ANALYSIS OF GENERATOR RETAILER FINANCIAL DATA

Prepared for the Electricity Authority

23 August 2021

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Summary

The question we address

- This report examines data for the four largest generator-retailers to identify whether there was any change in earnings from 2018. This is relevant because if there has been a sustained exercise of market power from around that time, it would be reasonable to expect some increase in net earnings.
- Having said that, it is important to recognise that any observed step-up in earnings would not prove the exercise of market power. An earnings increase could occur for other reasons, such as underlying shifts in market costs or prices.
- **What we found**
- We analysed data supplied by companies on their NZ electricity operations for the period from financial year (FY) ended 2016 to 2020. We used earnings before interest, tax, depreciation, amortization and fair value adjustments (EBITDAF) to measure company earnings from NZ electricity generation and sales.
- For the combined companies, EBITDAF lifted by $163m (~8%) to $2,222m between 2018 and 2019, then dropped $21m to $2,201m in 2020 (-1%). For the period 2016 to 2018 EBITDAF was fairly stable (varying between $2,059m and $2,091m).
- At the individual company level, most gentailers had relatively modest differences in earnings for the pre- and post-2018 periods. Meridian was the exception with earnings increasing by $156m (24%) in FY2019 and a further $17m (2%) in FY2020.

Summary (cont'd)

Reasons for increase in Meridian EBITDAF

- Meridian's higher earnings were largely driven by greater revenue, with little change in operating costs over the period.
- On the revenue side, Meridian's generation volumes in 2019 were 8% higher than in 2018 and rose by a further 5% in 2020. The increase in generation contributed to the lift in Meridian's 2019 and 2020 earnings compared to 2018.
- However, higher generation alone does not explain the increase in EBITDAF recorded in 2019 and 2020. For example, generation volume was higher in 2016 than 2019 (13,694 GWh cf. 13,559 GWh) but EBITDAF in 2016 was lower than 2019 ($656m cf. $809m).
- Examination of detailed data shows the EBITDAF increases in 2019 and 2020 had some factors in common (e.g. higher sales to C&I customers) but others that were different (e.g. a gain of $121m on derivative purchases in 2019). But there appears to be quite a lot of 'noise' in the annual data.
- To remove some of the annual noise we compared 2016 and 2020 data. This comparison indicates the key drivers of increased EBITDAF between these years was:
  - Higher sales ($164m) to retail customers (mainly a positive volume shift)
  - Higher sales ($62m) to NZAS (a mix of positive volume and price effects)
  - Higher net income ($79m) on hedges bought by Meridian (reduced volumes but greater net receipts)
- There were also some (-$134m) offsetting factors, e.g. reduced spot and derivative sales and higher costs

Summary (cont'd)

- In overall terms, Meridian appears to have benefited from a combination of moving its generation volumes away from spot market sales and into higher value sale channels (e.g. residential customer sales) and increased market prices in some sale channels (e.g. C&I customer sales)
- Arguably, it is not surprising that Meridian recorded higher earnings post 2018 given the nature of its generation base (entirely renewable plant with low cash operating costs) and the market backdrop of increased spot and contract prices.
- However, the analysis does highlight some open questions:
    - Why did Meridian's earnings lift appreciably while other companies (e.g. Mercury which also has 100% renewable generation base) record relatively flat or lower earnings post-2018?
    - A material portion of Meridian's earnings uplift appears to stem from higher net income recorded on derivatives it purchases from third parties. It is unclear whether this reflects temporary influences (e.g. attractive deals which will eventually expire) or some enduring factor?

Analysis of earnings for largest four gentailers

Purpose of this report

Scope

- The Authority has been assessing the strength of competition in the electricity spot and forward markets, particularly examining whether there has been any change since 2018.
- This report addresses a related question – namely whether there is any evidence of a change in generator-retailer earnings after mid-2018. This is relevant because if there has been a sustained exercise of market power, it would be reasonable to expect some of the proceeds to be visible in suppliers' net earnings.
- Having said that, it is important to recognise that any observed step-up in earnings would not prove the exercise of market power. An earnings increase could occur for other reasons, such as underlying shifts in market costs or prices. Hence, the cause of any upward shift would need to be examined.
- Against this backdrop, this report analyses the net earnings of the largest major gentailers before and after 2018. It seeks to:
    1. Identify any changes in sector or company earnings
    2. Examine the underlying sources of any significant increase in earnings.
- All monetary references in this report are New Zealand dollars unless stated otherwise.

Key caveats

Contact

- C&I sales are not separated from Residential and SME in earlier years
- Data excludes all staff and costs not specifically allocated to business lines (e.g. overheads)

Genesis

- Genesis data incorporates adjustments to reflect the arbitration decision announced in August 2021 relating to liability for carbon units in its Kupe gas contract with Beach. This alters results from reported information - particularly from FY18 onwards

Mercury

- Mercury treats C&I as part of the wholesale segment (unlike data for other suppliers)

Meridian

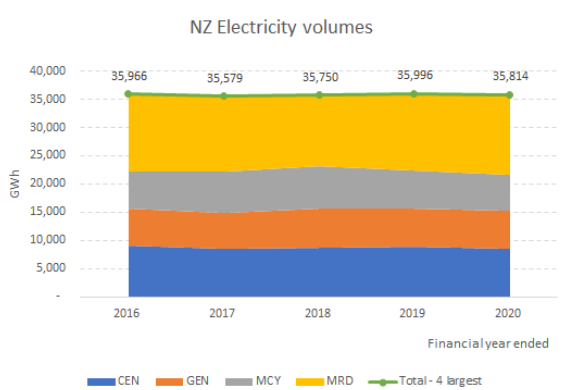
- The contract with New Zealand Aluminium Smelters Ltd (NZAS) is treated as a physical supply contract although it is a contract for differences (CFD)

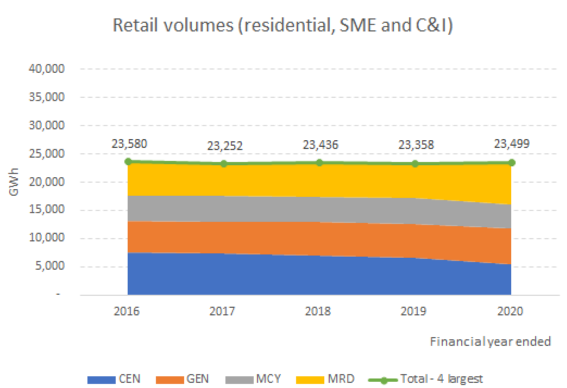
General

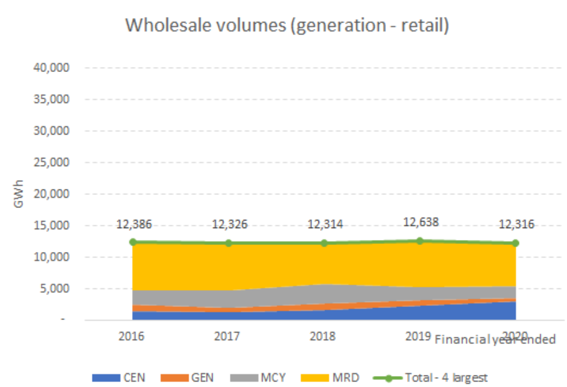
- More generally, the companies do not necessarily adopt the same allocation rules for revenues or costs which do not fall squarely into the electricity business - e.g. treatment of common IT costs. However, we understand each company has adopted a consistent treatment over time. As a result, time series comparisons should be valid even if cross-company analysis is not reliable.
- Charts and tables show results which may differ slightly from one another due to rounding – for example EBITDAF components may not sum exactly to reported total figures.

