

*Contact*<sup>®</sup>

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# Monthly Operating Report

September 2017

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# September overview

- » For the month of September 2017 Contact recorded<sup>1</sup>:
  - Electricity and gas sales of 697 GWh (September 2016: 709 GWh)
  - Netback of \$82.30/MWh (September 2016: \$83.20/MWh)
  - Cost of energy was \$27.47/MWh (September 2016: \$28.74/MWh) with renewable generation for the month of 614 GWh up 98 GWh, or 19% up on September 2016
  
- » Otahuhu futures settlement wholesale price for the 4<sup>th</sup> quarter of 2017 (ASX):
  - As at 16 October 2017: \$52/MWh
  - As at 30 September 2017: \$52/MWh
  - As at 31 August 2017: \$61/MWh
  
- » As at 16 October 2017, South Island storage was 113% of mean (30 September 2017: 120%) and North Island storage was 126% of mean (30 September 2017: 122%)
  - As at 16 October, total Clutha scheme storage was 77% of mean

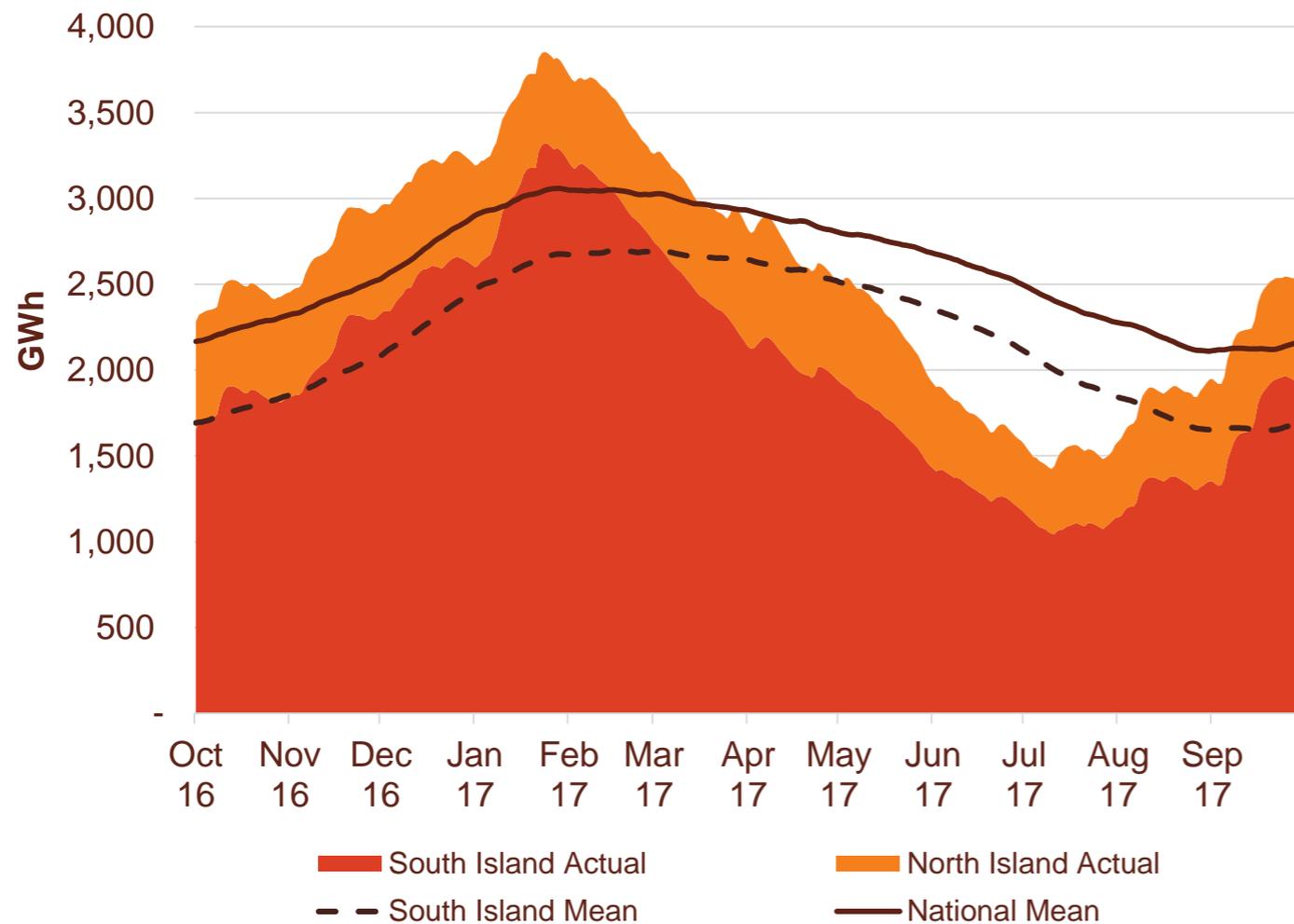


- » Record geothermal generation in the first quarter of FY18, up 6% on Q1 FY17 as Contact obtained a variation to the Wairakei mass take resource consent which allows for more flexibility in the extraction of geothermal fluid

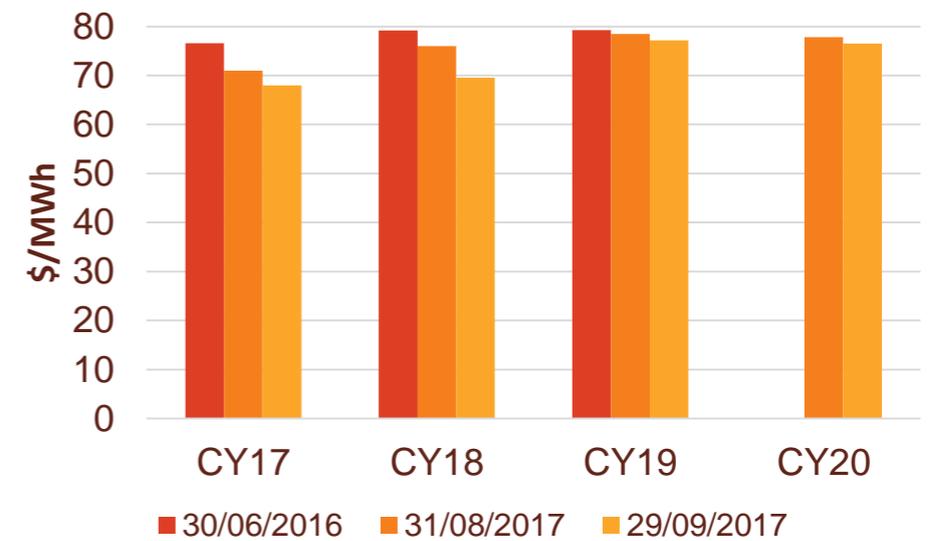
<sup>1</sup> Operating statistics have been restated see pages 9-12

# Hydro storage and forward prices

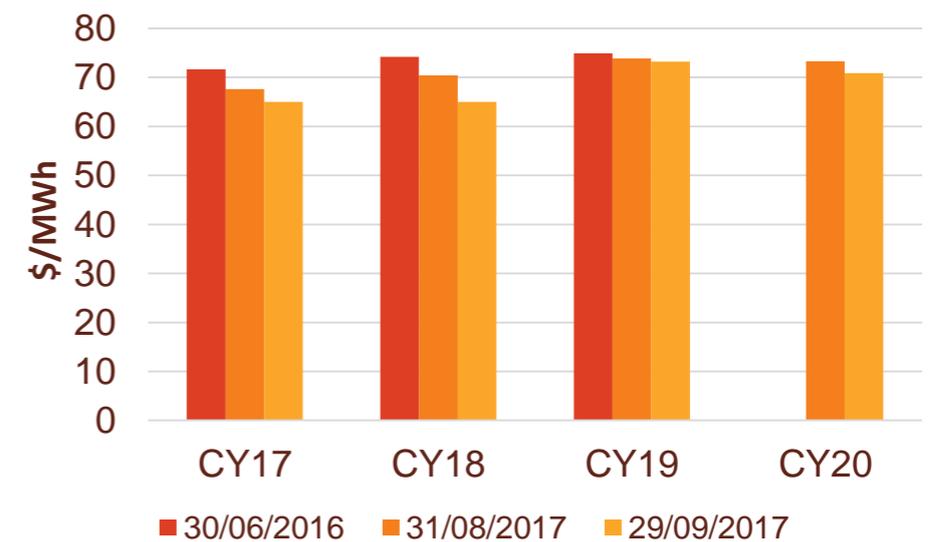
New Zealand controlled hydro storage against mean



Otahuhu ASX futures settlement

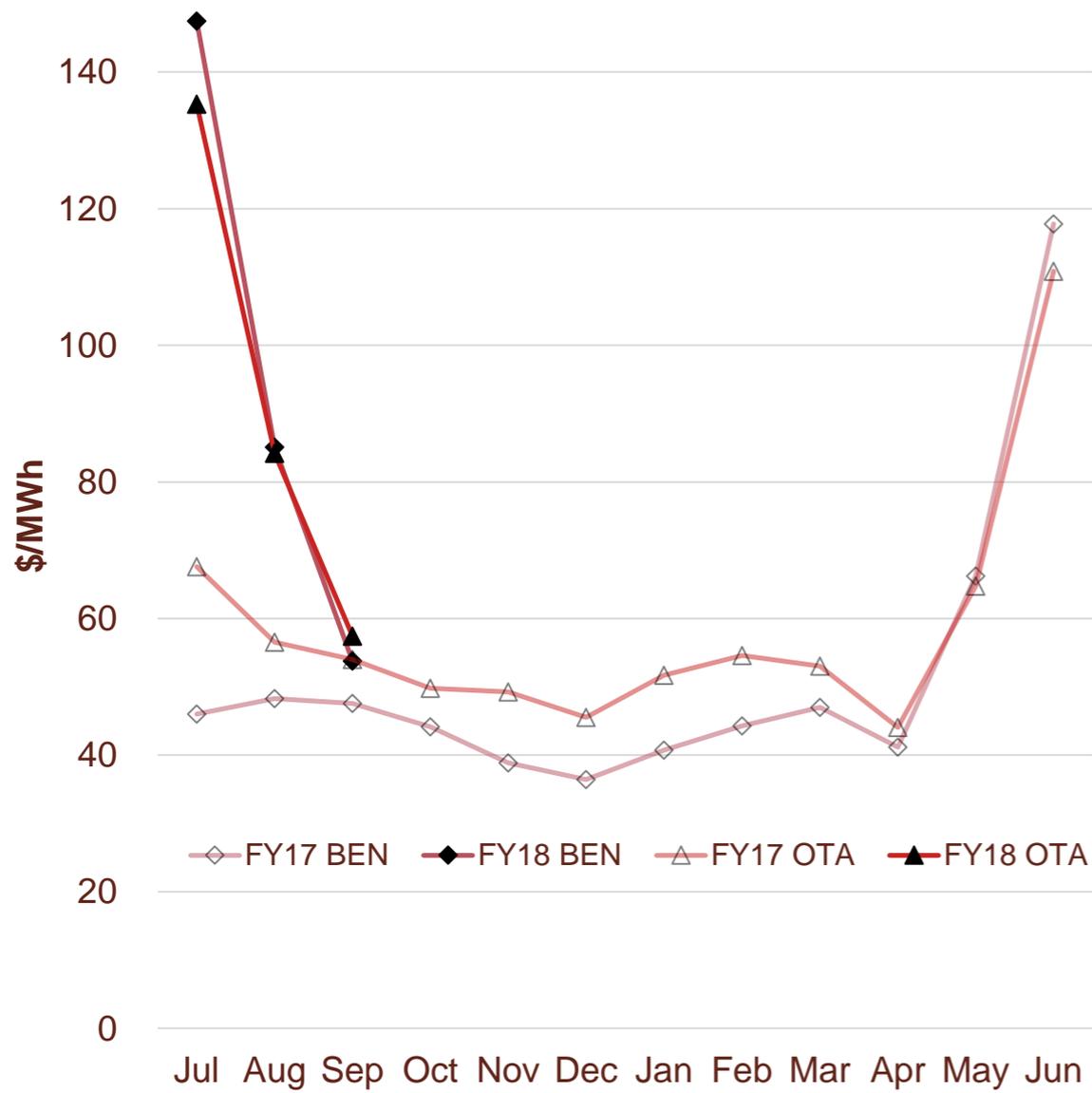


Benmore ASX futures settlement



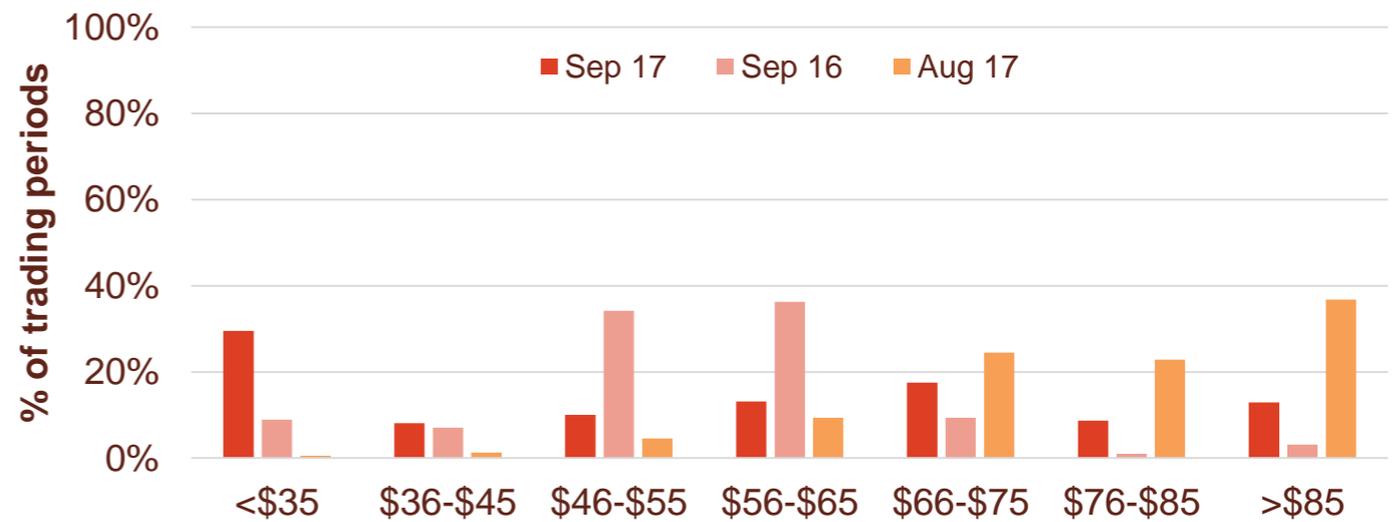
# Wholesale market

## Wholesale electricity pricing

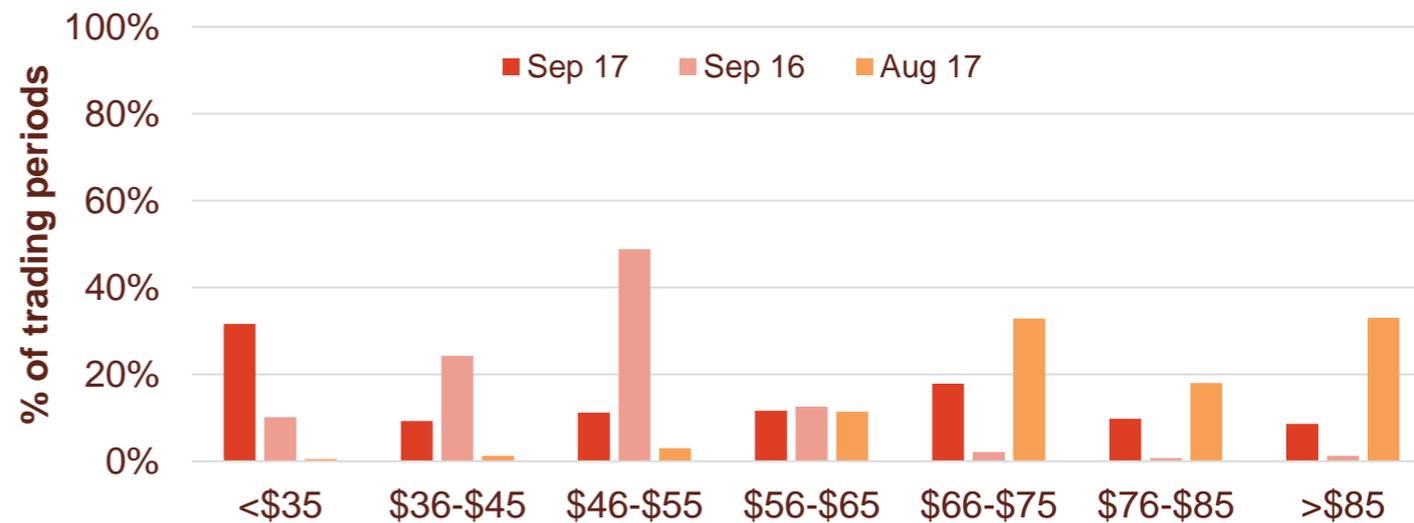


## Distribution of wholesale market price by trading periods

### Otahuhu node



### Benmore node

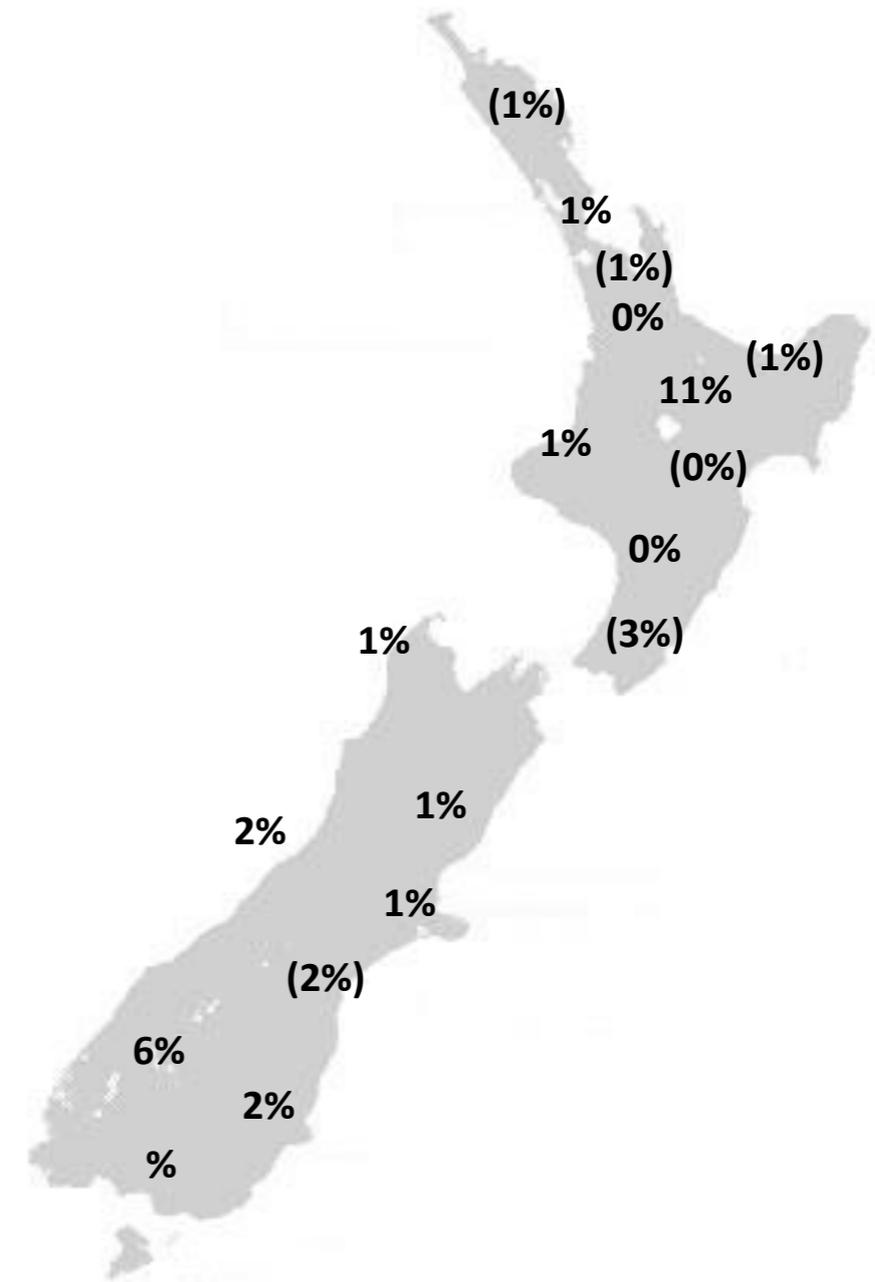
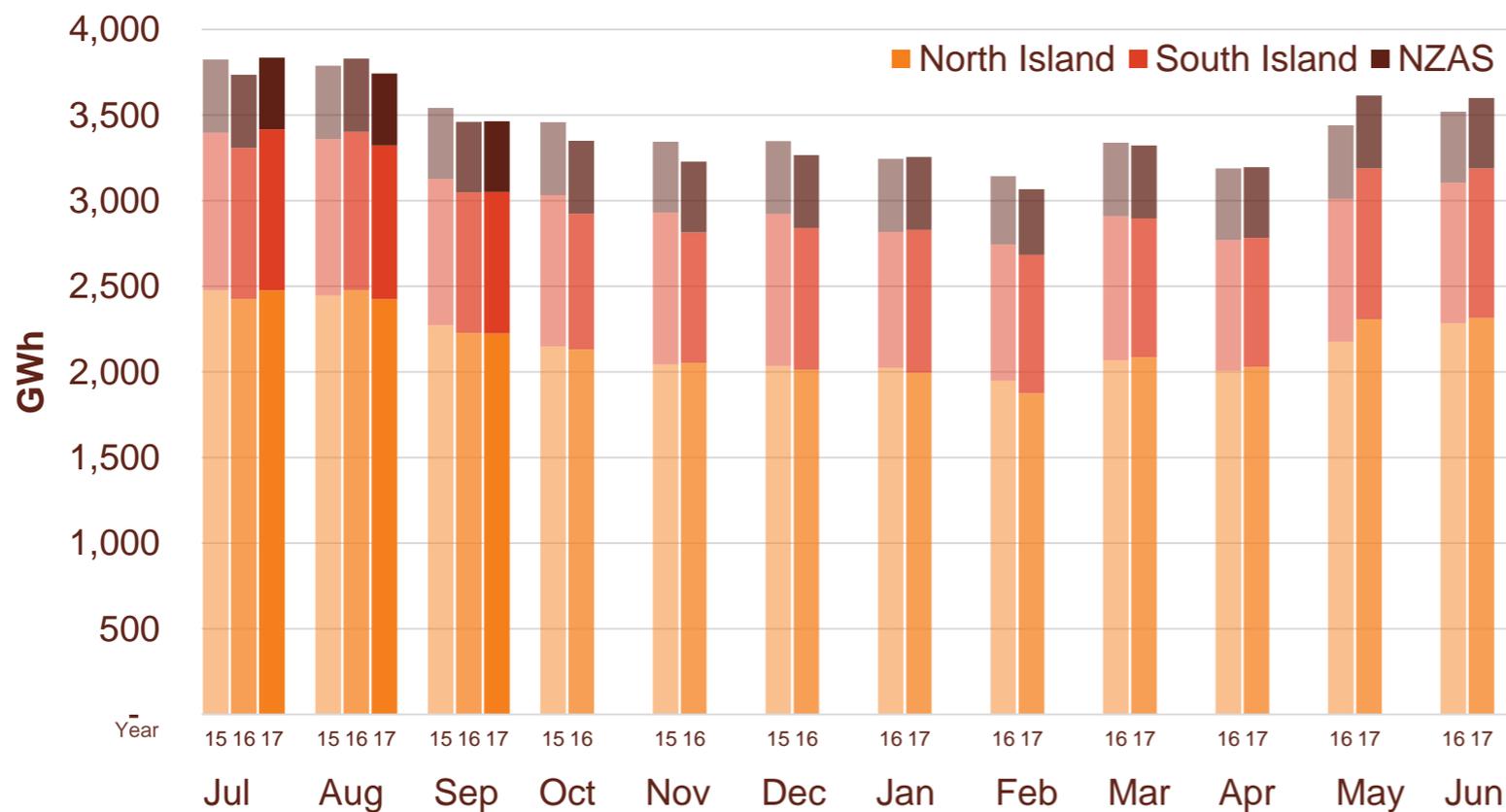


# Electricity demand

- » New Zealand electricity demand was up 0.3% on September 2016 (down 2.2% on September 2015).
- » Cumulative 12 months demand for October 2016 to September 2017 of 40,942 GWh is 0.3% lower than the prior comparative period.

## Regional demand change (%) on September 2016

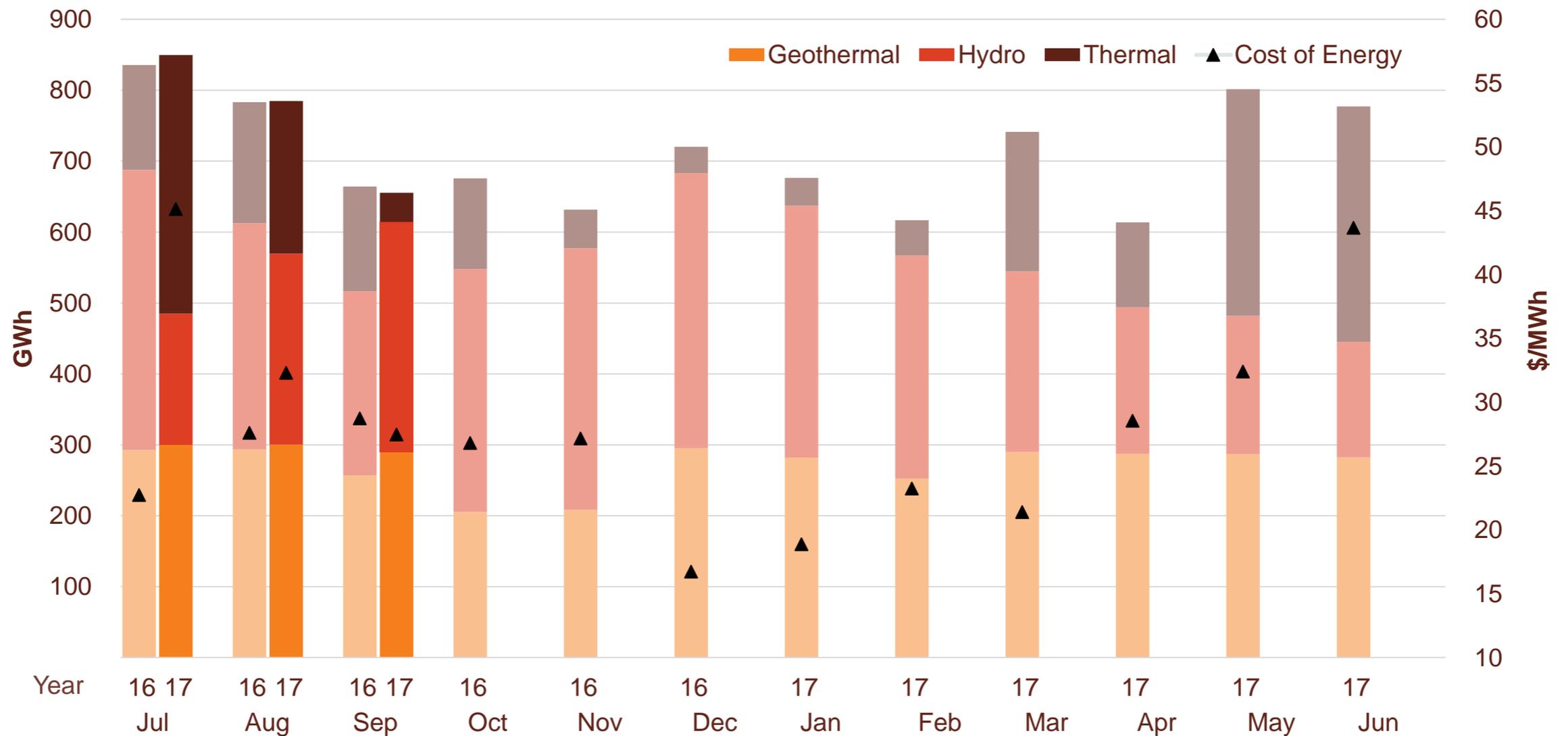
### Total national demand (FY16, 17 and 18)



Source: Contact and Electricity Authority grid demand (reconciled) <http://www.emi.ea.govt.nz>

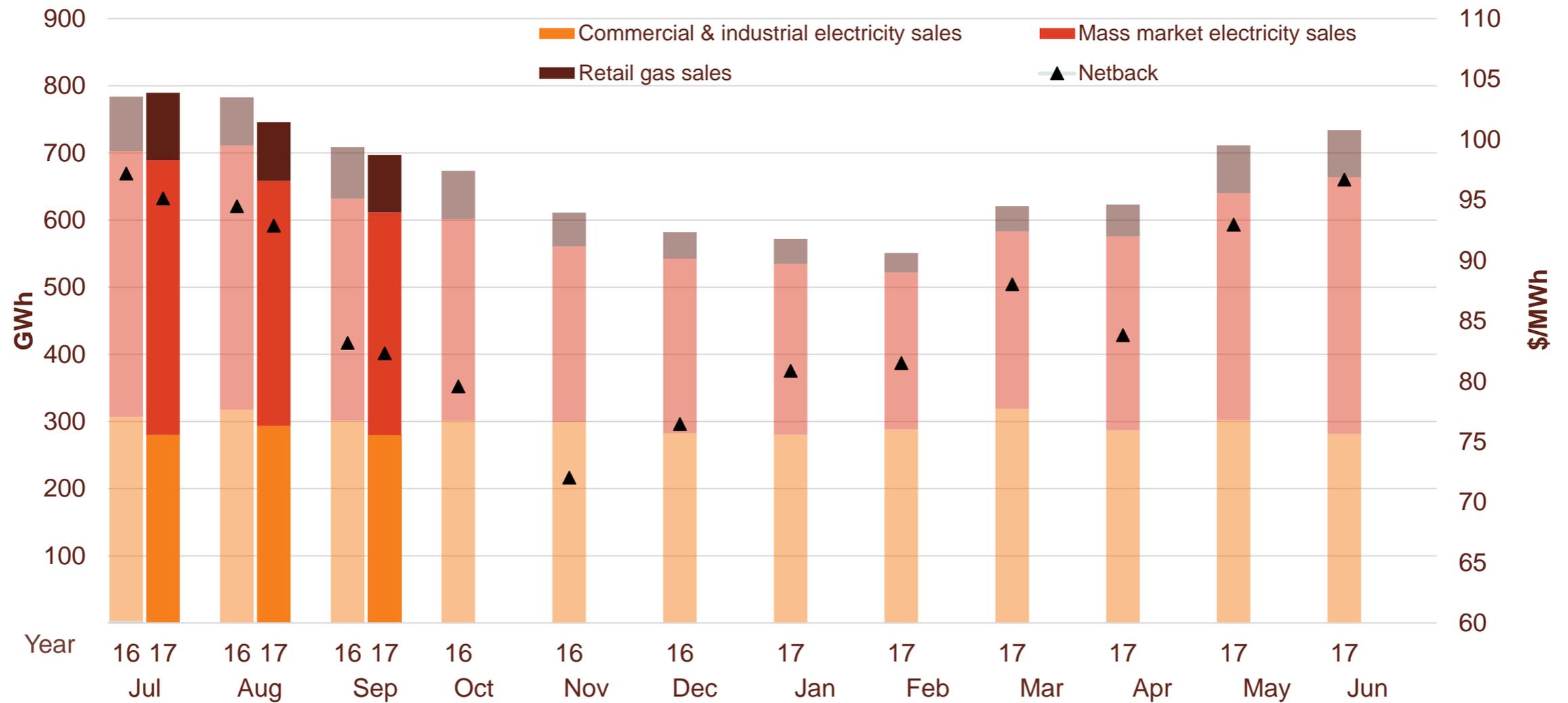
# Contact's Generation business performance

## Generation mix and cost of energy (FY17 and 18)



# Contact's Customer business performance

## Retail sales volumes and netback (FY17 and 18)



# Contact's operational performance

Data		Measure	The month ended September 2017	The month ended September 2016	The month ended August 2017	Three months ended September 2017	Three months ended September 2016
Customer	Mass market electricity sales	GWh	332	330	365	1,107	1,119
	Commercial & industrial electricity sales	GWh	280	302	293	853	923
	Retail gas sales	GWh	85	77	87	272	230
	Total electricity and gas sales	GWh	697	709	746	2,232	2,273
	Average electricity sales price	\$/MWh	191.54	185.71	194.48	194.93	193.53
	Electricity direct pass through costs	\$/MWh	(90.01)	(81.29)	(82.23)	(84.91)	(81.10)
	Electricity and gas cost to serve	\$/MWh	(11.68)	(14.58)	(10.33)	(10.95)	(13.34)
	Netback	\$/MWh	82.30	83.16	92.86	90.36	91.87
	Electricity line losses	%	6%	5%	6%	6%	5%
	Retail gas sales	PJ	0.3	0.2	0.3	0.9	0.8
	LPG sales	tonnes	6,558	6,477	7,371	21,678	21,244
	Electricity customer numbers <sup>1</sup>	#	423,000	423,000	423,500		
	Gas customer numbers <sup>1</sup>	#	64,500	62,500	64,500		
	LPG customer numbers (includes franchises) <sup>1</sup>	#	82,000	76,000	81,500		
Generation	Thermal generation	GWh	41	148	215	621	466
	Geothermal generation	GWh	290	257	300	890	843
	Hydro generation	GWh	325	260	270	779	974
	Spot market generation	GWh	655	664	785	2,290	2,283
	Spot electricity purchases	GWh	647	664	698	2,084	2,153
	CfD sales / (purchases)	GWh	(55)	(45)	16	(6)	20
	Steam sales	GWh	67	66	58	151	169
	Commercial & industrial electricity sales	GWh	9	10	8	21	23
	GWAP	\$/MWh	53.29	50.08	82.29	94.55	52.00
	LWAP	\$/MWh	(59.43)	(53.57)	(87.50)	(101.69)	(57.45)
	LWAP/GWAP	%	112%	107%	106%	108%	110%
	Gas used in internal generation	PJ	0.6	1.5	2.0	5.7	4.7
	Gas storage net movement <sup>2</sup>	PJ	0.5	(0.5)	(0.2)	(0.7)	(1.2)
	Unit generation cost	\$/MWh	(28.07)	(35.85)	(36.51)	(35.77)	(32.13)
	Cost of energy	\$/MWh	(27.47)	(28.74)	(32.30)	(35.34)	(26.29)

<sup>1</sup> Data has been rounded to the nearest 500 and reflects numbers as at month end.

# CfD and direct Te Rapa electricity sales have been reclassified from the Customer segment to the Generation segment

- » All CfDs included in the Generation segment
- » Direct electricity sales from Te Rapa included in the Generation segment, aligning with steam sales

## Restated FY2016 operating statistics

	Measure	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	
Customer	Mass market electricity sales	GWh	418	404	359	309	283	278	251	245	279	284	321	360
	Commercial & industrial electricity sales	GWh	312	313	305	311	306	306	312	311	335	317	329	304
	Retail gas sales	GWh	87	84	69	56	44	37	26	25	32	40	51	67
	Total electricity and gas sales	GWh	817	801	733	676	633	621	589	581	645	641	701	731
	Average electricity sales price	\$/MWh	196.55	195.15	187.21	177.61	172.15	173.23	175.66	175.78	179.33	184.13	192.83	199.47
	Electricity direct pass thru costs	\$/MWh	(80.81)	(78.72)	(79.85)	(79.51)	(79.92)	(77.56)	(78.75)	(76.28)	(76.31)	(76.41)	(76.80)	(84.86)
	Electricity and gas cost to serve	\$/MWh	(12.86)	(13.45)	(15.07)	(16.43)	(14.02)	(12.13)	(14.56)	(14.51)	(15.55)	(14.43)	(11.47)	(11.40)
	Netback	\$/MWh	94.28	95.37	85.89	78.02	74.51	82.00	80.59	83.17	85.34	89.46	99.19	97.09
	Actual electricity line losses	%	8%	5%	4%	4%	6%	3%	4%	8%	3%	3%	8%	7%
	Retail gas sales	PJ	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2
	LPG sales	tonnes	7,677	7,158	6,502	5,451	5,265	5,327	4,269	4,533	4,984	5,472	5,976	7,005
	Electricity customer numbers	#	428,500	427,000	424,500	423,000	422,000	421,000	420,500	421,000	422,000	423,500	424,000	425,000
	Gas customer numbers	#	61,500	61,500	61,000	61,000	61,000	60,500	60,500	60,500	61,000	61,500	61,500	62,000
	LPG customer numbers (includes franchises)	#	70,500	71,000	71,500	72,000	72,000	72,500	73,000	73,500	73,500	74,000	74,500	75,500
Generation	Thermal generation	GWh	231	236	254	89	170	56	90	74	137	65	86	126
	Geothermal generation	GWh	276	293	264	262	239	290	295	268	269	274	284	285
	Hydro generation	GWh	384	339	250	357	314	366	252	298	358	351	420	401
	Spot market generation	GWh	890	868	768	708	723	712	638	639	764	691	790	812
	Spot electricity purchases	GWh	795	751	692	646	630	603	586	607	634	621	706	714
	CfD sales	GWh	23	18	26	-	27	13	30	19	75	26	23	47
	Steam sales	GWh	38	70	67	69	66	67	59	50	44	46	36	14
	Commercial & industrial electricity sales	GWh	5	9	10	10	10	10	10	9	7	7	5	1
	GWAP	\$/MWh	51	53	57	56	64	68	68	64	57	62	54	53
	LWAP	\$/MWh	(56)	(56)	(60)	(61)	(70)	(76)	(73)	(70)	(63)	(69)	(61)	(61)
	LWAP/GWAP	%	108%	105%	106%	109%	109%	111%	108%	110%	111%	110%	112%	115%
	Gas used in internal generation	PJ	2.0	2.0	2.2	1.1	1.7	0.8	1.1	0.9	1.3	0.8	1.0	1.1
	Gas storage net movement	PJ	(0.4)	(0.4)	(0.4)	-	(0.7)	(0.1)	-	0.1	0.2	0.6	0.5	0.3
	Unit generation cost	\$/MWh	(35.56)	(37.84)	(43.99)	(30.46)	(38.52)	(26.25)	(30.46)	(29.64)	(30.89)	(25.89)	(25.35)	(25.77)
	Cost of Energy	\$/MWh	(33.37)	(31.57)	(37.77)	(22.14)	(34.83)	(13.90)	(27.77)	(28.24)	(23.44)	(21.49)	(23.79)	(19.06)

# Restated FY2017 operating statistics

	Measure	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	
Customer	Mass market electricity sales	GWh	396	393	330	301	261	260	254	233	265	289	338	382
	Commercial & industrial electricity sales	GWh	304	317	302	301	299	282	280	288	319	287	302	281
	Retail gas sales	GWh	81	72	77	72	50	39	37	29	38	47	71	70
	Total electricity and gas sales	GWh	781	783	709	673	611	582	572	551	621	623	711	734
	Average electricity sales price	\$/MWh	199.09	195.02	185.71	181.20	171.41	179.35	180.34	180.25	182.84	184.33	193.54	200.56
	Electricity direct pass thru costs	\$/MWh	(81.49)	(80.55)	(81.29)	(81.99)	(80.71)	(82.80)	(82.10)	(81.50)	(76.85)	(81.55)	(79.81)	(83.89)
	Electricity and gas cost to serve	\$/MWh	(12.46)	(13.10)	(14.58)	(13.71)	(14.87)	(16.34)	(14.31)	(14.79)	(14.84)	(14.69)	(13.44)	(13.66)
	Netback	\$/MWh	97.17	94.48	83.16	79.57	72.01	76.45	80.86	81.50	88.02	83.80	92.96	96.67
	Actual electricity line losses	%	7%	4%	5%	5%	6%	6%	6%	6%	6%	2%	8%	5%
	Retail gas sales	PJ	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3
	LPG sales	tonnes	7,433	7,334	6,477	5,623	5,882	5,363	4,676	4,535	5,293	5,339	7,124	7,622
	Electricity customer numbers	#	425,500	423,500	423,000	423,000	422,500	421,000	420,500	421,000	421,500	422,000	422,500	423,000
	Gas customer numbers	#	62,000	62,000	62,500	62,500	62,500	62,500	62,500	62,500	63,000	63,000	63,500	64,000
LPG customer numbers (includes franchises)	#	76,000	75,500	76,000	75,500	76,000	76,500	77,000	77,000	77,500	78,000	78,500	80,000	
Generation	Thermal generation	GWh	148	171	148	128	54	37	39	50	197	120	320	332
	Geothermal generation	GWh	293	294	257	205	208	295	282	253	290	287	287	282
	Hydro generation	GWh	395	319	260	343	369	388	355	314	255	206	195	163
	Spot market generation	GWh	835	783	664	676	632	720	676	617	741	614	802	777
	Spot electricity purchases	GWh	749	740	664	633	594	574	572	554	620	590	694	699
	CfD sales	GWh	44	21	(45)	32	20	89	132	97	141	41	99	44
	Steam sales	GWh	34	69	66	65	60	55	55	51	58	50	29	10
	Commercial & industrial electricity sales	GWh	4	9	10	10	9	9	10	8	9	7	4	1
	GWAP	\$/MWh	54	51	50	45	42	38	43	44	49	44	65	110
	LWAP	\$/MWh	(63)	(56)	(54)	(50)	(47)	(44)	(51)	(53)	(53)	(47)	(70)	(121)
	LWAP/GWAP	%	115%	109%	107%	110%	114%	118%	118%	119%	108%	107%	107%	110%
	Gas used in internal generation	PJ	1.4	1.7	1.5	1.3	0.7	0.6	0.6	0.6	1.7	1.2	2.7	2.8
	Gas storage net movement	PJ	(0.2)	(0.5)	(0.5)	(0.1)	0.3	0.3	0.1	0.2	(0.6)	(0.3)	(1.1)	(0.6)
	Unit generation cost	\$/MWh	(27.81)	(33.59)	(35.85)	(33.84)	(32.60)	(25.80)	(24.74)	(28.62)	(33.01)	(35.18)	(38.39)	(41.44)
	Cost of Energy	\$/MWh	(22.75)	(27.60)	(28.74)	(26.82)	(27.18)	(16.74)	(18.89)	(23.24)	(21.41)	(28.56)	(32.40)	(43.68)

# Restated FY2018 operating statistics

	Measure	Jul-17	Aug-17	Sep-17	
Customer	Mass market electricity sales	GWh	409	365	332
	Commercial & industrial electricity sales	GWh	280	293	280
	Retail gas sales	GWh	100	87	85
	Total electricity and gas sales	GWh	790	746	697
	Average electricity sales price	\$/MWh	198.37	194.48	191.54
	Electricity direct pass thru costs	\$/MWh	(82.94)	(82.23)	(90.01)
	Electricity and gas cost to serve	\$/MWh	(10.86)	(10.33)	(11.68)
	Netback	\$/MWh	95.11	92.86	82.30
	Actual electricity line losses	%	7%	6%	6%
	Retail gas sales	PJ	0.3	0.3	0.3
	LPG sales	tonnes	7,749	7,371	6,558
	Electricity customer numbers	#	423,500	423,500	423,000
	Gas customer numbers	#	64,000	64,500	64,500
	LPG customer numbers (includes franchises)	#	80,500	81,500	82,000
Generation	Thermal generation	GWh	365	215	41
	Geothermal generation	GWh	300	300	290
	Hydro generation	GWh	185	270	325
	Spot market generation	GWh	850	785	655
	Spot electricity purchases	GWh	739	698	647
	CfD sales	GWh	33	16	(55)
	Steam sales	GWh	26	58	67
	Commercial & industrial electricity sales	GWh	3	8	9
	GWAP	\$/MWh	138	82	53
	LWAP	\$/MWh	(152)	(87)	(59)
	LWAP/GWAP	%	110%	106%	112%
	Gas used in internal generation	PJ	3.1	2.0	0.6
	Gas storage net movement	PJ	(1.0)	(0.2)	0.5
	Unit generation cost	\$/MWh	(41.02)	(36.51)	(28.07)
	Cost of Energy	\$/MWh	(45.15)	(32.30)	(27.47)

# Glossary of terms

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## Netback

Measures the performance of the Customer business.

This enables the performance of the retail channels to be measured without using an energy cost. The netback is meant to cover, inter alia, the net purchase cost, capital return, risk margin and a retail margin.

Electricity revenue from mass market and C&I customers

*Add:* Revenue from gas sales

*Less:* Electricity distribution network costs, meter costs and electricity levies

*Less:* Gas distribution network costs, meter costs and gas levies

*Less:* Operating costs to serve the customer, including head office allocation

## Cost of Energy

Measures the performance of the Generation business.

Cost of energy reflects the total operational costs of generating and procuring electricity sold to customers. It does not include any capital return expectations.

Wholesale electricity revenue from our generating assets

*Add:* Revenue from steam sales and direct electricity sales from Te Rapa

*Less:* Electricity purchase costs from the wholesale market to supply customers

*Less:* Electricity transmission costs and levies

*Less:* Gas and diesel purchase costs (excluding gas purchases for retail gas sales)

*Less:* Gas transmission costs and levies

*Less:* Carbon emissions costs

*Less:* Generation operating costs and head office allocation

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Netback and cost of energy is divided by the total retail sales volumes (electricity and gas sales) to be expressed as \$/MWh

# Keep in touch

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