. If the EPR had found the opposite, that would have raised more issues and be of greater concern than the retail market tinkering.
- The Government notes that the EA will be responsible for implementing many of the recommendations and that as an independent body it cannot direct specific regulation. However, it then goes on to say that the Government will step in if the EA does not implement the recommendations to its satisfaction!

At the margin retail profits may dip for a period but we do not see this as a long-term issue. The generation side of the business still makes up 70% to 90% of generator/retailer earnings.

The final EPR report can be found here: https://www.mbie.govt.nz/assets/electricity-price-review-final-report.pdf

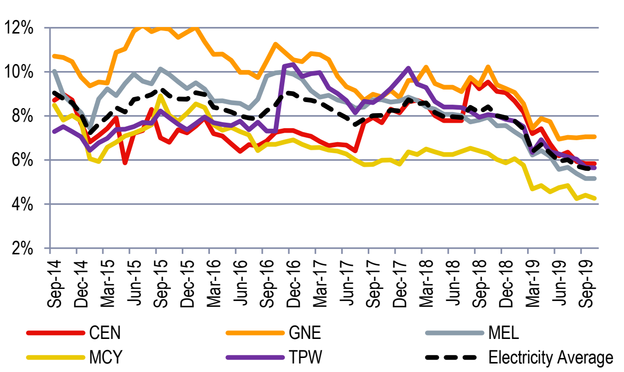
The Government has indicated that it will review outcomes in its second term (assuming it is re-elected) highlighting that the sector will always have some regulatory overhang — but overall the changes recommended are tinkering at the edges as opposed to wholesale changes. We continue to view sector regulatory risk to be low.

## Yield story persists, but with a few bumps

September 2019 has seen the yield story continue for the generator/retailers. September did, however, highlight the sensitivity to interest rates. Mid-month the 10-year swap rate increased more than +20 basis points, resulting in the big four electricity stock share prices falling between -5% and -10%. However, the increase in interest rates proved to be temporary with interest rates ending September at similar levels to the beginning (and falling further in early October).

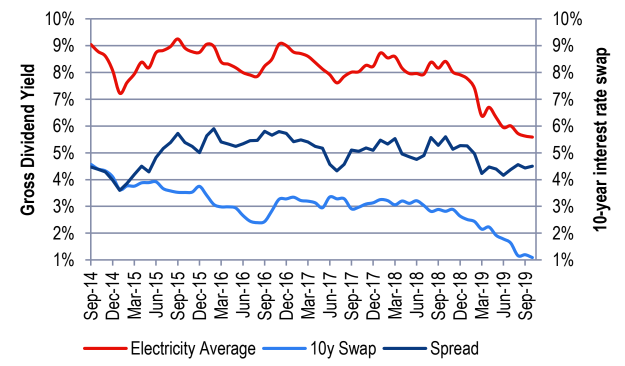
The spread between the 10-year swap rate (1.12%) and the average gross dividend yield (5.59%) remains between 4% and 5% at 4.5%, so slightly above its low point, suggesting there is further upside to electricity share prices.

**Figure 2. Gross dividend yields**




Source: Bloomberg, Forsyth Barr analysis

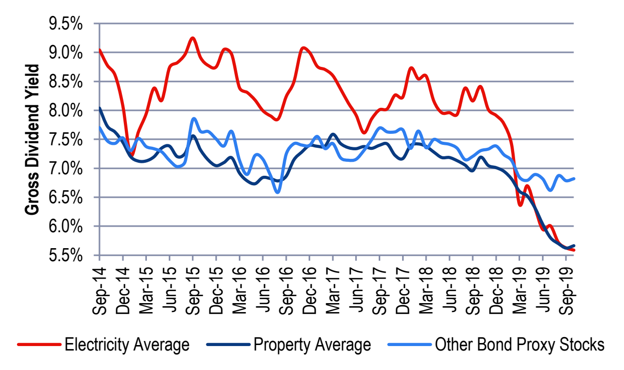
**Figure 3. Electricity sector dividend yield vs 10-year swap rate**




Source: Bloomberg, Forsyth Barr analysis

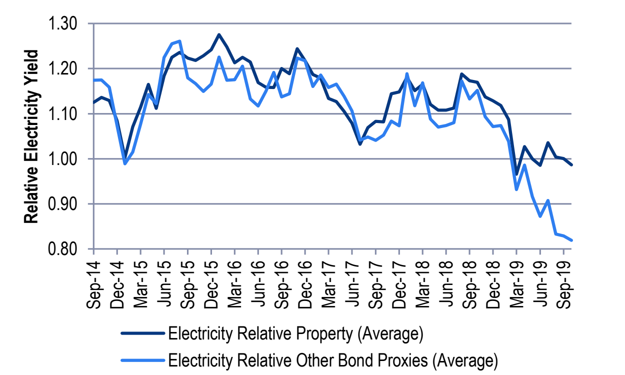
The electricity sector has continued to outperform relative to other high quality yield stocks (CNU, SKC, SPK, VCT). These alternative bond proxies are looking increasingly attractive vs. the electricity stocks. Relative to property, electricity performance has been similar, although in September the electricity sector slightly outperformed property.

**Figure 4. Avg. electricity sector yield vs property and bond proxies**




Source: Bloomberg, Forsyth Barr analysis

**Figure 5. Elec. sector yield relative to property and bond proxies**




Source: Bloomberg, Forsyth Barr analysis

## MSCI review gets closer — CEN in a tight race with FBU

Some of the strong run in MCY and CEN can likely be attributed to the potential for each company to enter the MSCI New Zealand Standard Index, (the New Zealand segment of the broader MSCI World & ACWI indices), at the upcoming November review. Given the substantial value of passive funds tracking MSCI's indices globally (MSCI's most recent estimate put the total at USD$786b) there has been increasing amounts of speculation prior to the announcement of index reviews. The outcome of the index review will be announced on Friday 8 November, with the changes becoming effective at close on Tuesday 26 November. Prices to be used at the index review can be taken as at any of the last 10 trading days of October.

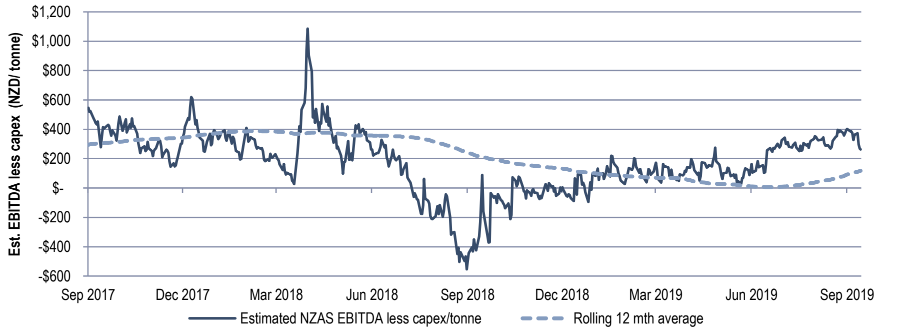
At current pricing there are two possible outcomes:

- **Number of members is left unchanged at seven** (we believe this is the slightly less likely scenario): Priority rules would dictate that MCY enters and Fletcher Builder (FBU) exits.
- **Number of members is increased to eight** (we believe this is the slightly more likely scenario): Priority rules would mean that MCY enters and that either FBU stays or CEN replaces FBU. A month ago the latter scenario was the more likely. However, share price movements in the last month have at times seen FBU more likely to remain in the index than being replaced by CEN. We believe at the current share price (CEN at $8.73 and FBU at $4.80) CEN has its nose in front, but a relative movement of ~2% in favour of FBU will see the position reverse.

## NZAS continues to make more from its electricity contract than aluminium

We have recently heard rumours that NZAS is again struggling financially. Our analysis suggests that in the year to 30 June 2019, the market was less favourable but the September 2019 quarter has seen NZAS make ~NZ$300/tonne in earnings (EBITDA less maintenance capex). Aluminium prices have been reasonably steady over the past quarter but falling alumina prices and a falling NZDUSD FX rate have been helpful.

**Figure 6. Estimated NZAS profitability**



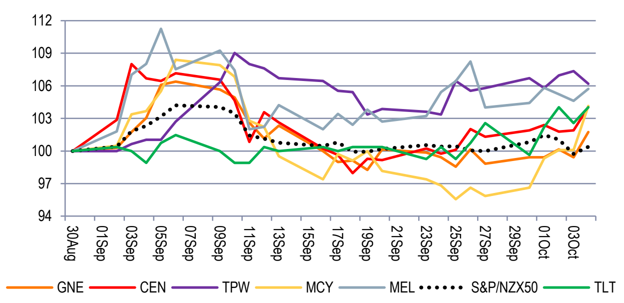

Source: Bloomberg, IRESS, Forsyth Barr analysis

In addition, we estimate that NZAS made ~$1.5m in September from its electricity contract by not operating at full capacity. NZAS' average electricity consumption was 594MW in September, -28MW below its contracted volume. However, after adjusting "lost" aluminium sales, we estimate the gain is a little under $1.0m.

# Share market performance: Sept 2019

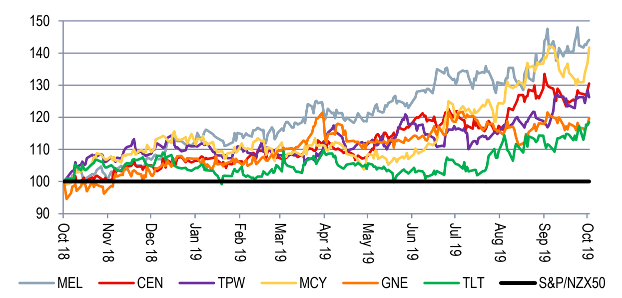
Once again all the generator/retailers outperformed the S&P/NZX50C in September 2019, this month led by TPW (+6.2%) and MEL (+5.7%). However, in mid-September most of the stocks fell as there were hints of interest rates increasing, although that proved to be short-lived. Over the past year all the generator/retailers have outperformed the market by at least +16%.

**Figure 7. Stock performance vs. S&P/NZX50C**




Source: Thomson Reuters, Forsyth Barr analysis

**Figure 8. 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. Whilst we like the medium-term outlook for the electricity sector, views on interest rates are currently driving the share prices. We have an OUTPERFORM rating on TPW and TLT, a NEUTRAL rating on CEN and GNE and we currently view MEL and MCY as expensive and have an UNDERPERFORM rating on them.

**Figure 9. EBITDAF multiples**

| | | | Target | Target | | Mkt Cap | EBITDAF (x) | | EBITDAF - capex (x) | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Company** | **Code** | **Price** | **Price** | **Return** | **Rating** | **$m** | **FY19** | **FY20** | **FY19** | **FY20** |
| Contact Energy | CEN | $8.72 | $8.22 | -1.3% | NEUTRAL | 6,239 | 14.7 | 14.6 | 17.4 | 17.3 |
| Genesis Energy (excl Kupe) | GNE | $3.50 | $3.28 | -1.3% | NEUTRAL | 3,192 | 15.9 | 13.7 | 19.6 | 16.4 |
| Mercury | MCY | $5.40 | $4.45 | -14.7% | UNDERPERFORM | 7,349 | 17.3 | 16.2 | 20.4 | 18.9 |
| Meridian Energy | MEL | $5.27 | $4.20 | -16.2% | UNDERPERFORM | 13,494 | 19.4 | 19.5 | 21.0 | 21.1 |
| Trustpower | TPW | $8.23 | $8.00 | 1.4% | OUTPERFORM | 2,576 | 15.0 | 14.6 | 17.0 | 16.6 |
| **Compco Average** | | | | | | | **16.4** | **15.6** | **19.0** | **18.0** |
| Tilt Renewables | TLT | $2.84 | $2.99 | 5.4% | OUTPERFORM | 1,333 | 11.8 | 8.8 | 12.6 | 9.3 |
| Genesis Energy (incl Kupe) | GNE | $3.50 | $3.28 | -1.3% | NEUTRAL | 3,578 | 13.0 | 11.7 | 15.3 | 13.6 |

Note: To calculate the GNE excl Kupe multiples, we assume the value of Kupe is $400m. Debt and interest has been apportioned 10% to Kupe and 90% to Energy (in line with EV proportion) and dividend in line with adjusted NPAT.
Source: Thomson Reuters, Forsyth Barr analysis

**Figure 10. PE multiples and dividend yields**

| | PE (x) | | Adjusted PE (x) | | Cash Div Yield | | Gross Div Yield | | Free Cash Flow Yield | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Company** | **FY19** | **FY20** | **FY19** | **FY20** | **FY19** | **FY20** | **FY19** | **FY20** | **FY19** | **FY20** |
| Contact Energy | 36.0 | 35.8 | 23.5 | 23.6 | 4.5% | 4.5% | 5.7% | 5.8% | 4.5% | 5.0% |
| Genesis Energy (excl Kupe) | 124.2 | 54.8 | 33.4 | 23.1 | 3.4% | 3.9% | 4.7% | 5.4% | 3.1% | 4.4% |
| Mercury | 54.4 | 41.9 | 32.2 | 27.1 | 2.9% | 3.0% | 4.1% | 4.2% | 1.3% | 2.8% |
| Meridian Energy | 51.4 | 51.6 | 30.5 | 31.0 | 4.1% | 4.1% | 5.1% | 5.1% | 3.8% | 3.8% |
| Trustpower | 28.1 | 27.3 | 24.5 | 24.0 | 4.1% | 4.3% | 5.6% | 5.8% | 4.5% | 5.3% |
| **Compco Average** | **51.2** | **41.0** | **28.5** | **25.6** | **3.8%** | **4.0%** | **5.0%** | **5.3%** | **3.4%** | **4.3%** |
| Tilt Renewables | 42.9 | 28.8 | 15.9 | 12.7 | 0.0% | 0.0% | 0.0% | 0.0% | 8.2% | 10.4% |
| Genesis Energy (incl Kupe) | 76.4 | 42.2 | 22.5 | 18.0 | 5.0% | 5.0% | 6.9% | 6.9% | 5.2% | 6.2% |

Note: Adjusted PE replaces actual depreciation with maintenance capital expenditure. This removes the distortion caused by asset revaluations.
Source: Thomson Reuters, Forsyth Barr analysis

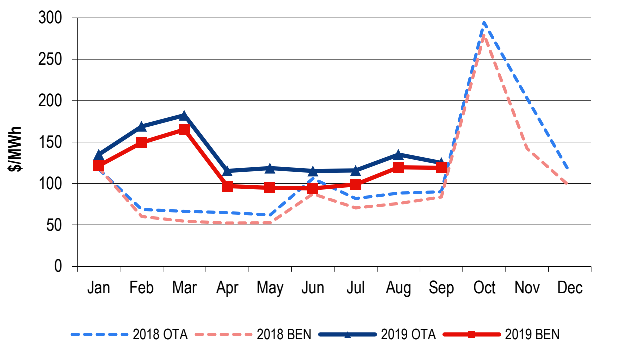
# Electricity market: September 2019

## Spot wholesale electricity prices and ASX futures

### Average wholesale electricity prices remain firm

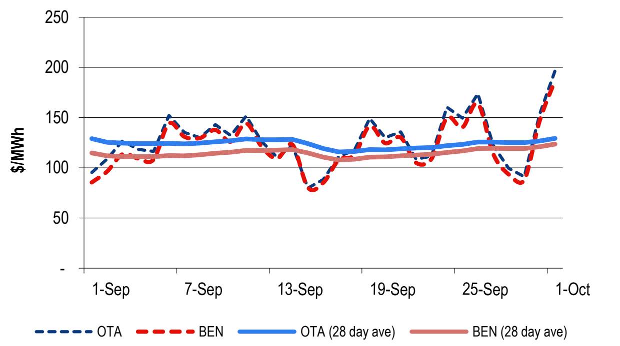
- The OTA average price in September 2019 was $125/MWh, -7.5% lower than the prior month. The BEN average price was $119/MWh, -0.4% lower than the prior month.
- Prices were largely range bound between $100/MWh and $150/MWh, with South Island hydro storage falling below average and North Island hydro storage slightly above average for this time of year. The change in the hydro storage position has seen the gap between OTA and BEN prices narrow.

**Figure 11. Average monthly wholesale electricity prices**




Source: NZX Energy, Forsyth Barr analysis

**Figure 12. Average daily wholesale electricity prices**

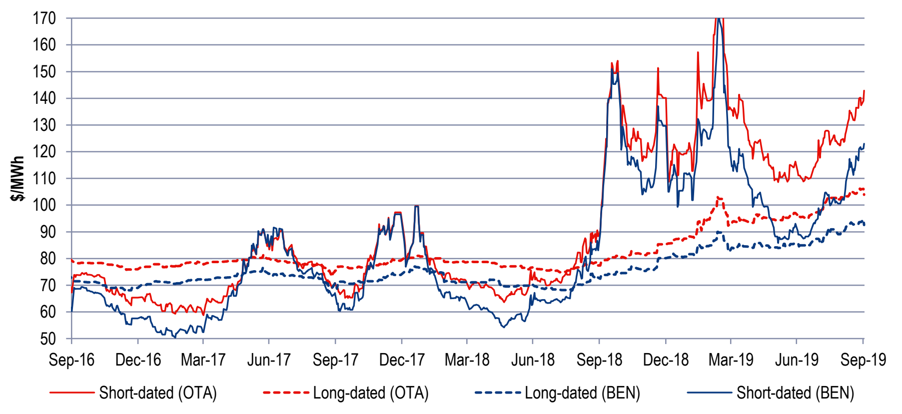



Source: NZX Energy, Forsyth Barr analysis

### ASX futures continue to rise

- Long-dated ASX futures prices at BEN increased +2.8% to $93/MWh at month end while the long-dated price at OTA increased +1.0% to $104/MWh. These long-dated prices are new highs, with BEN prices moving past $90/MWh for the first time. Compared to a year ago, the long-dated futures prices are +$19.7/MWh (+27.1%) and +$26.5/MWh (+34.3%) higher respectively.
- Short-dated ASX futures prices also rose in September as hydro lake storage declined. Prices at OTA increased +14.9% to end the month at $143/MWh while prices at BEN increased +21.2% to $123/MWh.

**Figure 13. ASX futures price curves (past three years)**



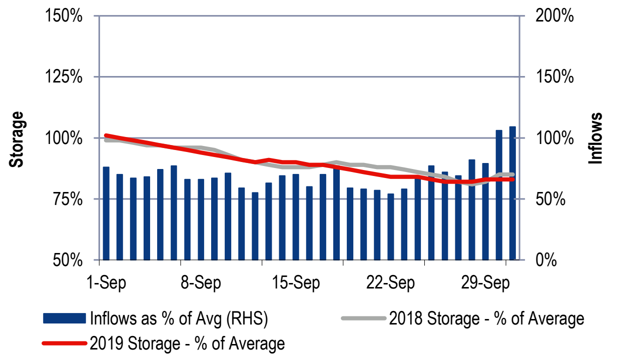

Source: Electricity Authority, Forsyth Barr analysis

## Hydro storage volumes

### National storage levels decline to below average, mirroring 2018

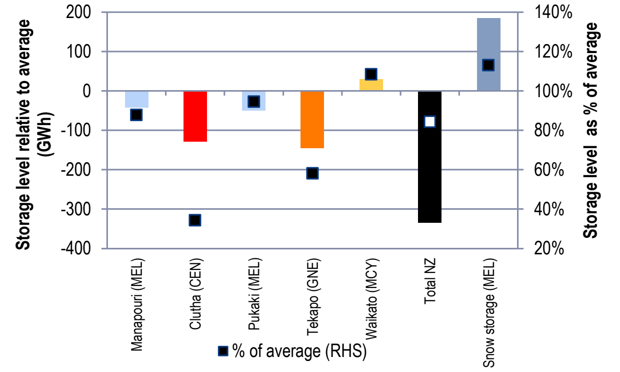
- National lake storage levels decreased -18% in September 2019 to 83% of average at the start of October. Lake levels gradually declined throughout September with only two days of above-average inflows. Total inflows in September were 69% of average, which is very low.
- As at 3 October 2019 only MCY's Waikato catchments have above average storage at 109% of average. MEL's Pukaki catchment experienced the biggest decline during September down -33% to 95%, the first time NZ's largest storage lake has been this low since November 2018. Manapouri also trended down during September, but received a good top-up in the last week. MEL's seasonal snow pack as at 21 September was 113% of average with an estimated 1,522GWh of storage.

**Figure 14. Average lake storage levels and average inflows**




Source: NZX Energy, Forsyth Barr analysis

**Figure 15. Key storage lakes relative to average (as at 5 Sep 2019)**




Source: Energylink, MEL, Forsyth Barr analysis

## Demand and generation analysis

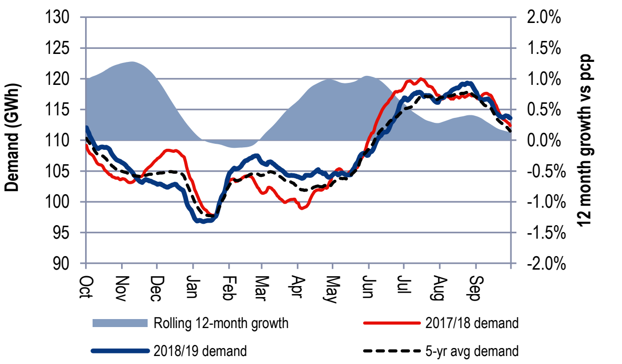
### National demand rises slightly

- National electricity demand averaged 113.4GWh/day (including Tiwai) in September 2019, increasing +1.2% vs. the pcp. National demand excluding Tiwai was up +0.8% despite average September 2019 temperatures similar to the pcp.

### Record geothermal generation

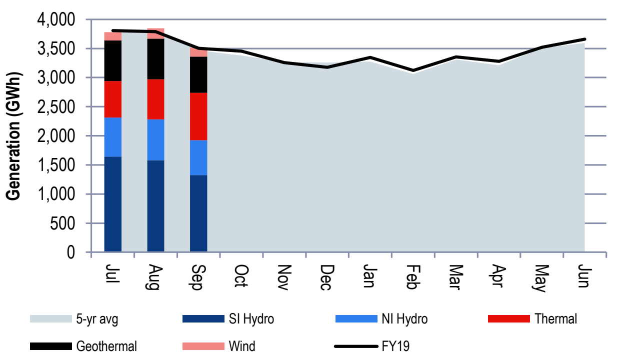
- New Zealand generation totalled 3,514GWh in September 2019, +0.3% above the pcp. The mix change saw thermal generation increase significantly, with both North Island and South Island hydro generation down on the pcp and August 2019. Thermal generation market share was 20.2%, the highest since January 2018.

**Figure 16. Rolling 28-day average demand & rolling 12-mth growth**




Source: NZX Energy, Forsyth Barr analysis

**Figure 17. NZ generation (by technology) – fiscal year to June**




Source: EnergyLink, Forsyth Barr analysis

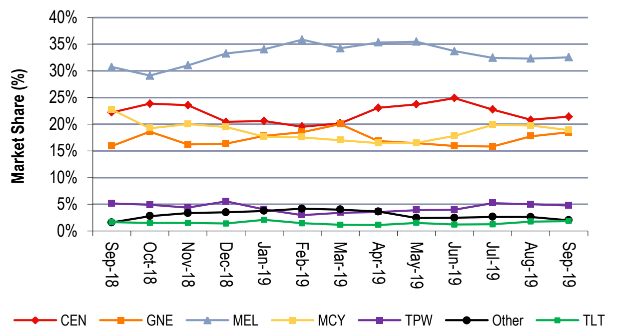
### Generation market share — GNE gains market share

- September 2019 generation market shares were similar to August 2019, with CEN, GNE and MEL lifting market share slightly, with MCY having the biggest decline, -0.9% to 18.9%.

### CEN — Very soft SI hydro generation

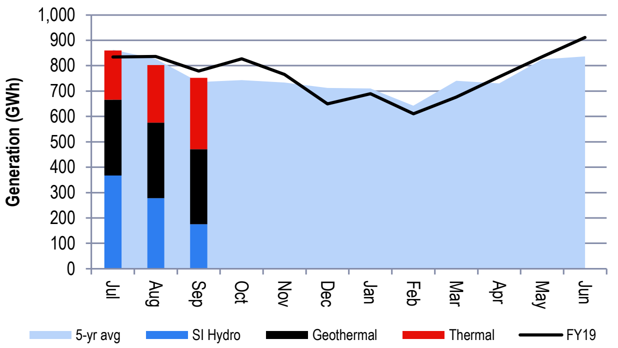
- CEN's generation in September 2019 totalled 752GWh, down -3% on the pcp but +2% ahead of the five-year average. Hydro generation was very low, at 175GWh, it is the lowest September generation for at least 15 years and the first time it has been below 200GWh since January 2018. However, thermal generation was strong at 282GWh, the highest since January 2018. Geothermal generation was steady as expected. Hydro storage is currently 67GWh, 34% of average (i.e. very low).

**Figure 18. Monthly generation market share**




Source: EnergyLink, Forsyth Barr analysis

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




Source: EnergyLink, Forsyth Barr analysis

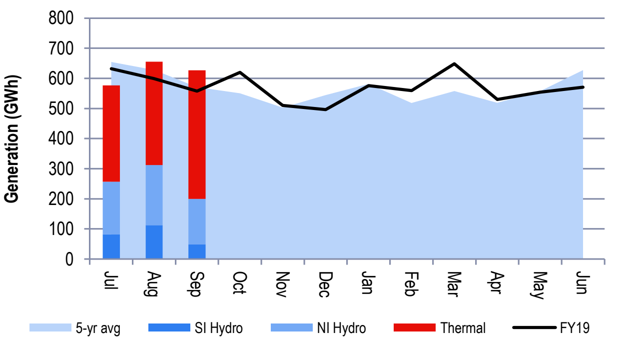
### GNE — Strong August thermal generation

- GNE's total generation was 627GWh, +13% higher than the pcp, with thermal generation up +63%. Hydro generation was -20% below average, with SI hydro generation just 47% of normal. GNE's SI hydro storage was 201GWh, 58% of average as of 3 October, ~-10% lower than a month ago.

### MCY — NI hydro generation a little below average, storage holding up

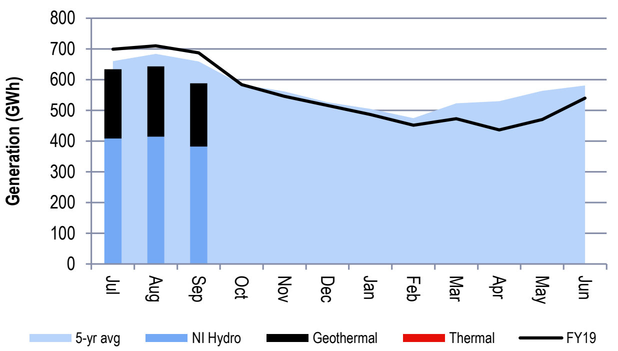
- MCY's September 2019 generation was 588GWh, -4% below average with hydro generation being the main factor. MCY's hydro storage at month end was the only lake with above average storage (+8%) at 392GWh. It was in a similar position a month ago.

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




Source: EnergyLink, Forsyth Barr analysis

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




Source: EnergyLink, Forsyth Barr analysis

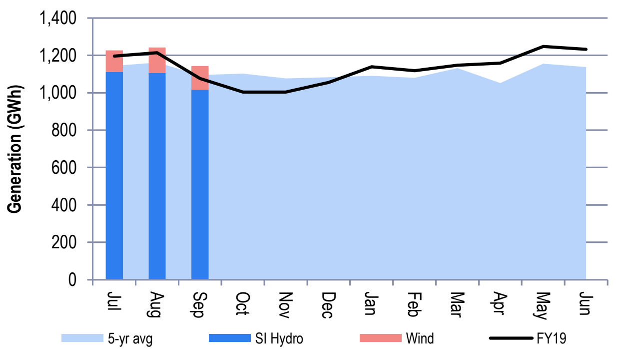
### MEL — Strong generation, but hydro storage position moves below average

- MEL's September 2019 hydro generation was again above average (+6%) at 1,016GWh, the ninth month in a row where generation has been above 1,000GWh for the month (and the longest sequence since MEL sold its Tekapo hydro stations to GNE). However, there is evidence that MEL's strong hydrology run is coming to an end. The degree of above average generation is down and hydro storage is 93% of average, the lowest since November 2018.

### TPW — Hydro generation remains soft

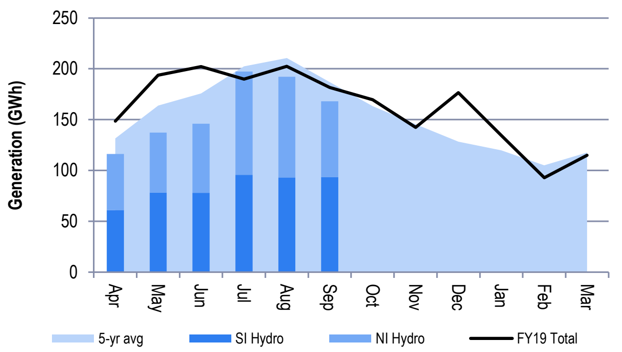
- We estimate TPW's September 2019 generation was 168GWh, the lowest total for September in five years. Both North and South Island generation was below average.

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




Source: EnergyLink, Forsyth Barr analysis

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




Source: EnergyLink, Forsyth Barr analysis

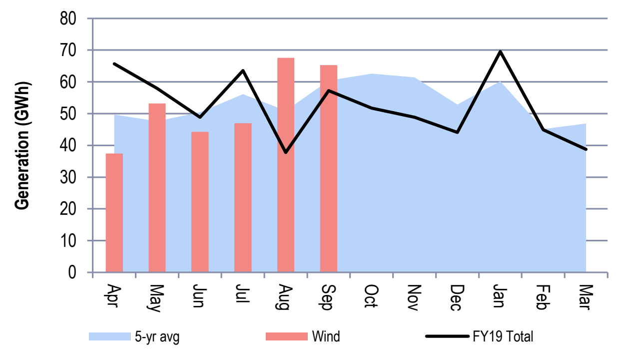
### TLT — Strong wind generation

- We estimate TLT's September 2019 generation was 65GWh, the second consecutive month of above average generation volumes and comfortably ahead of the pcp.

### Generation prices — Sector GWAP rises

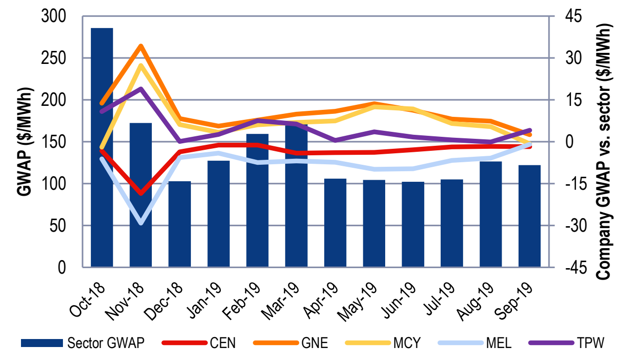
- The average generation weighted average price for September was $122/MWh, with all the generators closely clustered around this price as the North Island/South Island price split narrowed in September. TPW had the highest GWAP at $126/MWh, CEN the lowest at $120/MWh.

**Figure 24. TLT monthly generation mix (current, pcp and 5-yr avg)**




Source: EnergyLink, Forsyth Barr analysis

**Figure 25. Average generation weighted average price (GWAP)**



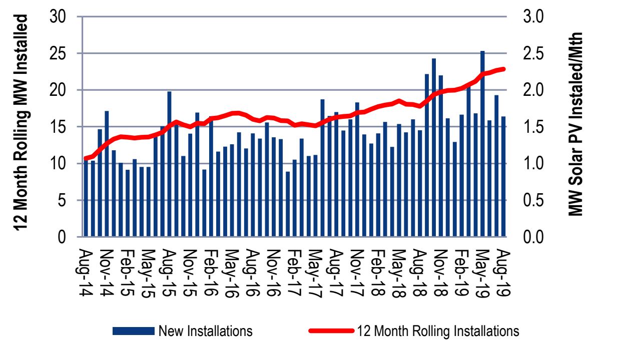

Source: EnergyLink, Forsyth Barr analysis

## Solar PV installations

### New solar installations continue to flatline

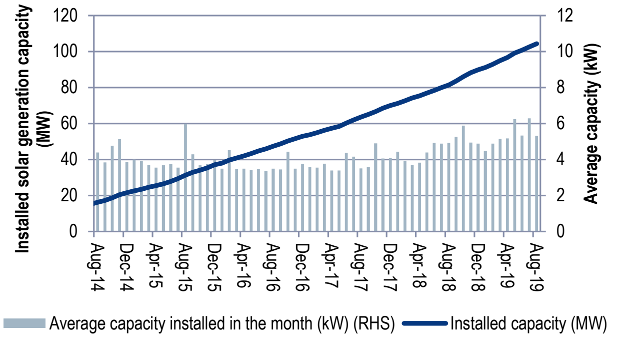
- The home solar market continues to stagnate, with 335 installations in August 2019 and the 12-month rolling total slipping to 4,300. However, the commercial market continues to grow. August 2019 saw a total of 1.6MW installed and the 12-month total increased to almost 23MW.
- There are now more than 24,700 solar installations in the country with a total capacity of 104.3MW.

**Figure 26. Solar PV capacity installed**




Source: Electricity Authority, Forsyth Barr analysis

**Figure 27. Solar capacity installed**

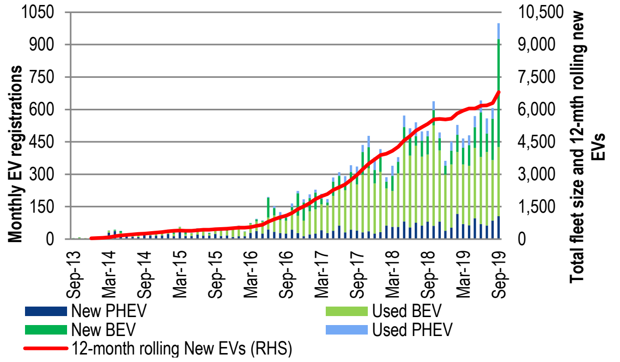



Source: Electricity Authority, Forsyth Barr analysis

## EV registrations

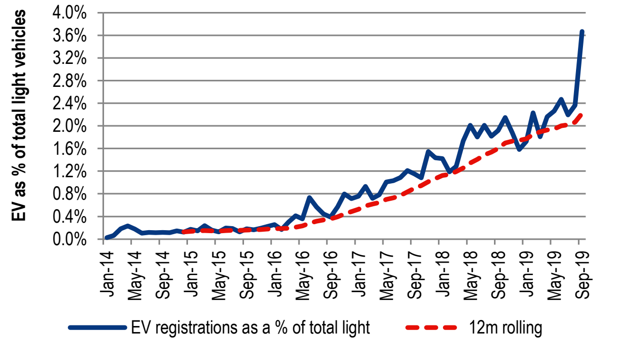
- September 2019 has broken all records for EV registrations. There were 999 new and used car registrations, +55% (+357) more than the old month high set in June 2019. A key driver of the big increase was 356 new Tesla Model 3 sales finally being delivered. That was enough to see the Model 3 reach the top three sales.
- 4.2% of new car sales were electric, almost +2% more than the previous best month. Including used car registrations, 3.7% of all newly registered vehicles were some form of EV, a new record. We expect these figures to be a temporary spike.
- The EV fleet is now almost 16,500 (0.4% of total light vehicles), with rolling 12-month sales almost 6,800 (2.2% of total registrations).

**Figure 28. EV registrations**




Source: Ministry of Transport, Forsyth Barr analysis

**Figure 29. EV registrations as % of total light vehicle registrations**



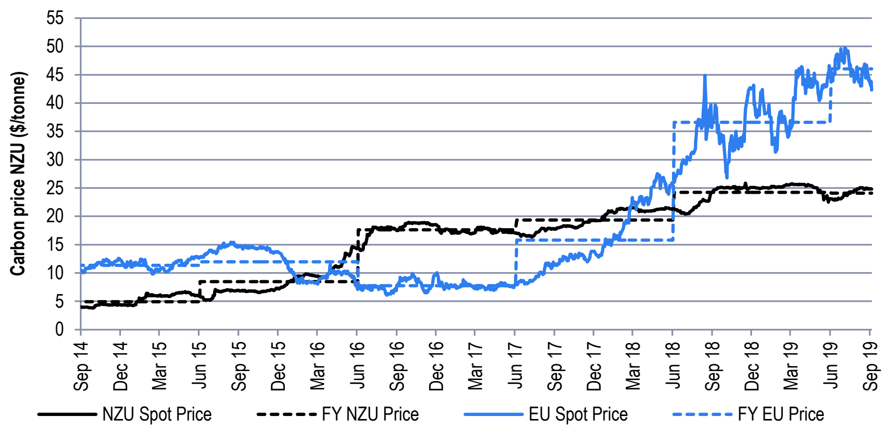

Source: Ministry of Transport, Forsyth Barr analysis

## Carbon prices

### NZ carbon price range bound

- NZ Units continue to trade close to the $25/unit cap. Prices ranged between $24.75 and $25.05/unit, and last traded at $24.80.
- EU carbon prices continued to trend lower and are currently €24.2/unit, down from €26.3 (-8.1%) at the end of August.

**Figure 30. Price of carbon (NZ$/tonne)**



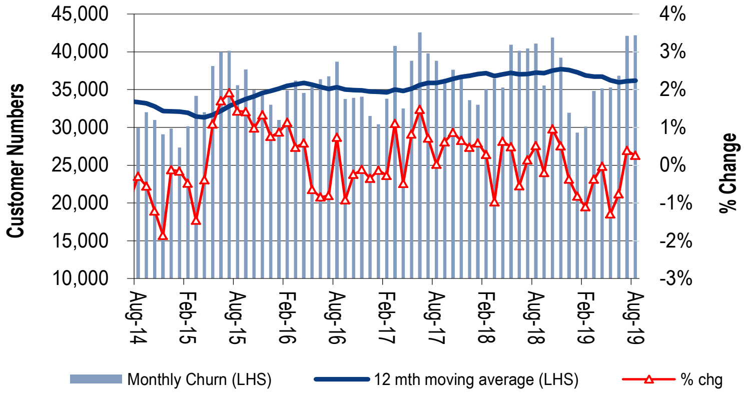

Source: Bloomberg, Forsyth Barr analysis

## Retail electricity customers

### Connection churn — Churn levels stay high

- August 2019 switching was the highest in several years. There were more than 42,000 switches, the highest since June 2017. Trader switches at 18,674 is the highest monthly total since March 2014. Driving the high level of switches has been MCY's exit from the Farm Source contract, with many farms switching to either MEL or GNE. The elevated number of switches is expected to continue for another month or two.

**Figure 31. Electricity connection churn**



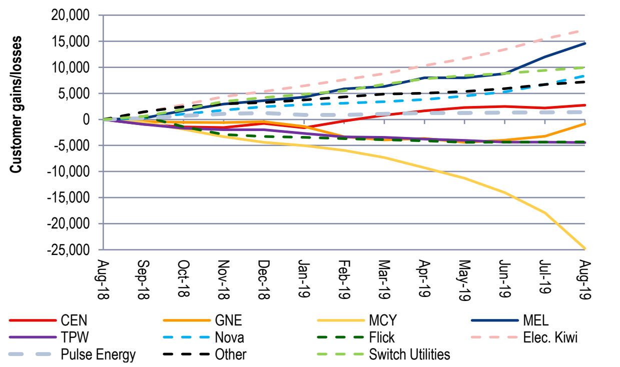

Source: Electricity Authority, Forsyth Barr analysis

### Customer number changes — MCY continues to shed customers

MCY had another difficult month in the retail market in August 2019, losing -6,830 connections. Most of these connection losses relate to MCY no longer being Farm Source's electricity supplier of choice. Over the past 12-months MCY has lost close to -25,000 connections. MEL and GNE had strong months adding +2,590 and +2,376 connections respectively, picking up most of MCY's losses. CEN also had a solid month adding +553 connections.