We examined the 2016-2020 period and use EBITDAF to measure changes in the net earnings of suppliers

- We examine earnings in the financial years (FY) ended 2016 to 2020* for the four largest gentailers. This provides a span either side of the period when wholesale electricity prices rose (i.e. after mid-2018).
- We use EBITDAF as the measure of earnings. EBITDAF refers to earnings before interest, tax, depreciation, amortization, and fair value adjustments. This measure was chosen because it is commonly used to assess operating earnings, is unaffected by changes in capital structure and is subject to few accounting judgements.
- The principal drawback with EBITDAF is it excludes any capital-related costs (such as depreciation or interest expenses) which are significant costs for generation businesses. However, the exclusion is acceptable in this case because we are examining trends over time and suppliers' physical asset bases have changed little over the 2016 to 2020 period.* Likewise, their total generation and sales volumes have been stable over the period.







Definitions: NZ electricity volumes = generation sales to spot market. Retail volumes = sales to residential, SME and C&I customers. Wholesale volumes = generation – retail.

* - All suppliers have a June year end. Data was also provided by Trustpower but has been excluded from the analysis because the generation base was changing materially through the period due to the KCE acquisition and the Tilt Renewables demerger. ** Mill Creek wind farm was the last major generation addition before 2020 by any of larger gentailers and was fully operational in late 2014.

We focus on earnings for the combined NZ electricity businesses – rather than retail or wholesale segments

Combined wholesale and retail data appears robust

- Gentailers were asked to disclose revenue, cost and volume data for their NZ electricity operations at the retail and wholesale segment levels.
- The disclosed data largely excludes revenues and costs for other activities (e.g. gas, telco, LPG, Australia).
- This exclusion is critical for understanding NZ electricity business earnings and the data provided by suppliers appears to be robust.

Segment level data is less reliable

- Gentailers report widely differing transfer prices even though they operate similar businesses.
- Transfer prices appear to not be comparable – creating doubt about segmental time series comparisons.
- Gentailers adopt differing segmental definitions further complicating analysis. For example, Mercury includes commercial and industrial (C&I) customers as part of the wholesale segment – whereas others treat it as part of retail segment.
- For these reasons, we do not focus on segment level analysis.

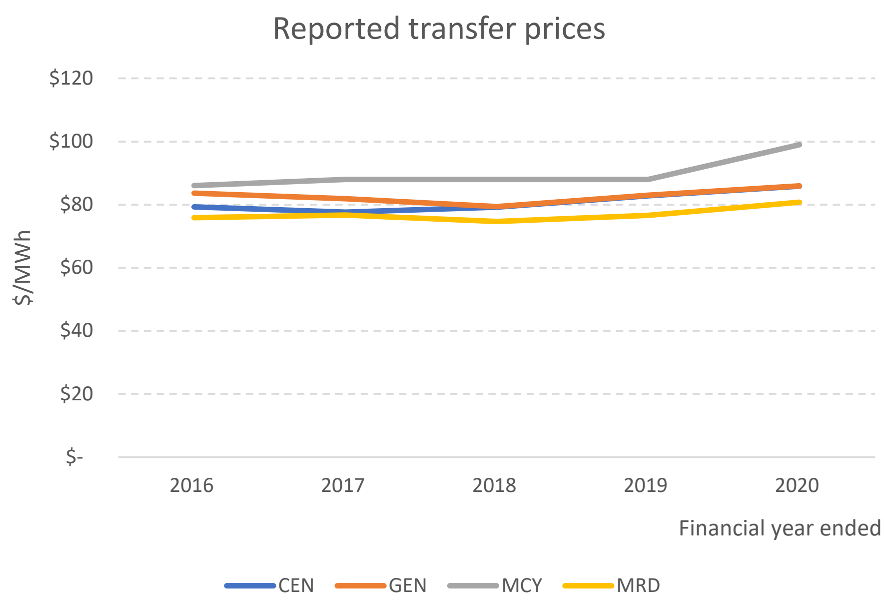
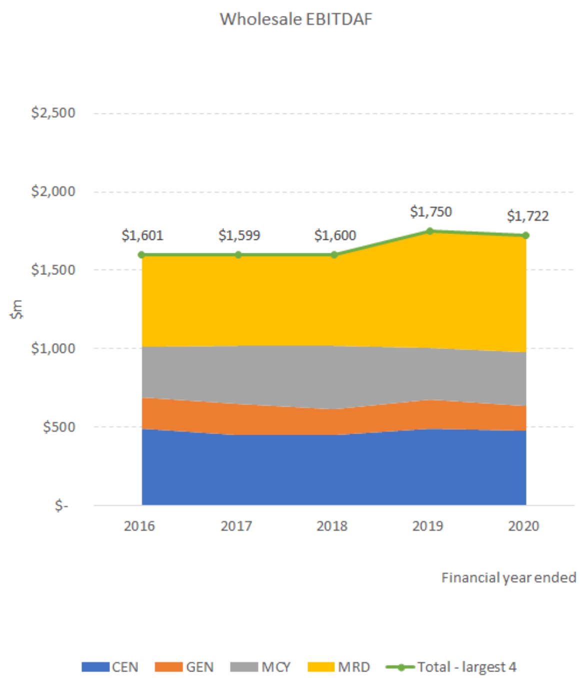


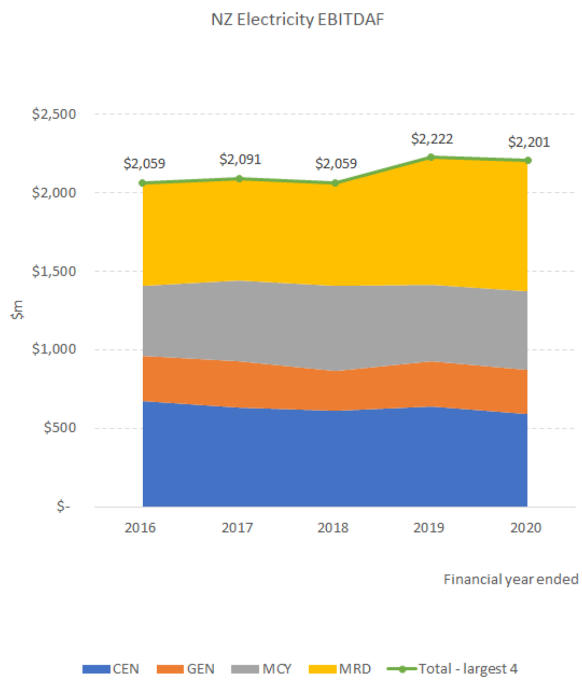
Chart shows the disclosed average transfer price for sale of energy by the wholesale segment to the retail segment. This is computes by dividing the internal transfer cost by the volume of purchases for the retail segment.

The Mercury figures are not comparable with other suppliers as the price excludes sales to C&I customers (these generally have a lower cost of energy than residential and small and medium enterprise customers.)

Analysis of combined earnings for largest four gentailers

Gentailer combined earnings lifted by $163m (~8%) between 2018 and 2019, then dropped $21m in 2020 (-1%)





Retail EBITDAF

- Increased by $13m between 2018 and 2019
- Increased by $20m between 2018 and 2020
- Increased by $20m in four years to 2020

Wholesale EBITDAF

- Increased by $150m between 2018 and 2019
- Increased by $122m between 2018 and 2020
- Increased by $121m in four years to 2020

NZE EBITDAF

- Increased by $163m (8%) between 2018 and 2019
- Increased by $142m (7%) between 2018 and 2020
- Increased by $142m (7%) in four years to 2020

Most gentailers reported modest differences in pre- and post-2018 earnings, except for Meridian

Contact
- NZ electricity EBITDAF increased by $28m (+5%) in 2019 and fell $49m (-8%) in 2020.

Genesis
- NZ electricity EBITDAF increased by $31m (+12%) in 2019 and fell $2m (-1%) in 2020.

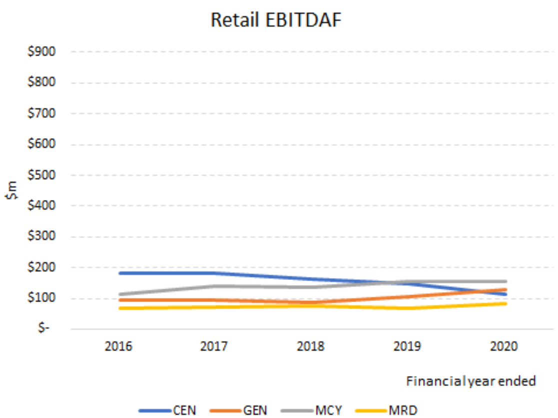
Mercury
- NZ electricity EBITDAF fell by $52m (-10%) in 2019 and increased $13m (3%) in 2020.

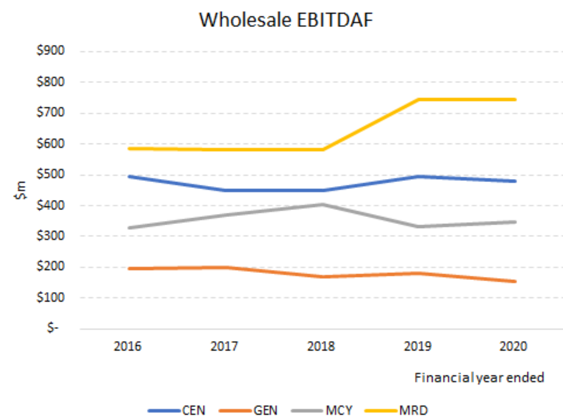
Meridian
- NZ electricity EBITDAF increased by $156m (+24%) in 2019 and by $17m (+2%) in 2020.

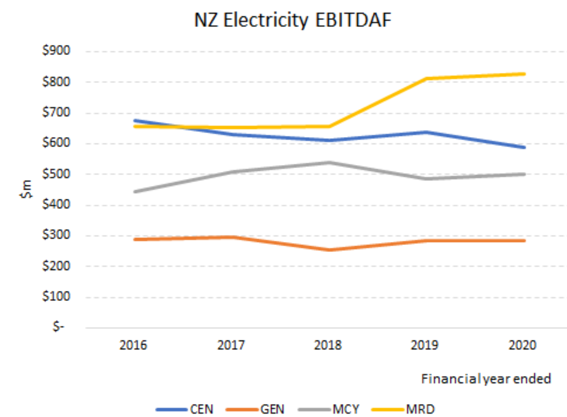
NZ electricity EBITDAF (annual earnings)					
$m	2016	2017	2018	2019	2020
CEN	$ 674	$ 632	$ 611	$ 639	$ 590
GEN	$ 288	$ 295	$ 255	$ 286	$ 284
MCY	$ 442	$ 510	$ 538	$ 486	$ 499
MRD	$ 655	$ 654	$ 655	$ 811	$ 828

NZ electricity EBITDAF - change from previous year					
$m	2016	2017	2018	2019	2020
CEN		-$ 42	-$ 21	$ 28	-$ 49
GEN		$ 7	-$ 40	$ 31	-$ 2
MCY		$ 68	$ 28	-$ 52	$ 13
MRD		-$ 1	$ 1	$ 156	$ 17

NZ electricity EBITDAF ($m change from previous year)					
%	2016	2017	2018	2019	2020
CEN		-6%	-3%	5%	-8%
GEN		2%	-13%	12%	-1%
MCY		15%	6%	-10%	3%
MRD		0%	0%	24%	2%







Changes in combined earnings for four largest gentailers between 2016 and 2020

Five year trend analysis
- Chart shows 2016 compared to 2020 – this removes much of the annual 'noise' and makes it easier to identify longer term changes

Overall EBITDAF
- Increased by $142m

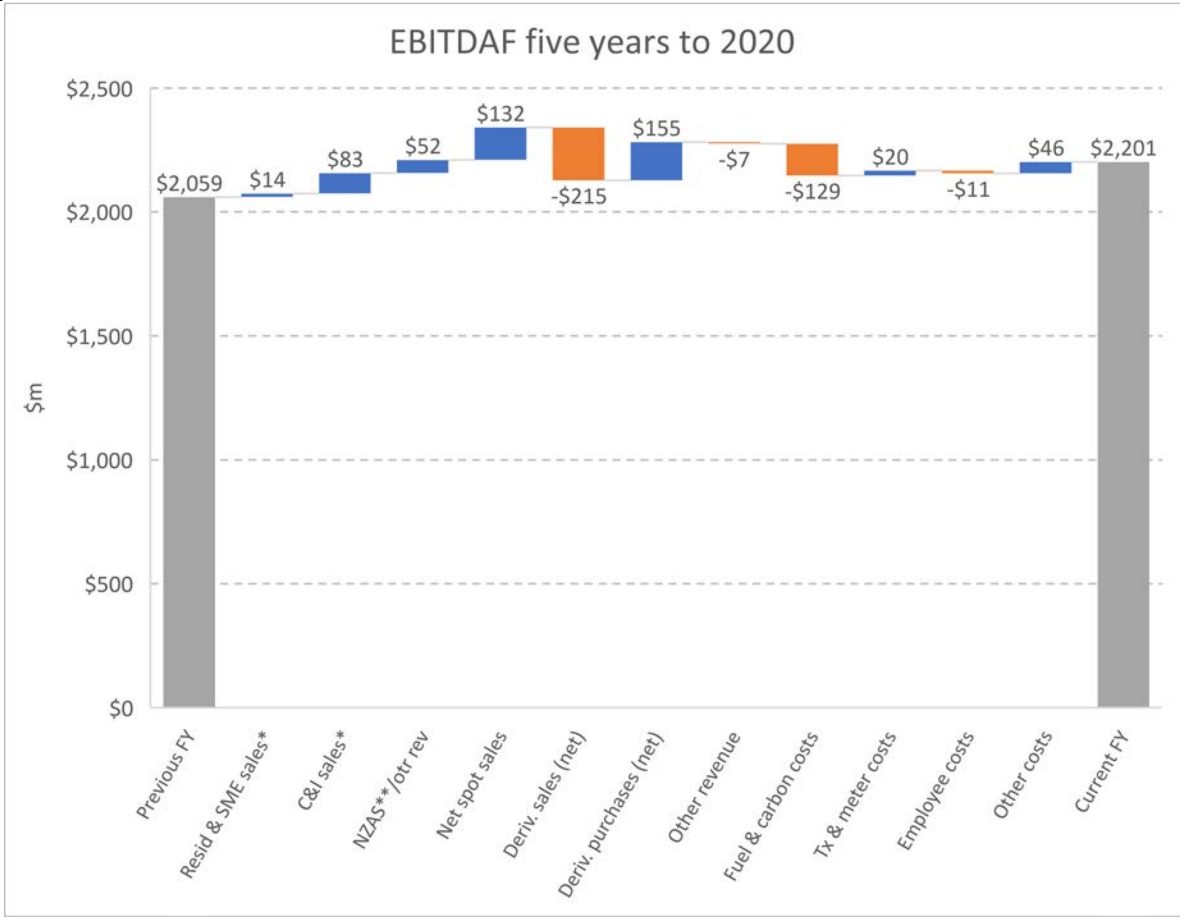
Retail + NZAS + otr sales
- Retail added $97m
- NZAS added $52m
- Other detracted $7m

Derivative sales/purchases
- Detracted a net $60m

Net spot sales
- Increased by $132m

Fuel and carbon costs
Detracted by $129m

Other misc costs
- Costs decreased by net $55m



* Revenue less dx costs, ** incl. "Other elec. mkt revenue", Net spot sales is generation revenues at spot minus purchases for retail sales and NZAS (for Meridian)

Combined gentailer volumes between 2016 and 2020

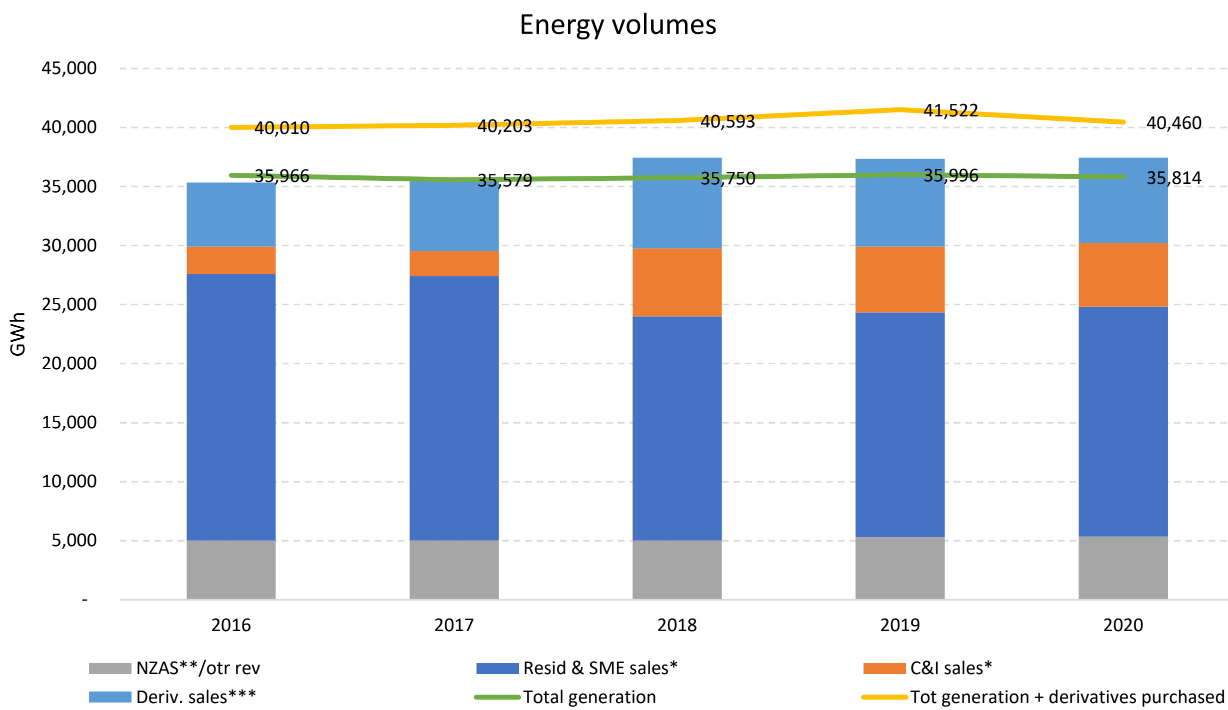
Generation volumes
- Basically flat

Retail + NZAS sales
- Basically flat

Derivative sales
- Increased ~33% from 5,422 to 7214 GWh

Derivative purchases
- Increased ~15% from 4,044 to 4,646 GWh

Net spot sales
- Reduced 8% to 5,584 GWh

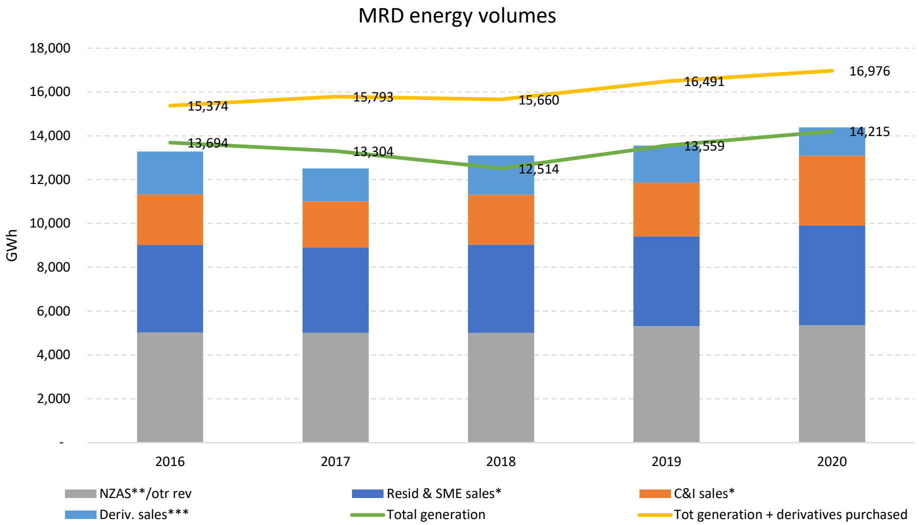


* Purchase volume, ** Includes "other elec mkt revenue", *** Excludes futures

Analysis of Meridian earnings

Meridian had higher generation volumes in 2019 and 2020 than 2018, but this does not fully explain EBITDAF increase

- On the revenue side, Meridian's generation volumes in 2019 were 8% higher than in 2018 and rose by a further 5% in 2020.
- The increase in generation is likely to have contributed to the lift in Meridian's 2019 and 2020 earnings compared to 2018.
- However, higher generation alone does not explain the increase in EBITDAF recorded in 2019 and 2020.
- This is evident by comparing the results for 2016 and 2019.
- In 2016 generation was 13,694 GWh, which was higher than generation in 2019 (13,559 GWh)
- But despite the lower generation volume in 2019 than 2016, EBITDAF was higher ($809m cf. 656m).
- A more detailed analysis is needed to identify underlying drivers.



* Purchase volume, ** Includes "other elec mkt revenue", *** Excludes futures

Meridian's earnings were lifted by higher retail sales and derivative income in 2019 and retail sales in 2020

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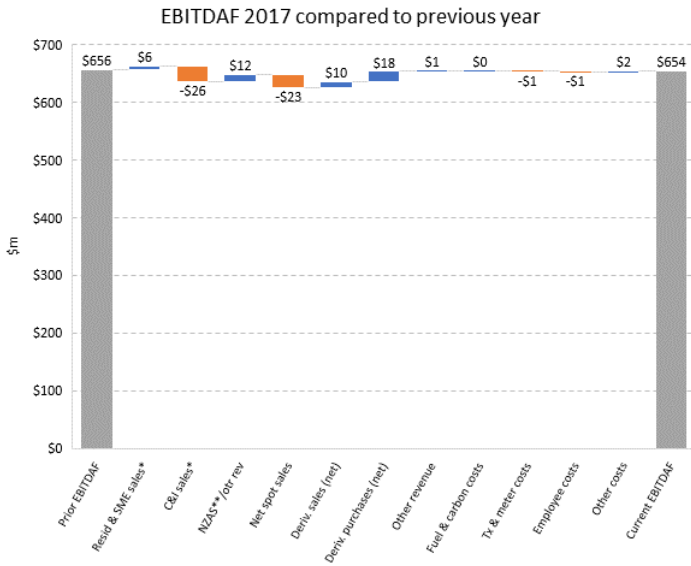
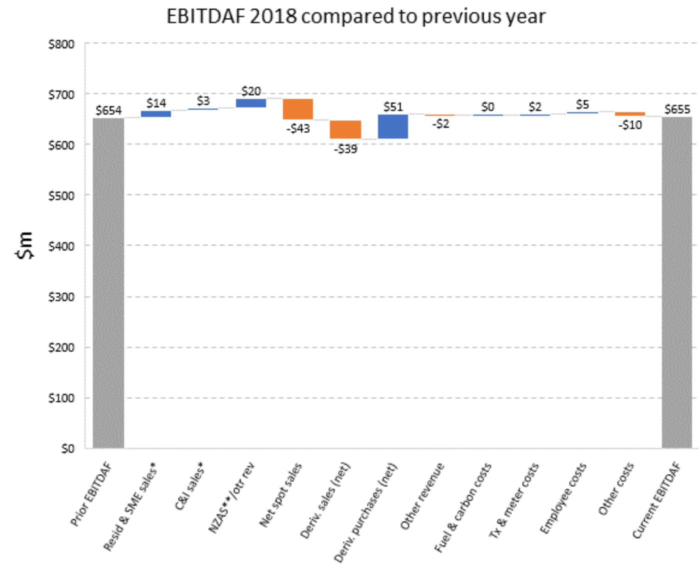
2019 cf 2018

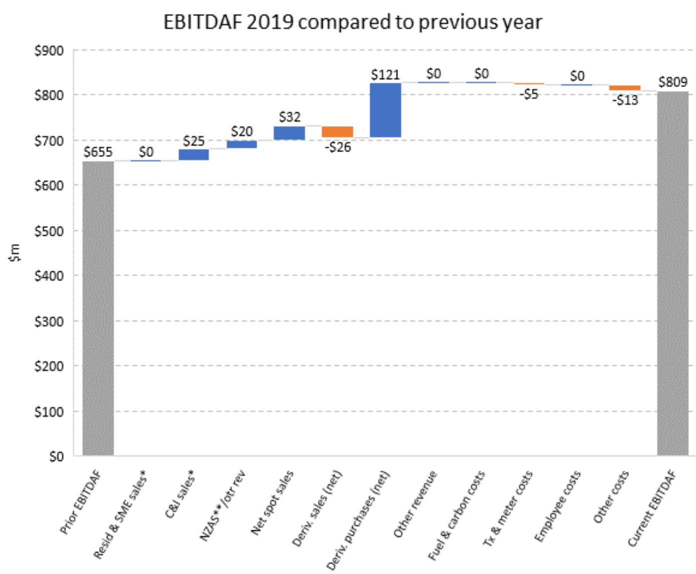
- Derivative purchases added $121m
- Retail, NZAS and spot sales added $77m
- Costs rose by $18m

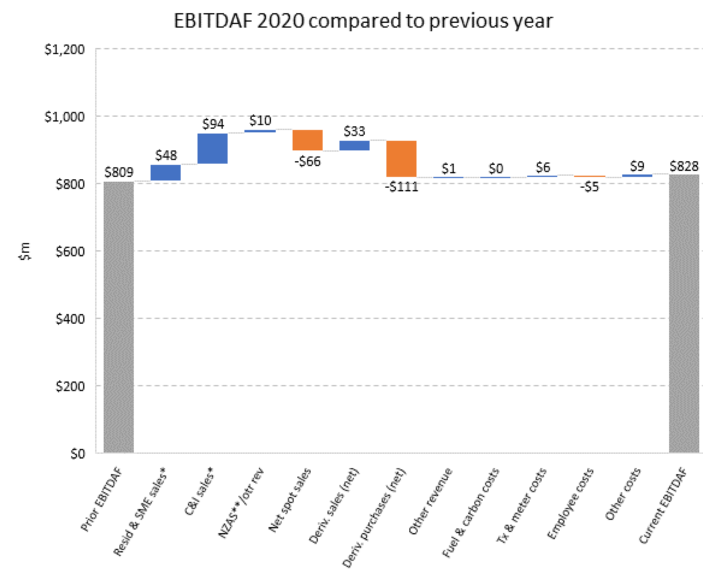
2020 cf 2019

- Retail + NZAS + derivative sales added $185m
- Derivative purchases and net spot sales detracted by $177m









* Revenue less distribution costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenue at spot prices minus purchases for retail sales (and NZAS load for Meridian).

Revenue growth was clearly the main source of Meridian's higher earnings between 2016 and 2020

Five year trend analysis

- Chart shows 2016 compared to 2020 – this removes much of the annual 'noise' and makes it easier to identify longer term changes

Retail + NZAS sales

- Retail added $164m
- NZAS added $62m

Derivative sales/purchases

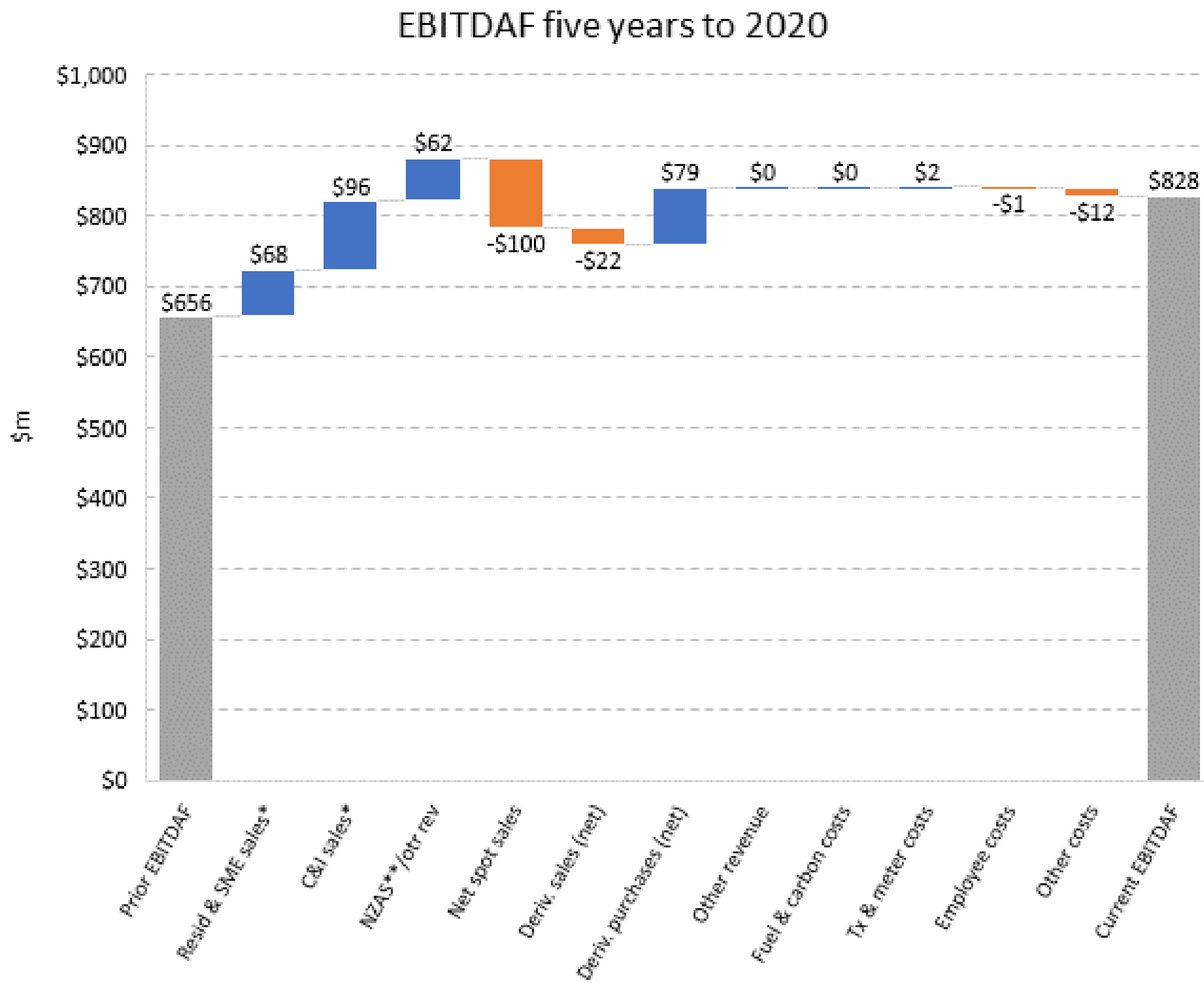
- Net gain of $57m

Net spot sales

- Detracted $100m

Other misc costs

- Almost no change (detracted by $11m or ~1% of EBITDAF)



* Revenue less distribution costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenue at spot prices minus purchases for retail sales (and NZAS load for Meridian).

Meridian's revenue growth reflects a mix of volume and other effects which differ by channel

Residential and SME sales +$68m
- ~90% volume driven

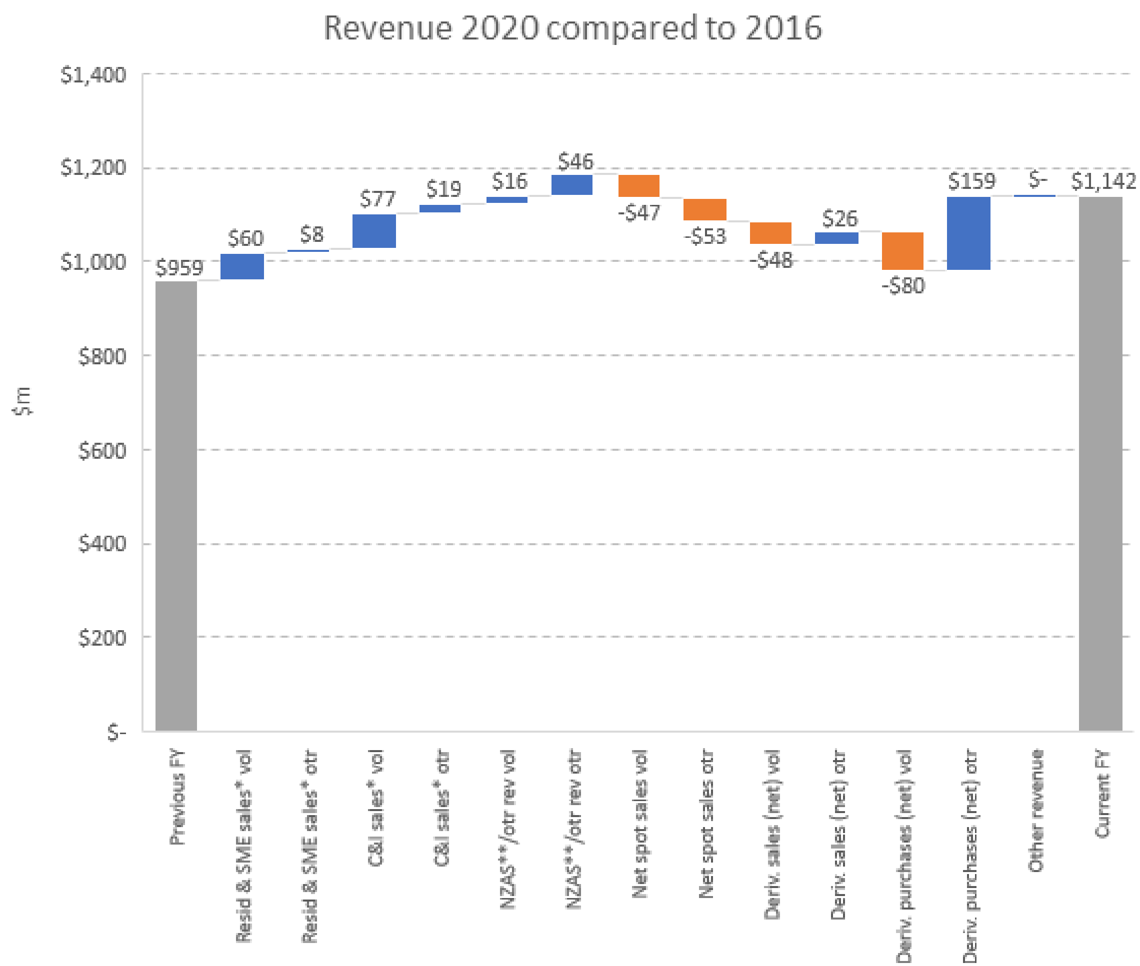
C&I sales +$96m
- ~80% volume driven

NZAS sales +$62m
- ~26% volume driven

Net spot sales -$100m
- ~47% volume driven

Derivative sales -$22m
- Sale volumes were down (detracting from EBITDAF) and this was not offset by higher sale prices

Derivative purchases +$79m
- Purchase volumes increased (reducing EBITDAF) but net settlement receipts increased by a larger amount



* Revenue less dx costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenues at spot minus purchases for retail sales (and NZAS for Meridian). Volume effect calculated based on price in prior period x change in volume. Other effect is total effect minus calculated volume impact.

Meridian has benefited from increased sale volumes in channels with higher prices

Retail sales

- Meridian's residential, SME (+14%) and C&I (+38%) volumes have grown over time (after 2017 dip)

NZAS sales

- Modest volume growth (+7%)

Net spot (generation minus retail and NZAS)

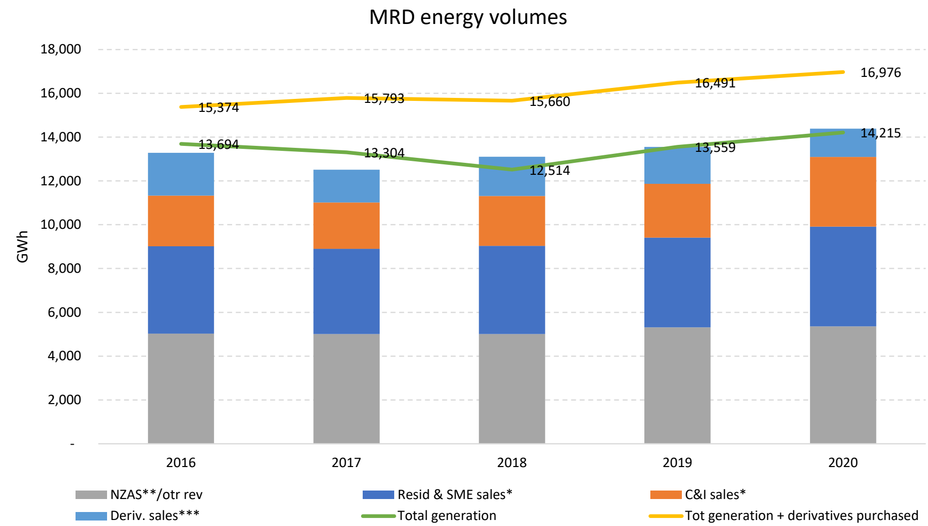
- Volume reduced by ~50% to 1,122 GWh

Derivative sales

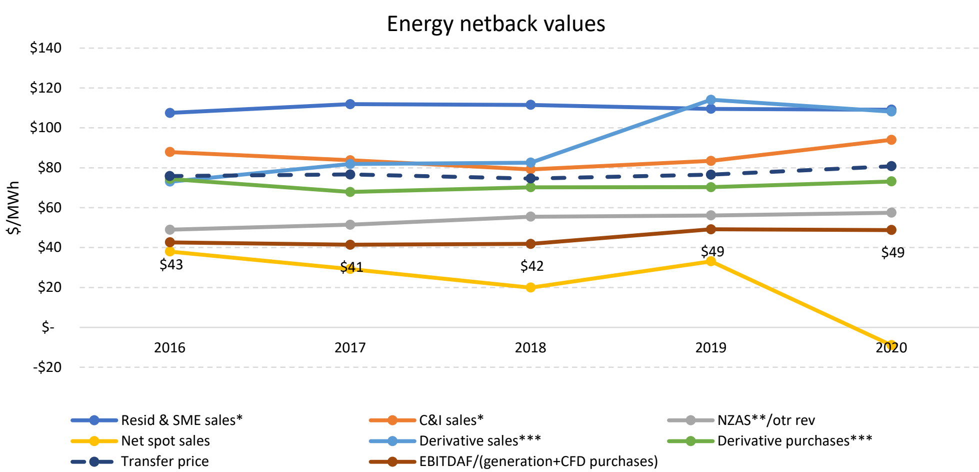
- Declining volumes (-34%) but higher prices – however it is unclear whether the CFD volume data is entirely comparable over time

Derivative purchases

- Meridian increased the purchased volume of derivative (+64%) since 2016 at relatively flat prices



* Purchase volume, ** Includes "other elec mkt revenue", *** Excludes futures



* Net of dx cost, ** Includes "other elec mkt revenue", *** Excludes futures

Genesis-Meridian swaption proceeds do not explain higher net derivative income between 2016 and 2020

Derivative purchase volumes and prices

- Meridian's derivative purchase volumes increased from 1,680 GWh in 2016 to 2,761 GWh 2020.
- The volume weighted average purchase price it paid was fairly flat across the period ($73/MWh-$74/MWh).
- By contrast, average settlement receipts increased between 2016 and 2020 from $73/MWh to $108/MWh.
- In net terms, this lifted Meridian EBITDAF by $79m (cf overall increase of $172m)
- This raises a question as to whether Meridian's earnings have been temporarily buoyed by a large hedge contract which (with hindsight) is particularly favourable.
- Possible candidates are the swaption agreements between Genesis and Meridian, which allow Meridian to call for CFD cover at pre-defined strike prices in return for monthly option payments.

$m for YE June	Receipts to MRD from GEN	Pymts by MRD to GEN	Net receipt/ (payment)
2016	$0	-$15	-$15
2017	$1	-$15	-$14
2018	$6	-$15	-$10
2019	$18	-$19	-$1
2020	$4	-$21	-$17
2021	$76	-$21	$54
Swaption receipts and payments 1 July 2015 to 30 June 2021 - CCG analysis.xlsx			

Swaptions do not explain higher derivative income

- We analysed information provided to the Authority by Meridian on swaption payments and receipts.
- In summary, Meridian was making net payments to Genesis through the 2016 – 2020 and these varied little in annual terms (see table).
- The only appreciable change is for FY2021, when net proceeds lift by $71m compared to the previous year. However, this change lies outside the period for which we have analysed earnings.
- More generally, this data indicates the swaptions are not the source of net income reported on derivative purchases in the 2016-2020 period.

Analysis of Contact, Genesis and Mercury earnings

Contact earnings changes between 2016 and 2020

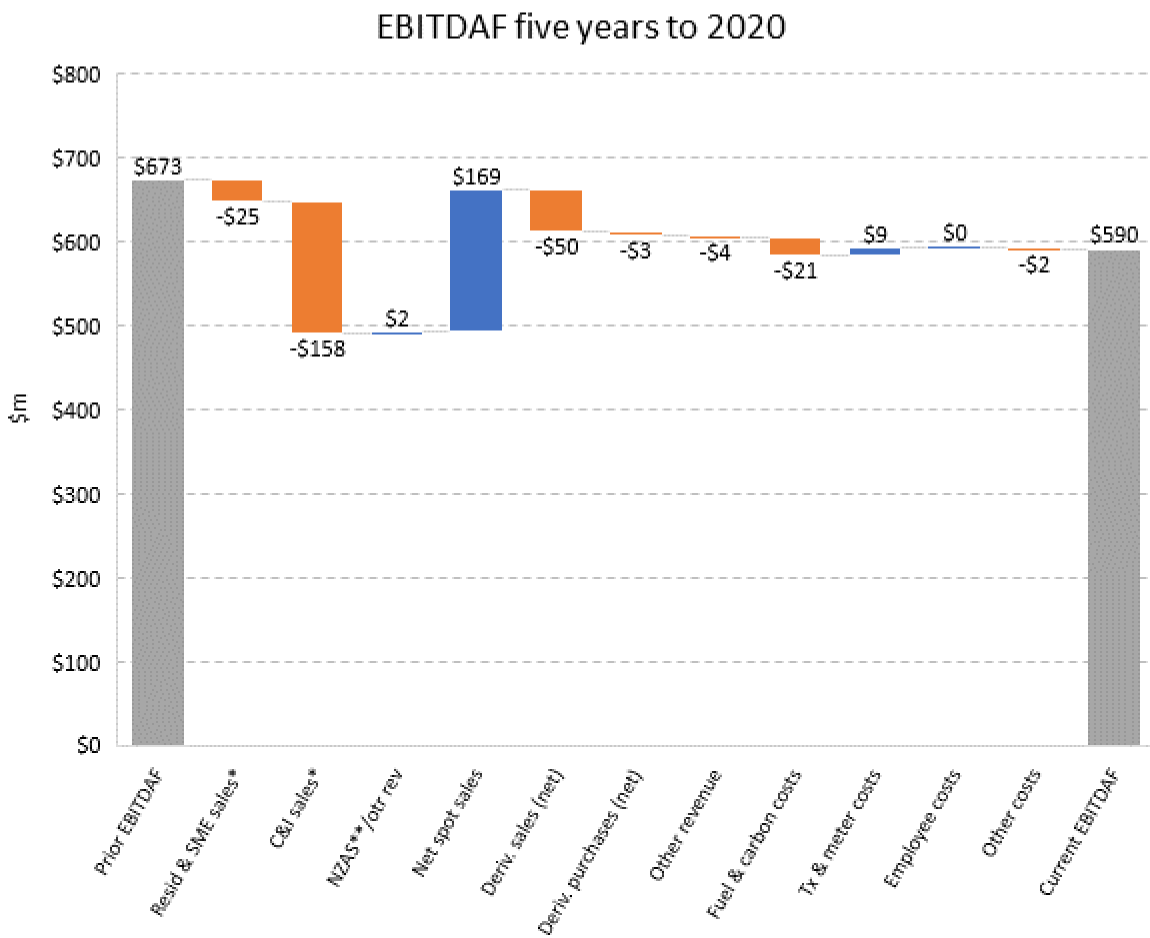
Overall EBITDAF
- Reduction of $83m

Retail + otr mkt sales
- Detracted $181m

Derivative sales/purchases
- Detracted $53m

Net spot sales
- Increased $169m

Other misc costs
- Detracted $14m



* Revenue less dx costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenues at spot minus purchases for retail sales (and NZAS for Meridian)

Genesis earnings changes between 2016 and 2020

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Overall EBITDAF
- Reduction of $4m

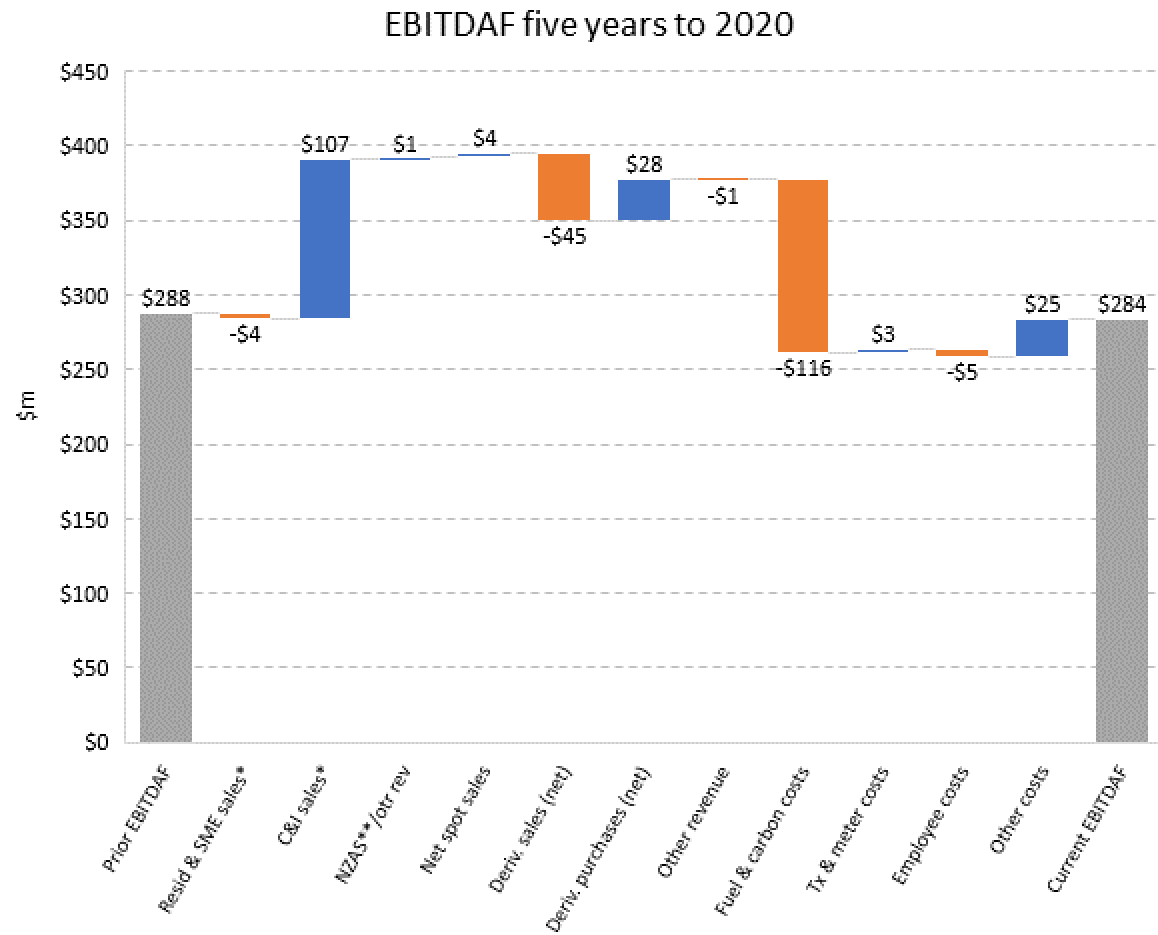
Retail + otr mkt sales
- Added $104m

Derivative sales/purchases
- Detracted $17m

Net spot sales
- Added $4m

Fuel and carbon costs
- Detracted by $116m

Other misc costs
- Costs declined by $23m



* Revenue less dx costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenues at spot minus purchases for retail sales (and NZAS for Meridian)

Mercury earnings changes between 2016 and 2020

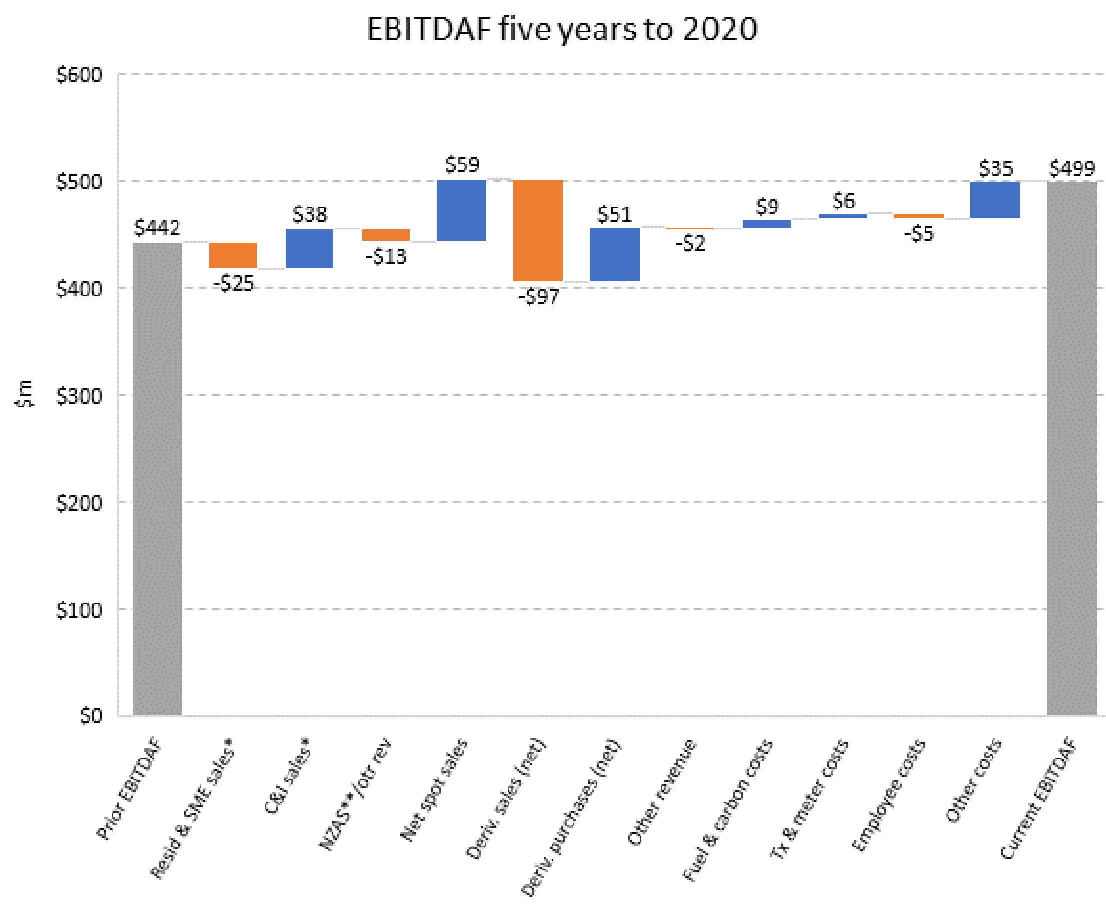
Overall EBITDAF
- Increased $57m

Retail + other mkt sales
- No net change

Derivative sales/purchases
- Net detracted by $46m

Net spot sales
- Increased by $59m

Other costs
- Net gain of $45m



* Revenue less dx costs. ** incl. "Other elec. mkt revenue". Net spot sales is generation revenues at spot minus purchases for retail sales (and NZAS for Meridian)