

In 2019, the supply of electricity amounted to 2,653.7 GWh, an increase of 4.8 per cent when compared to previous year.

## Electricity Supply: 2015-2019

During 2019, the electricity supply in Malta comprised net generation from power plants (67.8 per cent), supply from net imports (24.0 per cent) and renewable sources (8.2 per cent) (Table 1 and Chart 1).

In 2019, the gross production consisting of the electricity supplied from power plants and from renewables amounted to 2,076 GWh. The month of August featured the highest amount of gross production with 220.2 GWh (Table 2).

Electricity production from power plants registered an increase of 5.4 per cent when compared to previous year amounting to 1,858 GWh (Table 3). Energy harvesting from renewable sources registered an increase of 10.2 per cent, reaching 218.1 GWh in 2019. Most of the renewable energy (97.0 per cent) was produced from photovoltaic panels (Table 4).

During 2019, a total of 656.8 GWh were imported through the interconnector, registering an increase of 4.0 per cent when compared to previous year (Table 5).

The month of August (283.6 GWh) had the highest amount of electricity supplied during 2019 with a share of 10.7 per cent. This was followed by the month of July (279.3 GWh) having a share of 10.5 per cent from the amount of electricity supplied (Table 6).

The months of July and August featured the highest electricity demand, registering 504 MW and 485 MW respectively during 2019. The highest annual average demand was registered in 2019 with 414 MW, an increase of 6.9 per cent when compared to previous year (Table 7).

In 2019, emissions from power plant sources increased by 6.0 per cent over the situation in 2018 (Table 8 and Chart 2) ■

**Table 1. Electricity supply by year**

			megawatt-hours (MWh)				
			2015	2016	2017	2018	2019 <sup>P</sup>
a	+	Power Plants	1,203,236	720,834	1,479,721	1,763,485	1,857,984
b	+	Renewable sources	101,693	136,251	172,059	197,833	218,059
c=(a+b)		<b>Gross production</b>	<b>1,304,929</b>	<b>857,085</b>	<b>1,651,779</b>	<b>1,961,318</b>	<b>2,076,043</b>
d	-	Own use (Power Plants)	63,901	50,542	49,262	50,210	58,623
e=(c-d)		<b>Net production</b>	<b>1,241,028</b>	<b>806,543</b>	<b>1,602,517</b>	<b>1,911,108</b>	<b>2,017,420</b>
f	+	Imports (balance)	1,053,981	1,526,689	897,066	631,293	656,756
g	-	Exports (balance)	0	0	35,695	10,549	20,451
h=(e+f-g)		<b>Electricity supply</b>	<b>2,295,009</b>	<b>2,333,231</b>	<b>2,463,888</b>	<b>2,531,852</b>	<b>2,653,725</b>

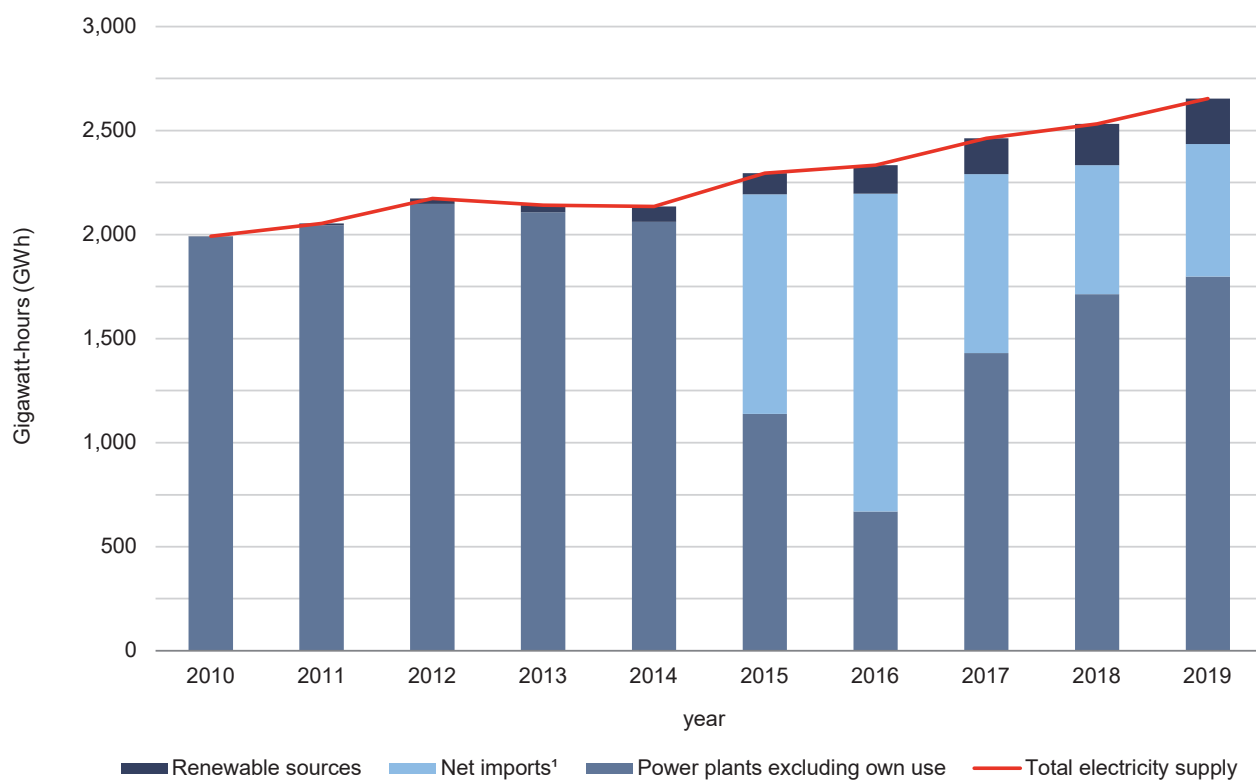
<sup>P</sup> Provisional

Notes:

1. In 2015 the electricity supplied to the network comprised the local generation from the Marsa and Delimara power stations, partly imported via the Sicily-Malta interconnector which was put in service in March 2015. From 2017, the electricity supplied was generated from Enemalta plants at Delimara and Marsa, D3 Power Generation Ltd and Electrogas Malta Ltd plants at Delimara and partly imported via the Sicily-Malta interconnector.
2. Electricity exports through the Malta-Sicily Interconnector started in 2017.
3. Renewable energy is produced from photovoltaic panels, micro wind turbines and Combined Heat and Power (CHP) plants.
4. Own use is the electricity used by power station auxiliaries directly related to generation and including that used in fuel handling plant, cooling water plant, power station services, heating, lighting, workshops and administrative buildings directly associated with the power station during both on-load and off-load periods.
5. Totals may not add up due to rounding.

Source: Enemalta plc, Energy and Water Agency (EWA) and Regulator for Energy and Water Services (REWS).

**Chart 1. Total electricity supply in Malta by type and year**



<sup>1</sup> net imports = imports - exports

**Table 2. Gross production of electricity by month and year**

megawatt-hours (MWh)					
Month	2015	2016	2017	2018	2019 <sup>P</sup>
January	191,458	70,204	84,174	115,296	184,227
February	175,919	56,424	67,944	157,431	142,703
March	175,282	57,499	79,038	119,551	149,152
April	107,553	55,696	107,885	106,885	152,565
May	92,320	54,593	100,228	164,375	170,456
June	80,687	67,932	154,616	161,261	194,226
July	107,619	97,066	180,176	218,848	202,508
August	103,205	100,779	208,922	220,110	220,238
September	81,771	86,328	229,774	192,119	174,651
October	76,351	80,894	187,882	173,928	170,319
November	45,072	62,312	101,550	170,255	142,428
December	67,692	67,357	149,590	161,259	172,571
<b>Total</b>	<b>1,304,929</b>	<b>857,085</b>	<b>1,651,779</b>	<b>1,961,318</b>	<b>2,076,043</b>

<sup>P</sup> Provisional

Notes:

1. Gross production consists of the electricity supplied from power plants and from renewable sources.
2. Totals may not add up due to rounding.

Source: Enemalta plc, Energy and Water Agency (EWA) and Regulator for Energy and Water Services (REWS).