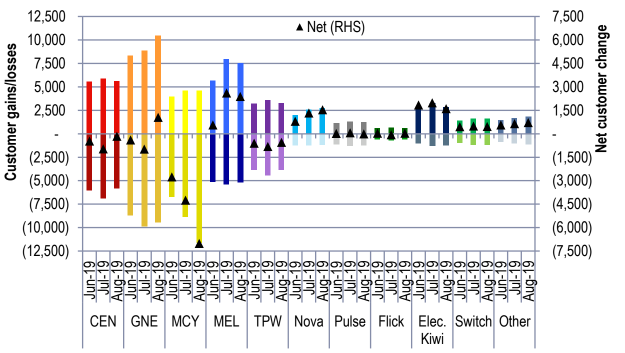
- Of the Tier 2 players both Electric Kiwi and Nova had strong months in August adding +1,708 and +1,652 connections respectively and continuing their strong recent retail market performances. Flick Electric (ZEL) returned to positive growth in August, albeit at a slow rate adding just +52 connections

**Figure 32. Cumulative 12-mth electricity customer gains/losses**




Source: Electricity Authority, Forsyth Barr analysis

**Figure 33. Customer switches (excludes market growth)**

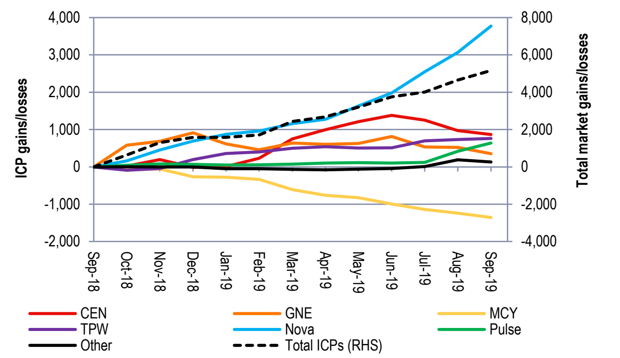



Source: Electricity Authority, Forsyth Barr analysis

## Retail gas customers

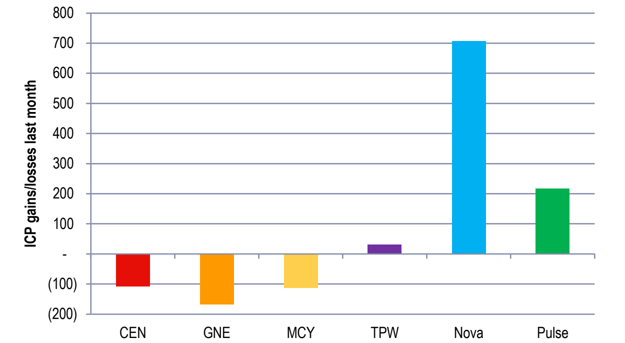
- Nova led customer retail gains in the gas market again and continued its strong performance over the past year by adding a further +707 connections in September 2019, its biggest monthly gain in almost five years. It has now added 3,770 connections (+11%) over the past 12 months. Pulse also had a solid month adding +217 connections. GNE experienced the largest losses in September 2019, losing -167 connections.

**Figure 34. Gas customer numbers — 12-mth cumulative gains/losses**




Source: Gas Industry Co, Forsyth Barr analysis

**Figure 35. Gains/losses by retailer**



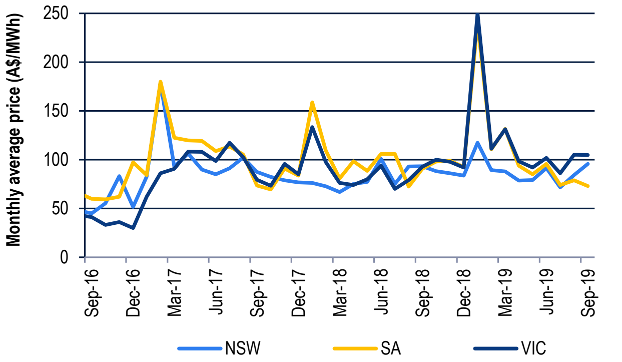

Source: Gas Industry Co, Forsyth Barr analysis

## Australian electricity market

### Wholesale prices rise up in NSW, down in SA and Victoria

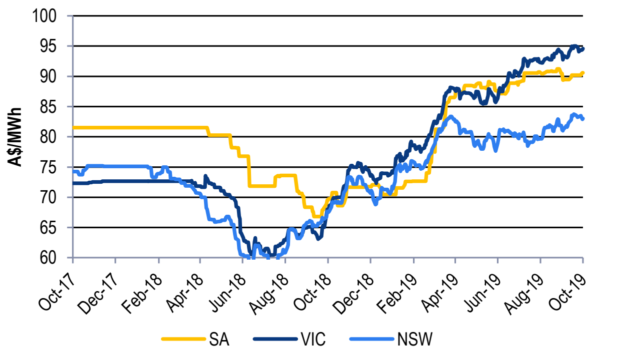
- Average wholesale electricity prices rose +14% to A$96/MWh in NSW in September 2019, but SA and VIC prices fell -7% to A$73/MWh and A$105/MWh respectively.
- FY21 futures prices were generally flat. The NSW futures price increased +2.3% to A$83/MWh, but SA was only up +0.1% to A$91/MWh and VIC was up +0.9% to A$95/MWh.

**Figure 36. Australian wholesale electricity price (A$/MWh)**




Source: AEMO, Forsyth Barr analysis

**Figure 37. Australian FY21 futures price (A$/MWh)**

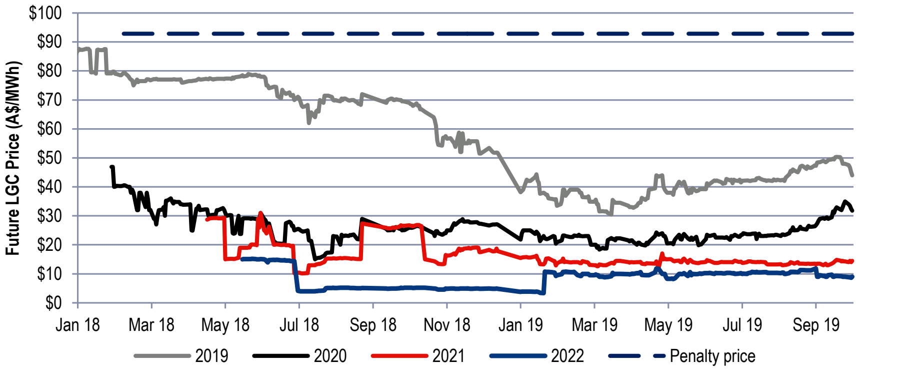



Source: Thomson Reuters, Forsyth Barr analysis

### Renewable energy certificate (LGC) prices increase

- LGC prices showed some volatility in September 2019. The 2019 price rose above A$50/MWh for the first time in 2019, before falling back to A$44/MWh at month end. 2020 prices also show some strength, increasing +A$5/MWh to $A32/MWh at month end, the first time the 2020 price has been above A$30/MWh since May 2018. Longer-dated LGC prices continue to trade below A$15/MWh.

**Figure 38. Renewable energy certificate prices (LGCs)**




Source: Bloomberg, Forsyth Barr analysis

# Key statistics

## New Zealand electricity market statistics

**Figure 39. Key statistics – New Zealand**

| | Sep-18 | Aug-19 | Sep-19 | % Chg pcp | % Chg mom |
|---|---|---|---|---|---|
| ***Average Monthly Prices*** | | | | | |
| OTA avg ($/MWh) | $83.8 | $119.6 | $119.0 | 42.0% | -0.4% |
| HAY avg ($/MWh) | $90.0 | $135.1 | $125.0 | 38.9% | -7.5% |
| BEN avg ($/MWh) | $85.3 | $123.0 | $120.4 | 41.2% | -2.2% |
| | | | | | |
| ***Avg Daily Generation (GWh)*** | | | | | |
| **CEN** | 26.0 | 25.9 | 25.1 | -3.4% | -3.1% |
| % of NZ Generation | 22.2% | 20.9% | 21.4% | -3.6% | 2.7% |
| **GNE** | 18.6 | 22.0 | 21.7 | 16.4% | -1.5% |
| % of NZ Generation | 15.9% | 17.7% | 18.5% | 16.0% | 4.3% |
| **MCY** | 26.5 | 24.5 | 22.1 | -16.6% | -9.9% |
| % of NZ Generation | 22.7% | 19.8% | 18.9% | -16.9% | -4.5% |
| **MEL** | 35.9 | 40.1 | 38.1 | 6.3% | -4.9% |
| % of NZ Generation | 30.7% | 32.3% | 32.5% | 5.9% | 0.8% |
| **TPW** | 8.0 | 8.4 | 7.8 | -2.3% | -7.1% |
| % of NZ Generation | 6.8% | 6.8% | 6.6% | -2.6% | -1.6% |
| | | | | | |
| ***Daily Demand (GWh)*** | | | | | |
| Demand (excl Tiwai) | 98.3 | 104.1 | 99.1 | 0.8% | -4.8% |
| NZAS demand | 13.7 | 14.3 | 14.3 | 4.0% | -0.3% |
| Total NZ Demand | 112.0 | 118.4 | 113.4 | 1.2% | -4.3% |
| | | | | | |
| ***Hydrology (% of average)*** | | | | | |
| Average hydro inflows | 105% | 90% | 69% | -34.4% | -23.4% |
| Average hydro storage | 90% | 105% | 90% | -0.6% | -14.4% |
| Month end hydro storage | 85% | 101% | 83% | -2.4% | -17.8% |
| | | | | | |
| ***ASX futures as at:*** | **28-Sep-18** | **30-Aug-19** | **1-Oct-19** | | |
| Short-dated OTA | $88.3 | $124.4 | $142.9 | 61.9% | 14.9% |
| Long-dated OTA | $77.4 | $102.9 | $103.9 | 34.3% | 1.0% |
| Short-dated BEN | $83.1 | $101.5 | $123.0 | 48.1% | 21.2% |
| Long-dated BEN | $72.8 | $90.0 | $92.5 | 27.1% | 2.8% |

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

## Australian electricity market statistics

**Figure 40. Key statistics - Australia**

| | Sep-18 | Aug-19 | Sep-19 | % Chg pcp | % Chg mom |
|---|---|---|---|---|---|
| ***Average Monthly Prices*** | | | | | |
| NSW avg (A$/MWh) | $93.4 | $84.0 | $95.6 | 2.4% | 13.8% |
| SA avg (A$/MWh) | $90.6 | $78.8 | $73.0 | -19.5% | -7.4% |
| VIC avg (A$/MWh) | $92.9 | $105.0 | $104.8 | 12.8% | -0.2% |
| | | | | | |
| ***Electricity Futures for FY21:*** | **30-Sep-18** | **30-Aug-19** | **30-Sep-19** | | |
| NSW avg (A$/MWh) | $67.5 | $81.1 | $83.0 | 22.9% | 2.3% |
| SA avg (A$/MWh) | $69.8 | $90.5 | $90.6 | 29.9% | 0.1% |
| VIC avg (A$/MWh) | $67.9 | $93.8 | $94.6 | 39.3% | 0.9% |
| | | | | | |
| ***Spot and Future LGC Prices*** | **30-Sep-18** | **30-Aug-19** | **3-Oct-19** | | |
| Spot (A$/MWh) | $71.8 | $46.8 | $45.5 | -36.6% | -2.8% |
| 2019 (A$/MWh) | $69.0 | $47.4 | $44.0 | -36.2% | -7.2% |
| 2020 (A$/MWh) | $26.0 | $26.4 | $31.8 | 22.1% | 20.3% |
| 2021 (A$/MWh) | $26.8 | $13.5 | $14.5 | -45.8% | 7.4% |

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

# Industry news — September 2019

## Listed sector company news

### Contact Energy (CEN)

- In a surprise announcement, the CEN Board has appointed current Refining NZ (NZR) CEO, Mike Fuge, to be the new CEN CEO. Mr Fuge is expected to start no later than March 2020 and has been the NZR CEO for a little over one year.
- A project to extract silica from Ohaaki geothermal fluid is underway following a $15m grant that Geo40 received from the Provincial Growth Fund. The silica is used in various applications within the paint, pulp & paper and precision casting. There is also the potential to extract lithium from the silica. From CEN's perspective, removing the silica helps prevent the build-up of silica in geothermal pipes and reinjection wells.

### Genesis Energy (GNE)

- Two separate issues temporarily reduced production capacity at Kupe, lowering production ~-30% for a week.
- GNE is looking to buy its first fully electric LPG delivery truck before June 2020. It is the next step towards its goal of having half of its 84 delivery fleet electric by 2025. GNE currently has four plug-in hybrid trucks in its fleet.

### Trustpower (TPW)

- TPW has been forced to alter how it operates its Waipori hydro system (located near Dunedin) following an earthquake assessment. TPW has lowered the lake level of Lake Two -2.1m and is likely to remove the at risk blockwork. Indications are that the change should not impact TPW's operations or energy output significantly, with the main effect being a reduction in peaking capacity.

### Tilt Renewables (TLT)

- TLT's Waipipi wind farm (formerly the Waverley wind farm) has reached financial close and will commence construction in the near future. The 133MW wind farm will cost $280m and produce 455GWh p.a. GNE has signed a 20-year offtake agreement.

### Vector (VCT)

- VCT's Powersmart business is going to install a 1MW floating solar array on Watercare's Rosedale wastewater treatment pond. The project is expected to cost $2.5m and we estimate will produce ~1.4GWh of energy. We estimate the cost of energy (assuming a 6% WACC) is $188/MWh.

## Political / regulatory news

- The Government has released the final Electricity Price Review report. We cover off the important points earlier in this report.
- The EA is proposing to remove the option of South Island only official conservation campaigns. These savings campaigns (although never actually used as yet) are triggered by low hydro storage and were to start in the South Island, before becoming nationwide. The EA says that the HVDC inter-island transmission link now has more capacity to transfer energy southwards. The implication is that North Island retailers would face having to make compensation payments earlier than previously.
- Small electricity retailer, Ecotricity, has complained to the EA and the ComCom that MEL is predatory pricing as it has been offering commercial rates below ASX futures prices. MEL strongly rejects the claim.
- The System Operator has indicated that supply margins in late November are tight, particularly between 13 and 22 November when several plants are out for maintenance, totalling 1,850MW.

## Emerging technology news (EV, solar & storage)

- MBIE is encouraging EV suppliers who are in the all-of-Government Motor Vehicle Contract to submit new tenders to supply EVs, recognising the EV market has evolved since 2016 when the contract was agreed. The Government is aiming for its vehicle fleet to be 100% electric by 2026 (where practical).
- Hiringa Energy has chosen Hamilton, Tauranga, New Plymouth and Palmerston North as the first four locations for hydrogen filling stations. All four stations are expected to be operational before June 2021. Hiringa is targeting 20 resupply sites within five years.

## Other industry news

- Top Energy's Ngawha 32MW, $176m geothermal expansion is progressing well, with power station equipment expected to arrive mid-October. The expansion adds to the existing 25MW plant and is expected to be operational by the end of 2020. Top Energy is also considering expanding the plant a further 32MW by 2026.
- The World Energy Council has released its latest global energy assessment using its Energy Trilemma Index which measures security of supply, cost of supply and energy sustainability. NZ ranks 10$^{th}$ out of 128 countries, down two positions from last year, but still a strong result and the highest non-European country. Australia is ranked 28$^{th}$.
- Pioneer Energy (part owner of retailer Pulse Energy) has opened a new 8.1MW hydro station in Central Otago. The new hydro station is expected to produce ~31GWh (44% capacity factor).

Sources: Energy News, Energy and Environment, EV Talk

**Contact Energy Limited (CEN)** Priced as at 04 Oct 2019: NZ$8.72 June year end

| **Forsyth Barr valuation** | | | |
|---|---|---|---|
| Valuation methodology | Blend of spot valuations, weighted to multiples | | |
| | | | |
| **12-month target price (NZ$)*** | **8.22** | **Spot valuations (NZ$)** | |
| Expected share price return | -5.7% | 1. DCF | 7.38 |
| Net dividend yield | 4.5% | 2. Market multiples | 8.43 |
| Estimated 12-month return | -1.2% | 3. Dividend yield | 8.89 |
| | | | |
| **Key WACC assumptions** | | **DCF valuation summary (NZ$m)** | |
| Risk free rate | 2.00% | Total firm value | 6,389 |
| Equity beta | 0.88 | (Net debt)/cash | (1,108) |
| WACC | 6.6% | Value of equity | 5,281 |
| Terminal growth | 1.5% | Shares (m) | 716 |

| **Profit and Loss Account (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Sales revenue | 2,275 | 2,519 | 2,413 | 2,332 | 2,341 |
| **Normalised EBITDA** | **479** | **518** | **488** | **491** | **501** |
| Depreciation and amortisation | (220) | (205) | (202) | (201) | (199) |
| **Normalised EBIT** | **259** | **313** | **286** | **290** | **302** |
| Net interest | (84) | (70) | (57) | (58) | (57) |
| Depreciation capex adjustment | 99 | 104 | 100 | 98 | 96 |
| Tax | (48) | (72) | (64) | (65) | (69) |
| Minority interests | - | - | - | - | - |
| **Adjusted normalised NPAT** | **227** | **280** | **265** | **265** | **272** |
| Abnormals/other | (97) | 65 | (100) | (98) | (96) |
| **Reported NPAT** | **130** | **345** | **165** | **167** | **177** |
| Normalised EPS (cps) | 31.7 | 39.2 | 37.0 | 37.0 | 38.0 |
| DPS (cps) | 32.0 | 39.0 | 39.0 | 39.5 | 40.0 |

| **Growth Rates** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Revenue (%) | 9.4 | 10.7 | -4.2 | -3.4 | 0.4 |
| EBITDA (%) | -4.4 | 8.1 | -5.7 | 0.4 | 2.2 |
| EBIT (%) | -11.6 | 20.8 | -8.5 | 1.1 | 4.3 |
| Normalised NPAT (%) | 9.1 | 23.4 | -5.5 | -0.1 | 2.8 |
| Normalised EPS (%) | 9.1 | 23.4 | -5.5 | -0.1 | 2.8 |
| DPS (%) | 23.1 | 21.9 | 0.0 | 1.3 | 1.3 |

| **Cash Flow (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| **EBITDA** | **479** | **518** | **488** | **491** | **501** |
| Working capital change | 38 | (19) | (8) | (4) | (1) |
| Interest & tax paid | (111) | (112) | (123) | (127) | (132) |
| Other | (27) | 14 | - | - | - |
| **Operating cash flow** | **379** | **401** | **357** | **359** | **368** |
| Capital expenditure | (82) | (63) | (93) | (65) | (66) |
| (Acquisitions)/divestments | 6 | 382 | - | - | - |
| Other | (7) | - | - | - | - |
| **Funding available/(required)** | **296** | **720** | **264** | **294** | **301** |
| Dividends paid | (201) | (251) | (279) | (279) | (283) |
| Equity raised/(returned) | 1 | - | - | - | - |
| **Increase/(decrease) in net debt** | **(96)** | **(469)** | **15** | **(15)** | **(19)** |

| **Balance Sheet (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Working capital | (22) | (3) | 5 | 9 | 10 |
| 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** | **4,579** | **4,447** | **4,316** |
| Net debt/(cash) | 1,448 | 943 | 958 | 943 | 925 |
| Other non current liabilities | 901 | 955 | 950 | 941 | 931 |
| Shareholder's funds | 2,727 | 2,782 | 2,671 | 2,563 | 2,460 |
| Minority interests | - | - | - | - | - |
| **Total funding sources** | **5,076** | **4,680** | **4,579** | **4,447** | **4,316** |

| **Valuation Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 16.2 | 14.3 | 14.7 | 14.7 | 14.3 |
| EV/EBIT (x) | 29.9 | 23.7 | 25.1 | 24.8 | 23.8 |
| PE (x) | 27.5 | 22.3 | 23.5 | 23.6 | 22.9 |
| Price/NTA (x) | 2.7 | 2.6 | 2.8 | 2.9 | 3.1 |
| Free cash flow yield (%) | 4.8 | 5.4 | 4.2 | 4.7 | 4.8 |
| Net dividend yield (%) | 3.7 | 4.5 | 4.5 | 4.5 | 4.6 |
| Gross dividend yield (%) | 4.4 | 5.6 | 5.7 | 5.8 | 5.9 |
| Imputation (%) | 48 | 64 | 70 | 70 | 75 |
| Pay-out ratio (%) | 101 | 100 | 105 | 107 | 105 |

| **Capital Structure** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Interest cover EBIT (x) | 3.3 | 4.8 | 5.5 | 5.5 | 5.8 |
| Interest cover EBITDA (x) | 5.7 | 7.4 | 8.5 | 8.5 | 8.8 |
| Net debt/ND+E (%) | 34.7 | 25.3 | 26.4 | 26.9 | 27.3 |
| Net debt/EBITDA (x) | 3.0 | 1.8 | 2.0 | 1.9 | 1.8 |

| **Key Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Return on assets (%) | 4.9 | 9.8 | 5.9 | 6.2 | 6.6 |
| Return on equity (%) | 4.7 | 6.3 | 6.2 | 6.5 | 7.2 |
| Return on funds employed (%) | 4.5 | 9.4 | 5.7 | 5.9 | 6.4 |
| EBITDA margin (%) | 21.1 | 20.6 | 20.2 | 21.0 | 21.4 |
| EBIT margin (%) | 11.4 | 12.4 | 11.9 | 12.4 | 12.9 |
| Capex to sales (%) | 3.6 | 2.5 | 3.9 | 2.8 | 2.8 |
| Capex to depreciation (%) | 37 | 31 | 46 | 32 | 33 |

| **Operating Performance** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| | | | | | |
| **Divisional Revenue ($m)** | | | | | |
| Wholesale electricity | 1,157 | 1,463 | 1,370 | 1,258 | 1,241 |
| Retail electricity | 883 | 863 | 891 | 907 | 920 |
| Retail gas sales | 71 | 73 | 81 | 83 | 85 |
| LPG sales | 121 | 58 | - | - | - |
| Other | 31 | 32 | 33 | 33 | 33 |
| **Total Revenue** | **2,263** | **2,489** | **2,373** | **2,281** | **2,279** |
| | | | | | |
| **Operating Statistics** | | | | | |
| Hydro generation (GWh) | 3,479 | 4,232 | 3,887 | 3,887 | 3,887 |
| Geothermal generation (GWh) | 3,323 | 3,257 | 3,346 | 3,346 | 3,346 |
| Thermal generation (GWh) | 1,812 | 1,422 | 1,624 | 1,704 | 1,784 |
| **Total Generation (GWh)** | **8,614** | **8,911** | **8,857** | **8,937** | **9,018** |
| GWAP ($/MWh) | 85 | 129 | 114 | 96 | 92 |
| | | | | | |
| Gas consumed (PJ) | 17.5 | 13.9 | 15.4 | 16.1 | 16.9 |
| Gas price ($/GJ) | 6.1 | 7.1 | 7.2 | 7.3 | 7.4 |
| | | | | | |
| Retail electricity volumes (GWh) | 6,997 | 6,554 | 6,548 | 6,692 | 6,678 |
| Electricity customers (000) | 413 | 411 | 411 | 407 | 404 |
| Average usage/customer (MWh) | 8.7 | 8.6 | 8.7 | 8.7 | 8.7 |
| Average retail price ($/MWh) | 242 | 244 | 250 | 255 | 260 |
| | | | | | |
| LWAP ($/MWh) | 91 | 138 | 125 | 104 | 100 |
| LWAP/GWAP | 1.07 | 1.07 | 1.09 | 1.09 | 1.09 |
| | | | | | |
| Retail gas volumes (PJ) | 2.9 | 3.1 | 3.2 | 3.2 | 3.2 |
| Gas customers (000) | 65 | 67 | 67 | 67 | 68 |
| Average gas sales price ($/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 04 Oct 2019: NZ$3.50 — June year end

| Forsyth Barr valuation | | | |
|---|---|---|---|
| Valuation methodology | | Mix of market multiple and DCF | |
| **12-month target price (NZ$)*** | **3.28** | **Spot valuations (NZ$)** | |
| Expected share price return | -6.3% | 1. DCF | 2.92 |
| Net dividend yield | 5.0% | 2. Market multiple | 3.25 |
| Estimated 12-month return | -1.3% | 3. Dividend yield | 3.66 |
| **Key WACC assumptions** | | **DCF valuation summary (NZ$m)** | |
| Risk free rate | 2.00% | Total firm value | 4,243 |
| Equity beta | 0.88 | (Net debt)/cash | (1,256) |
| WACC | 6.7% | Value of equity | 2,987 |
| Terminal growth | 1.5% | Shares (m) | 1,022 |

| Profit and Loss Account (NZ$m) | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Sales revenue | 2,305 | 2,701 | 2,513 | 2,408 | 2,399 |
| **Normalised EBITDA** | **361** | **363** | **367** | **406** | **446** |
| Depreciation and amortisation | (206) | (197) | (210) | (214) | (231) |
| **Normalised EBIT** | **155** | **167** | **156** | **193** | **215** |
| Net interest | (74) | (73) | (72) | (65) | (61) |
| Associate income | - | - | - | - | - |
| Tax | (22) | (27) | (24) | (36) | (43) |
| Deprecation capex adjustment | 71 | 92 | 98 | 107 | 134 |
| **Adjusted normalised NPAT** | **129** | **159** | **159** | **199** | **245** |
| Abnormals/other | (109) | (100) | (98) | (107) | (134) |
| **Reported NPAT** | **20** | **59** | **60** | **92** | **111** |
| Normalised EPS (cps) | 5.8 | 6.5 | 5.9 | 8.8 | 10.6 |
| DPS (cps) | 16.9 | 17.1 | 17.4 | 17.7 | 18.0 |

| Growth Rates | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Revenue (%) | 18.1 | 17.2 | -6.9 | -4.2 | -0.4 |
| EBITDA (%) | 8.4 | 0.8 | 1.0 | 10.7 | 9.9 |
| EBIT (%) | -2.0 | 7.8 | -6.3 | 23.2 | 11.5 |
| Normalised NPAT (%) | -18.9 | 23.5 | -0.1 | 25.4 | 23.2 |
| Normalised EPS (%) | -19.6 | 21.8 | -1.2 | 24.1 | 22.6 |
| DPS (%) | 1.8 | 0.9 | 1.8 | 1.7 | 1.7 |

| Cash Flow (NZ$m) | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| **EBITDA** | **361** | **363** | **367** | **406** | **446** |
| Working capital change | 33 | (27) | (2) | (10) | (8) |
| Interest & tax paid | (120) | (123) | (109) | (117) | (128) |
| Other | (7) | 17 | - | - | - |
| **Operating cash flow** | **266** | **231** | **256** | **279** | **311** |
| Capital expenditure | (108) | (69) | (74) | (64) | (57) |
| (Acquisitions)/divestments | 0 | (0) | - | - | - |
| Other | - | - | - | - | - |
| **Funding available/(required)** | **159** | **162** | **182** | **215** | **254** |
| Dividends paid | (148) | (132) | (139) | (142) | (166) |
| Equity raised/(returned) | (1) | (1) | - | - | - |
| **Increase/(decrease) in net debt** | **(10)** | **(29)** | **(43)** | **(72)** | **(87)** |

| Balance Sheet (NZ$m) | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Working capital | 90 | 111 | 113 | 123 | 131 |
| 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** | **4,266** | **4,142** | **3,978** |
| Net debt/(cash) | 1,206 | 1,228 | 1,272 | 1,216 | 1,130 |
| Other non current liabilities | 806 | 934 | 921 | 905 | 881 |
| Shareholder's funds | 1,956 | 2,151 | 2,073 | 2,022 | 1,966 |
| Minority interests | - | - | - | - | - |
| **Total funding sources** | **3,968** | **4,313** | **4,266** | **4,142** | **3,978** |

| Valuation Ratios | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 13.2 | 13.1 | 13.0 | 11.8 | 10.8 |
| EV/EBIT (x) | 30.9 | 28.5 | 30.6 | 24.9 | 22.4 |
| PE (x) | 27.4 | 22.5 | 22.8 | 18.4 | 15.0 |
| Price/NTA (x) | 2.2 | 2.0 | 2.1 | 2.2 | 2.3 |
| Free cash flow yield (%) | 4.4 | 4.5 | 5.1 | 6.0 | 7.1 |
| Net dividend yield (%) | 4.8 | 4.9 | 5.0 | 5.0 | 5.1 |
| Gross dividend yield (%) | 6.3 | 6.8 | 6.9 | 6.9 | 7.0 |
| Imputation (%) | 80 | 100 | 100 | 95 | 95 |
| Pay-out ratio (%) | 132 | 110 | 113 | 93 | 77 |

| Capital Structure | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Interest cover EBIT (x) | 1.4 | 2.1 | 2.2 | 2.9 | 3.5 |
| Interest cover EBITDA (x) | 4.9 | 5.0 | 5.1 | 6.2 | 7.3 |
| Net debt/ND+E (%) | 37.7 | 35.5 | 37.2 | 36.7 | 35.6 |
| 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 | 4.4 | 5.1 |
| Return on equity (%) | 3.0 | 3.1 | 2.9 | 4.5 | 5.6 |
| Return on funds employed (%) | 3.6 | 3.6 | 3.4 | 4.3 | 5.1 |
| EBITDA margin (%) | 15.6 | 13.5 | 14.6 | 16.9 | 18.6 |
| EBIT margin (%) | 6.7 | 6.2 | 6.2 | 8.0 | 9.0 |
| Capex to sales (%) | 4.7 | 2.5 | 2.9 | 2.7 | 2.4 |
| Capex to depreciation (%) | 52 | 35 | 35 | 30 | 25 |

| Operating Performance | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Renewable generation | 3,084 | 2,835 | 2,683 | 2,717 | 2,717 |
| Gas generation | 3,392 | 2,586 | 2,791 | 2,783 | 2,783 |
| Coal generation | 657 | 1,410 | 900 | 876 | 876 |
| **Total GNE generation (GWh)** | **7,133** | **6,831** | **6,375** | **6,377** | **6,377** |
| GWAP ($/MWh) | 92 | 143 | 115 | 107 | 101 |
| Coal used (tonnes) | 348 | 720 | 466 | 453 | 453 |
| Coal price ($/tonne) | 120 | 139 | 135 | 125 | 126 |
| Gas used (PJ) | 26.7 | 20.2 | 20.6 | 20.5 | 20.5 |
| Gas price ($/GJ) | 7.9 | 8.6 | 8.4 | 8.2 | 8.3 |
| Electricity customers (000) | 503.7 | 499.5 | 494.5 | 489.6 | 487.1 |
| MM/SME volumes | 4,169 | 4,077 | 4,069 | 4,048 | 4,027 |
| TOU volumes | 1,811 | 1,992 | 2,011 | 2,032 | 2,052 |
| **Total fixed price volumes (GWh)** | **5,980** | **6,068** | **6,080** | **6,080** | **6,079** |
| Average MM usage/cust (kWh/yr) | 8,240 | 8,126 | 8,186 | 8,227 | 8,257 |
| Average FPVV price ($/MWh) | 206 | 207 | 211 | 213 | 215 |
| LWAP ($/MWh) | 92 | 139 | 116 | 108 | 101 |
| LWAP/GWAP | 1.01 | 0.97 | 1.01 | 1.01 | 1.01 |
| Line losses (%) | 5.3 | 5.4 | 5.5 | 5.5 | 5.5 |
| Retail gas customers (000) | 106.2 | 107.1 | 107.7 | 108.2 | 108.7 |
| Retail gas volumes (PJ) | 7.5 | 8.2 | 8.3 | 8.4 | 8.4 |
| Gas volume/cust (GJ/yr) | 70.5 | 76.7 | 77.1 | 77.5 | 77.9 |
| LPG retail sales (tonnes) | 35,005 | 38,507 | 41,954 | 45,536 | 48,014 |
| **Kupe production** | | | | | |
| Gas production (PJ) | 11.8 | 11.8 | 10.5 | 10.0 | 11.5 |
| Oil production (k barrels) | 533 | 473 | 381 | 355 | 564 |
| LPG production (k tonnes) | 45.9 | 50.6 | 45.2 | 42.4 | 47.8 |
| Kupe EBITDAF ($m) | 115 | 109 | 99 | 95 | 121 |
| Energy EBITDAF ($m) | 245 | 255 | 268 | 311 | 325 |
| **GNE EBITDAF ($m)** | **361** | **363** | **367** | **406** | **446** |

* 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 04 Oct 2019: NZ$5.40 | June year end |
|---|---|---|

| Forsyth Barr valuation | | | |
|---|---|---|---|
| Valuation methodology | | Mix of market multiple and DCF | |
| 12-month target price (NZ$)* | 4.45 | Spot valuations (NZ$) | |
| Expected share price return | -17.6% | 1. DCF | 4.00 |
| Net dividend yield | 3.0% | 2. Market multiple | 4.86 |
| Estimated 12-month return | -14.6% | 3. Dividend yield | 4.52 |
| Key WACC assumptions | | DCF valuation summary (NZ$m) | |
| Risk free rate | 2.00% | Total firm value | 6,540 |
| Equity beta | 0.88 | (Net debt)/cash | (1,096) |
| WACC | 6.7% | Value of equity | 5,444 |
| 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 | 1,818 | 1,784 | 1,766 |
| **Normalised EBITDA** | **566** | **505** | **488** | **522** | **549** |
| Depreciation and amortisation | (201) | (204) | (205) | (208) | (212) |
| **Normalised EBIT** | **365** | **301** | **284** | **314** | **337** |
| Net interest | (91) | (75) | (66) | (70) | (72) |
| Associate income | 2 | 1 | 3 | 3 | 3 |
| Tax | (91) | (73) | (64) | (71) | (77) |
| Depreciation capex adj | 58 | 78 | 71 | 95 | 95 |
| **Adjusted normalised NPAT** | **256** | **239** | **228** | **271** | **286** |
| Abnormals/other | (7) | 118 | (71) | (95) | (95) |
| **Reported NPAT** | **249** | **357** | **157** | **176** | **191** |
| Normalised EPS (cps) | 18.8 | 17.6 | 16.8 | 19.9 | 21.0 |
| DPS (cps) | 15.1 | 15.5 | 15.8 | 16.2 | 22.1 |

| Growth Rates | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Revenue (%) | 12.6 | 11.2 | -9.1 | -1.9 | -1.0 |
| EBITDA (%) | 8.2 | -10.8 | -3.3 | 6.9 | 5.0 |
| EBIT (%) | 7.9 | -17.7 | -4.9 | 10.5 | 7.2 |
| Normalised NPAT (%) | 1.8 | -6.5 | -4.5 | 18.9 | 5.4 |
| Normalised EPS (%) | 2.9 | -6.4 | -4.5 | 18.9 | 5.4 |
| Ordinary DPS (%) | 3.4 | 2.6 | 1.9 | 2.5 | 36.4 |

| Cash Flow (NZ$m) | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| **EBITDA** | **566** | **505** | **488** | **522** | **549** |
| Working capital change | 4 | 2 | 52 | (63) | (2) |
| Interest & tax paid | (192) | (148) | (151) | (160) | (167) |
| Other | (4) | (33) | - | - | - |
| **Operating cash flow** | **374** | **326** | **390** | **299** | **381** |
| Capital expenditure | (127) | (122) | (301) | (111) | (80) |
| (Acquisitions)/divestments | (139) | 215 | - | - | - |
| Other | 6 | 5 | 1 | 1 | 1 |
| **Funding available/(required)** | **114** | **424** | **90** | **189** | **301** |
| Dividends paid | (273) | (208) | (212) | (218) | (225) |
| Equity raised/(returned) | (55) | 7 | - | - | - |
| **Increase/(decrease) in net debt** | **214** | **(223)** | **122** | **29** | **(76)** |

| Balance Sheet (NZ$m) | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Working capital | 63 | 63 | 11 | 73 | 75 |
| Fixed assets | 5,370 | 5,528 | 5,629 | 5,539 | 5,410 |
| Intangibles | 85 | 62 | 59 | 57 | 55 |
| Other assets | 385 | 521 | 523 | 526 | 529 |
| **Total funds employed** | **5,903** | **6,174** | **6,223** | **6,195** | **6,069** |
| Net debt/(cash) | 1,264 | 1,096 | 1,218 | 1,247 | 1,171 |
| Other non current liabilities | 1,306 | 1,498 | 1,480 | 1,464 | 1,448 |
| Shareholder's funds | 3,333 | 3,580 | 3,525 | 3,484 | 3,450 |
| Minority interests | - | - | - | - | - |
| **Total funding sources** | **5,903** | **6,174** | **6,223** | **6,195** | **6,069** |

| Valuation Ratios | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 14.7 | 16.4 | 16.8 | 15.8 | 15.0 |
| EV/EBIT (x) | 22.7 | 27.3 | 28.5 | 26.0 | 24.2 |
| PE (x) | 28.8 | 30.7 | 32.2 | 27.1 | 25.7 |
| Price/NTA (x) | 2.3 | 2.1 | 2.1 | 2.2 | 2.2 |
| Free cash flow yield (%) | 3.4 | 2.8 | 1.2 | 2.6 | 4.1 |
| Net dividend yield (%) | 2.8 | 2.9 | 2.9 | 3.0 | 4.1 |
| Gross dividend yield (%) | 3.9 | 4.0 | 4.1 | 4.2 | 5.4 |
| Imputation (%) | 100 | 100 | 100 | 100 | 85 |
| Pay-out ratio (%) | 80 | 88 | 94 | 81 | 105 |

| Capital Structure | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Interest cover EBIT (x) | 4.7 | 6.7 | 4.4 | 4.6 | 4.7 |
| Interest cover EBITDA (x) | 6.2 | 6.7 | 7.4 | 7.5 | 7.6 |
| Net debt/ND+E (%) | 27.8 | 23.7 | 25.9 | 26.6 | 25.6 |
| Net debt/EBITDA (x) | 2.2 | 2.2 | 2.5 | 2.4 | 2.1 |

| Key Ratios | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Return on assets (%) | 7.1 | 7.8 | 4.4 | 4.9 | 5.4 |
| Return on equity (%) | 6.0 | 4.6 | 4.5 | 5.1 | 5.6 |
| Return on funds employed (%) | 5.8 | 4.7 | 4.3 | 4.8 | 5.3 |
| EBITDA margin (%) | 31.5 | 25.3 | 26.9 | 29.3 | 31.1 |
| EBIT margin (%) | 20.4 | 15.1 | 15.8 | 17.8 | 19.3 |
| Capex to sales (%) | 7.1 | 6.1 | 16.6 | 6.2 | 4.5 |
| Capex to depreciation (%) | 69 | 67 | 158 | 57 | 40 |

| Operating Statistics | 2018A | 2019A | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Hydro | 4,947 | 4,006 | 3,980 | 4,016 | 4,016 |
| Geothermal | 2,757 | 2,894 | 2,810 | 2,829 | 2,829 |
| Wind | - | - | - | 181 | 469 |
| **Total MCY Generation (GWh)** | **7,704** | **6,900** | **6,790** | **7,026** | **7,314** |
| GWAP ($/MWh) | 86.3 | 138.7 | 114.6 | 105.2 | 98.4 |
| Electricity customers (000) | 388 | 373 | 364 | 360 | 357 |
| MM volumes | 3,278 | 3,182 | 3,009 | 2,969 | 2,945 |
| TOU volumes | 1,200 | 1,319 | 1,385 | 1,421 | 1,428 |
| **Total Fixed Price volumes (GWh)** | **4,478** | **4,501** | **4,393** | **4,390** | **4,373** |
| Spot Sales | 891 | 780 | 731 | 734 | 738 |
| Net CFD's | 2,110 | 1,624 | 1,563 | 1,563 | 1,563 |
| **Total Sales (GWh)** | **7,479** | **6,905** | **6,687** | **6,687** | **6,674** |
| Average usage per cust (MWh/yr) | 11.4 | 11.8 | 12.0 | 12.1 | 12.2 |
| LWAP ($/MWh) | 91.6 | 144.2 | 120.5 | 111.0 | 104.1 |
| LWAP/GWAP | 1.06 | 1.04 | 1.05 | 1.06 | 1.06 |
| Average FPVV price ($/MWh) | 112.5 | 113.4 | 115.1 | 117.7 | 119.8 |
| Line losses (%) | 5.6 | 5.1 | 5.4 | 5.3 | 5.3 |
| Retail gas customers (000) | 48 | 47 | 46 | 46 | 47 |
| Retail gas volumes (PJ) | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 |
| Gas volume/cust (GJ/yr) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Energy margin ($m) | 730 | 667 | 672 | 704 | 737 |
| Operating costs ($m) | (205) | (199) | (203) | (202) | (208) |
| Other revenue ($m) | 41 | 37 | 19 | 20 | 20 |
| **MCY EBITDAF ($m)** | **566** | **505** | **488** | **522** | **549** |

* 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 04 Oct 2019: NZ$5.26 June year end

| **Forsyth Barr valuation** | | | |
|---|---|---|---|
| Valuation methodology | | Mix of market multiple and DCF | |
| **12-month target price (NZ$)*** | **4.20** | **Spot valuations (NZ$)** | |
| Expected share price return | -20.2% | 1. DCF | 3.85 |
| Net dividend yield | 4.1% | 2. Market multiple | 4.40 |
| Estimated 12-month return | -16.2% | 3. Dividend yield | 4.47 |
| **Key WACC assumptions** | | **DCF valuation summary (NZ$m)** | |
| Risk free rate | 2.00% | Total firm value | 11,279 |
| Equity beta | 0.84 | (Net debt)/cash | (1,424) |
| WACC | 6.7% | Value of equity | 9,855 |
| 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 | 3,531 | 3,443 | 3,458 |
| **Normalised EBITDA** | **666** | **838** | **769** | **766** | **779** |
| Depreciation and amortisation | (268) | (276) | (309) | (302) | (296) |
| **Normalised EBIT** | **398** | **562** | **460** | **464** | **483** |
| Net interest | (81) | (83) | (82) | (86) | (88) |
| Associate income & other | (19) | (14) | (17) | (19) | (19) |
| Tax | (95) | (133) | (101) | (101) | (105) |
| Minority interests | - | - | - | - | - |
| **Reported NPAT** | **203** | **332** | **259** | **259** | **270** |
| Abnormals/other | 158 | 149 | 183 | 177 | 171 |
| **Adjusted normalised NPAT** | **361** | **481** | **442** | **436** | **442** |
| Adjusted normalised EPS (cps) | 14.1 | 18.8 | 17.3 | 17.0 | 17.2 |
| DPS (cps) | 19.2 | 21.3 | 21.4 | 21.6 | 20.6 |

| **Growth Rates** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Revenue (%) | 16.7 | 24.5 | -14.0 | -2.5 | 0.4 |
| EBITDA (%) | 1.4 | 25.8 | -8.2 | -0.4 | 1.7 |
| EBIT (%) | 1.3 | 41.2 | -18.2 | 1.0 | 4.0 |
| Normalised NPAT (%) | -3.1 | 33.4 | -8.1 | -1.5 | 1.3 |
| Normalised EPS (%) | -3.1 | 33.4 | -8.1 | -1.5 | 1.3 |
| DPS (%) | 1.5 | 10.9 | 0.4 | 0.9 | -4.6 |

| **Cash Flow (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| **EBITDA** | **666** | **838** | **769** | **766** | **779** |
| Working capital change | (34) | (36) | 6 | 12 | 16 |
| Interest & tax paid | (186) | (200) | (224) | (227) | (235) |
| Other | (19) | 33 | (17) | (19) | (19) |
| **Operating cash flow** | **427** | **635** | **533** | **532** | **541** |
| Capital expenditure | (247) | (69) | (75) | (76) | (58) |
| (Acquisitions)/divestments | 23 | - | - | - | - |
| Other | - | - | - | - | - |
| **Funding available/(required)** | **203** | **566** | **458** | **456** | **483** |
| Dividends paid | (486) | (500) | (569) | (550) | (556) |
| Equity raised/(returned) | (2) | (2) | - | - | - |
| **Increase/(decrease) in net debt** | **285** | **(64)** | **111** | **95** | **73** |

| **Balance Sheet (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Working capital | (17) | (24) | (13) | (6) | (3) |
| 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** | **9,003** | **8,766** | **8,511** |
| Net debt/(cash) | 1,461 | 1,424 | 1,535 | 1,630 | 1,703 |
| Other non current liabilities | 1,991 | 2,362 | 2,321 | 2,280 | 2,238 |
| Shareholder's funds | 4,823 | 5,457 | 5,147 | 4,856 | 4,571 |
| Minority interests | - | - | - | - | - |
| **Total funding sources** | **8,275** | **9,243** | **9,003** | **8,766** | **8,511** |

| **Valuation Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 22.2 | 17.8 | 19.5 | 19.6 | 19.3 |
| EV/EBIT (x) | 37.2 | 26.6 | 32.6 | 32.4 | 31.1 |
| PE (x) | 37.4 | 28.0 | 30.5 | 31.0 | 30.6 |
| Price/NTA (x) | 2.8 | 2.5 | 2.6 | 2.8 | 3.0 |
| Free cash flow yield (%) | 1.3 | 4.2 | 3.4 | 3.4 | 3.6 |
| Net dividend yield (%) | 3.6 | 4.0 | 4.1 | 4.1 | 3.9 |
| Gross dividend yield (%) | 4.6 | 5.1 | 5.1 | 5.1 | 5.0 |
| Imputation (%) | 68 | 66 | 65 | 65 | 70 |
| Pay-out ratio (%) | 136 | 113 | 124 | 127 | 119 |

| **Capital Structure** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Interest cover EBIT (x) | 4.7 | 6.6 | 5.4 | 5.2 | 5.2 |
| Interest cover EBITDA (x) | 8.2 | 10.1 | 9.3 | 9.0 | 8.8 |
| Net debt/ND+E (%) | 23.2 | 20.7 | 23.0 | 25.1 | 27.1 |
| Net debt/EBITDA (x) | 2.2 | 1.7 | 2.0 | 2.1 | 2.2 |

| **Key Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Return on assets (%) | 4.4 | 5.7 | 4.7 | 4.9 | 5.2 |
| Return on equity (%) | 4.3 | 6.1 | 5.0 | 5.3 | 5.9 |
| Return on funds employed (%) | 4.6 | 5.9 | 5.0 | 5.2 | 5.5 |
| EBITDA margin (%) | 20.2 | 20.4 | 21.8 | 22.3 | 22.5 |
| EBIT margin (%) | 12.1 | 13.7 | 13.0 | 13.5 | 14.0 |
| Capex to sales (%) | 7.5 | 1.7 | 2.1 | 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 | 12,035 | 11,701 | 11,701 |
| Wind generation | 1,263 | 1,244 | 1,460 | 1,474 | 1,474 |
| **Total NZ generation (GWh)** | **12,528** | **13,570** | **13,494** | **13,175** | **13,175** |
| GWAP ($/MWh) | 83.0 | 123.3 | 102.5 | 94.9 | 90.6 |
| Overseas generation (GWh) | 581 | 730 | 778 | 800 | 800 |
| Overseas GWAP ($/MWh) (NZD) | 151 | 100 | 136 | 106 | 96 |
| Overseas customer numbers (000) | 97 | 110 | 127 | 143 | 153 |
| Powershop customers (000) | 66 | 74 | 74 | 76 | 77 |
| Meridian branded customers (000) | 225 | 228 | 228 | 233 | 237 |
| **NZ electricity customers (000)** | **291** | **302** | **302** | **308** | **315** |
| Average usage per cust (MWh/yr) | 13.5 | 13.2 | 13.1 | 13.1 | 13.1 |
| Mass market volumes | 3,824 | 3,901 | 3,952 | 3,995 | 4,079 |
| Time of use volumes | 2,157 | 2,338 | 2,508 | 2,528 | 2,548 |
| **Total fixed price volumes (GWh)** | **5,981** | **6,239** | **6,460** | **6,523** | **6,627** |
| NZAS sales | 5,011 | 5,310 | 5,464 | 5,449 | 5,449 |
| Sell CFDs | 2,278 | 2,239 | 2,195 | 2,195 | 2,195 |
| Buy CFDs | -2,222 | -1,965 | -1,938 | -1,740 | -1,740 |
| **Total Sales (GWh)** | **11,047** | **11,823** | **12,181** | **12,426** | **12,531** |
| Average FPVV price ($/MWh) | 105.2 | 104.8 | 106.2 | 108.3 | 110.5 |
| LWAP ($/MWh) | 88 | 132 | 111 | 101 | 98 |
| LWAP/GWAP | 1.06 | 1.07 | 1.09 | 1.07 | 1.08 |
| Lines losses (%) | 5.3 | 5.9 | 5.2 | 5.2 | 5.2 |
| New Zealand Energy Margin ($m) | 944 | 1,108 | 1,022 | 1,013 | 1,013 |
| Overseas Energy Margin ($m) | 86 | 118 | 124 | 115 | 114 |
| **Meridian Energy Margin ($m)** | **1,030** | **1,226** | **1,146** | **1,128** | **1,127** |

* 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 04 Oct 2019: NZ$2.84 March year end

| **Forsyth Barr valuation** | | | |
|---|---|---|---|
| Valuation methodology | Mix of market multiple (33%) and DCF (67%) | | |
| **12-month target price (NZ$)*** | **2.80** | **Spot valuations (NZ$)** | |
| Expected share price return | -1.4% | 1. DCF | 2.60 |
| Net dividend yield | 0.0% | 2. Multiple | 2.79 |
| Estimated 12-month return | -1.4% | 3. n/a | n/a |
| **Key WACC assumptions** | | **DCF valuation summary (NZ$m)** | |
| Risk free rate | 2.0% | Total firm value | 1,612 |
| Equity beta | 0.94 | (Net debt)/cash | (392.9) |
| WACC | 7.4% | Value of equity | 1,219 |
| Terminal growth | 1.5% | Shares (m) | 469 |

| **Profit and Loss Account (A$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Sales revenue | 158.0 | 193.3 | 194.5 | 255.8 | 291.7 |
| **Normalised EBITDA** | **103.8** | **134.8** | **127.9** | **171.0** | **190.5** |
| Depreciation and amortisation | (77.1) | (83.6) | (77.9) | (86.1) | (107.7) |
| **Normalised EBIT** | **26.8** | **51.2** | **50.0** | **84.9** | **82.8** |
| Net interest | (29.4) | (30.1) | (17.2) | (31.1) | (43.5) |
| Other | 26.3 | (2.0) | - | - | - |
| Tax | (6.6) | (6.9) | (9.7) | (15.9) | (11.6) |
| Deprecation capex adjustment | 48.6 | 56.6 | (4.5) | (73.6) | 72.5 |
| **Normalised NPAT** | **47.3** | **70.1** | **18.7** | **(35.7)** | **100.2** |
| Abnormals/other | (30.3) | (58.0) | 4.5 | 73.6 | (72.5) |
| **Reported NPAT** | **17.0** | **12.2** | **23.2** | **37.9** | **27.7** |
| Normalised EPS (cps) | 15.1 | 14.9 | 4.0 | (7.6) | 21.3 |
| 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 | -2.3 | 69.7 | -2.6 |
| EBIT (%) | n/a | n/a | n/a | n/a | n/a |
| Normalised NPAT (%) | 3.9 | -52.3 | 90.2 | 63.8 | -27.0 |
| 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** | **103.8** | **134.8** | **127.9** | **171.0** | **190.5** |
| Working capital change | (18.9) | 0.6 | 14.6 | 2.2 | (22.9) |
| Interest & tax paid | (41.9) | (41.7) | (15.5) | (25.2) | (40.3) |
| Other | 13.9 | (8.6) | - | - | - |
| **Operating cash flow** | **56.9** | **85.0** | **127.0** | **148.1** | **127.4** |
| Capital expenditure | (83.6) | (90.8) | (408.1) | (406.3) | (7.0) |
| (Acquisitions)/divestments | - | - | - | - | - |
| Other | - | - | - | - | - |
| **Funding available/(required)** | **(26.7)** | **(5.8)** | **(281.1)** | **(258.2)** | **120.4** |
| Dividends paid | (11.0) | (10.6) | - | - | - |
| Equity raised/(returned) | - | 259.9 | - | - | - |
| **Increase/(decrease) in net debt** | **37.7** | **(243.5)** | **281.1** | **258.2** | **(120.4)** |

| **Balance Sheet (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Working capital | 17.9 | 14.3 | 0.7 | (1.5) | 21.3 |
| Fixed assets | 1,170.6 | 1,066.7 | 1,396.9 | 1,717.1 | 1,616.4 |
| Intangibles | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Other assets | 100.5 | 114.3 | 113.3 | 113.3 | 113.3 |
| **Total funds employed** | **1,289.6** | **1,195.9** | **1,511.5** | **1,829.5** | **1,751.6** |
| Net debt/(cash) | 593.1 | 369.3 | 650.4 | 908.7 | 788.3 |
| Other non current liabilities | 186.3 | 170.6 | 181.9 | 203.7 | 218.5 |
| Shareholder's funds | 510.2 | 656.0 | 679.1 | 717.1 | 744.8 |
| Minority interests | - | - | - | - | - |
| **Total funding sources** | **1,289.6** | **1,195.9** | **1,511.5** | **1,829.5** | **1,751.6** |

| **Valuation Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 17.3 | 12.8 | 13.8 | 11.2 | 10.1 |
| EV/EBIT (x) | 67.1 | 33.6 | 35.3 | 22.6 | 23.2 |
| PE (x) | 17.4 | 17.7 | 67.4 | n/a | 12.6 |
| Price/NTA (x) | n/a | 4.9 | 4.9 | 4.9 | 4.9 |
| Free cash flow yield (%) | 3.6 | 6.0 | 3.2 | -3.0 | 9.0 |
| Net dividend yield (%) | 1.2 | 0.4 | 0.0 | 0.0 | 0.0 |
| Gross dividend yield (%) | 1.2 | 0.4 | 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 | 2.9 | 2.7 | 1.9 |
| Interest cover EBITDA (x) | 3.5 | 4.5 | 7.4 | 5.5 | 4.4 |
| Net debt/ND+E (%) | 53.8 | 36.0 | 48.9 | 55.9 | 51.4 |
| Net debt/EBITDA (x) | 5.7 | 2.7 | 5.1 | 5.3 | 4.1 |

| **Key Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Return on assets (%) | 2.0 | 3.3 | 3.2 | 4.4 | 4.6 |
| Return on equity (%) | 9.3 | 10.7 | 2.8 | -5.0 | 13.5 |
| Return on funds employed (%) | 1.7 | 3.5 | 2.7 | 3.7 | 3.8 |
| EBITDA margin (%) | 65.7 | 69.7 | 65.8 | 66.9 | 65.3 |
| EBIT margin (%) | 16.9 | 26.5 | 25.7 | 33.2 | 28.4 |
| Capex to sales (%) | 52.9 | 47.0 | 209.9 | 158.8 | 2.4 |
| Capex to depreciation (%) | 108 | 109 | 524 | 472 | 6 |

| **Operating Performance** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Australia installed capacity (MW) | 386 | 440 | 440 | 776 | 776 |
| NZ installed capacity (MW) | 197 | 197 | 197 | 197 | 330 |
| **TLT installed capacity (MW)** | **583** | **637** | **637** | **973** | **1,106** |
| Australia wind generation (GWh) | 1,225 | 1,395 | 1,385 | 2,209 | 2,653 |
| NZ wind generation (GWh) | 571 | 658 | 658 | 672 | 1,119 |
| **TLT wind generation (GWh)** | **1,796** | **2,053** | **2,043** | **2,881** | **3,772** |
| ***Price assumptions*** | | | | | |
| Australia REC price (A$/MWh) | 83 | 78 | 55 | 25 | 12 |
| SA wholesale price (A$/MWh) | 69 | 87 | 91 | 78 | 62 |
| VIC wholesale price (A$/MWh) | | 105 | 111 | 91 | 71 |
| Australia PPA price (A$/MWh) | 98 | 94 | 89 | 81 | 77 |
| NZ PPA price (NZ$/MWh) | 65 | 65 | 65 | 66 | 68 |
| Australia spot sales (GWh) | 23 | 155 | 346 | 668 | 535 |
| Australia PPA sales (GWh) | 1,202 | 1,239 | 1,038 | 1,541 | 2,118 |
| Australia spot revenue (A$m) | 3 | 34 | 60 | 88 | 57 |
| Australia PPA revenue (A$m) | 118 | 117 | 93 | 125 | 162 |
| Australia revenue (A$m) | 122 | 151 | 153 | 213 | 219 |
| NZ revenue (A$m) | 36 | 42 | 42 | 43 | 73 |
| Australia EBITDAF (A$m) | 82 | 109 | 105 | 148 | 146 |
| NZ EBITDAF (A$m) | 22 | 25 | 23 | 24 | 45 |

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

| Trustpower Ltd (TPW) | Priced as at 04 Oct 2019: NZ$8.23 | | March year end |
|---|---|---|---|

**Forsyth Barr valuation**

| | | | |
|---|---|---|---|
| Valuation methodology | Blend of spot valuations, weighted to multiples | | |
| **12-month target price (NZ$)*** | **8.00** | **Spot valuations (NZ$)** | |
| Expected share price return | -2.8% | 1. DCF | 7.45 |
| Net dividend yield | 4.2% | 2. Market multiples | 8.08 |
| Estimated 12-month return | 1.4% | 3. Dividend Yield | 8.00 |
| **Key WACC assumptions** | | **DCF valuation summary (NZ$m)** | |
| Risk free rate | 2.00% | Total firm value | 2,906 |
| Equity beta | 0.88 | (Net debt)/cash | (557) |
| WACC | 6.8% | Value of equity | 2,333 |
| Terminal growth | 1.5% | Shares (m) | 313 |

| **Profit and Loss Account (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Sales revenue | 979 | 1,030 | 997 | 1,015 | 1,029 |
| **Normalised EBITDA** | **270** | **222** | **209** | **214** | **218** |
| Depreciation and amortisation | (47) | (47) | (44) | (43) | (43) |
| **Normalised EBIT** | **223** | **175** | **166** | **171** | **175** |
| Net interest | (34) | (28) | (31) | (32) | (32) |
| Depreciation capex adjustment | 8 | 19 | 16 | 15 | 14 |
| Tax | (55) | (48) | (43) | (44) | (45) |
| Minority interests | (1) | (2) | (2) | (2) | (2) |
| **Normalised NPAT** | **141** | **117** | **105** | **107** | **110** |
| Abnormals/other/depn adj | (13) | (26) | (11) | (11) | (10) |
| **Reported NPAT** | **128** | **91** | **94** | **97** | **100** |
| Normalised EPS (cps) | 44.9 | 37.1 | 33.5 | 34.2 | 35.0 |
| DPS (cps) | 34.0 | 34.0 | 34.0 | 35.0 | 36.0 |

| **Growth Rates** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Revenue (%) | 4.2 | 5.2 | -3.3 | 1.8 | 1.4 |
| EBITDA (%) | 15.0 | -17.6 | -5.8 | 2.3 | 1.8 |
| EBIT (%) | 19.3 | -21.6 | -5.3 | 3.1 | 2.3 |
| Normalised NPAT (%) | 8.5 | -17.3 | -9.8 | 2.3 | 2.2 |
| Normalised EPS (%) | 8.5 | -17.3 | -9.8 | 2.3 | 2.2 |
| DPS (%) | 3.0 | 0.0 | 0.0 | 2.9 | 2.9 |

| **Cash Flow (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| **EBITDA** | **270** | **222** | **209** | **214** | **218** |
| Working capital change | 25 | (47) | (9) | 10 | 10 |
| Interest & tax paid | (64) | (75) | (68) | (71) | (73) |
| Other | (23) | 20 | - | - | - |
| **Operating cash flow** | **208** | **120** | **133** | **153** | **155** |
| Capital expenditure | (42) | (31) | (28) | (29) | (29) |
| (Acquisitions)/divestments | 118 | 8 | - | - | - |
| Other | 4 | (2) | - | - | - |
| **Funding available/(required)** | **288** | **96** | **105** | **124** | **126** |
| Dividends paid | (110) | (190) | (153) | (106) | (113) |
| Equity raised/(returned) | (0) | - | - | - | - |
| **Increase/(decrease) in net debt** | **(178)** | **95** | **49** | **(18)** | **(13)** |

| **Balance Sheet (NZ$m)** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Working capital | (28) | (0) | 9 | 8 | 10 |
| Fixed assets | 2,102 | 1,925 | 1,910 | 1,896 | 1,882 |
| Intangibles | 44 | 37 | 36 | 35 | 35 |
| Other assets | 60 | 115 | 114 | 106 | 94 |
| **Total funds employed** | **2,178** | **2,076** | **2,070** | **2,045** | **2,021** |
| Net debt/(cash) | 467 | 557 | 606 | 588 | 575 |
| Other non current liabilities | 276 | 270 | 272 | 273 | 273 |
| Shareholder's funds | 1,413 | 1,224 | 1,165 | 1,155 | 1,142 |
| Minority interests | 22 | 25 | 27 | 29 | 31 |
| **Total funding sources** | **2,178** | **2,076** | **2,070** | **2,045** | **2,021** |

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

| **Valuation Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| EV/EBITDA (x) | 11.7 | 14.0 | 15.2 | 14.9 | 14.7 |
| EV/EBIT (x) | 14.2 | 17.7 | 19.2 | 18.7 | 18.3 |
| PE (x) | 18.3 | 22.2 | 24.6 | 24.0 | 23.5 |
| Price/NTA (x) | 1.8 | 2.2 | 2.3 | 2.3 | 2.3 |
| Free cash flow yield (%) | 6.5 | 3.5 | 4.1 | 4.8 | 4.9 |
| Net dividend yield (%) | 4.1 | 4.1 | 4.1 | 4.3 | 4.4 |
| Gross dividend yield (%) | 5.7 | 5.0 | 5.6 | 5.8 | 6.0 |
| Imputation (%) | 100 | 55 | 90 | 95 | 95 |
| Pay-out ratio (%) | 76 | 92 | 102 | 102 | 103 |

| **Capital Structure** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Interest cover EBIT (x) | 7.0 | 6.8 | 5.8 | 5.7 | 5.9 |
| Interest cover EBITDA (x) | 7.9 | 7.9 | 6.7 | 6.7 | 6.8 |
| Net debt/ND+E (%) | 24.8 | 31.3 | 34.2 | 33.7 | 33.5 |
| Net debt/EBITDA (x) | 1.7 | 2.5 | 2.9 | 2.7 | 2.6 |

| **Key Ratios** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| Return on assets (%) | 9.2 | 7.2 | 7.6 | 7.9 | 8.2 |
| Return on equity (%) | 9.9 | 9.7 | 9.2 | 9.5 | 9.9 |
| Return on funds employed (%) | 8.5 | 7.2 | 6.6 | 6.9 | 7.1 |
| EBITDA margin (%) | 27.5 | 21.6 | 21.0 | 21.1 | 21.2 |
| EBIT margin (%) | 22.8 | 17.0 | 16.6 | 16.8 | 17.0 |
| Capex to sales (%) | 4.2 | 3.0 | 2.8 | 2.8 | 2.8 |
| Capex to depreciation (%) | 134 | 98 | 96 | 98 | 100 |

| **Divisional Revenue** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| NZ electricity revenue | 810 | 861 | 829 | 838 | 843 |
| Australia electricity revenue | 33 | - | - | - | - |
| Gas revenue | 29 | 29 | 31 | 33 | 35 |
| Telecommunication revenue | 81 | 88 | 94 | 102 | 110 |
| Other revenue | 27 | 52 | 43 | 42 | 42 |
| **Total revenue** | **979** | **1,030** | **997** | **1,015** | **1,029** |

| **Operating Statistics** | **2018A** | **2019A** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|
| NZ generation (GWh) | 2,235 | 1,995 | 1,801 | 1,896 | 1,896 |
| Australian generation (GWh) | 284 | - | - | - | - |
| **Total generation (GWh)** | **2,519** | **1,995** | **1,801** | **1,896** | **1,896** |
| NZ GWAP $/MWh | 88 | 125 | 101 | 93 | 88 |
| Mass market sales (GWh) | 1,887 | 1,845 | 1,812 | 1,807 | 1,798 |
| TOU sales (GWh) | 842 | 880 | 912 | 915 | 918 |
| Spot sales (GWh) | 1,086 | 1,021 | 1,025 | 1,028 | 1,032 |
| **Total Sales (GWh)** | **3,815** | **3,746** | **3,749** | **3,751** | **3,748** |
| LWAP $/MWh | 91 | 131 | 109 | 99 | 94 |
| LWAP/GWAP | 1.04 | 1.04 | 1.08 | 1.07 | 1.07 |
| Electricity customers (000) | 273 | 267 | 265 | 264 | 262 |
| Usage/customer (MWh) | 6.9 | 6.8 | 6.8 | 6.8 | 6.8 |
| Revenue/MWh sold ($) | 212 | 230 | 221 | 223 | 225 |
| Gas customers (000) | 37 | 39 | 41 | 42 | 43 |
| Volume/customer (GJ) | 27.5 | 26.5 | 26.5 | 26.5 | 26.5 |
| Telco customers (000) | 87 | 96 | 104 | 111 | 117 |
| Revenue/customer ($) | 991 | 963 | 972 | 982 | 992 |