

# Energy Quarterly

*Reporting on the March 2018 Quarter*

*Research, Evaluation & Analytics Branch*

## March 2018 quarter highlights

- Total energy supply increased 2.5 petajoules (PJ), or 2.0 per cent, compared to the same March quarter in 2017. Increased energy supply was predominately consumed within the Domestic Transport and Agriculture, Forestry and Fishing sectors.
- Oil and gas added 5.0 PJ to total energy supply for consumption. However, declines in coal and weak electricity generation offset oil and gas increases, and total energy supply for consumption across all fuel types increased 2.5 PJ, or 2.0 per cent.
- Oil companies significantly increased their imports in preparation for planned refinery maintenance in May and June, while the transformation of gas into electricity drove this quarter's increase in gas supply.
- Electricity generation from renewable sources declined; however, renewable generation was still over 80 per cent.
- Geothermal generation was down six per cent.
- Gas-fired generation increased 27 per cent and coal-fired generation increased 105 per cent.
- The retail cost of petrol and diesel increased, primarily due to increased importer margins.

## Year ending March 2018 highlights

- Increased oil imports added 7.9 PJ to New Zealand's total energy supply, compared to the year ending March 2017.
- Gas-fired and coal-fired electricity generation contributed 15.9 PJ and 3.2 PJ of energy to New Zealand's electricity system respectively.
- Increased energy supply was consumed in the Domestic Transport sector. Both Industrial and Residential energy declined compared to the year ending March 2017.



## Commentary

### **Oil companies increased imports in preparation for planned refinery maintenance**

Overall imports of many refined products increased sharply in preparation for planned maintenance at the refinery in May and June. Petrol imports rose 25.3 per cent and diesel rose 6.8 per cent on the March 2017 quarter. The refinery's fuel intake increased 1.8 PJ this quarter, and generated 33 per cent more regular petrol, 14.5 per cent more jet fuel and 6.5 per cent more diesel than the same March quarter in 2017.

Overall oil product consumption increased 3.0 per cent on the March 2017 quarter. The bulk of the increase occurred in Domestic Transport, but increases were observed in Agriculture, Forestry and Fishing (up 8.9 per cent, or 0.4 PJ) and Commercial and Public Services (up 17 per cent, or 0.3 PJ) compared to March 2017.

### **Hydro and wind generation down, fossil-fuelled generation up**

Low hydro storage and calm conditions in the first month of the quarter resulted in less hydro and wind generation, and an increase in thermal generation. National hydro storage made a strong recovery in the rest of the quarter with two ex-tropical cyclones seeing the levels rise from 79 to 113 per cent.

Low hydro storage levels at the beginning of the quarter led to increased gas-fired generation being brought to market with gas supply up 6.4 per cent for the quarter. The sustained demand for coal to be used by Huntly also meant sub-bituminous coal production grew over the quarter.

### **Renewable generation over 80 per cent, despite a dry start to the quarter**

New Zealand experienced a hot, dry, and calm start to the year, with January 2018 the hottest month on record. The seasonal snow stored in the catchment last winter also melted very fast and so the seasonal snowpack disappeared two months earlier than usual.

This impacted the fuel mix used for electricity generation, though renewable generation still reached 81.1 per cent (down from 86.1 per cent in the March 2017 quarter).

### **The weather also impacted electricity demand by the residential and agriculture sectors**

Warmer temperatures resulted in residential electricity demand falling by 3.9 per cent from the previous March quarter as households used less electricity.

Increased rainfall in the second two months of the quarter raised soil moisture levels, which reduced the need for irrigation. This resulted in electricity demand by the Agriculture sector falling by 3.5 per cent compared to the March 2017 quarter.

National electricity demand increased 0.3 per cent as these reductions in demand were offset by higher commercial and industrial demand.

### **The March year saw higher than average wholesale electricity prices but as yet this has not been faced by residential customers**

Sales-based electricity cost data for the year to March 2018 shows that the average cost per unit faced by residential consumers was 0.8 per cent higher than for the year to March 2017. This increased cost was driven by a 2.9 per cent increase in the lines component, with the energy and other retail component falling 0.7 per cent.



The year to March 2018 also saw a 21 per cent increase in the average cost per unit faced by the industrial sector. This was driven by increases in the cost of energy faced by users that purchase their electricity directly on the market, rather than through a retailer.