**Table 3. Electricity production from power plants by month and year**

megawatt-hours (MWh)					
Month	2015	2016	2017	2018	2019
January	186,105	62,558	75,771	105,053	172,879
February	170,282	47,626	57,515	147,372	131,577
March	168,577	45,967	63,829	100,857	128,381
April	99,058	42,638	91,918	87,530	131,083
May	82,643	40,154	82,163	143,001	147,025
June	70,439	54,007	136,246	139,150	169,887
July	96,595	81,595	160,986	196,913	178,342
August	91,956	86,214	191,138	200,565	198,805
September	71,031	74,700	213,855	175,846	156,756
October	67,572	70,631	174,624	160,000	155,010
November	37,777	54,655	91,880	158,588	129,676
December	61,202	60,090	139,795	148,610	158,563
<b>Total</b>	<b>1,203,236</b>	<b>720,834</b>	<b>1,479,721</b>	<b>1,763,485</b>	<b>1,857,984</b>

Notes:

1. In 2015 the electricity supplied to the network comprised the local generation from the Marsa and Delimara power stations, partly imported via the Sicily-Malta interconnector which was put in service in March 2015. From 2017, the electricity supplied was generated from Enemalta plants at Delimara and Marsa, D3 Power Generation Ltd and Electrogas Malta Ltd plants at Delimara and partly imported via the Sicily-Malta interconnector.

2. Totals may not add up due to rounding.

Source: Enemalta plc and Regulator for Energy and Water Services (REWS).

**Table 4. Estimated electricity production from renewable sources by month and year**

	megawatt-hours (MWh)				
<b>Month</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019<sup>P</sup></b>
January	5,352	7,646	8,403	10,243	11,348
February	5,637	8,798	10,429	10,059	11,126
March	6,706	11,532	15,209	18,694	20,771
April	8,495	13,058	15,967	19,355	21,482
May	9,677	14,439	18,065	21,374	23,431
June	10,248	13,925	18,370	22,111	24,339
July	11,024	15,471	19,190	21,935	24,166
August	11,249	14,565	17,783	19,545	21,433
September	10,740	11,629	15,919	16,273	17,895
October	8,780	10,263	13,258	13,928	15,309
November	7,295	7,657	9,670	11,667	12,752
December	6,490	7,268	9,795	12,649	14,008
<b>Total</b>	<b>101,693</b>	<b>136,251</b>	<b>172,059</b>	<b>197,833</b>	<b>218,059</b>
<i>of which generated from:</i>					
<i>Photovoltaic panels</i>	94,990	127,886	162,263	188,819	211,600
<i>Other sources</i>	6,703	8,365	9,796	9,014	6,459

<sup>P</sup> Provisional

Notes:

1. Renewable energy is produced from photovoltaic panels, micro wind turbines and Combined Heat and Power (CHP) plants.
2. Totals may not add up due to rounding.

Source: Energy and Water Agency (EWA).

Table 5. Imports and exports of electricity by month and year

megawatt-hours (MWh)

Month	2015		2016		2017		2018		2019	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
January	-	-	118,017	0	132,919	0	88,723	21	46,959	400
February	-	-	116,448	0	110,898	0	36,626	556	60,593	214
March	6,738	0	123,760	0	105,540	0	76,788	7	58,857	473
April	58,546	0	117,418	0	68,290	0	79,455	30	44,681	3,048
May	85,679	0	129,483	0	87,888	0	35,625	1,094	34,195	8,455
June	111,109	0	134,620	0	58,113	0	55,534	896	45,459	1,545
July	140,248	0	144,444	0	82,528	0	45,846	723	82,336	31
August	145,570	0	138,191	0	69,343	0	52,598	1,510	69,462	54
September	139,195	0	130,432	0	10,832	16,292	53,889	633	68,754	22
October	122,797	0	129,957	0	30,964	18,227	38,518	302	56,059	5,329
November	130,177	0	121,159	0	86,738	0	25,078	1,105	55,498	343
December	113,922	0	122,760	0	53,013	1,176	42,613	3,674	33,903	538
<b>Total</b>	<b>1,053,981</b>	<b>0</b>	<b>1,526,689</b>	<b>0</b>	<b>897,066</b>	<b>35,695</b>	<b>631,293</b>	<b>10,549</b>	<b>656,756</b>	<b>20,451</b>

Notes:

1. In March 2015, part of the electricity started to be imported from the Malta-Sicily Interconnector.
2. Electricity exports through the Malta-Sicily Interconnector started in 2017.
3. Totals may not add up due to rounding.

Source: Enemalta plc

**Table 6. Electricity supply by month and year**

Month	megawatt-hours (MWh)				
	2015	2016	2017	2018	2019 <sup>P</sup>
January	182,327	184,355	212,834	201,104	225,655
February	168,464	169,432	175,151	190,078	198,735
March	174,972	178,062	180,204	193,401	203,217
April	161,148	170,222	173,339	183,527	189,677
May	173,353	180,638	185,658	195,835	191,337
June	187,591	198,397	208,229	211,741	232,884
July	242,822	236,030	257,325	258,196	279,315
August	243,508	233,545	272,821	265,899	283,631
September	216,740	211,872	219,069	240,351	238,232
October	194,389	206,021	196,184	207,431	215,759
November	172,237	178,901	185,414	189,320	192,958
December	177,458	185,757	197,660	194,968	202,325
<b>Total</b>	<b>2,295,009</b>	<b>2,333,231</b>	<b>2,463,888</b>	<b>2,531,852</b>	<b>2,653,725</b>

<sup>P</sup> Provisional

Note: Totals may not add up due to rounding.

Source: Enemalta plc, Energy and Water Agency (EWA) and Regulator for Energy and Water Services (REWS).

**Table 7. Electricity maximum demand by month and year**

Month	megawatts (MW)				
	2015	2016	2017	2018	2019
January	368	355	409	371	443
February	361	330	381	410	427
March	347	331	339	360	389
April	302	294	307	331	357
May	289	300	312	344	334
June	318	370	441	378	449
July	395	418	456	452	504
August	426	397	488	465	485
September	374	394	415	460	432
October	354	360	344	366	390
November	317	326	341	348	370
December	336	375	395	366	392
<b>Average</b>	<b>349</b>	<b>354</b>	<b>386</b>	<b>388</b>	<b>414</b>

Source: Enemalta plc.

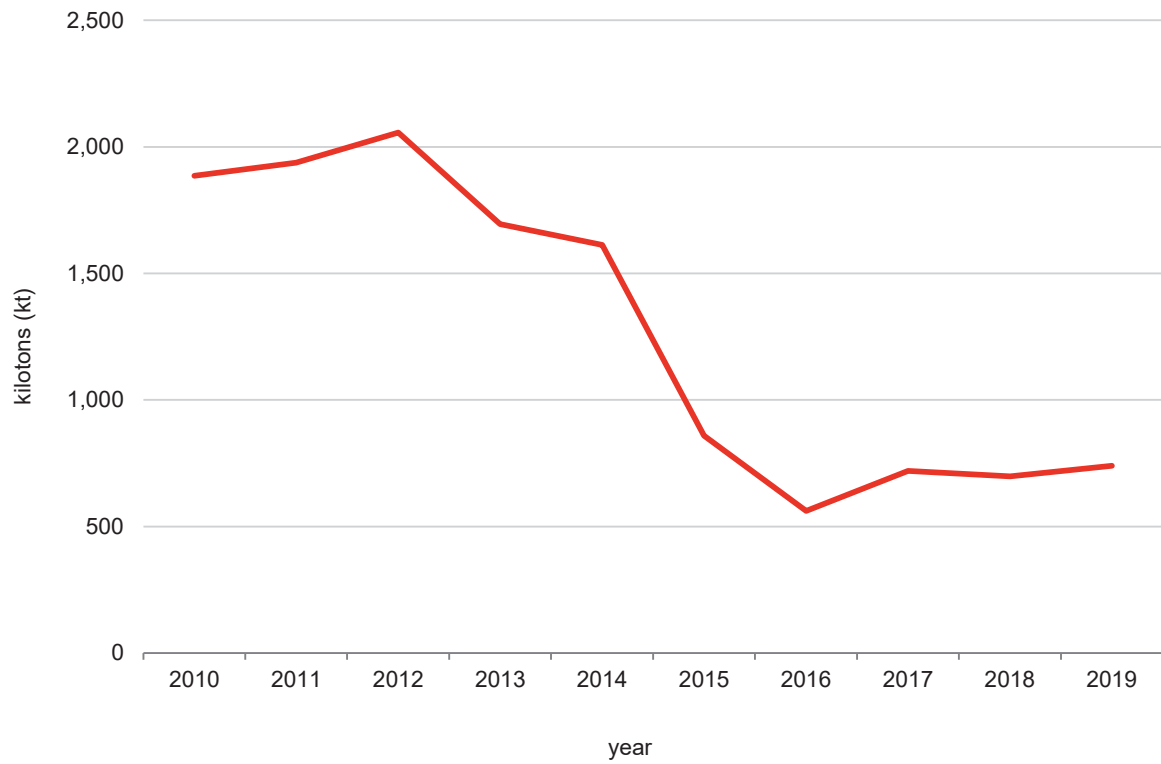
**Table 8. CO<sub>2</sub> equivalent emissions from power plants by year**

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Year	CO <sub>2</sub> equivalent
2015	859
2016	562
2017	719
2018	698
2019 <sup>P</sup>	740

<sup>P</sup> Provisional

Source: Malta Resources Authority (MRA).

**Chart 2. CO<sub>2</sub> equivalent emissions from power plants by year**



## Methodological Notes

### 1. Definitions:

- **Megawatt (MW):** is a unit for measuring power that is equivalent to one million watts.
- **Megawatt-hour (MWh):** is equal to 1,000 kilowatts or one million (1,000,000) watts of electricity produced by a power plant that runs continuously for one hour.
- **Gigawatt-hour (GWh):** is equal to 1,000 megawatts or one billion (1,000,000,000) watts of electricity produced by a power plant that runs continuously for one hour.
- **Maximum electricity demand:** the highest amount of electricity consumed at any one point in time across the entire network system.
- **Renewable energy:** energy that is obtained from resources which are continually replenished on a human timescale. Such resources include sunlight, wind, rain, tides, waves and geothermal heat.
- **Photovoltaic (PV) system:** A complete set of components for converting solar radiation into electricity by the photovoltaic process, including the array/s of photovoltaic modules that collect and absorb sunlight for conversion into electricity, inverter/s and associated balance of system components.
- **CO<sub>2</sub> equivalent:** is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
- **Own use by power plants:** is the difference between Gross and Net production, i.e. it is the electricity and heat used by power station auxiliaries directly related to generation and including that used in fuel handling plant, cooling water plant, power station services, heating, lighting, workshops and administrative buildings directly associated with the power station during both on-load and off-load periods.
- **Gross electricity production:** is the sum of the electrical energy production by all the generating sets concerned (including pumped storage) measured at the output terminals of the main generators.
- **Net electricity production:** is equal to the gross electricity production less the electrical energy absorbed by the generating auxiliaries and the losses in the main generator transformers.
- **Imports and Exports:** Amounts of electricity and heat are considered as imported or exported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not. If electricity is "wheeled" or transited through a country, the amount should be reported as both an import and an export.
- **Electricity supply:** For electricity, this is the electrical energy supplied from the plant. In the case of a national network this is equal to the sum of the net electrical energy production supplied by all power stations within the country, reduced by the amount used simultaneously for pumping as well as the amount used for heat sold using heat pumps and electric boilers. It is then reduced or increased by exports to or imports from abroad.

2. Data is subject to revision.

3. Renewable energy data was revised for reference years 2017 and 2018. Electricity maximum demand data was revised for reference years 2015 and 2016. CO<sub>2</sub> emissions data was revised for reference years 2015-2019.

4. More information relating to this news release may be accessed at:

Statistical Concepts: <http://nso.gov.mt/metadata/concepts.aspx>

Metadata: <http://nso.gov.mt/metadata/reports.aspx?id=19>

5. References to this news release are to be cited appropriately.

6. A detailed news release calendar is available on:

[https://nso.gov.mt/en/News\\_Releases/Release\\_Calendar/Pages/News-Release-Calendar.aspx](https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx)