

During 2018, the harvesting of renewable energy from grid-connected PV systems was estimated at 189.6 GWh, an increase of 16.9 per cent over the previous year.

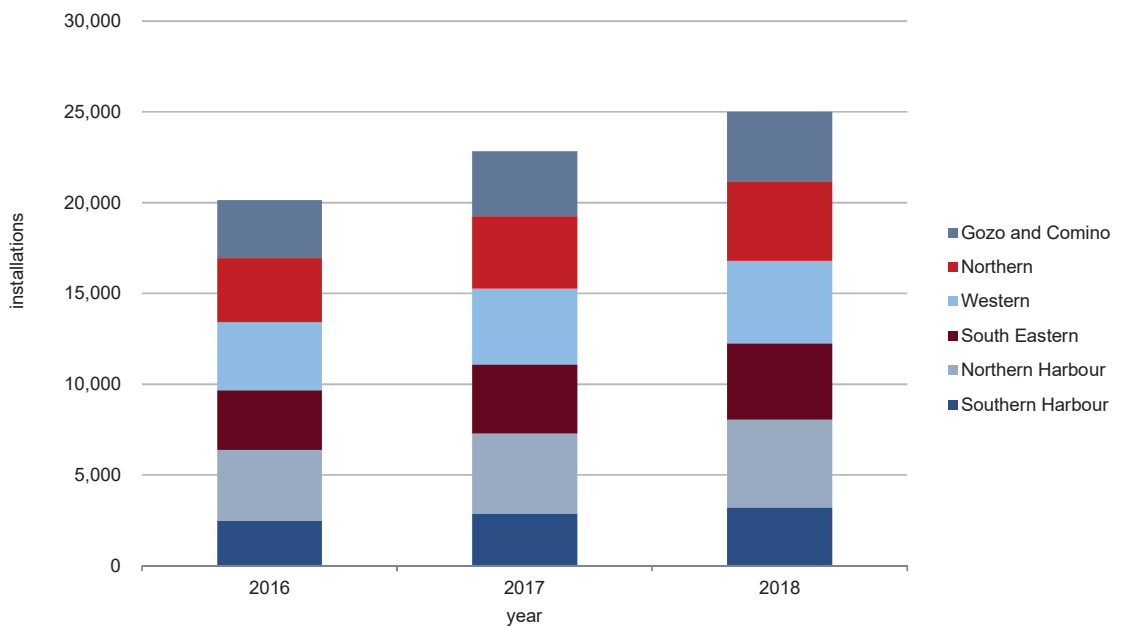
Renewable Energy from Photovoltaic Panels (PVs): 2018

Cut-off date:
26 April 2019

Stock of PVs: 2018

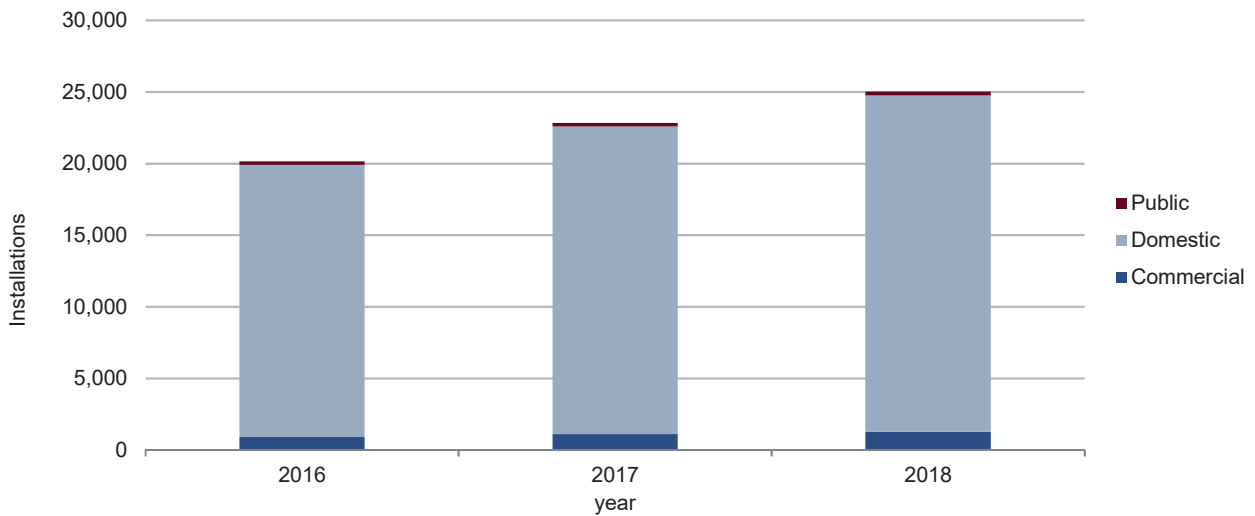
The stock of PV installations amounted to 25,007 of which 84.5 per cent were installed in the region of Malta and 15.5 per cent were in the Gozo and Comino region. The Northern Harbour and Western districts accounted for 37.5 per cent of the total stock of PV installations with 4,831 and 4,544 installations, respectively. When compared to 2017, new installations increased by 9.5 per cent. The percentage increases were highest in the Southern Harbour district (11.7 per cent) and lowest in the Gozo and Comino district (8.3 per cent) (Table 1, Map 1).

Chart 1. Stock of PV installations by district and year (LAU 1)



The domestic sector accounted for 93.9 per cent of the total stock of PV installations, followed by the commercial and public sectors, accounting for 5.1 and 1.0 per cent, respectively. Most increases in new PV installations resulted from the domestic sector. The Northern Harbour district had the highest stock of PV installations in both domestic and commercial sectors. (Table 2 and Maps 2, 3).

Chart 2. Stock of PV installations by sector and year



Maps 1 to 3 illustrate the concentration of grid-connected PVs, featuring point data on 250m² grid cells. Map 4 illustrates the spread and intensity of domestic PV installations per 1,000 population by locality, indicating that the top 10 localities were in the region/district of Gozo and Comino. When analysing the results by district, Gozo and Comino district had an average of 111 domestic installations per 1,000 population, followed by the Western and South Eastern districts at 71 and 57 installations, respectively. The lowest ratio was registered in the Northern Harbour district, with 30 installations per 1,000 population.

Production of energy from PVs: 2018

Total kWp amounted to 131,303.7, an increase of 16.9 per cent over 2017. The domestic sector amounted to 52.1 per cent of the total kWp, followed by 43.8 and 4.1 per cent in the commercial and public sectors, respectively. The peak power rating of an average PV system in the domestic sector stood at 2.9 kWp, whereas that for the commercial and public sectors amounted to 45.2 and 20.9 kWp, respectively. (Table 3 and Map 5).

Chart 3. Total kWp of grid-connected PVs by sector and year

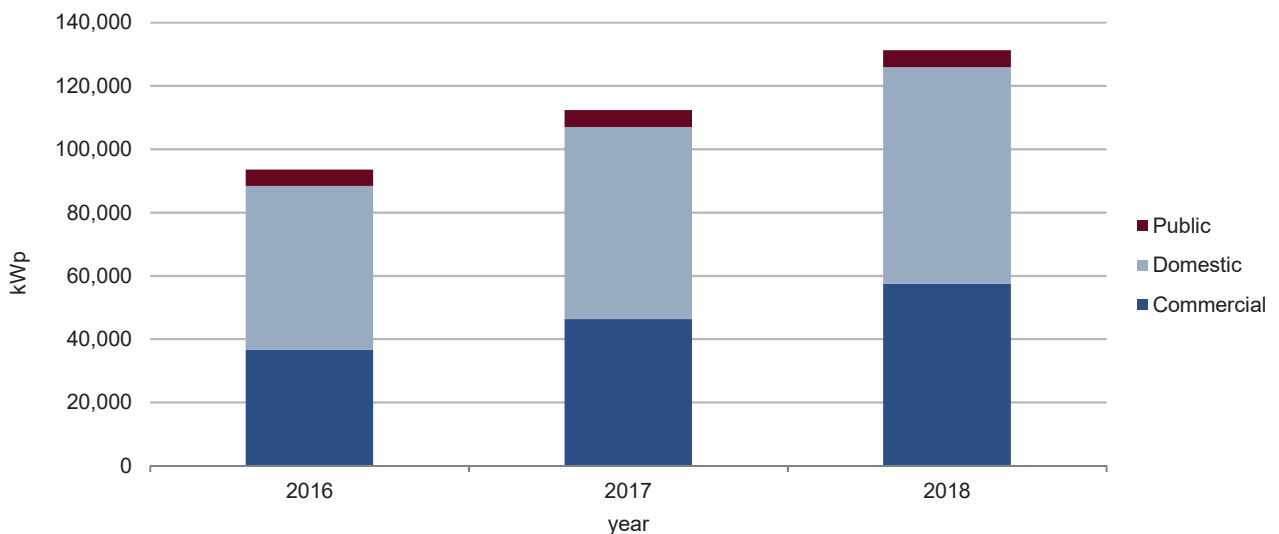
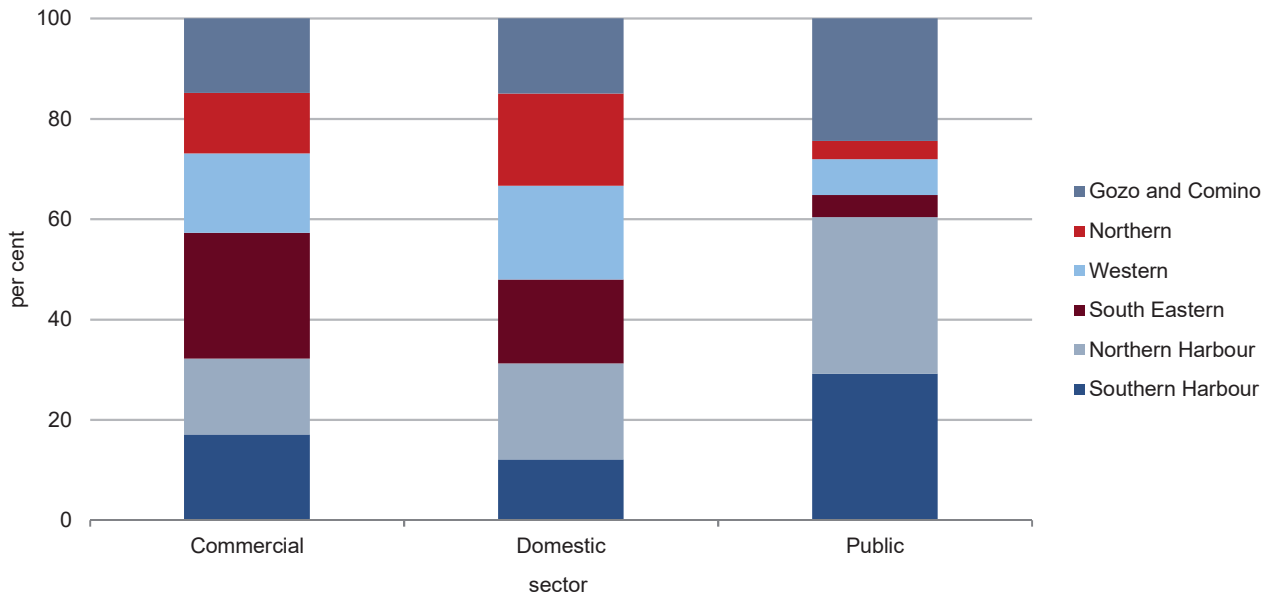


Chart 4. Distribution of total kWp of grid-connected PVs by sector and district: 2018 (LAU1)



When compared to the situation in 2017, generation of energy from grid-connected PVs increased by 16.9 per cent, totalling an estimated value of 189.6 GWh. Most energy was generated in the South Eastern and Northern Harbour districts at 19.6 and 17.8 per cent of the total GWh, respectively. Increases were highest in the Northern Harbour district (22.1 per cent) and lowest in the Southern Harbour district (10.2 per cent). (Table 4 and Map 6).

Chart 5. Estimated total output in GWh from grid-connected PVs by district and year (LAU 1)

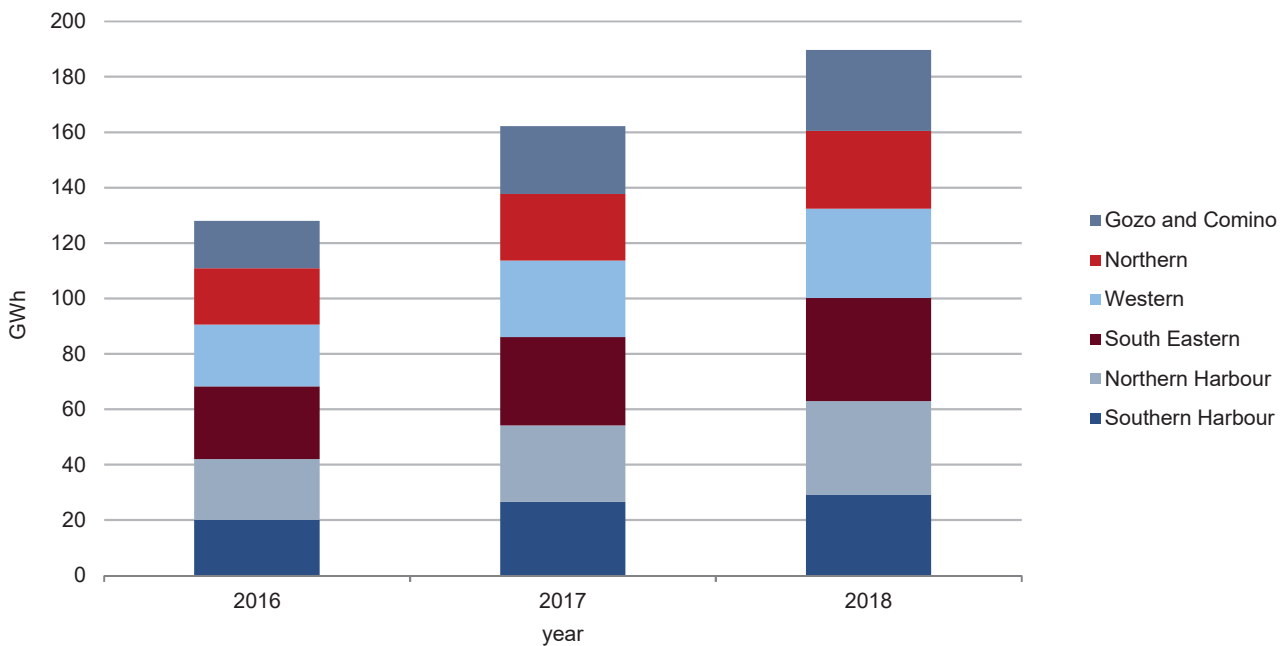


Table 1. Stock of PV installations by region/district and year (NUTS 3 and LAU 1)

National NUTS 3 LAU 1	MALTA							Gozo and Comino
	Malta							Gozo and Comino
	Southern Harbour	Northern Harbour	South Eastern	Western	Northern	Gozo and Comino		
2016	20,157	16,953	2,467	3,922	3,291	3,725	3,548	3,204
2017	22,838	19,258	2,877	4,414	3,793	4,174	4,000	3,580
2018	25,007	21,131	3,215	4,831	4,208	4,544	4,333	3,876

Source: Regulator for Energy and Water Services

Table 2. Stock of PV installations by sector, region/district and year (NUTS 3 and LAU 1)

National NUTS 3 LAU 1	MALTA							Gozo and Comino
	Malta							Gozo and Comino
	Southern Harbour	Northern Harbour	South Eastern	Western	Northern	Gozo and Comino		
Commercial								
2016	915	766	132	180	133	166	155	149
2017	1,100	920	154	216	157	192	201	180
2018	1,272	1,070	183	246	192	220	229	202
Domestic								
2016	18,993	15,986	2,274	3,685	3,128	3,526	3,373	3,007
2017	21,482	18,130	2,656	4,140	3,606	3,949	3,779	3,352
2018	23,475	19,849	2,964	4,526	3,986	4,289	4,084	3,626
Public								
2016	249	201	61	57	30	33	20	48
2017	256	208	67	58	30	33	20	48
2018	260	212	68	59	30	35	20	48

Source: Regulator for Energy and Water Services

Table 3. Total kWp of connected PVs by sector, region/district and year (NUTS 3 and LAU 1)

National NUTS 3 LAU 1	MALTA							
	Malta							Gozo and Comino
	Southern Harbour	Northern Harbour	South Eastern	Western	Northern	Gozo and Comino		
Commercial								
2016	36,547.9	33,579.4	8,080.7	4,238.3	10,621.0	6,407.5	4,231.9	2,968.5
2017	46,322.5	39,425.8	9,205.2	6,070.4	11,879.1	6,822.2	5,448.9	6,896.7
2018	57,446.9	48,891.3	9,805.1	8,694.5	14,385.7	9,088.9	6,917.1	8,555.6
Domestic								
2016	51,844.9	43,789.7	5,933.2	9,882.0	8,427.2	9,822.1	9,725.2	8,055.2
2017	60,630.0	51,376.1	7,177.9	11,557.2	10,060.8	11,313.0	11,267.2	9,253.9
2018	68,415.6	58,163.2	8,282.6	13,076.3	11,444.8	12,795.3	12,564.2	10,252.4
Public								
2016	5,149.7	3,818.6	1,369.8	1,636.6	240.9	376.5	194.8	1,331.1
2017	5,344.4	4,013.3	1,554.1	1,647.0	240.9	376.5	194.8	1,331.1
2018	5,441.2	4,110.1	1,588.3	1,697.2	240.9	388.9	194.8	1,331.1
Total								
2016	93,542.5	81,187.7	15,383.7	15,756.9	19,289.1	16,606.1	14,151.9	12,354.8
2017	112,296.9	94,815.2	17,937.2	19,274.6	22,180.8	18,511.7	16,910.9	17,481.7
2018	131,303.7	111,164.6	19,676.0	23,468.0	26,071.4	22,273.1	19,676.1	20,139.1

Source: Regulator for Energy and Water Services

Table 4. Estimated total GWh produced by connected PVs by region/district and year (NUTS 3 and LAU 1)

National NUTS 3 LAU 1	MALTA							
	Malta							Gozo and Comino
	Southern Harbour	Northern Harbour	South Eastern	Western	Northern	Gozo and Comino		
2016	127.9	110.8	20.0	22.0	26.2	22.3	20.3	17.1
2017	162.2	137.7	26.5	27.6	31.9	27.6	24.1	24.5
2018	189.6	160.4	29.2	33.7	37.2	32.3	28.0	29.2

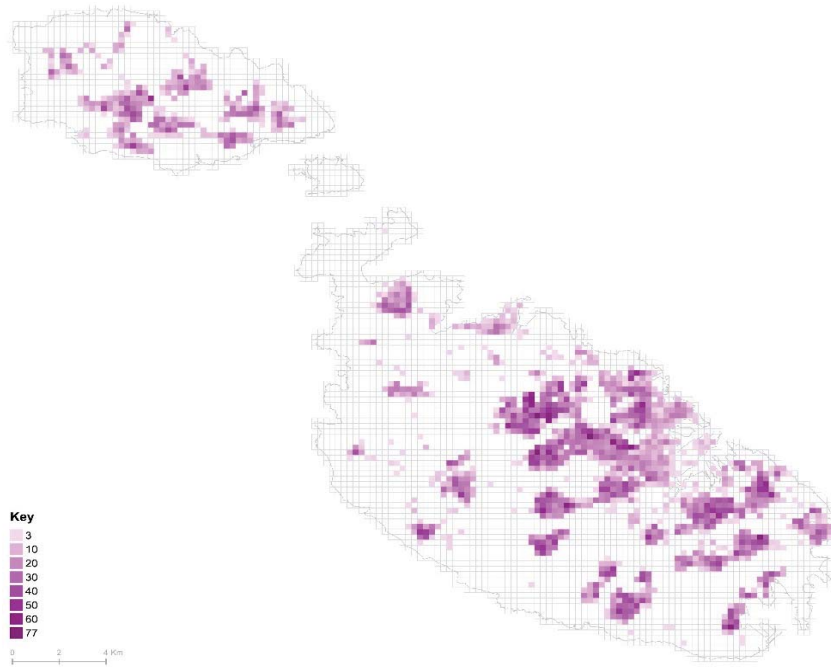
Notes:

1. Estimated output (GWh) for MALTA was based on data provided by the Energy and Water Agency based on PV meter readings. Estimated output (MALTA) was based on the relation between actual data (kWh) provided by Enemalta plc. to the Energy and Water Agency and the kWp installations as provided by the Regulator for Energy and Water Services.

2. Estimated output for regions (NUTS 3), districts (LAU 1) and localities (LAU 2) was estimated on the basis of the corresponding kWp effectively connected to grid.

Source: NSO estimates based on actual data provided by the Energy and Water Agency

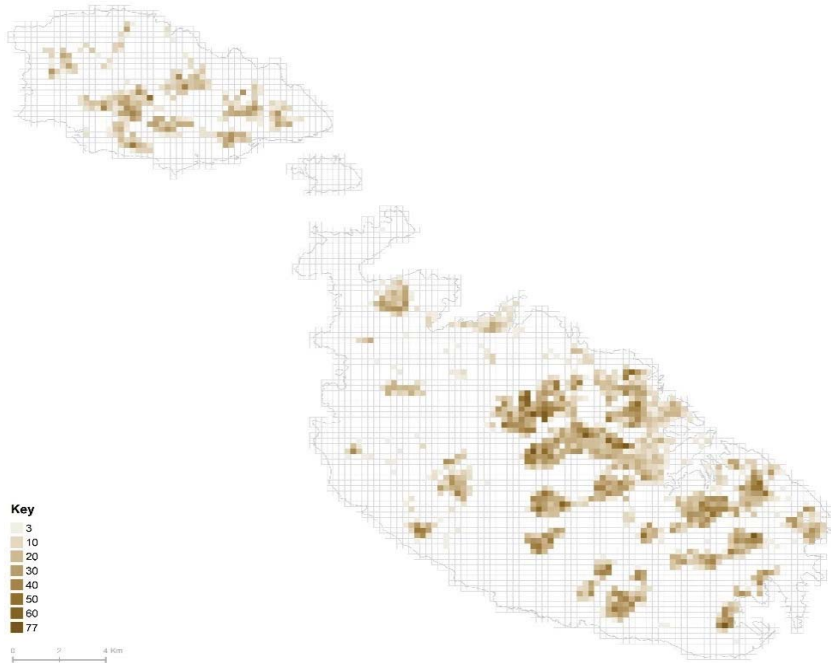
Map 1. Total PV installations using 250m² grid cells: 2018



Notes:

1. Each square represents an area of 250m².
2. Each grid cell shows the total number of PVs installed in that particular area. Grid cells containing less than three PV installations are omitted.

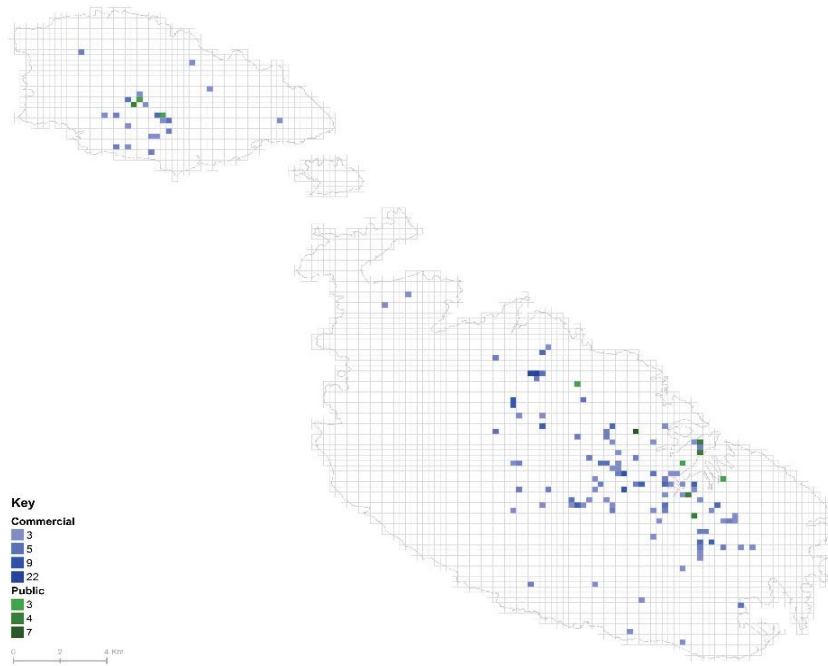
Map 2. Domestic PV installations using 250m² grid cells: 2018



Notes:

1. Each square represents an area of 250m².
2. Each grid cell shows the total number of PVs installed in that particular area. Grid cells containing less than three PV installations are omitted.

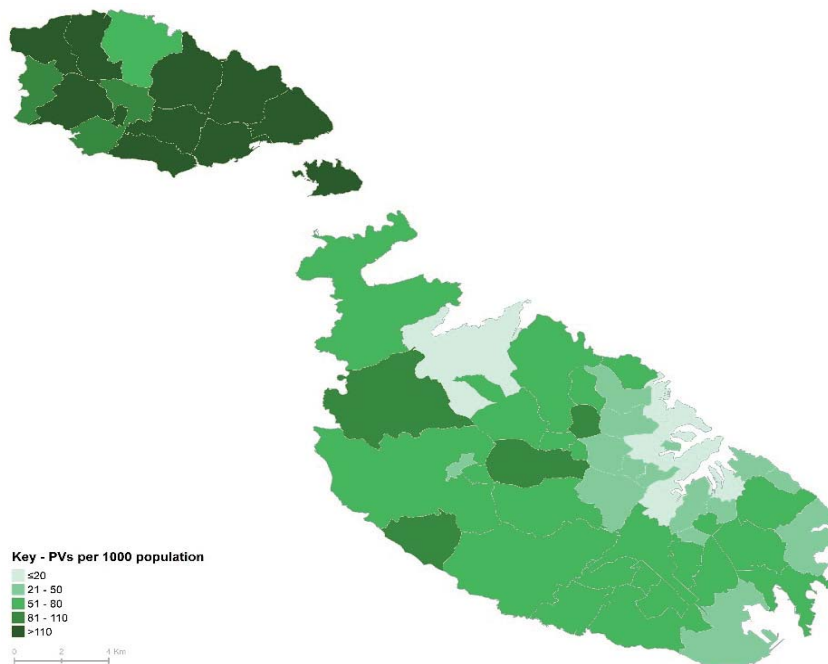
Map 3. Public and commercial PV installations using 250m² grid cells: 2018



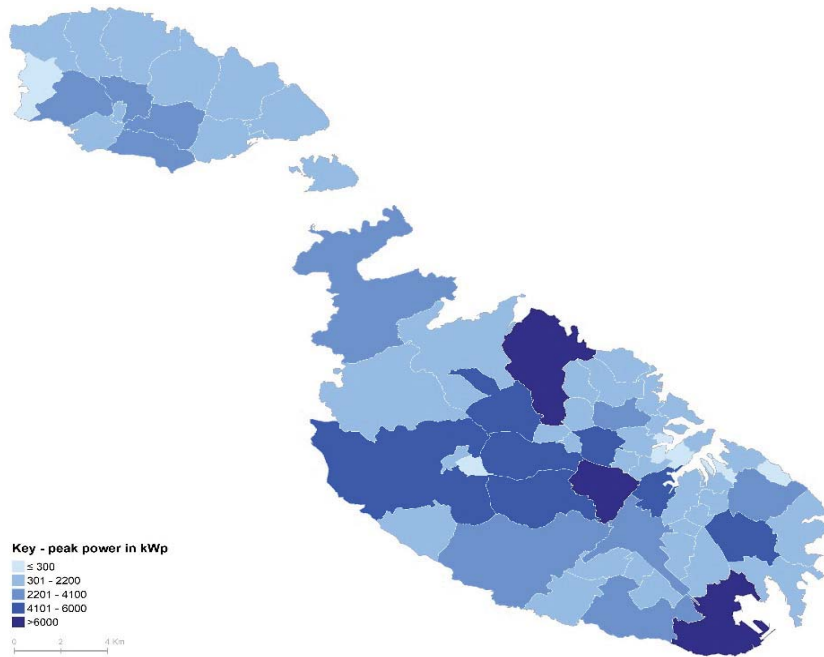
Notes:

1. Each square represents an area of 250m².
2. Each grid cell shows the total number of PVs installed in that particular area. Grid cells containing less than three PV installations are omitted.

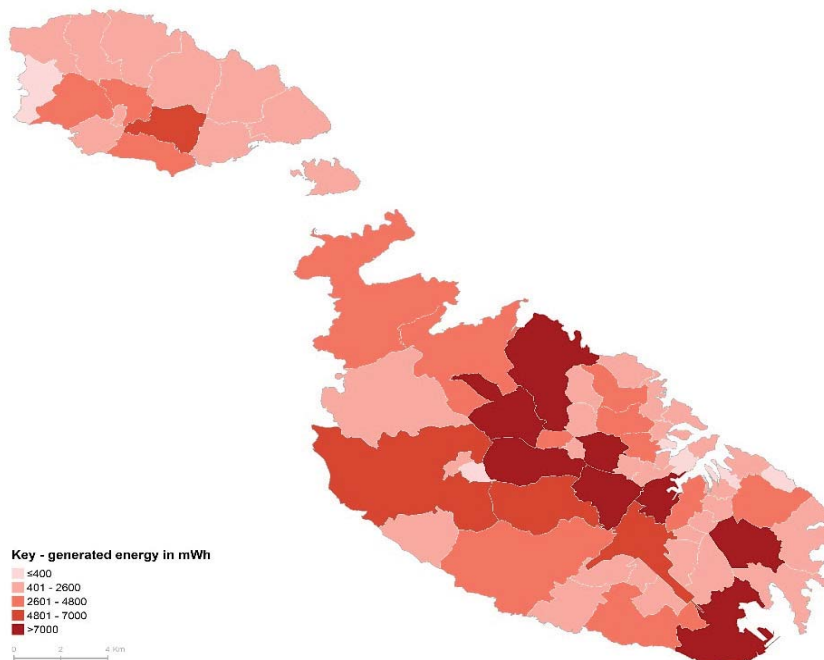
Map 4. Total PVs installed in the domestic sector per 1,000 residents: 2018 (LAU 2)



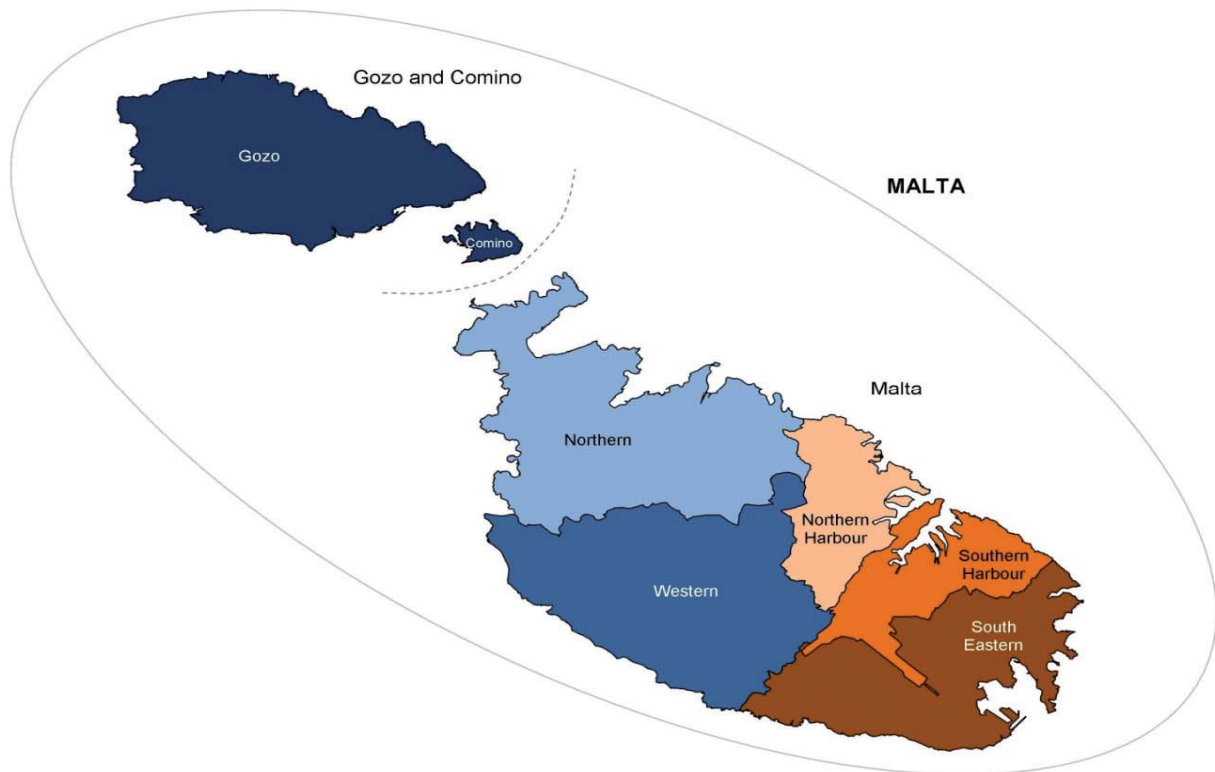
Map 5. Total kWp by locality: 2018 (LAU2)



Map 6. Total estimated mWh by locality: 2018 (LAU2)



Graphical Illustration of MALTA by NUTS Classification



Districts classification

Southern Harbour

Cospicua; Fgura; Floriana; Ғal Luqa; Ғaḷ-Ḷabbar; Kalkara; Marsa; Paola; Santa Luċija; Senglea; Ғal Tarxien; Valletta; Vittoriosa; Xgħajra.

Northern Harbour

Birkirkara; Gżira; Ғal Qormi; Ғamrun; Msida; Pembroke; San Ġwann; Santa Venera; St Julian's; Swieqi; Ta' Xbiex; Tal-Pietà; Tas-Sliema.

South Eastern

Birżebbuġa; Gudja; Ғal Ghaxaq; Ғal Kirkop; Ғal Safi; Marsaskala; Marsaxlokk; Mqabba; Qrendi; Żejtun; Żurrieq.

Western

Ғad-Dingli; Ғal Balzan; Ғal Lija; Ғ'Attard; Ғaḷ-Żebbuġ; Iklin; Mdina; Mtarfa; Rabat; Siġġiewi.

Northern

Ғal Ghargħur; Mellieħa; Mgarr; Mosta; Naxxar; St Paul's Bay.

Gozo and Comino

Fontana; Ghajnsielem; Għarb; Għasri; Munxar; Nadur; Qala; San Lawrenz; Ta' Kerċem; Ta' Sannat; Victoria; Xgħhra; Xewkija; Żebbuġ.

Methodological Notes

1. The main source of data is the Regulator for Energy and Water Services. Point data showing location of PV installations was obtained from Enemalta plc.
2. Statistics for years 2017 - 2018 are provisional and may be subject to revision.

Definitions:

3. **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.
4. **kWp:** kilowatt peak - in the solar industry, kilowatt peak means the peak power rating of a panel.
5. **kWh:** kilowatt hour - a unit of energy equal to 1,000 watt-hours. It is normally used as a billing unit for energy delivered to consumers by electricity providers. The units of measurement are as follows:
 - kWh:** kilowatt hour = 1 thousand watt-hours
 - MWh:** megawatt hour = 1 million watt-hours
 - GWh:** gigawatt hour = 1 billion watt-hours
6. Commercial sector includes industry.
7. Public sector includes institutional households.
8. The term installation refers to a collection of PV panels installed as one PV system.
9. Installation date refers to the date when the PV system is actually connected to the Feed-in Tariffs grid.
10. Any quotations from this news release are to be cited and/or referenced.
11. More information relating to this news release may be accessed at:
 - Statistical concept: <https://nso.gov.mt/metadata/concepts.aspx>
 - Sources and methods: [https://nso.gov.mt/metadata/classificationdetails.aspx?id=Districts%20\(Local%20Administrative%20Unit\)](https://nso.gov.mt/metadata/classificationdetails.aspx?id=Districts%20(Local%20Administrative%20Unit))
12. A detailed news release calendar is available on https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx