SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Tracking effect of COVID-19 on energy supply and demand

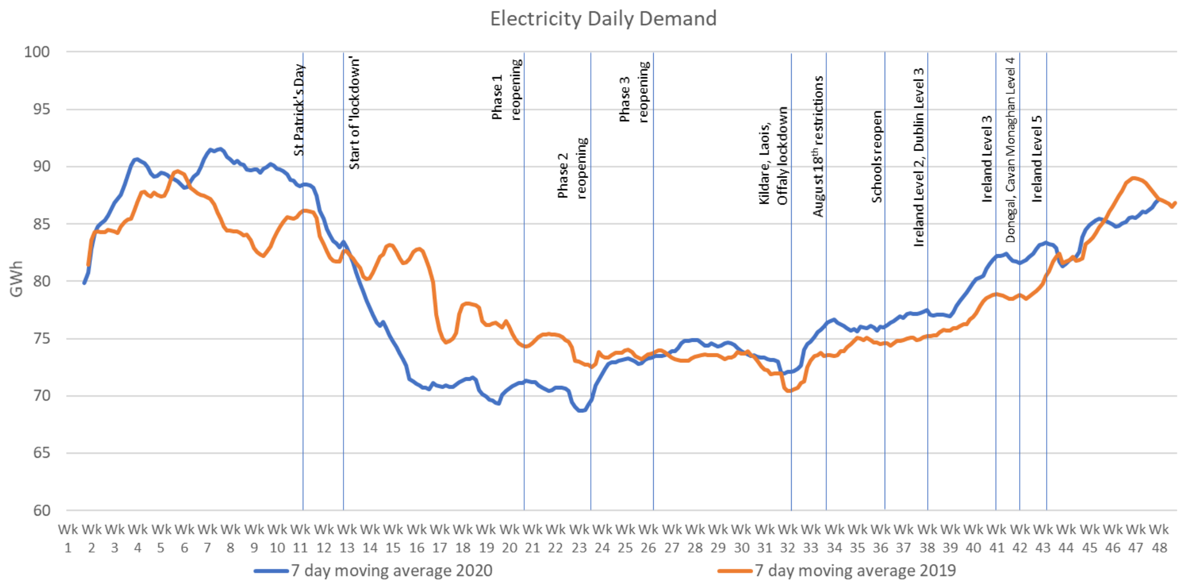
26th November 2020

This note provides a brief overview of energy demand trends for electricity, gas and oil in Ireland since 1st January 2020.[1]

The most recent data included in the demand trends is for **October** when Ireland went to level 3 restrictions on the 6th and level 5 on the 21st. The impact of COVID-19 on energy demand in 2020 is evident. Some interpretation is included under each chart for reference

Electricity

The chart below shows analysis of the demand data on EirGrid's website. This shows the 7-day moving average of the daily demand in GWh since 1st January through to 25th November, which smooths out differences in weekday and weekend demand.



Electricity can be followed daily on the EirGrid websites[2]. Some analysis is needed to interpret the data. From the chart above:

- Average daily electricity demand returned to 2019 seasonal levels following phase 2 reopening at around 73 kWh/day in June and July.
- Since the start of July, demand had been running a little above seasonal 2019 levels following phase 3 reopening.
- Cumulative demand to the end of October is approximately 0.4% up on 2019.
- Effect of Ireland going to Level 5 restrictions on 21st October already evident although it does include a bank holiday weekend where the Monday would have lower than normal demand. Also note that October 2020 was slightly warmer than October 2019.

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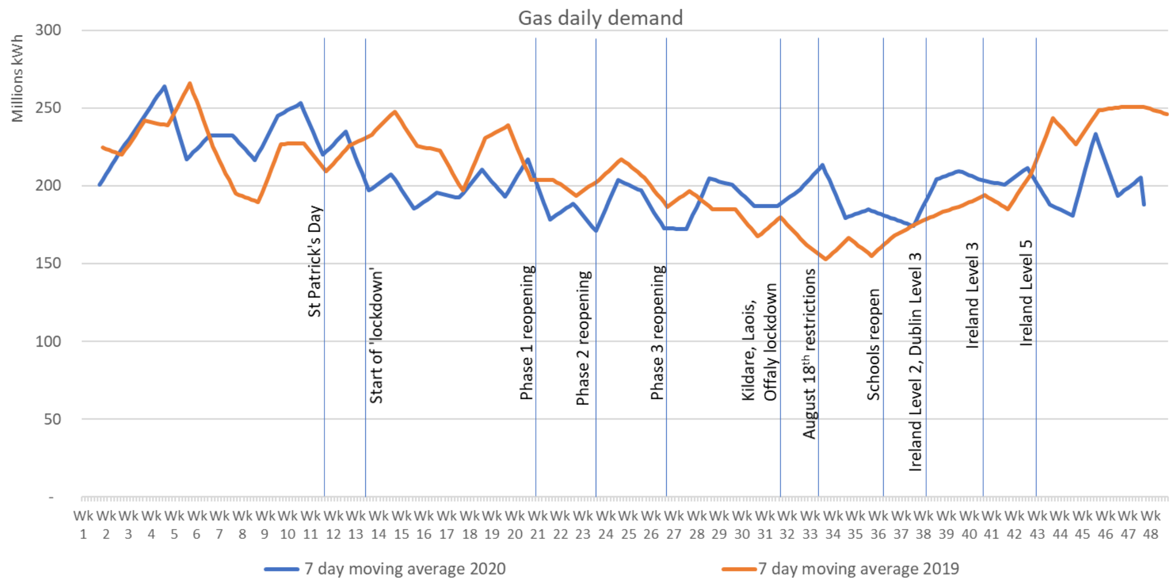
[1] Note, where relevant, all figures are in net calorific values.

[2] Official monthly statistics on electricity are available on an M-1 basis. These give high level production, import/export, stock change and supply figures. Energy input to electricity generation is available at M-2.

Networked Gas

The chart below shows analysis of the demand data on GNI's website.[3] This shows the 7-day moving average of the daily demand in GWh until 23rd November, which smooths out differences in weekday and weekend demand.



This data is not weather corrected but there does appear to be a reduction in gas demand during the first two weeks of the stay-at-home travel restriction. Notwithstanding the lack of weather correction, demand dropped from an average daily demand of 230 GWh pre lockdown to 196 GWh during lock down – a fall of approximately 15% - while during the same period in 2019 demand was increasing.

Demand fell to an average daily demand low of 172 GWh in the first week of July (also the first week of phase 3 reopening) but then increased to 205 GWh during the second week before falling again in the last two weeks of July to around 187 GWh. Demand has been above 2019 seasonal levels since the middle of July.

In January (weeks 1 to 5) there were 5% fewer heating degree-days compared with January 2019 – that is it was slightly warmer. February and March (weeks 5 to 13) there were 24% and 12% respectively more degree-days signifying that these months were somewhat colder than 2019. April, May and June (weeks 14 to 26) were warmer than in 2019 with 9%, 11% and 20% respectively fewer degree-days.

August and September had 13% and 8% more degree-days than in 2019 but as the heating season doesn't start until October this didn't impact significantly on gas demand. October had 5% fewer degreed days than October 2019, so it was slightly warner month in general than last year.

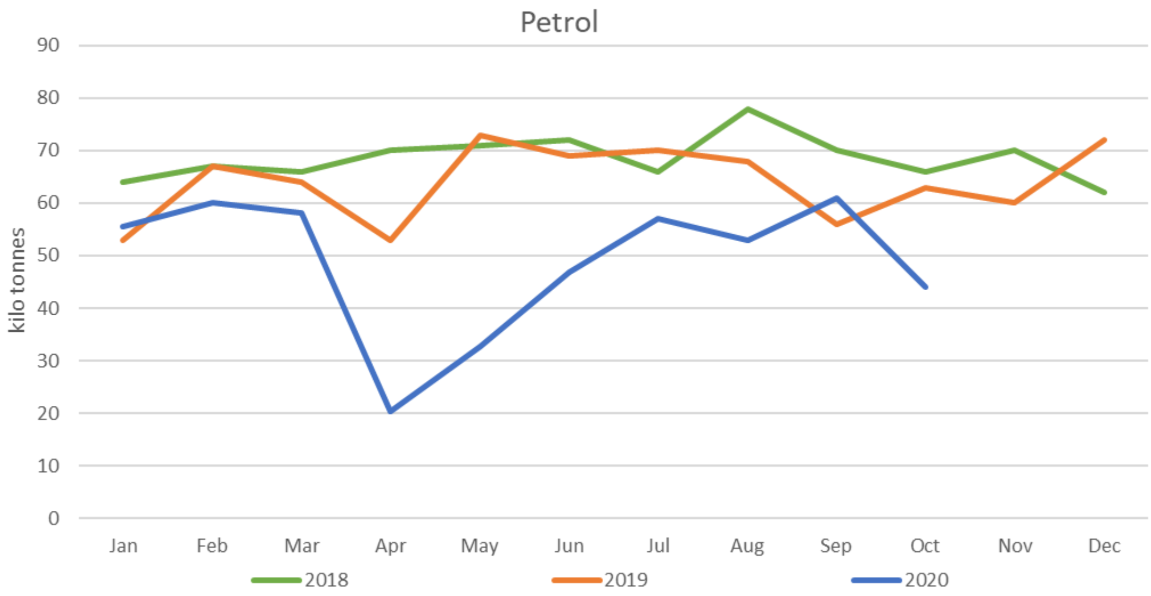
[3] Official monthly statistics on gas are available on an M-1 basis. These give high level production, import/export, stock change and supply figures.

Oil

Traffic movements were down by approximately 60%[4] during the lock-down in April compared with directly beforehand. Currently oil supply data is available up to the end of October.

Of the oil products, petrol, diesel and jet kerosene are the most immediately affected due to the travel restrictions.

Petrol

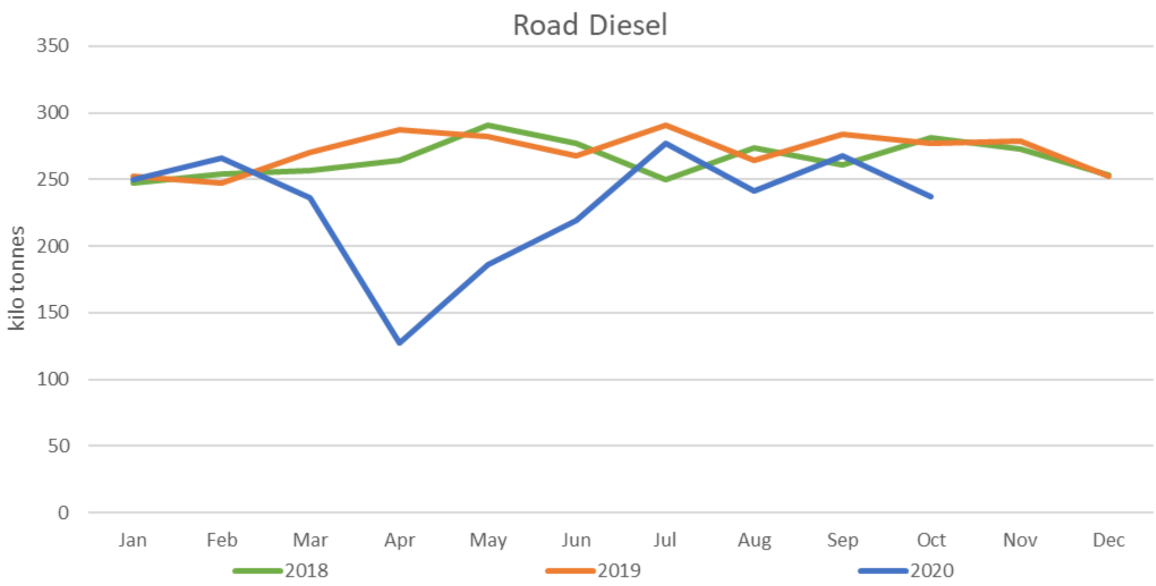


Petrol % change	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct
On previous month	-23.0	8.3	-3.3	-64.9	60.8	43.0	21.5	-7.0	15.1	-27.9
On 2019 month	4.6	-10.4	-9.3	-61.5	-55.1	-32.0	-18.6	-22.1	8.9	-30.2
On 2018 month	-13.4	-10.4	-12.1	-70.9	-53.8	-34.9	-13.6	-32.1	-12.9	-33.3

- Deliveries of petrol fell by 27.9% in October compared with September reflecting going to level 3 restrictions in early October and level 5 on the 21st. Deliveries were 30% lower than in October 2019 and 33% lower than October 2018.

[4] https://www.nratrafficdata.ie/c2/gmapbasic.asp?sgid=ZvyVmXU8jBt9PJE$c7UXt6

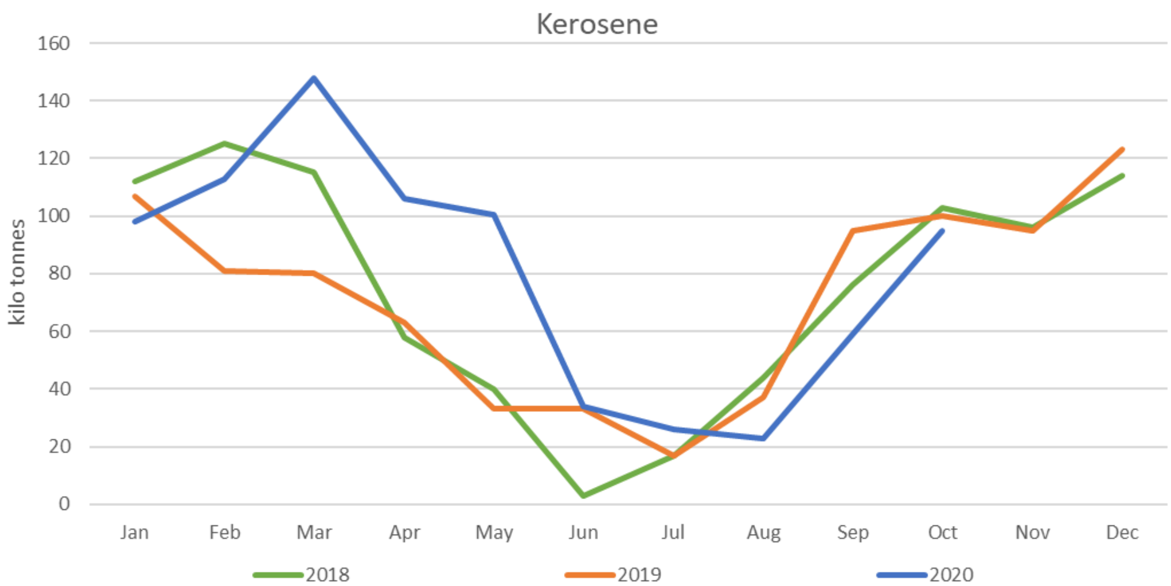
Diesel



Road Diesel % change	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct
On previous month	-0.7	6.4	-11.2	-46.2	46.6	17.7	26.3	-13.0	11.2	-11.6
On 2019 month	-0.7	7.7	-12.5	-55.7	-33.9	-18.2	-4.8	-8.7	-5.6	-14.4
On 2018 month	1.3	4.8	-8.0	-51.8	-36.0	-20.8	10.8	-12.0	2.7	-15.7

- Deliveries of road diesel fell by 11.6% in October compared with September, again reflecting the increased restrictions. Deliveries were 14.4% below October 2019 levels and 15.7% below October 2018.

Kerosene

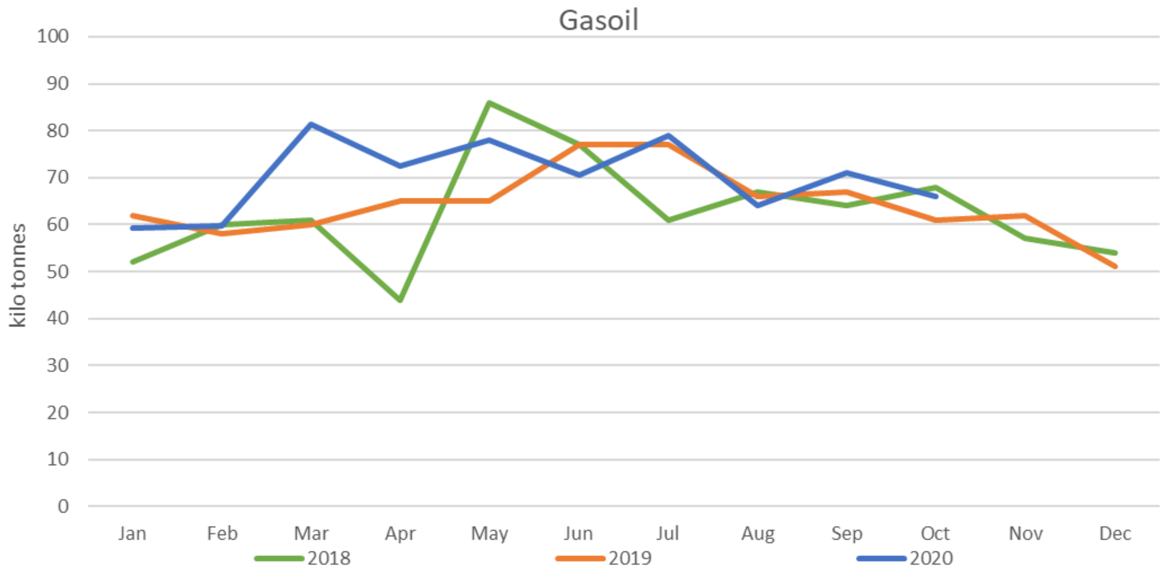


Kerosene % change	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct
On previous month	-20.4	15.2	31.1	-28.3	-5.2	-66.3	-23.2	-11.5	156.5	61.0
On 2019 month	-8.5	39.2	84.7	68.3	204.6	2.6	52.9	-37.8	-37.9	-5.0
On 2018 month	-12.6	-9.8	28.5	82.8	151.3	1028.8	52.9	-47.7	-22.4	-7.8

Kerosene is used for heating in households, services and industry

- Kerosene deliveries increased by 61% in October compared with September. Deliveries were 5% below October 2019 levels and 7.8% below October 2018.
- This dramatic increase in March and April 2020 compared the same period in 2019 is likely due to a combination of low oil prices and stocking up in advance of the lockdown. This build-up of kerosene in the oil tanks of households should result in lower deliveries later in the year.

Gasoil

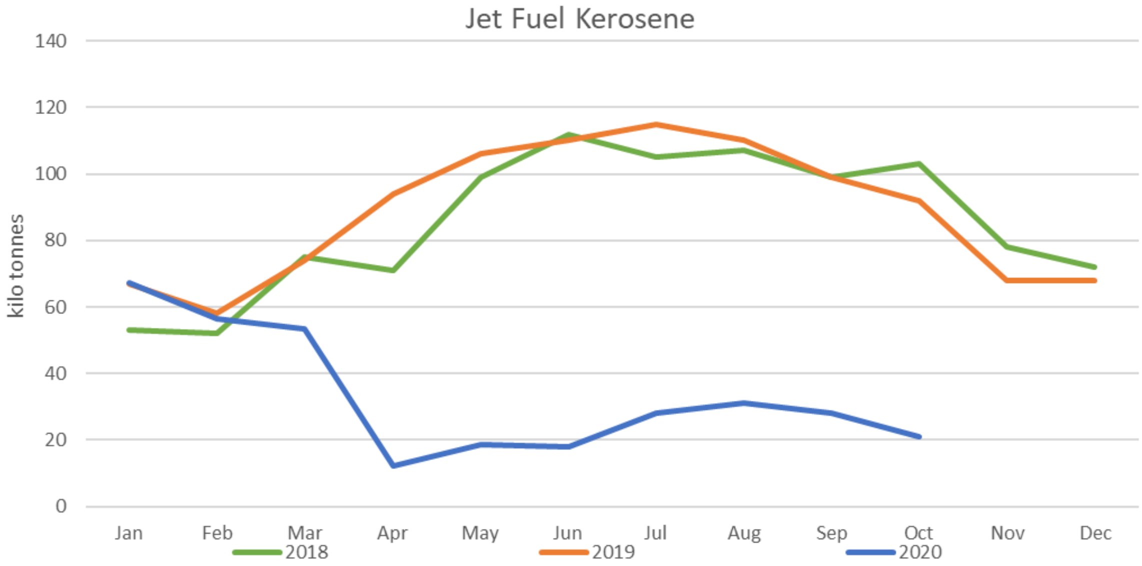


Gasoil % change	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct
On previous month	16.1	0.9	36.1	-11.0	7.5	-9.3	11.8	-19.0	10.9	-7.0
On 2019 month	-4.5	3.1	35.6	11.5	19.9	-8.2	2.6	-3.0	6.0	8.2
On 2018 month	13.9	-0.4	33.4	64.7	-9.4	-8.2	29.5	-4.5	10.9	-2.9

Gas oil is also used for heating in households, service and industry. Again, as with kerosene, there could be some filling of tanks due to low price and delivery anxieties.

- Deliveries of gasoil fell by 7% in October compared with September. Deliveries were 8.2% higher than in October 2019 and 2.9% lower than October 2018.
- Compared with 2019 deliveries were 33% and 18% higher respectively in March and April. This build-up of gas oil in the oil tanks of households and business should result in lower deliveries later in the year.

Jet Kerosene



Jet Kerosene change	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct
On previous month	-1.0	-16.0	-5.6	-77.0	52.4	-4.9	57.0	10.7	-9.7	-25.0
On 2019 month	0.5	-2.4	-27.8	-86.9	-82.3	-83.8	-75.7	-71.8	-71.7	-77.2
On 2018 month	27.1	8.8	-28.8	-82.7	-81.1	-84.1	-73.3	-71.0	-71.7	-79.6

- Deliveries of jet kerosene fell by 25% in October compared with September on foot of increased travel restrictions. Deliveries in October were still 77% lower than October 2019 and 79% lower than October 2018.