

In 2018, the electricity supplied amounted to 2,532.6 GWh, an increase of 2.8 per cent when compared to previous year.

Electricity Supply: 2014-2018

During 2018, the electricity supply in Malta comprised net generation from power plants (67.7 per cent), supply from net imports (24.5 per cent) and renewable sources (7.8 per cent) (Table 1, Chart 1).

In 2018, the gross production consisting of the electricity supplied from power plants and from renewables amounted to 1,962.1 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 19.2 per cent when compared to previous year amounting to 1,763.5 GWh (Table 3). Energy harvesting from renewable sources registered an increase of 15.4 per cent, reaching 198.6 GWh in 2018. Most of the renewable energy (95.5 per cent) was produced from photovoltaic panels (Table 4).

During 2018, a total of 631.3 GWh were imported through the interconnector, registering a decrease of 29.6 per cent when compared to the previous year (Table 5).

The month of August (266 GWh) had the highest amount of electricity supplied during 2018 with a share of 10.5 per cent. This is followed with the month of July (258.3 GWh) having a share of 10.2 per cent from the amount of electricity supplied (Table 6).

The months of August and September feature the highest electricity demand, registering 465 MW and 460 MW respectively during 2018. The highest annual average demand was registered in 2018 with 388 MW, an increase of 0.5 per cent compared to the previous year (Table 7).

In 2018, emissions from power plant sources decreased by 3.6 per cent over the situation in 2017 (Table 8, Chart 2) ■

Table 1. Electricity supply by year

		megawatt-hours (MWh)				
		2014	2015	2016	2017	2018 ^P
a	+ Power Plants	2,170,225	1,203,236	720,834	1,479,721	1,763,485
b	+ Renewable sources	74,890	101,693	136,250	172,026	198,587
c=(a+b)	Gross production	2,245,115	1,304,929	857,084	1,651,746	1,962,072
d	- Own use (Power Plants)	109,682	63,901	50,542	49,262	50,210
e=(c-d)	Net production	2,135,433	1,241,028	806,542	1,602,484	1,911,862
f	+ Imports (balance)	-	1,053,981	1,526,689	897,066	631,293
g	- Exports (balance)	-	0	0	35,695	10,549
h=(e+f-g)	Electricity supply	2,135,433	2,295,009	2,333,231	2,463,855	2,532,606

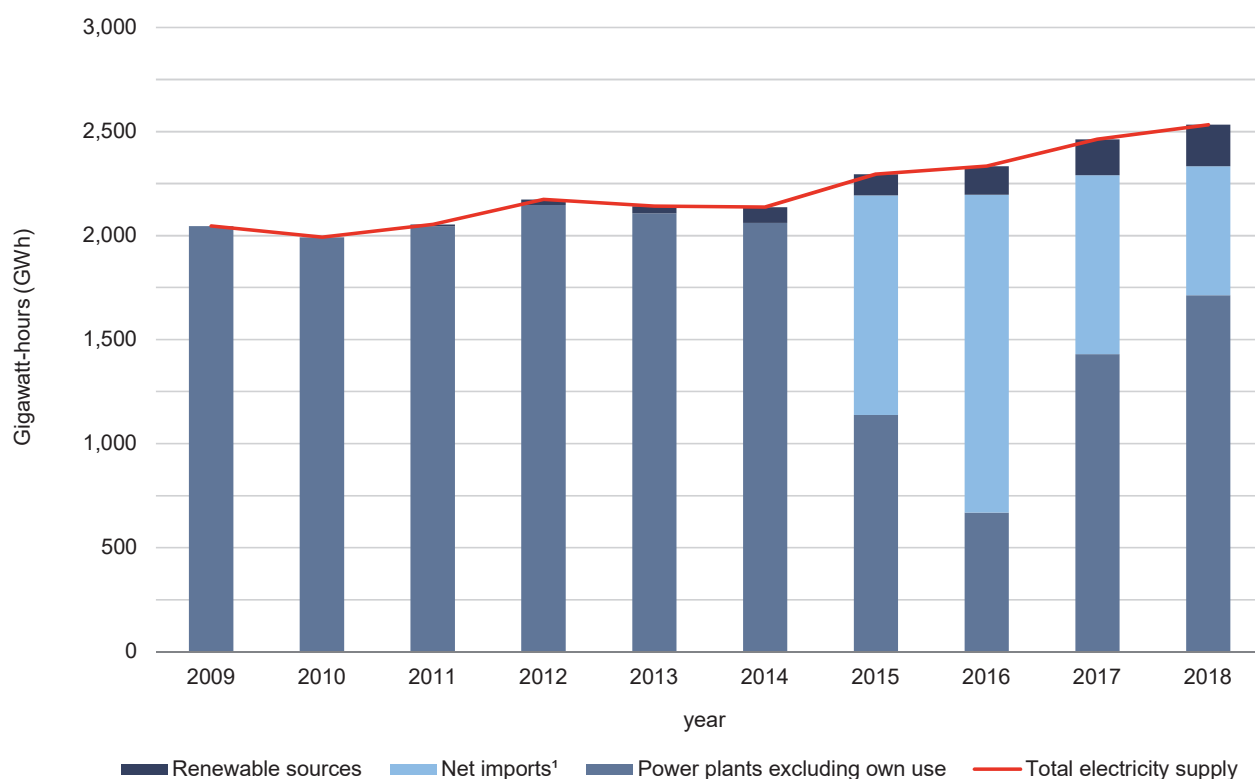
^P Provisional

Notes:

1. In 2014, electricity production from power plants comprised the output of power stations in Marsa and Delimara. In March 2015, part of the electricity started to be imported from the Malta-Sicily Interconnector. From 2017, electricity was produced by Enemalta power station (Delimara), D3 Power Generation, D4 Electrogas Malta and imported from the Malta-Sicily Interconnector.
2. Electricity exports through the Malta-Sicily Interconnector started in 2017.
3. Renewable energy produced from photovoltaic panels, micro wind turbines and Combined Heat and Power (CHP) plant.
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



¹ net imports = imports - exports

Table 2. Gross production of electricity by month and year

Month	megawatt-hours (MWh)				
	2014	2015	2016	2017	2018 ^P
January	179,944	191,458	70,204	84,173	115,342
February	159,865	175,919	56,424	67,943	157,476
March	173,312	175,282	57,499	79,037	119,635
April	163,941	107,553	55,696	107,884	106,975
May	172,393	92,320	54,593	100,227	164,480
June	192,960	80,687	67,932	154,614	161,366
July	221,634	107,619	97,066	180,171	218,937
August	227,821	103,205	100,779	208,916	220,180
September	216,820	81,771	86,328	229,769	192,172
October	193,222	76,351	80,894	187,878	173,962
November	169,869	45,072	62,312	101,547	170,275
December	173,333	67,692	67,357	149,587	161,272
Total	2,245,115	1,304,929	857,084	1,651,746	1,962,072

^P 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

Month	megawatt-hours (MWh)				
	2014	2015	2016	2017	2018
January	177,157	186,105	62,558	75,771	105,053
February	156,869	170,282	47,626	57,515	147,372
March	168,762	168,577	45,967	63,829	100,857
April	158,192	99,058	42,638	91,918	87,530
May	165,704	82,643	40,154	82,163	143,001
June	185,462	70,439	54,007	136,246	139,150
July	212,929	96,595	81,595	160,986	196,913
August	218,933	91,956	86,214	191,138	200,565
September	208,316	71,031	74,700	213,855	175,846
October	185,792	67,572	70,631	174,624	160,000
November	163,708	37,777	54,655	91,880	158,588
December	168,401	61,202	60,090	139,795	148,610
Total	2,170,225	1,203,236	720,834	1,479,721	1,763,485

Notes:

1. In 2014, electricity production from power plants comprised the output of power stations in Marsa and Delimara. From 2017, electricity production from power plants was produced by Enemalta power station (Delimara), D3 Power Generation and D4 Electrogas Malta.
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)				
Month	2014	2015	2016	2017	2018^P
January	2,787	5,352	7,646	8,402	10,289
February	2,996	5,637	8,798	10,428	10,104
March	4,550	6,706	11,532	15,208	18,778
April	5,749	8,495	13,058	15,965	19,445
May	6,689	9,677	14,439	18,064	21,479
June	7,498	10,248	13,925	18,368	22,216
July	8,705	11,024	15,471	19,185	22,024
August	8,888	11,249	14,565	17,777	19,615
September	8,504	10,740	11,629	15,914	16,326
October	7,430	8,779	10,263	13,254	13,962
November	6,161	7,295	7,657	9,667	11,687
December	4,932	6,490	7,268	9,792	12,662
Total	74,890	101,693	136,250	172,026	198,587
<i>of which generated from:</i>					
<i>Photovoltaic panels</i>	68,380	94,990	127,885	162,230	189,576
<i>Other sources</i>	6,510	6,703	8,365	9,796	9,011

^P Provisional

Notes:

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

Source: Energy and Water Agency.

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

Month	megawatt-hours (MWh)									
	2014		2015		2016		2017		2018	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
January	-	-	-	-	118,017	0	132,919	0	88,723	21
February	-	-	-	-	116,448	0	110,898	0	36,626	556
March	-	-	6,738	0	123,760	0	105,540	0	76,788	7
April	-	-	58,546	0	117,418	0	68,290	0	79,455	30
May	-	-	85,679	0	129,483	0	87,888	0	35,625	1,094
June	-	-	111,109	0	134,620	0	58,113	0	55,534	896
July	-	-	140,248	0	144,444	0	82,528	0	45,846	723
August	-	-	145,570	0	138,191	0	69,343	0	52,598	1,510
September	-	-	139,195	0	130,432	0	10,832	16,292	53,889	633
October	-	-	122,797	0	129,957	0	30,964	18,227	38,518	302
November	-	-	130,177	0	121,159	0	86,738	0	25,078	1,105
December	-	-	113,922	0	122,760	0	53,013	1,176	42,613	3,674
Total	-	-	1,053,981	0	1,526,689	0	897,066	35,695	631,293	10,549

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)				
	2014	2015	2016	2017	2018 ^P
January	170,651	182,327	184,355	212,833	201,150
February	151,463	168,464	169,432	175,151	190,122
March	163,479	174,972	178,062	180,203	193,485
April	155,510	161,148	170,222	173,338	183,618
May	163,839	173,353	180,638	185,657	195,940
June	183,943	187,591	198,397	208,227	211,847
July	211,684	242,822	236,030	257,320	258,284
August	217,464	243,508	233,545	272,816	265,969
September	206,919	216,740	211,872	219,064	240,404
October	184,253	194,389	206,021	196,180	207,465
November	161,600	172,237	178,901	185,411	189,341
December	164,629	177,458	185,757	197,657	194,981
Total	2,135,433	2,295,009	2,333,231	2,463,855	2,532,606

^P 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)				
	2014	2015	2016	2017	2018
January	337	368	355	409	371
February	334	361	335	381	410
March	339	347	338	339	360
April	290	302	299	307	331
May	291	295	295	312	344
June	340	318	344	441	378
July	359	397	380	456	452
August	374	426	371	488	465
September	383	384	372	415	460
October	353	354	359	344	366
November	313	317	326	341	348
December	350	338	345	395	366
Average	339	351	343	386	388

Note: Figures for the electricity maximum demand for the above time series may be revised.

Source: Enemalta plc.

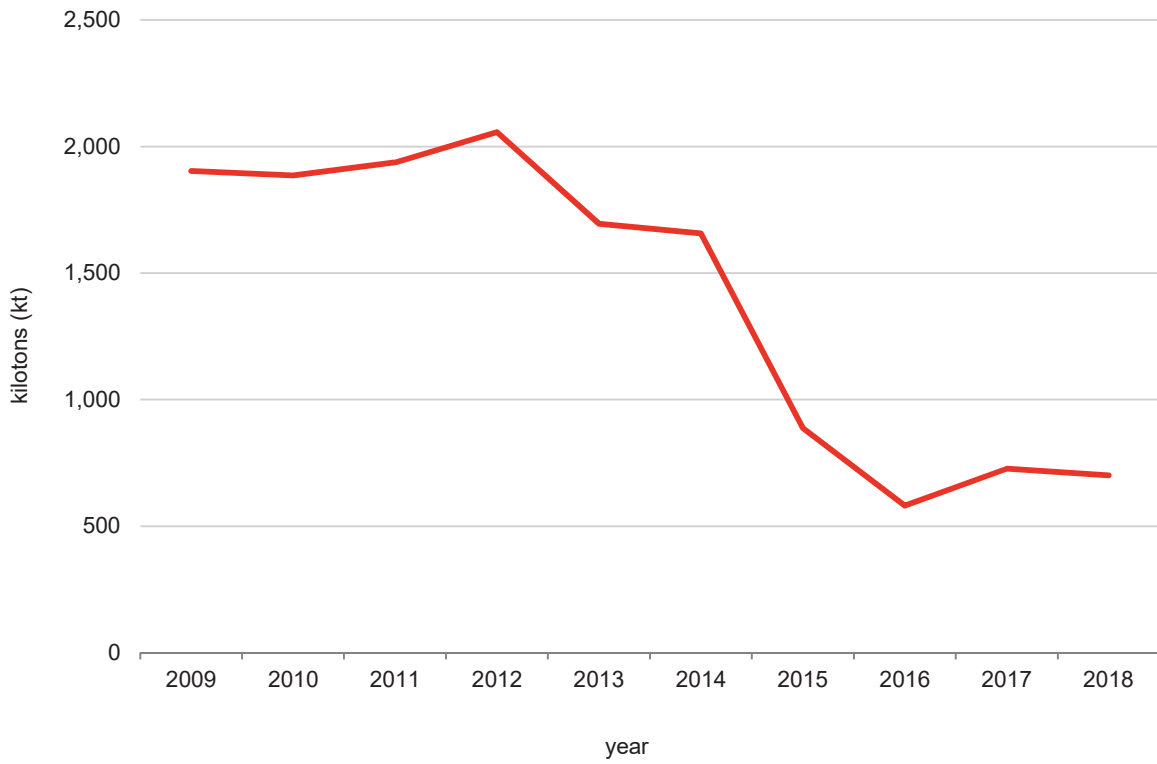
Table 8. CO₂ equivalent emissions from power plants by year

kilotons (kt)	
Year	CO ₂ equivalent
2014	1,657
2015	887
2016	581
2017	727
2018 ^P	701

^P Provisional

Source: Malta Resources Authority

Chart 2. CO₂ 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.
- **CO₂ 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. 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>

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

4. A detailed news release calendar is available on:

https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx