Malta energy transition

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Malta has 5 islands, of which 3 (Malta, Gozo and Comino) are inhabited. The island of Malta covers an area of 246 km2, followed by Gozo (67 km2) and Comino (3.5 km2). The total population of Malta (country) is 514 600 people. Malta is a unitary parliamentary republic, which means that it is governed as a single entity by a central government. The Ministry for Gozo serves the function of a regional authority within the Gozo-Comino region. Its function is mostly to execute and enforce national policies on a regional level. As such, its legislative powers are limited.

The Integrated National Energy and Climate Plan for Malta for the period 2021-2030 aims to increase its share of renewable energy technologies in its gross final energyconsumption to 11.5% by 2030. In the electricity sector, the share of renewables is planned to rise to 11%by 2030. The share of renewable heating and cooling is expected to reach 22.06% by 2020and rising to 25.71% by 2030. The share of renewable energy in the transport sector is planned to reach 15% by 2030.

The island of Malta is heavily dependent on oil imports, and could benefit greatly from its own energy transition. Despite some barriers to renewables, solar is booming – and if it continues to do so, Malta should be able to meet its 2020 energy goals. Geoffrey Saliba explains.

In a recent stakeholder meeting in Malta, EU Commissioner for Climate Action and Energy Ca?ete outlined an EU vision where member states will be fully powered by renewable energy sources. This is an attractive vision – energy security would isolate the EU from geo-political shocks, reduced emissions would benefit air quality in the short term and climate change in the long run, and it would invigorate the EU"s green economy.

Strategically, Malta is well aligned with this vision. Since 2015, its energy supply has been diversified through a bi-directional interconnector with Sicily. An upgrade of electricity production to use gas instead of oil is also underway. Coupled with constant efforts to promote renewables, this has increased Malta"s electricity sources to three, when just 10 years ago the only electricity source was older oil-fueled power stations approaching shut-down.

The expansion of renewables is also being promoted. The main mechanism is a feed-in tariff, and public interest is high. Yet, as of 2015, only 5% of Malta"s energy was generated through renewables – half of the country"s 10% 2020 target.

Malta"s options for renewable energy are limited. Tidal energy is non-existent, while potential wind and wave energy are very limited. Offshore wind is also limited since the ocean is very deep and unsuitable for offshore wind. Malta has an abundance of solar intensity but limited land mass on which to place solar installation. Most of Malta"s land is already developed or else protected, leaving little land available to dedicate solely to

solar installations.

Rooftop photovoltaics are the main source of renewable energy in Malta. As many as 1 in 5 of the residential building stock have a photovoltaic system, excluding apartments, the rooftops of which residents do not normally have permission to use, and vacant premises. Commercial and industrial capacity is just over half of the installed residential capacity, which, coupled with the residential sector, make up 95% of Malta"s PV capacity. The remaining 5% is generated on publicly owned or administered buildings.

The increase of solar installations by the residential sector has been particularly successful, especially considering that in just 7 years, capacity went from nearly zero to over 50% of the national output, with 1 in 5 households owning their rooftop solar installations.

Opportunities for further growth, however, will depend on mobilising increased use of industrial and commercial space. Considering the growing interest in PV by the residential, the industrial and commercial sectors, it is highly likely that Malta will meet and potentially exceed the 2020 renewable energy target of 10%.

Yet for moving beyond the 2020 targets several key challenges exist: Given Malta"s limited free space, dual-use of space, such as rooftop photovoltaic and covering of parking lots, must be prioritized to increase the build-up of the country"s solar energy potential. There have been a small number of successful case studies coupling public land with private funding of large solar projects.

Malta entered the renewable energy game relatively late. In just over ten years, the country has modernised its infrastructure in line with an ambitious EU energy vision, developed a small but growing renewables sector, and planned a holistic energy efficiency strategy. The next few years will be crucial for reaching Malta"s targets, yet cautious optimism is advised.