

New Zealand Power Report

15 February 2019
Karl Arns

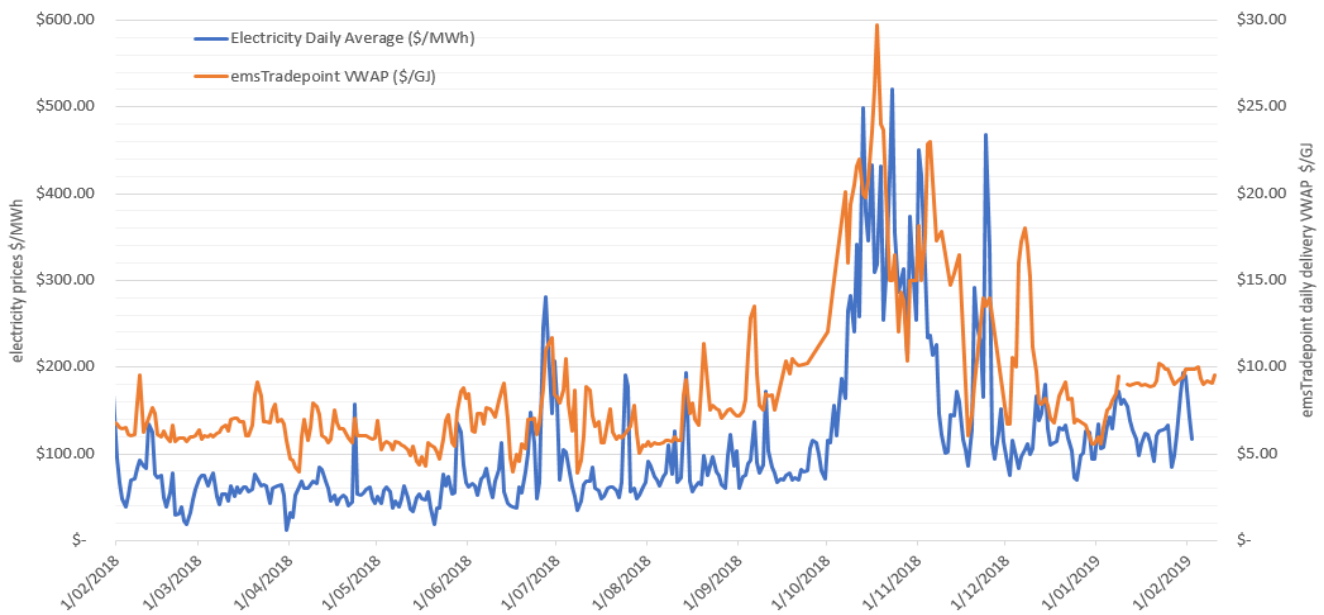
OVERVIEW

- Pohokura outage sends spot soaring
- High temperatures lead to high demand and constrained generation at Huntly

COMMENTARY

Gas remains the major driver of energy prices. Credit to emsTradepoint for this excellent slide comparing gas and electricity spot prices, presented at the Energy Trader Forum yesterday:

Electricity and gas spot prices



The [most recent Pohokura outage](#) has had a very clear impact. While the outage was signaled to the market just under a month ago, futures prices did not initially react to the news. If anything, the ASX softened in the weeks following the outage but Monday this week that all changed when gas production dropped. The Feb OTA chart tells the story:



This tells us the market was completely unprepared, caught off guard and surprised by the impact of the most recent interruption to gas supply. Spot prices have jumped significantly this week:

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	1 Day	3 Day	7 Day	MTD	QTD
Benmore	214.81	206.42	171.40	144.52	128.68
Otahuhu	245.62	238.00	195.40	163.42	143.66

\$200+ daily averages, although historically extraordinary, are not surprising given the fundamentals:

- North Island hydro storage and therefore generation is low
- Short term gas is very tight
- Demand is high as a result of high temperatures
- Rankine generation appears to be limited by river heating constraints
- At this time of year storage should be building ahead of winter, storage dropped 202Gwh the last 7 days

The supply situation is so tight NZ's generator of last resort (Whirinaki) is being called upon to cover peak daily demand.

There is a potential rain maker on the horizon 8 days out. It has been a number of weeks since the last rain for much of the country and so the [ground is very dry](#). That means less water than usual will find its way into the catchments. If the storm hits it would help run of river hydro and short term spot prices no end. Beyond run of river however, water will be held for Q2/Q3 and so we don't expect an extended change to the offer stacks should the rain come. With that said, front end futures have gone ballistic and could easily consolidate.

Longer term gas availability is also very tight. Jun-Dec gas traded at \$10/GJ on emsTradeport last week. That tells us supply constraints go beyond a short term anomaly and therefore the uplift in longer term ASX prices is backed by fundamentals.

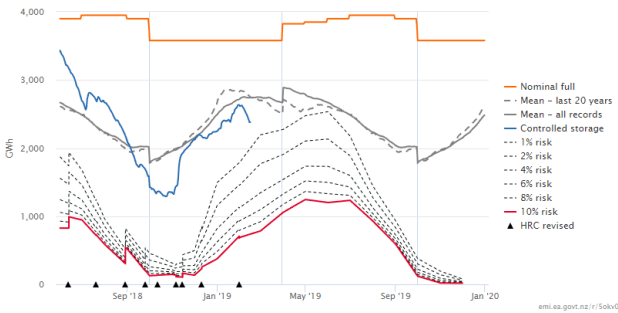
Cal'20 OTA has hit the \$100 mark:



The moves we are seeing are significant and occurring for a reason. Unless the gas market does a 180 degree turn and starts flowing at \$5 again, the forward price outlook is here to stay. With that said, the economics of new generation has completely changed and so we will see a supply response in the coming months and years. There will be no silver bullet in the near term.

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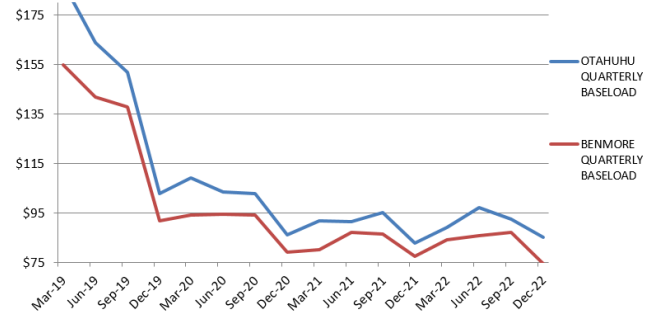
National Hydro Storage:

% of average:	86%
% of maximum:	63%
Daily Inflows:	66%

Generation Outages:

Plant	Start	Finish	MW Loss
TCC	11/1/2018	17/2/2019	350
HLY_1	31/12/2018	1/4/2019	240

Otago / Benmore Forward Curve



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Expiry	OTAHUHU FUTURES				BENMORE FUTURES			
	Closing Bid	Closing Offer	Previous Settlement	Open Interest	Closing Bid	Closing Offer	Previous Settlement	Open Interest
Feb-19	196.20	200.00	200.00	909	163.85	185.00	173.25	700
Mar-19	191.00	230.00	230.00	800	172.00	180.00	172.00	640
Apr-19	151.00	166.75	166.75	1231	146.00	188.45	149.05	480
May-19	145.00	163.75	163.75	310	130.00	165.05	137.10	480
Jun-19	145.00	161.45	161.45	120	140.00	147.45	140.00	191
Jul-19	150.00	165.00	155.45	180	145.00	150.00	150.00	110
Mar-19	166.00	199.15	187.85	2649	148.00	180.00	155.00	2197
Jun-19	147.00	171.25	164.00	3255	138.00	168.70	142.00	1940
Sep-19	137.00	157.50	152.00	2656	125.00	138.00	138.00	831
Dec-19	101.95	103.00	103.00	1555	83.60	91.90	91.90	637
Mar-20	104.80	109.20	109.20	1150	90.00	94.00	94.00	394
Jun-20	100.00	105.00	103.40	705	92.40	96.00	94.60	230
Sep-20	103.00	107.00	103.00	1001	92.40	97.00	94.00	364
Dec-20	84.00	88.00	86.10	730	78.20	82.10	79.00	572
Mar-21	91.80	96.00	91.80	380	79.65	83.60	80.25	222
Jun-21	90.95	95.00	91.50	430	85.85	89.00	87.00	180
Sep-21	91.75	96.05	95.00	420	85.85	90.10	86.50	370
Dec-21	82.90	86.60	82.90	430	74.40	78.00	77.50	150
Mar-22	87.00	93.00	89.00	180	81.05	84.50	84.00	120
Jun-22	93.45	97.00	97.00	180	85.85	90.10	85.85	70
Sep-22	92.40	96.60	92.40	120	86.90	91.20	87.00	60
Dec-22	84.00	88.00	85.00	180	74.40	78.10	74.40	60

Calendar Strips

OTAHUHU				BENMORE			
	Bid	Offer	Settle		Bid	Offer	Settle
2019	137.99	157.73	151.71	2019	123.65	144.65	131.73
2020	97.95	102.30	100.43	2020	88.25	92.28	90.40
2021	89.35	93.41	90.30	2021	81.44	85.18	82.81
2022	89.21	93.65	90.85	2022	82.05	85.98	82.81

Dealing Desk Contact Details

Auckland:	Institutional Commodities	+64 9 521 7802
	FX Desk	+64 9 523 2221
	Futures & Options Desk	+64 9 523 1166
	Equities Desk	+64 9 524 8712
Wellington:	Wellington Retail Desk	+64 4 499 0028

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