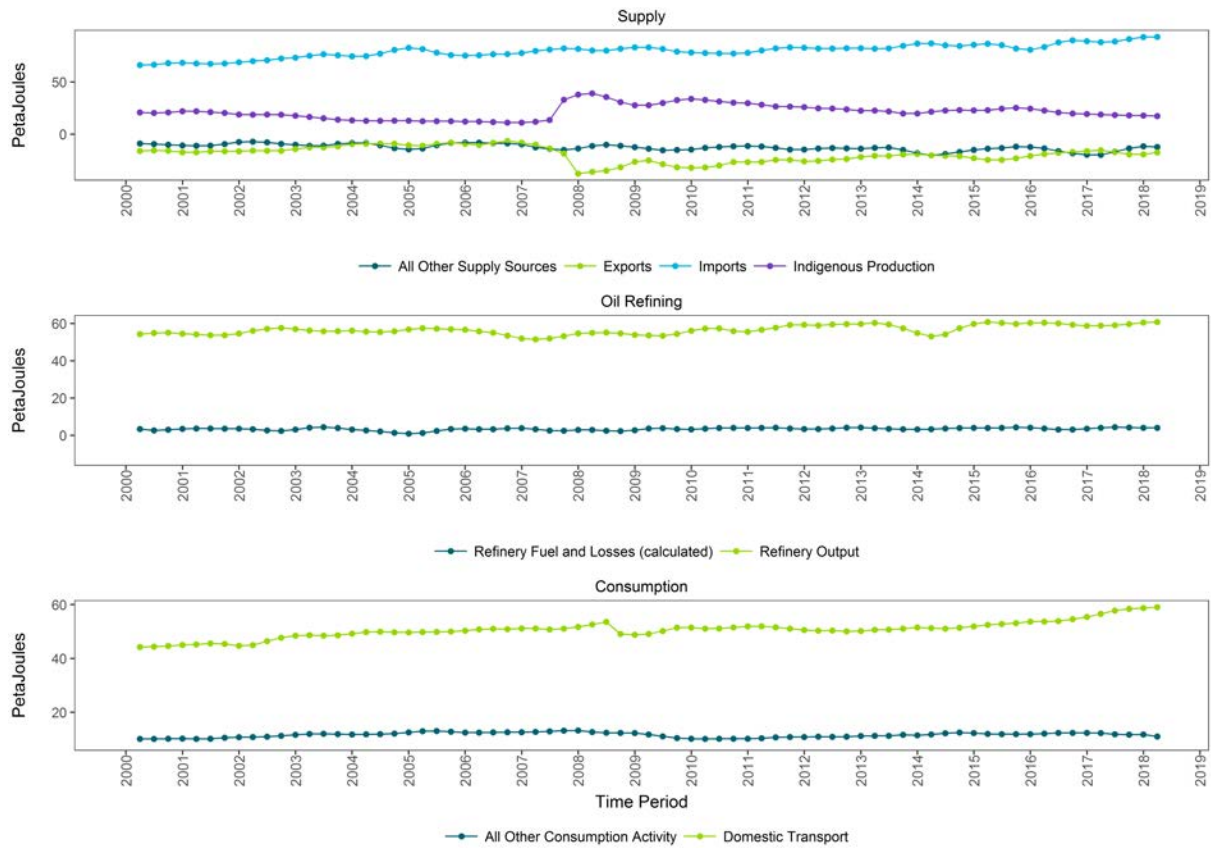
### **The retail cost of petrol and diesel increased**

The retail cost of petrol rose 5.25 cents per litre, or 3 per cent compared to the December 2017 quarter. Approximately 55 per cent of this rise is attributed to importer margins, which include local transport fees and profit margins. The retail cost of diesel rose by 6.70 cents per litre, or 5 per cent. Approximately 60 per cent of this increase is attributed to importer margins.



## Fuel Type Analysis

### Oil



Overall supply was down by 3.1 per cent (2.5 PJ) in the quarter. Indigenous crude production was down 11.4 per cent (2.1 PJ). This was largely influenced by a shutdown of the Pohokura field after a small leak was discovered in an offshore pipeline (indicated by bubbles from a condensate pipe from an offshore rig).

Imports of many refined products have increased sharply in preparation for the refinery maintenance shutdown over May and June. Regular petrol imports rose 26.6 per cent (2.2 PJ), and diesel rose 6.8 per cent (0.9 PJ). Imports of jet were down for the quarter but the refinery output of jet was up 14.5 per cent (2.1 PJ).

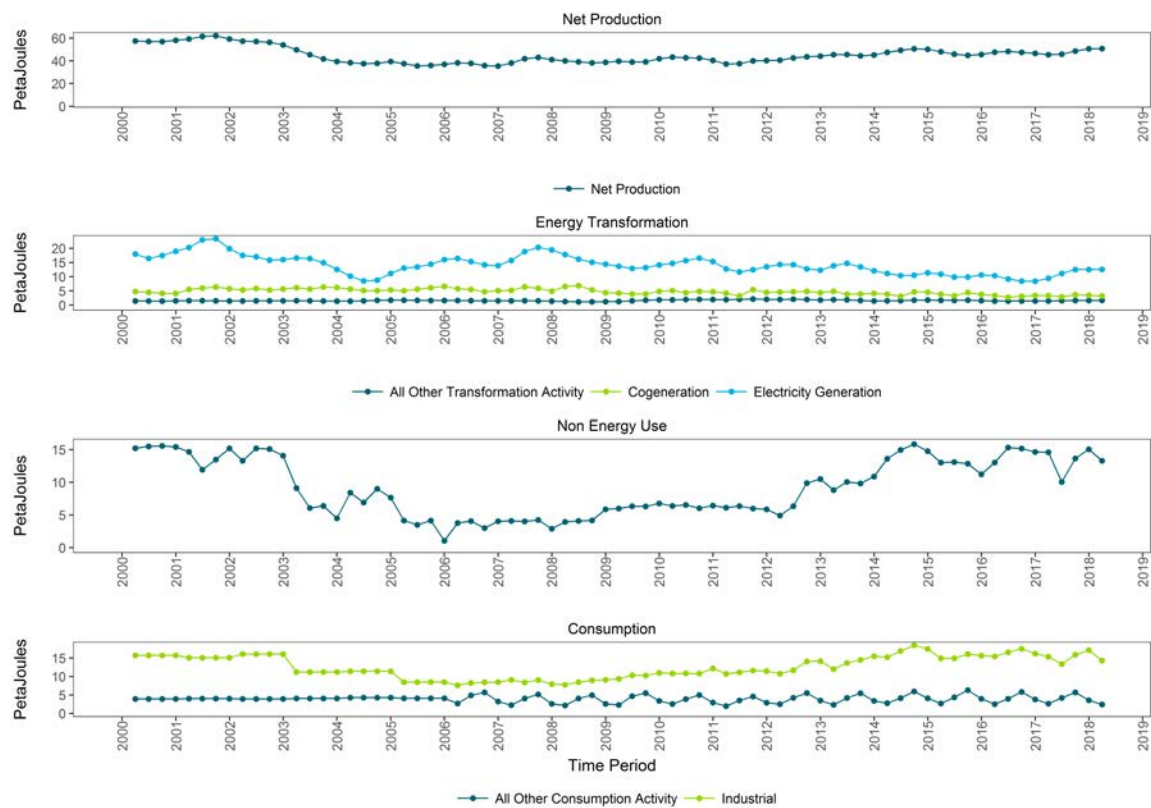
Refinery output for the quarter saw regular petrol increase by 33 per cent (3.5 PJ), premium petrol decrease 29.8 per cent (1.3 PJ), and diesel increase 6.5 per cent (1.2 PJ).

Total consumption increased 3.1 per cent (2.2 PJ). Diesel consumption increased in the Agricultural, Commercial, and Domestic Transport sectors. Gains in these sectors were offset by some decline in the Industrial sector.





## Gas



Overall gas supply was up 6.4 per cent (2.8 PJ) for the quarter.

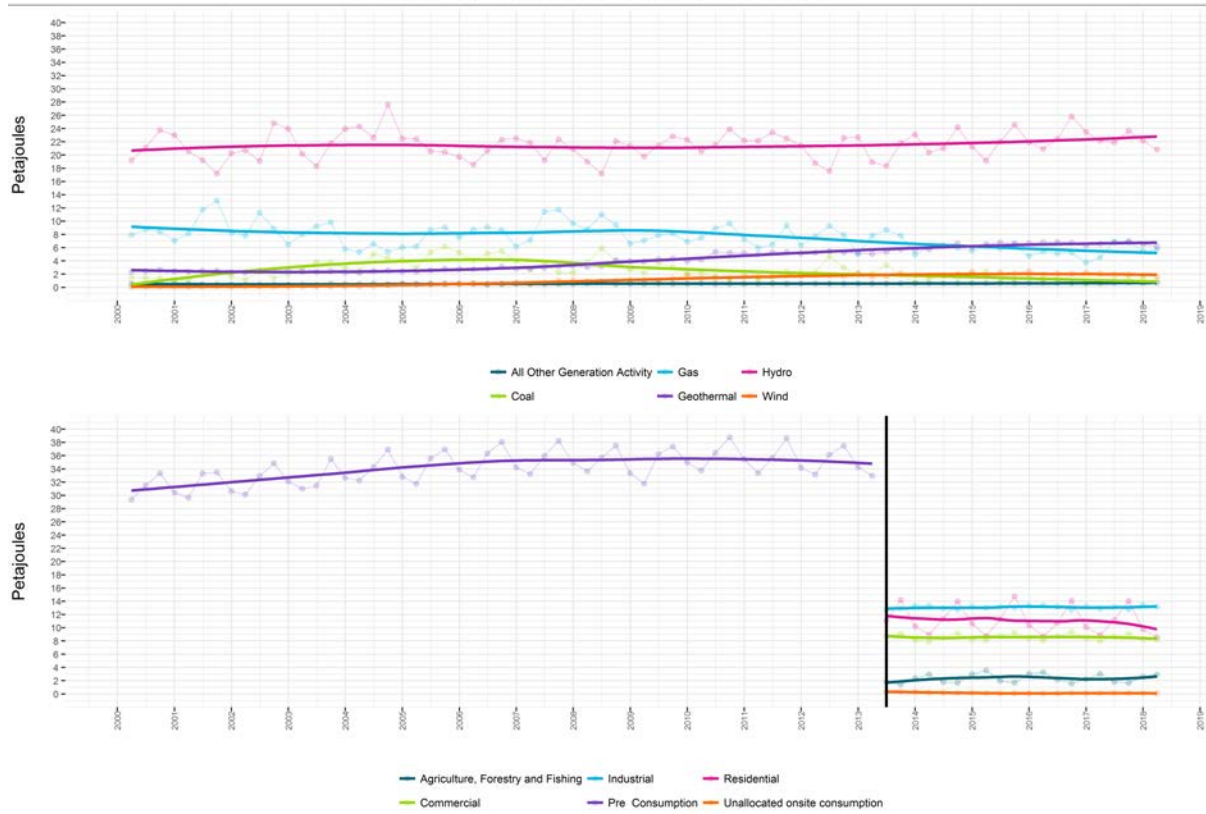
Gas-fired electricity generation was up 45.2 per cent (3.5 PJ). Low hydro storage led to increased gas-fired generation being brought to market.

Both Non-Energy Use and Total Consumption were down this quarter. Non-Energy Use was affected by gas supply constraints, including scheduled field maintenance and a damaged natural gas pipeline, which led to lower production at Methanex during the first quarter. Total consumption was down by 7.1 per cent (1.3 PJ), with the Basic Metals and Food Processing industries experiencing the bulk of the consumption decrease.



## Electricity

Electricity Generation and Consumption



*Note: Quarterly electricity sales data is available for the June quarter 2013 onwards. Previously this data was collected annually.*

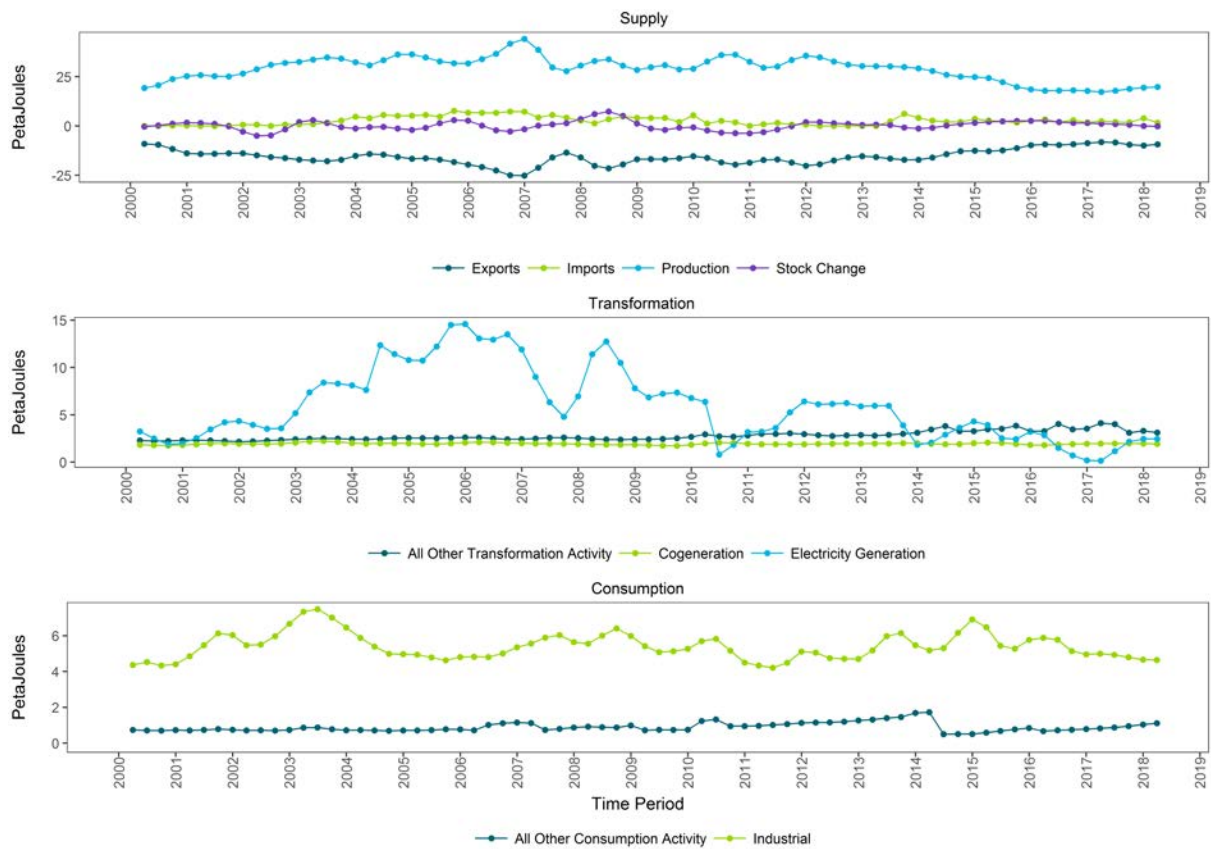
Low hydro storage levels at the start of the quarter led to record January prices, and higher fossil-fuel-based generation. The March 2018 quarter had the lowest renewable first quarter per cent – 81.1 – since 2015. However, hydro generation recovered following favourable rainfall in February.

The weather impacted on electricity demand by the agricultural and residential sectors:

- Increased rainfall raised soil moisture levels, reducing the need for irrigation. This resulted in a 3.5 per cent fall in electricity demand by the agricultural sector compared to the March 2017 quarter.
- Warmer temperatures resulted in residential electricity demand falling 3.9 per cent compared to the March 2017 quarter as households used less electricity. These reductions were offset by increases in commercial and industrial (due to food processing) demand, resulting in a net 0.3 per cent increase in national electricity demand.



## Coal



Coal production continued to rebound from its early-2017 low, up 44 per cent on March 2017. While bituminous coal production stayed steady relative to last quarter, sub-bituminous coal production continued to grow, driven by sustained demand for coal in electricity generation.

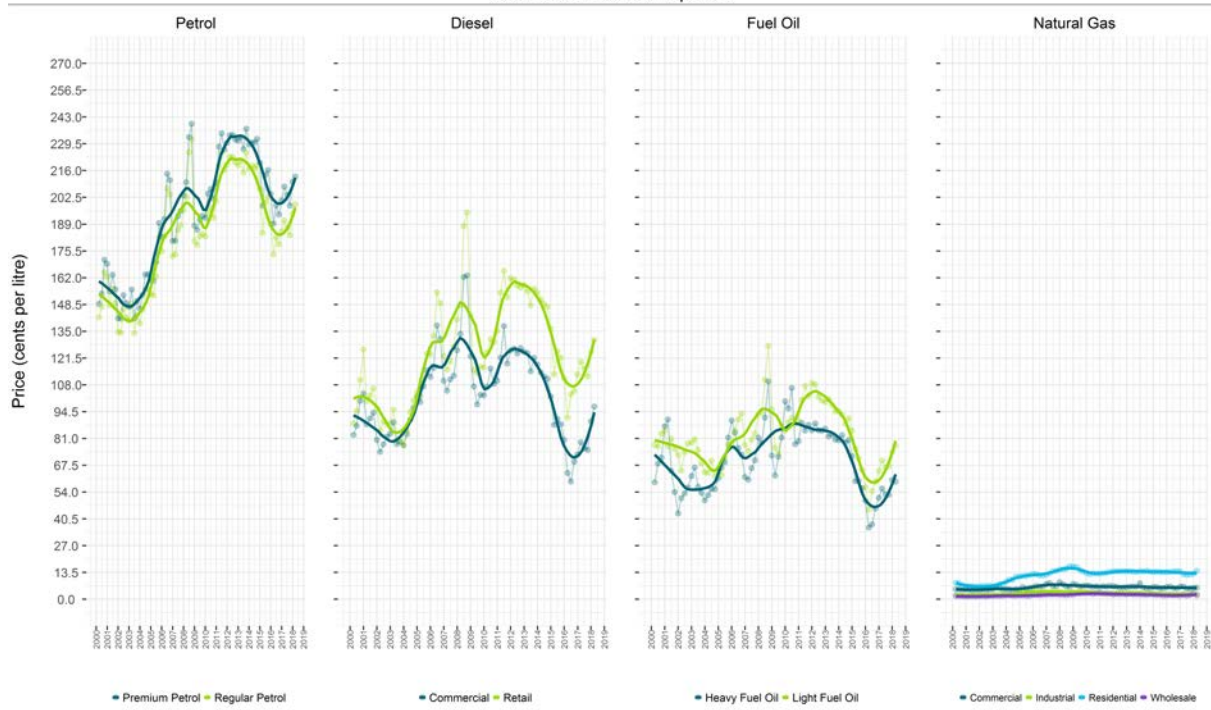
Domestic consumption fell by 21 per cent on March 2017, driven chiefly by a decline in industrial demand. Exports were up 65 per cent, supported by strong demand for coal in the Asia-Pacific region.





**Prices**

**Fuel Prices - Cents per Litre**  
Real December 2017 prices



**Decomposition of Fuel Prices - Cents per Litre**  
Real December 2017 prices







## Fuel prices

The retail cost of petrol rose 5.25 cents per litre, or 3 per cent compared to the December 2017 quarter. Approximately 55 per cent of this rise is attributed to importer margins, which include local transport fees and profit margins. The retail cost of diesel rose by 6.70 cents per litre, or 5 per cent. Approximately 63 per cent of this increase is attributed to importer margins.

Dubai crude oil prices (an indicator of oil and oil product prices) levelled off during the quarter, and Singapore prices for both regular petrol and diesel generally followed suit. Regular petrol did see a 3 per cent price rise, driving at least part of retail costs. Diesel prices, however, saw a small price decrease (0.7 per cent) across the quarter, which is not reflected in retail diesel prices.

## Electricity prices (QSDEP)

National retail electricity prices increased by approximately 0.02 c/kWh; 0.01 c/kWh of this increase is due to lines company tariffs, with the remainder attributed to electricity retailers.





## Data tables

**Table 1: Quarterly Energy Supply and Demand (Petajoules)**

Measure	Fuel Type	Variable	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	% Change	
Supply	Oil	Supply	82.47	69.47	76.14	84.43	79.98	-2.5	-3.0%	
		Transformation	0	0	0	0	0	0.0	NA	
		Non-energy Use and Losses	11.43	6.02	6.51	7.36	5.6	-5.8	-51.0%	
		Total Supply for Consumption	71.04	63.45	69.63	77.07	74.38	3.3	4.7%	
	Electricity	Supply	36.52	39.27	41.27	37.89	36.07	-0.4	-1.2%	
		Transformation	0	0	0	0	0	0.0	NA	
		Non-energy Use and Losses	3.66	4.3	3.59	3.69	3.1	-0.6	-15.3%	
		Total Supply for Consumption	32.86	34.97	37.68	34.2	32.97	0.1	0.3%	
	Gas	Supply	43.31	43.16	52.48	49.9	46.1	2.8	6.4%	
		Transformation	12.59	18.44	18.72	16.13	14.94	2.3	18.7%	
		Non-energy Use and Losses	14.59	10.05	13.65	15.03	13.29	-1.3	-8.9%	
		Total Supply for Consumption	16.13	14.67	20.11	18.74	17.87	1.7	10.8%	
	Coal	Supply	13.09	11.02	12.12	14.97	11.12	-2.0	-15.0%	
		Transformation	5.89	7.68	6.98	7.65	6.59	0.7	11.9%	
		Non-energy Use and Losses	0	0	0	0	0	0.0	NA	
		Total Supply for Consumption	7.2	3.34	5.14	7.32	4.53	-2.7	-37.1%	
	All Fuels	Total Supply for Consumption	127.23	116.43	132.56	137.33	129.75	2.5	2.0%	
	Consumption	All Fuels	Agriculture, Forestry and Fishing	7.77	6.96	7.58	7.8	8.24	0.5	6.0%
			Commercial and Public Services	11.47	12.96	13.98	12.46	11.74	0.3	2.4%
			Domestic Transport	57.54	56.28	55.52	61.94	59.84	2.3	4.0%
Industrial			40.4	34.24	37.05	41.92	36.31	-4.1	-10.1%	
Residential			10.84	13.93	17.7	12.13	9.71	-1.1	-10.4%	
Pre June-2013 Consumption			0	0	0	0	0	0.0	NA	
Unallocated onsite consumption			0.1	0.11	0.12	0.1	0.1	0.0	0.0%	
Total Consumption			128.12	124.48	131.95	136.35	125.94	-2.2	-1.7%	





Table 2: Quarterly Changes in Energy Supply and Demand (Petajoules)

Measure	Fuel Type	Variable	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	
Supply	Oil	Supply	6.18	-13	6.67	8.29	-4.45	-10.6	
		Transformation	0	0	0	0	0	0.0	
		Non-energy Use and Losses	5.97	-5.41	0.49	0.85	-1.76	-7.7	
		Total Supply for Consumption	0.21	-7.59	6.18	7.44	-2.69	-2.9	
	Electricity	Supply	-0.51	2.75	2	-3.38	-1.82	-1.3	
		Transformation	0	0	0	0	0	0.0	
		Non-energy Use and Losses	0.64	0.64	-0.71	0.1	-0.59	-1.2	
		Total Supply for Consumption	-1.15	2.11	2.71	-3.48	-1.23	-0.1	
	Gas	Supply	-1.59	-0.15	9.32	-2.58	-3.8	-2.2	
		Transformation	1.33	5.85	0.28	-2.59	-1.19	-2.5	
		Non-energy Use and Losses	-0.06	-4.54	3.6	1.38	-1.74	-1.7	
		Total Supply for Consumption	-2.86	-1.46	5.44	-1.37	-0.87	2.0	
	Coal	Supply	0.59	-2.07	1.1	2.85	-3.85	-4.4	
		Transformation	0.24	1.79	-0.7	0.67	-1.06	-1.3	
		Non-energy Use and Losses	0	0	0	0	0	0.0	
		Total Supply for Consumption	0.35	-3.86	1.8	2.18	-2.79	-3.1	
	All Fuels	Total Supply for Consumption	-3.45	-10.8	16.13	4.77	-7.58	-4.1	
	Consumption	All Fuels	Agriculture, Forestry and Fishing	0.27	-0.81	0.62	0.22	0.44	0.2
			Commercial and Public Services	-0.66	1.49	1.02	-1.52	-0.72	-0.1
Domestic Transport			-0.31	-1.26	-0.76	6.42	-2.1	-1.8	
Industrial			-0.2	-6.16	2.81	4.87	-5.61	-5.4	
Residential			-1.69	3.09	3.77	-5.57	-2.42	-0.7	
Pre June-2013 Consumption			0	0	0	0	0	0.0	
Unallocated onsite consumption			0	0.01	0.01	-0.02	0	0.0	
Total Consumption			-2.59	-3.64	7.47	4.4	-10.41	-7.8	

Table 3: Energy Supply and Demand (Petajoules) - Year Ending Published Quarter

Measure	Fuel Type	Variable	2017	2018	Annual Change	Annual % Change	
Supply	Oil	Supply	302.07	310.02	7.9	2.6%	
		Transformation	0	0	0.0	NA	
		Non-energy Use and Losses	28.39	25.49	-2.9	-10.2%	
		Total Supply for Consumption	273.68	284.53	10.8	4.0%	
	Electricity	Supply	153.09	154.5	1.4	0.9%	
		Transformation	0	0	0.0	NA	
		Non-energy Use and Losses	13.4	14.68	1.3	9.6%	
		Total Supply for Consumption	139.69	139.82	0.1	0.1%	
	Gas	Supply	189.38	191.64	2.3	1.2%	
		Transformation	52.34	68.23	15.9	30.4%	
		Non-energy Use and Losses	59.72	52.02	-7.7	-12.9%	
		Total Supply for Consumption	77.32	71.39	-5.9	-7.7%	
	Coal	Supply	49.86	49.23	-0.6	-1.3%	
		Transformation	25.72	28.9	3.2	12.4%	
		Non-energy Use and Losses	0	0	0.0	NA	
		Total Supply for Consumption	24.14	20.33	-3.8	-15.8%	
	All Fuels	Total Supply for Consumption	514.83	516.07	1.2	0.2%	
	Consumption	All Fuels	Agriculture, Forestry and Fishing	30.4	30.58	0.2	0.6%
			Commercial and Public Services	50.54	51.14	0.6	1.2%
Domestic Transport			220.15	233.58	13.4	6.1%	
Industrial			158.78	149.52	-9.3	-5.8%	
Residential			54.13	53.47	-0.7	-1.2%	
Pre June-2013 Consumption			0	0	0.0	NA	
Unallocated onsite consumption			0.43	0.43	0.0	0.0%	
Total Consumption			514.43	518.72	4.3	0.8%	





Table 4: Selected Oil Fuel Types (Petajoules)

Fuel Type	Measure	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	
Crude Oil, Condensate and Naphtha	Indigenous Production	16.16	16.93	16.64	15.98	13.98	-2.18	
	Imports	53.1	64.39	61.18	58.93	63.68	10.58	
	Exports	-12.97	-15.53	-17.36	-15.88	-13.14	-0.17	
	Stock Change	-1.22	-2.26	-0.14	5.1	-0.34	0.88	
	Stock in Transit	1.12	0.21	0.15	0.49	-0.84	-1.96	
	Refinery Intake	54.66	63.36	61	65.56	62.75	8.09	
	Total Supply for Consumption	1.53	0.38	-0.53	-0.94	0.59	-0.94	
	Diesel	Imports	12.97	10.45	8.09	15.35	13.85	0.88
Stock Change	3.24	-3.35	2.63	-0.61	1.39	-1.85		
Stock in Transit	-0.35	-1.17	2.05	0.76	0.05	0.40		
International Transport	-0.76	-0.49	-0.17	-0.33	-0.61	0.15		
Refinery Output	18.45	25.56	22.46	22.84	19.65	1.20		
Total Supply for Consumption	33.55	31	34.03	37.88	34.33	0.78		
Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	3.62	3.62	3.55	3.76	3.88	0.26	
	Commercial and Public Services	1.32	1.35	1.39	1.49	1.54	0.22	
	Domestic Transport	23.92	24.35	24	27.38	25.31	1.39	
	Industrial	4.4	3.34	3.38	3.62	3.68	-0.72	
	Residential	0.03	0.03	0.03	0.03	0.03	0.00	
	Total Consumption	33.29	32.69	32.37	36.28	34.44	1.15	
	Fuel Oil	Exports	0	-0.57	-3.92	-1.32	-0.83	-0.83
		Stock Change	-0.75	0.74	0.92	-0.57	-0.55	0.20
		Stock in Transit	-0.08	-0.23	-0.63	0.6	0.16	0.24
		International Transport	-3.71	-2.09	-1.9	-2.95	-3.67	0.04
Refinery Output		5.91	4.12	7.46	5.64	6.42	0.51	
Total Supply for Consumption		1.37	1.97	1.93	1.4	1.53	0.16	
Agriculture, Forestry and Fishing		0.25	0.2	0.28	0.18	0.35	0.10	
Commercial and Public Services		0.01	0.01	0.02	0.03	0.06	0.05	
Domestic Transport		1.07	1.04	1.08	1.15	1.3	0.23	
Industrial		0.42	0.26	0.29	0.38	0.23	-0.19	
Total Consumption	1.75	1.51	1.67	1.74	1.94	0.19		
Jet A	Imports	5.1	2.33	2.53	2.28	3.59	-1.51	
	Stock Change	0.31	-0.88	0	1.06	-0.58	-0.89	
	Stock in Transit	-1.92	-1.41	0.19	1.4	-0.14	1.78	
	International Transport	-14.35	-12.49	-12.34	-14.64	-14.36	-0.01	
	Refinery Output	14.52	14.38	13.08	14.7	16.63	2.11	
	Total Supply for Consumption	3.66	1.93	3.46	4.77	5.14	1.48	
	Domestic Transport	3.85	3.23	3.3	3.63	4.62	0.77	
	Total Consumption	3.85	3.23	3.3	3.63	4.62	0.77	
	Premium Petrol	Imports	3.79	2.77	2.56	4.17	4.64	0.85
		Exports	-0.45	0	0	0	0	0.45
Stock Change		0	-0.48	0.27	0.3	0.02	0.02	
Stock in Transit		-1.56	0.48	-0.4	-0.04	0.16	1.72	
Refinery Output		4.34	3.33	4.16	2.45	3.05	-1.29	
Total Supply for Consumption		6.12	6.1	6.59	6.88	7.87	1.75	
Agriculture, Forestry and Fishing		0.01	0.01	0.01	0.01	0.01	0.00	
Commercial and Public Services		0.02	0.02	0.02	0.02	0.02	0.00	
Domestic Transport		6.49	6.32	6.34	6.91	6.66	0.17	
Total Consumption		6.52	6.35	6.37	6.94	6.69	0.17	
Regular Petrol	Imports	8.32	8.94	8.09	8.77	10.54	2.22	
	Stock Change	3.63	-3.03	1.14	1.01	-1.42	-5.05	
	Stock in Transit	0.4	1.59	2.36	0.85	-0.1	-0.50	
	Refinery Output	10.5	12.1	11.51	14.3	13.97	3.47	
	Total Supply for Consumption	22.85	19.6	21.4	24.93	22.99	0.14	
	Agriculture, Forestry and Fishing	0.28	0.28	0.28	0.3	0.3	0.02	
	Commercial and Public Services	0.13	0.12	0.12	0.17	0.17	0.04	
	Domestic Transport	22	21.16	20.65	22.68	21.8	-0.20	
	Industrial	0.11	0.02	0.02	0.02	0.02	-0.09	
	Residential	0.01	0.01	0.01	0.01	0.01	0.00	
Total Consumption	22.53	21.59	21.08	23.18	22.3	-0.23		





Table 5: Gas Production, Transformation and Consumption (Petajoules)

Measure	Gas Use	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	% Change
Supply	Supply	43.31	43.16	52.48	49.9	46.1	2.79	6.4%
Energy Transformation	Electricity Generation	7.82	13.93	13.44	11	11.35	3.53	45.1%
	Cogeneration	3.33	2.96	3.6	3.48	3.22	-0.11	-3.3%
	Transmission and distribution losses	0.13	0.17	0.21	0.18	0.14	0.01	7.7%
Non-Energy Use	Non-Energy Use	14.59	10.05	13.65	15.03	13.29	-1.30	-8.9%
Consumption	Agriculture, Forestry and Fishing	0.26	0.42	0.46	0.31	0.2	-0.06	-23.1%
	Basic Metals	0.55	0.62	0.66	0.63	0.6	0.05	9.1%
	Chemicals	8.7	7	8.17	8.97	7.95	-0.75	-8.6%
	Commercial	1.41	2.05	2.62	1.84	1.41	0.00	0.0%
	Food Processing	4.25	3.38	4.38	5.09	3.79	-0.46	-10.8%
	Other	0.82	0.95	0.99	0.91	0.8	-0.02	-2.4%
	Residential	0.97	1.74	2.63	1.41	0.82	-0.15	-15.5%
	Wood,Pulp,Paper and Printing	1.05	1.42	1.69	1.52	1.17	0.12	11.4%

Table 6: Quarterly Changes in Gas Production, Transformation and Consumption (Petajoules)

Measure	Gas Use	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar
Supply	Supply	-1.59	-0.15	9.32	-2.58	-3.8	-2.21
Energy Transformation	Electricity Generation	1.29	6.11	-0.49	-2.44	0.35	-0.94
	Cogeneration	-0.06	-0.37	0.64	-0.12	-0.26	-0.20
	Transmission and distribution losses	-0.04	0.04	0.04	-0.03	-0.04	0.00
Non-Energy Use	Non-Energy Use	-0.06	-4.54	3.6	1.38	-1.74	-1.68
Consumption	Agriculture, Forestry and Fishing	-0.14	0.16	0.04	-0.15	-0.11	0.03
	Basic Metals	-0.02	0.07	0.04	-0.03	-0.03	-0.01
	Chemicals	-0.85	-1.7	1.17	0.8	-1.02	-0.17
	Commercial	-0.44	0.64	0.57	-0.78	-0.43	0.01
	Food Processing	0.35	-0.87	1	0.71	-1.3	-1.65
	Other	0.05	0.13	0.04	-0.08	-0.11	-0.16
	Residential	-0.56	0.77	0.89	-1.22	-0.59	-0.03
	Wood,Pulp,Paper and Printing	-0.36	0.37	0.27	-0.17	-0.35	0.01

Table 7: Electricity Net Production and Consumption (Petajoules)

Measure	Fuel Type	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	% Change
Net Generation (PJ)	Hydro	22.15	21.9	23.64	22.17	20.82	-1.33	-6.0%
	Geothermal	6.57	6.76	7.01	6.48	6.15	-0.42	-6.4%
	Gas	4.48	6.94	6.77	5.49	5.68	1.20	26.8%
	Wind	2.12	1.94	1.95	1.83	1.66	-0.46	-21.7%
	Coal	0.53	1.08	1.19	1.28	1.08	0.55	103.8%
	Wood	0.3	0.3	0.33	0.27	0.29	-0.01	-3.3%
	Biogas	0.26	0.24	0.25	0.25	0.26	0.00	0.0%
	Waste Heat	0.05	0.05	0.05	0.05	0.05	0.00	0.0%
	Solar	0.06	0.06	0.07	0.07	0.08	0.02	33.3%
	Consumption (PJ)	Industrial	12.87	13.17	12.77	13.43	13.18	0.31
Residential		8.89	11.2	14.04	9.77	8.55	-0.34	-3.8%
Commercial		7.97	8.67	9.1	8.27	8.22	0.25	3.1%
Agriculture, Forestry and Fishing		3.03	1.82	1.65	2.63	2.92	-0.11	-3.6%
Unallocated onsite consumption		0.1	0.11	0.12	0.1	0.1	0.00	0.0%

Table 8: Quarterly Changes in Electricity Net Production and Consumption (Petajoules)

Measure	Fuel Type	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar
Net Generation (PJ)	Hydro	-1.32	-0.25	1.74	-1.47	-1.35	-0.03
	Geothermal	0.24	0.19	0.25	-0.53	-0.33	-0.57
	Gas	0.72	2.46	-0.17	-1.28	0.19	-0.53
	Wind	-0.12	-0.18	0.01	-0.12	-0.17	-0.05
	Coal	-0.07	0.55	0.11	0.09	-0.2	-0.13
	Wood	0.01	0	0.03	-0.06	0.02	0.01
	Biogas	0.02	-0.02	0.01	0	0.01	-0.01
	Waste Heat	0	0	0	0	0	0.00
	Solar	0.01	0	0.01	0	0.01	0.00
	Oil	0	0	0.01	-0.01	0	0.00
Consumption (PJ)	Industrial	-0.37	0.3	-0.4	0.66	-0.25	0.12
	Residential	-1.21	2.31	2.84	-4.27	-1.22	-0.01
	Commercial	-0.39	0.7	0.43	-0.83	-0.05	0.34
	Agriculture, Forestry and Fishing	0.82	-1.21	-0.17	0.98	0.29	-0.53
	Unallocated onsite consumption	0	0.01	0.01	-0.02	0	0.00





Table 9: Coal Production, Transformation and Consumption (Petajoules)

Measure	Fuel Type	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	% Change
Supply	Production	14.15	21.06	18.25	19.54	20.33	6.18	43.7%
	Imports	2.49	2.05	1.84	3.95	1.69	-0.80	-32.1%
	Exports	-4.46	-13.05	-7.24	-11.95	-7.35	-2.89	64.8%
	Stock Change	0.91	0.96	-0.73	3.43	-3.55	-4.46	-490.1%
	Production Losses and Own Use	1.21	1.07	0.18	0.39	0.22	-0.99	-81.8%
Transformation	Electricity Generation	0	1.46	1.99	2.26	1.73	1.73	Inf%
	Cogeneration	1.88	2.09	1.93	1.98	1.88	0.00	0.0%
	Other Transformation	2.8	3.06	2.88	3.02	2.76	-0.04	-1.4%
Consumption	Agriculture, Forestry and Fishing	0.29	0.58	1.32	0.58	0.55	0.26	89.7%
	Commercial	0.2	0.33	0.3	0.23	0.21	0.01	5.0%
	Industrial	6.38	3.23	3.85	6.5	4.65	-1.73	-27.1%
	Residential	0.06	0.07	0.11	0.03	0.07	0.01	16.7%

Table 10: Quarterly Changes in Coal Production, Transformation and Consumption (Petajoules)

Measure	Fuel Type	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar
Supply	Production	-3.62	6.91	-2.81	1.29	0.79	4.41
	Imports	0.67	-0.44	-0.21	2.11	-2.26	-2.93
	Exports	5.23	-8.59	5.81	-4.71	4.6	-0.63
	Stock Change	-1.69	0.05	-1.69	4.16	-6.98	-5.29
	Production Losses and Own Use	0.58	-0.14	-0.89	0.21	-0.17	-0.75
Transformation	Electricity Generation	-0.27	1.46	0.53	0.27	-0.53	-0.26
	Cogeneration	0.01	0.21	-0.16	0.05	-0.1	-0.11
	Other Transformation	-0.08	0.26	-0.18	0.14	-0.26	-0.18
Consumption	Agriculture, Forestry and Fishing	-0.03	0.29	0.74	-0.74	-0.03	0.00
	Commercial	0	0.13	-0.03	-0.07	-0.02	-0.02
	Industrial	0.52	-3.15	0.62	2.65	-1.85	-2.37
	Residential	0	0.01	0.04	-0.08	0.04	0.04

Table 11: Diesel and Petrol Price Decomposition - Nominal and Constant Price

Liquid Fuel	Measure	Component	2017-03-31	2017-06-30	2017-09-30	2017-12-31	2018-03-31	Mar-on-Mar	% Change
Automotive Diesel	Nominal	Import cost plus freight and insurance	62.1	59.15	60.41	71.05	73.57	11.47	18.5%
		Gross importer's margin	37.94	37.64	33.43	33.31	35.3	-2.64	-7.0%
		Goods and Services Tax (GST)	15.51	15.05	14.63	16.25	17.13	1.62	10.4%
		Emissions Trading Scheme (ETS)	2.82	3.03	3.09	3.36	4.67	1.85	65.6%
		Duties, taxes and levies	0.53	0.53	0.63	0.63	0.63	0.10	18.9%
	Real Dec 2017 prices	Import cost plus freight and insurance	62.47	59.5	60.48	71.05	73.21	10.74	17.2%
		Gross importer's margin	38.17	37.87	33.46	33.31	35.13	-3.04	-8.0%
		Goods and Services Tax (GST)	15.6	15.14	14.65	16.25	17.04	1.44	9.2%
		Emissions Trading Scheme (ETS)	2.84	3.05	3.1	3.36	4.65	1.81	63.7%
		Duties, taxes and levies	0.53	0.53	0.63	0.63	0.63	0.10	18.9%
Regular Petrol	Nominal	Import cost plus freight and insurance	65.43	61.99	62.37	71.84	72.55	7.12	10.9%
		Gross importer's margin	29.89	29.93	27.78	27.72	30.83	0.94	3.1%
		Goods and Services Tax (GST)	24.76	24.27	23.9	25.34	26.09	1.33	5.4%
		Emissions Trading Scheme (ETS)	2.44	2.62	2.68	2.91	4.04	1.60	65.6%
		Duties, taxes and levies	67.28	67.28	66.48	66.48	66.48	-0.80	-1.2%
	Real Dec 2017 prices	Import cost plus freight and insurance	65.83	62.36	62.43	71.84	72.19	6.36	9.7%
		Gross importer's margin	30.07	30.11	27.81	27.72	30.68	0.61	2.0%
		Goods and Services Tax (GST)	24.91	24.42	23.92	25.34	25.96	1.05	4.2%
		Emissions Trading Scheme (ETS)	2.45	2.64	2.68	2.91	4.02	1.57	64.1%
		Duties, taxes and levies	67.69	67.69	66.56	66.48	66.16	-1.53	-2.3%

