

EnergyTrendz

MONTHLY

November 2018

Issue 116

A monthly review of trends in the energy markets compiled by Energy Link Ltd

November 2018

ELL Index

8.3 c/kWh

(at Haywards)

Other Nodes

The index is referenced to:

Otahuhu	8.6 c/kWh
Benmore	8.2 c/kWh

Change

The index increased by 7.8% since mid October

Volume

13 contracts (excluding ASX, and short term contracts) were traded during the month, totalling 1,032 GWh over the period Oct-18 to Sep-22

Contract Types

5 FPVV (fixed price variable volume)

8 CFD (contract for differences)

ELL CFD & FPVV Index

ELL FPVV 8.1 c/kWh

ELL CFD 8.7 c/kWh

Spread

7.2 c/kWh from Oct-18 to Sep-22

Location Factors

Expected location factors were updated in this edition of Energy Trendz

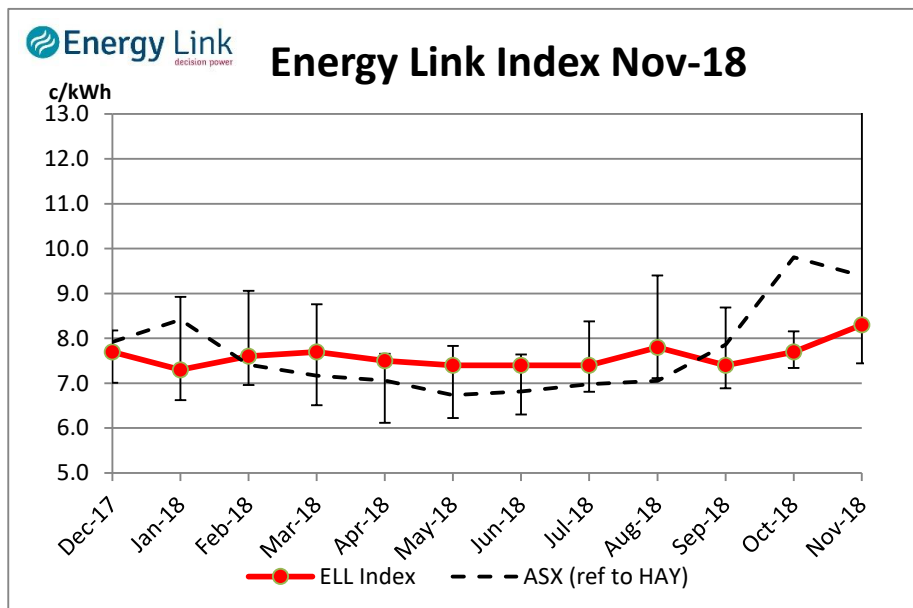
ASX Futures

Based on the 3 year average 'previous settlement' dates for 2018-2021 as of Friday 16

Otahuhu 9.8 c/kWh

Benmore 9.1 c/kWh

Energy Link Electricity Contract Index



For FPVV & CFD specific Indices, see page 2

The Energy Link Ltd (ELL) index chart shows the values over the 12 months up to the Energy Trendz publication date. All contracts are referenced to the **Haywards** reference node on the grid (lower North Island), and the error bars show the highest and lowest contract value in the 36 month period covered by the index. Details of the index are available from Energy Link.

ASX New Zealand electricity futures contracts are not included in the index.

Commentary

The index increased this month on a volume of 13 contracts traded 8 CFD, 5 FPVV.

The Energy Link indices exclude contracts from ASX, that are less than 6 months in duration, have volumes significantly less than disclosure rules require, are unverified or in dispute.

The spread of prices making up the index was 7.2 c/kWh this month. Prices for the contracts varied from 7.4 c/kWh to 14.6 c/kWh when referenced to Haywards.

The gap between the ELL Index and the ASX index decreased slightly over the month.

Large contracts relating to the Tiwai Smelter are excluded from the indices

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FPVV & CFD Electricity Contract Indices

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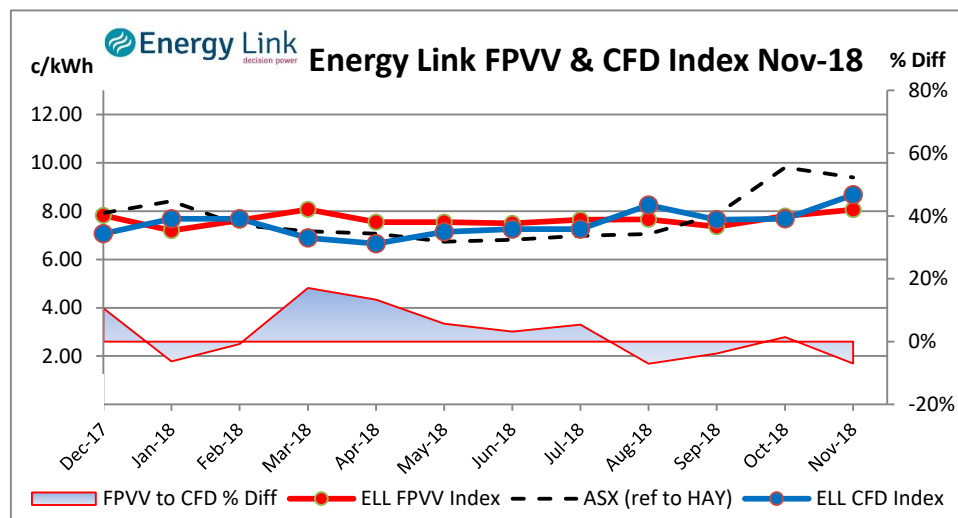
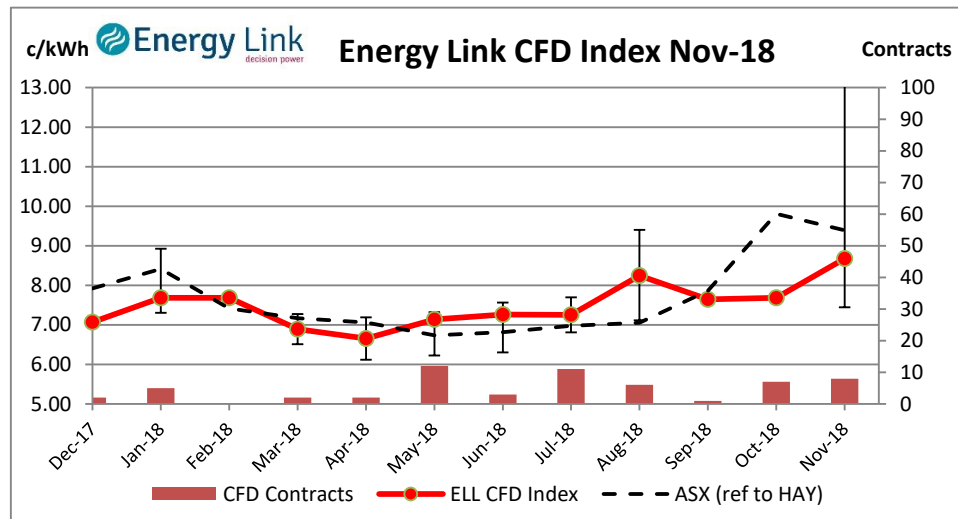
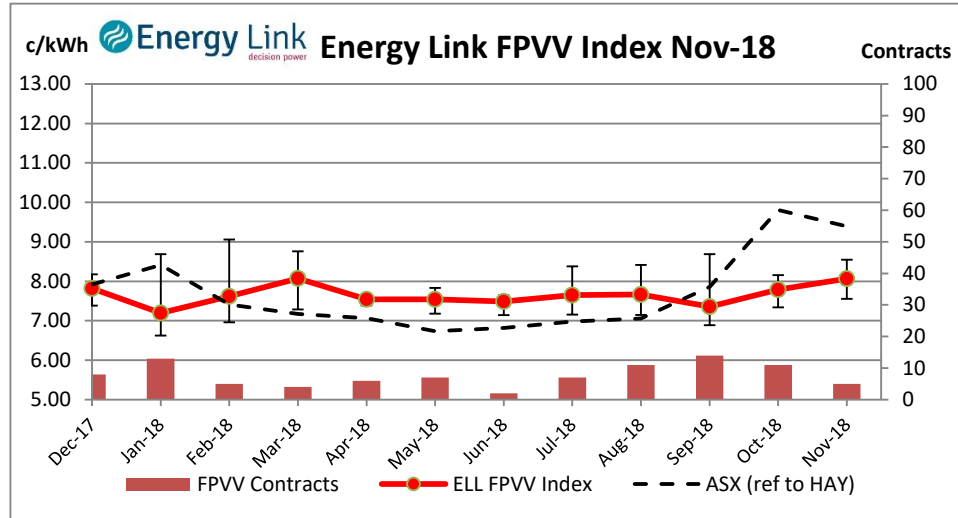
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FPVV & CFD Contract

The top two charts at right break the main ELL Index into two indices focusing specifically on either FPVV or CFD contracts. This makes the premium that is priced into the FPVV contracts (for the security of having no spot exposure) more readily apparent. These graphs also show the number of contracts of each type used in the calculation of each Index value. Index values generated from low contract volumes should be used with caution.

The bottom graph compares the two indices directly and also tracks the price difference between the FPVV & CFD contracts as a percentage of the CFD price.

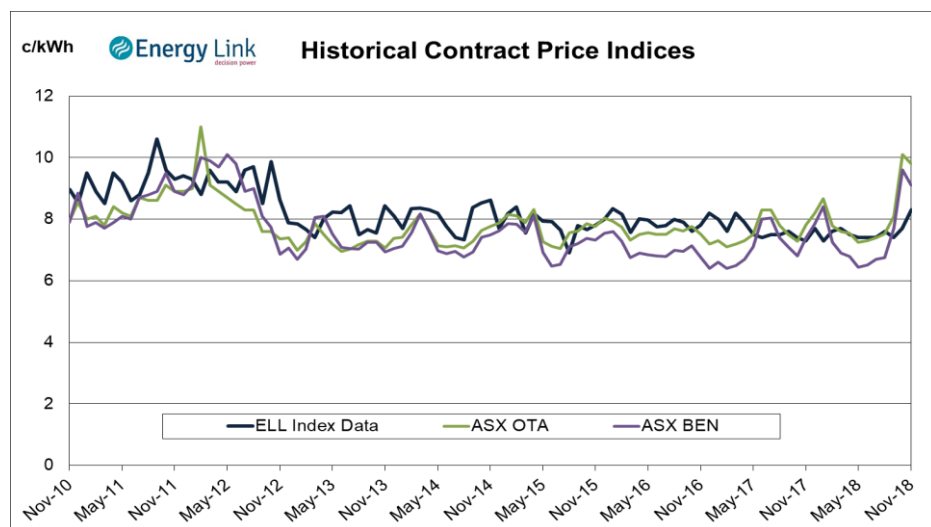
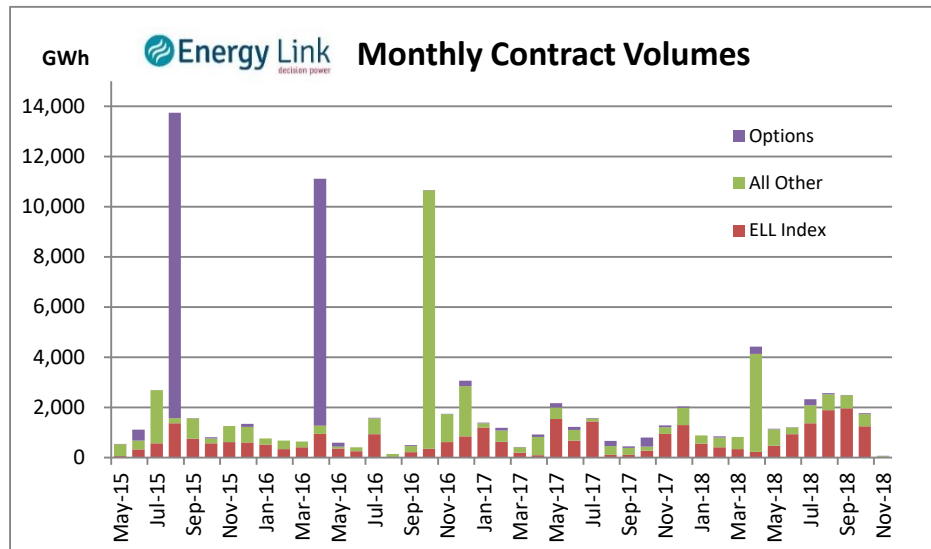


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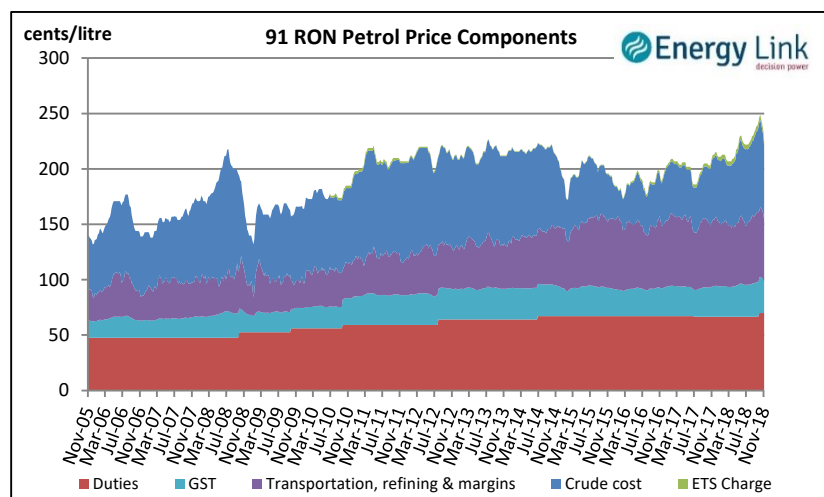


Petrol Prices

The chart at right shows the price of 91 octane (91 RON = "research octane number") from July 2005, broken down into its 5 major components: government duties, GST, ETS, the cost of transporting and refining crude oil including the retailer's margin, and finally the spot

Duties, ETS and GST currently comprise 46% of the total at-pump cost (major centres) of 91, with the cost of crude at 29%.

The cost of crude decreased by 12.7% over the month while the NZD exchange rate increased by 3.9%. The 91 RON price decreased by 9.5% over the month.



More data is at www.med.govt.nz.

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Futures Prices

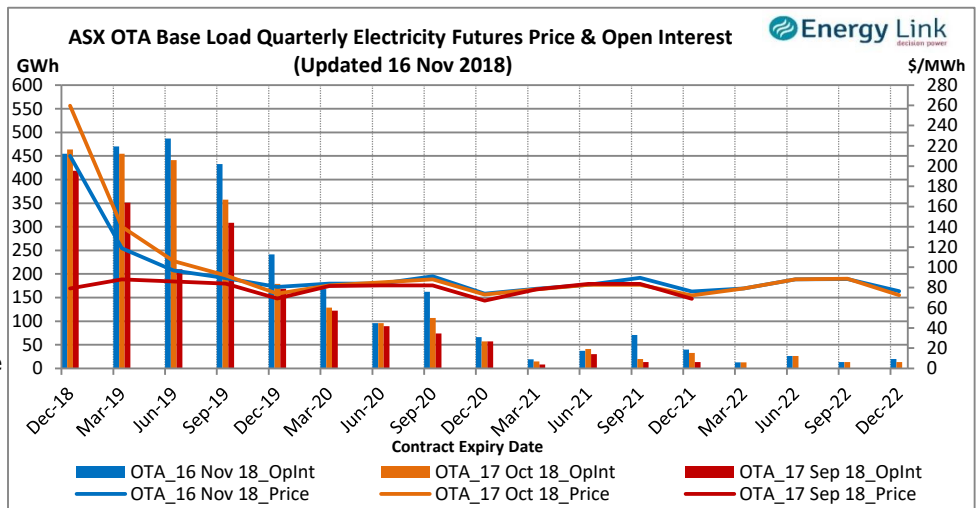
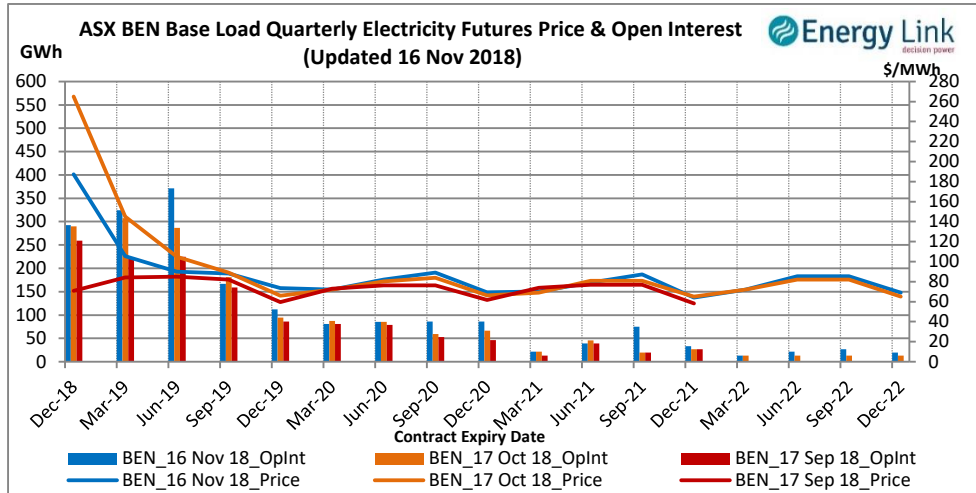
These prices are broken down to show the traded prices as they stood at the time of publishing, one month and two months prior to the time of publishing.

These two charts show the market's changing valuation of each quarterly contract while the amount of open interest in the various contract periods shows the changing amount of energy under each contract type over the same period.

The charts in the following two pages show all currently traded ASX NZ Energy Futures with Expiry Dates from Dec 18 through to Dec 22.

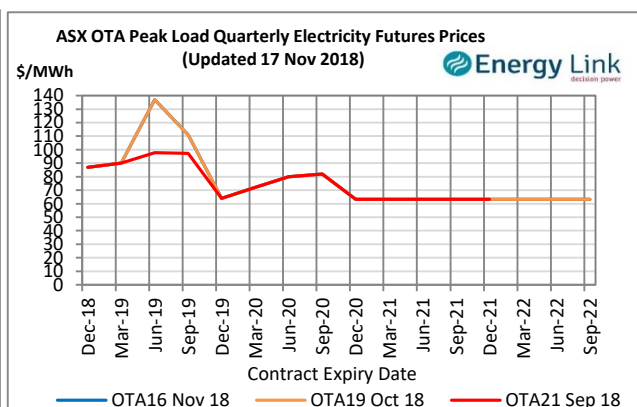
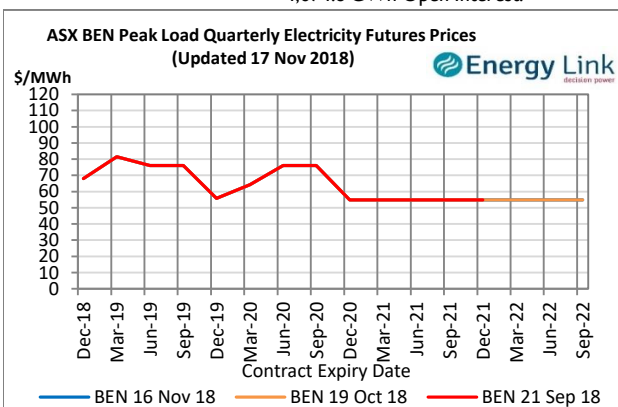
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The charts below show the traded prices for the peak load quarterly contracts for the next four years as they stood at the time of publishing, one month and two months prior to the time of publishing.

Currently there is 1,856.1 GWh contracted at Benmore and 2,818.7 GWh contracted at Otahuhu for a total of 4,674.8 GWh Open Interest.



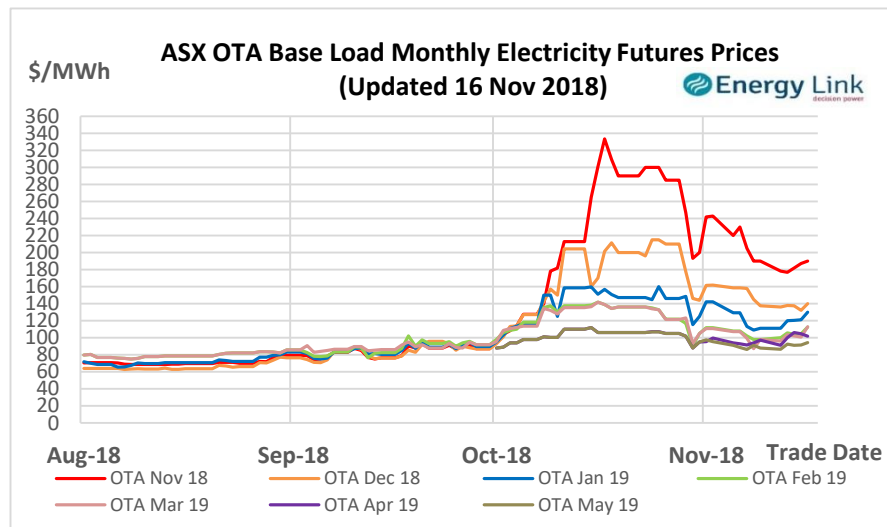
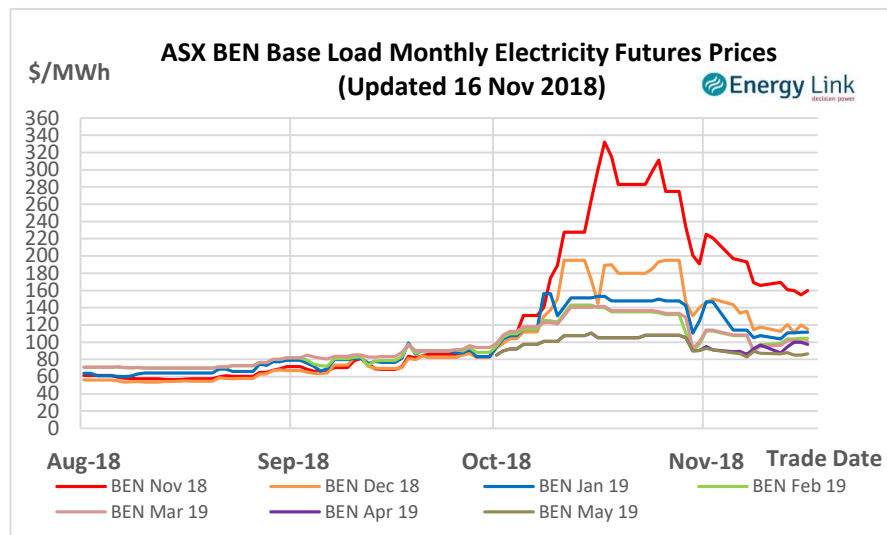
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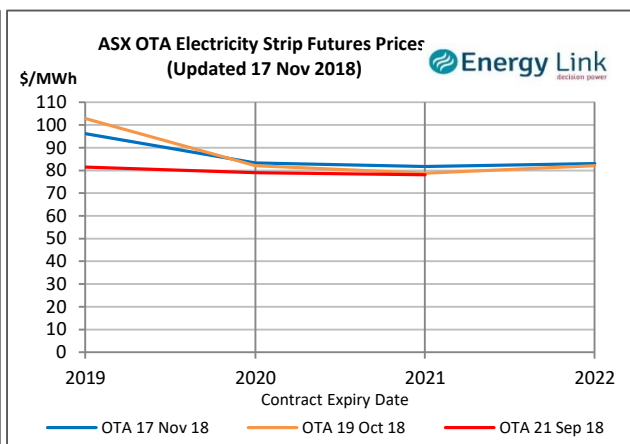
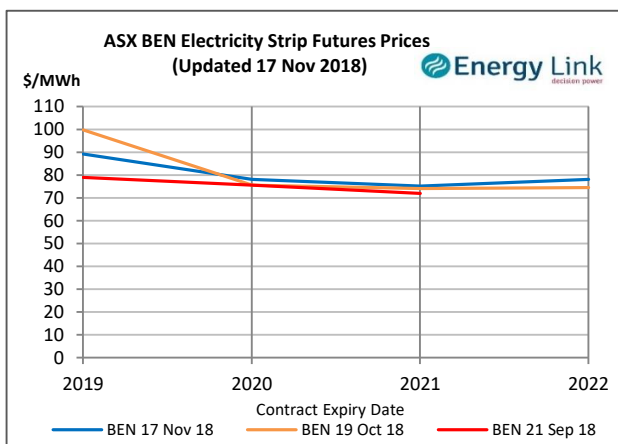
The charts to the right show the traded price of the monthly base load contracts for every trading date for the last three months prior to the time of publishing.

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The charts below show the price of the annual contracts for four calendar years as they stood at the time of publishing, one month and two months prior to the time of publishing.

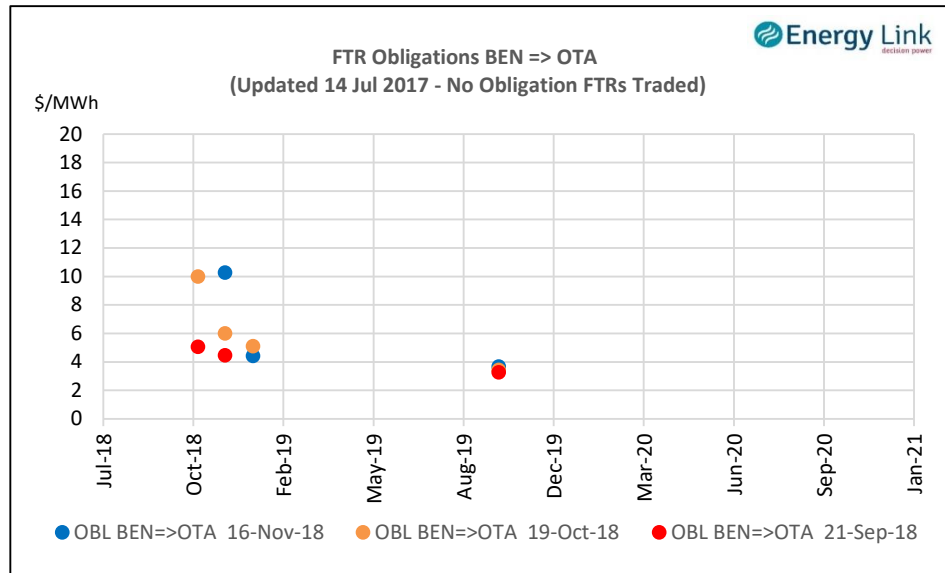


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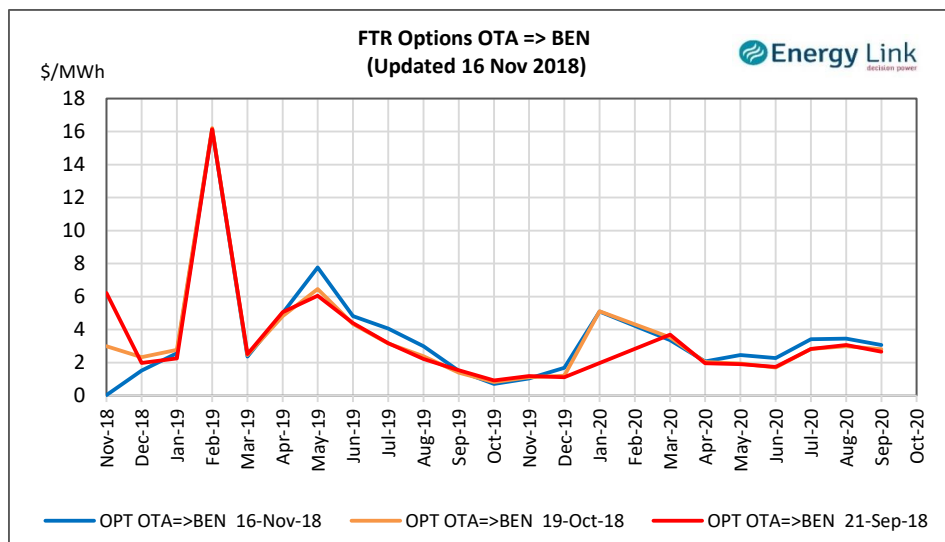
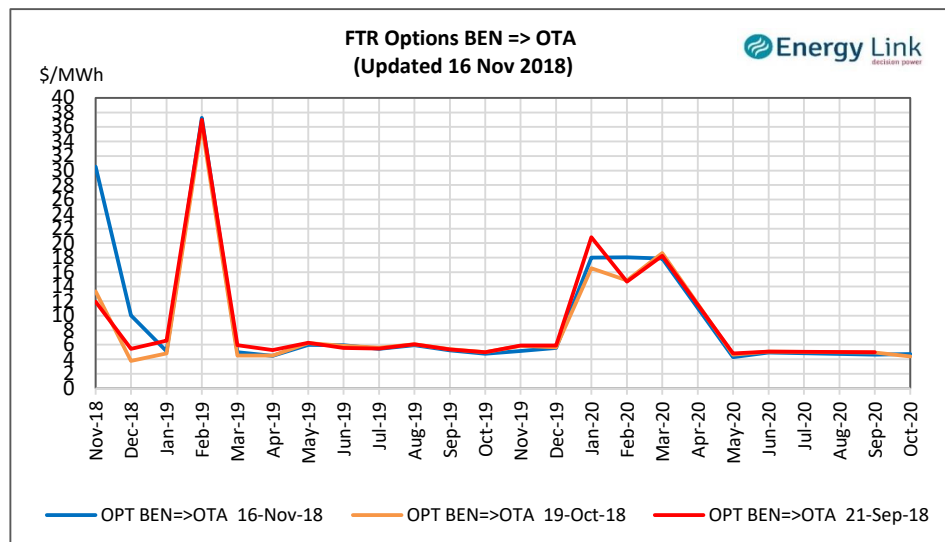
FTR Prices

The charts to the right show the daily settlement prices for each Financial Transmission Right (FTR) product and period. Note that FTR Obligations are shown as BEN (source) to OTA (sink).



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Appendix: Electricity Contract Listing

The tables below list the new Electricity Contracts that were eligible for inclusion in the ELL Indices this month.

The first table lists those contracts used to generate the indices while the second table lists those contracts that would have been eligible but were excluded as they were not entered into the Hedge Disclosure System in a timely manner.

This month 4 FPV contracts were excluded due to the size of the contract falling below 1 MW or contract effective date being longer than 120 days limit in the Electricity Industry Participation Code.

The data source for these contracts is the Electricity Authority's "Electricity Hedge Disclosure" website (www.electricitycontract.co.nz)

Eligible

Contract ID	Type	Trade Date	Effective Date	End Date	Quantity	Area	Price	Status	Created	Duration
354480	FPVV	11-Oct-18	1-Jan-19	30-Sep-22	43,006	Whakamaru	83.72	Not disputed	17-Oct-18	1369
354481	FPVV	12-Oct-18	1-Feb-19	30-Sep-22	65,941	Haywards	85.46	Not disputed	17-Oct-18	1338
355001	CFD	9-Oct-18	1-Oct-18	31-Mar-19	19,685	Otahuhu	141.55	Not disputed	18-Oct-18	182
356463	CFD	16-Oct-18	1-Jul-20	30-Jun-21	87,600	Otahuhu	77.5	Verified	24-Oct-18	365
356464	CFD	16-Oct-18	1-Jul-21	30-Jun-22	87,600	Otahuhu	77	Verified	24-Oct-18	365
356465	CFD	16-Oct-18	1-Jul-20	30-Jun-22	175,200	Whakamaru	74	Verified	24-Oct-18	730
356466	CFD	16-Oct-18	1-Jul-19	30-Jun-21	175,440	Whakamaru	77.22	Verified	24-Oct-18	731
356467	CFD	16-Oct-18	1-Jul-19	30-Jun-20	175,680	Whakamaru	77.22	Verified	25-Oct-18	366
357093	CFD	11-Oct-18	1-Apr-21	31-Mar-22	87,600	Whakamaru	76.11	Verified	26-Oct-18	365
357750	FPVV	18-Oct-18	1-Dec-18	30-Nov-21	28,428	Otahuhu	80.02	Not disputed	31-Oct-18	1096
357760	CFD	24-Oct-18	1-Apr-19	31-Mar-20	21,960	Otahuhu	79.68	Not disputed	31-Oct-18	366
358661	FPVV	1-Oct-18	1-Oct-18	30-Sep-21	33,144	Islington	81.02	Not disputed	3-Nov-18	1096
360660	FPVV	9-Nov-18	1-Jan-19	31-Dec-20	30,850	Otahuhu	79.02	Not disputed	14-Nov-18	731

Excluded Contracts

Contract ID	Type	Trade Date	Effective Date	End Date	Quantity	Area	Price	Status	Created	Duration	Reason
324737	FPVV	16-Jul-18	1-Aug-18	31-Jul-21	55,062	Otahuhu	77.02	Not disputed	21-Jul-18	1096	Traded > 2 mths ago
354460	FPVV	27-Sep-18	1-Oct-18	30-Sep-21	14,231	Otahuhu	85.29	Not disputed	17-Oct-18	1096	< 1 MW
354461	FPVV	27-Sep-18	1-Oct-18	30-Sep-21	165	Whakamaru	87.32	Not disputed	17-Oct-18	1096	< 1 MW
354462	FPVV	27-Sep-18	1-Oct-18	30-Sep-21	4,009	Haywards	80.57	Not disputed	17-Oct-18	1096	< 1 MW
354463	FPVV	27-Sep-18	1-Oct-18	30-Sep-21	11,493	Islington	84.24	Not disputed	17-Oct-18	1096	< 1 MW
354464	FPVV	27-Sep-18	1-Oct-18	30-Sep-21	260	Benmore	74.75	Not disputed	17-Oct-18	1096	< 1 MW
355752	FPVV	17-Oct-18	1-Jan-19	31-Dec-21	15,220	Otahuhu	86.39	Not disputed	20-Oct-18	1096	< 1 MW
355753	FPVV	17-Oct-18	1-Jan-19	31-Dec-21	11,326	Whakamaru	82.16	Not disputed	20-Oct-18	1096	< 1 MW
355754	FPVV	17-Oct-18	1-Jan-19	31-Dec-21	13,304	Haywards	79.35	Not disputed	20-Oct-18	1096	< 1 MW
355755	FPVV	17-Oct-18	1-Jan-19	31-Dec-21	8,698	Islington	83.19	Not disputed	20-Oct-18	1096	< 1 MW
355756	FPVV	17-Oct-18	1-Jan-19	31-Dec-21	5,890	Benmore	76.34	Not disputed	20-Oct-18	1096	< 1 MW
357154	FPVV	19-Oct-18	1-Nov-18	31-Mar-20	8,067	Otahuhu	82.06	Verified	29-Oct-18	517	< 1 MW
357155	FPVV	19-Oct-18	1-Nov-18	31-Mar-20	3,577	Whakamaru	79.31	Verified	29-Oct-18	517	< 1 MW
357156	FPVV	19-Oct-18	1-Nov-18	31-Mar-20	9,308	Haywards	80.98	Verified	29-Oct-18	517	< 1 MW
357751	FPVV	18-Oct-18	1-Dec-18	30-Nov-21	1,202	Haywards	75.44	Not disputed	31-Oct-18	1096	< 1 MW
357752	FPVV	18-Oct-18	1-Dec-18	30-Nov-21	2,198	Islington	82.55	Not disputed	31-Oct-18	1096	< 1 MW
357753	FPVV	18-Oct-18	1-Dec-18	30-Nov-21	10,078	Benmore	76.62	Not disputed	31-Oct-18	1096	< 1 MW
358660	FPVV	1-Oct-18	1-Oct-18	30-Sep-21	10,014	Whakamaru	80.37	Not disputed	3-Nov-18	1096	< 1 MW
360661	FPVV	9-Nov-18	1-Jan-19	31-Dec-20	423	Whakamaru	80.72	Not disputed	14-Nov-18	731	< 1 MW
360662	FPVV	9-Nov-18	1-Jan-19	31-Dec-20	501	Haywards	73.54	Not disputed	14-Nov-18	731	< 1 MW
360663	FPVV	9-Nov-18	1-Jan-19	31-Dec-20	3,325	Islington	76.17	Not disputed	14-Nov-18	731	< 1 MW

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