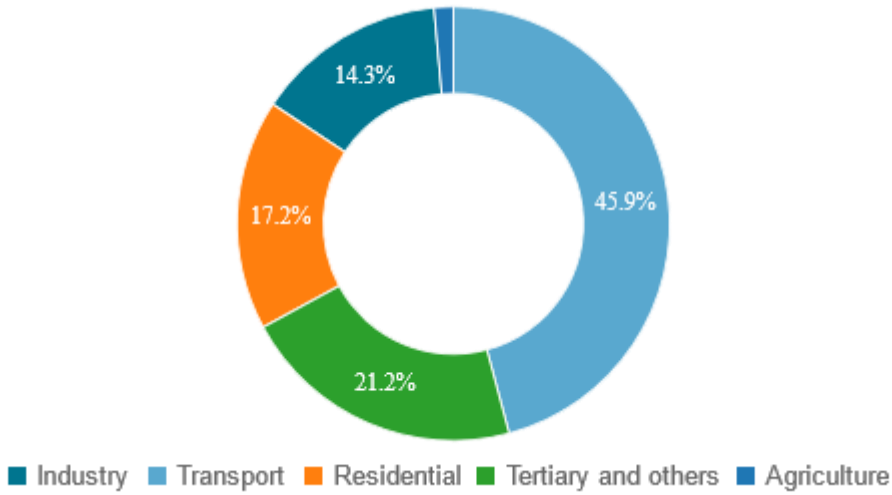
Energy efficiency trends and policies

Overview

In recent years Malta has experienced a remarkable growth in terms of both economy and population. Despite the slowdown in 2009, the economy rebounded registering an average real GDP growth rate equal to 6% between 2010 and 2018. From 2010 to 2018, the average annual growth rate of Malta's population has amounted to 1.8%, which represents the second largest average annual increase in the EU. Population growth and the corresponding increased demand in the housing market, together with the growth of tourism, have all intensified pressure on restraining an increase in energy consumption.

[Note: Comparison to previous publications should be done keeping in mind that International Aviation is omitted in this year's submission as per new definitions from Eurostat]

Figure 1: Final energy consumption by sector in 2018



Source: ODYSSEE

Malta still retains the lowest gross inland consumption per capita in 2018 along with Romania, below 2 toe/capita which is due to an open, service-based economy. The road transport sector remains heavily dependent on private cars as the principal means of transportation without the existence of any mass transport networks or rail. Whilst a higher share of the population is now living in apartments as opposed to single unit buildings, higher expectations in relation to thermal comfort translates to more households resorting to air conditioners for space cooling and space heating purposes.

[Note: All pre-2005 data is currently under review at the moment of this document's publication]

[Note: Comparison to previous publications should be done keeping in mind that International Aviation is omitted in this year's submission as per new definitions from Eurostat]

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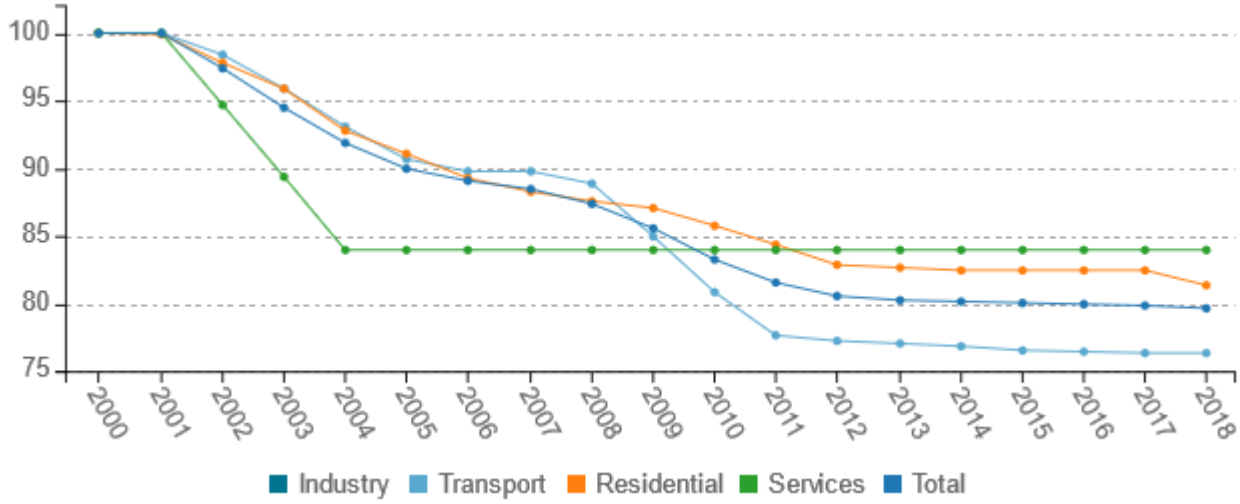
Figure 2: Technical Energy Efficiency Index



Source: ODYSSEE

Malta's National Energy and Climate Plan (2021-2030) has enabled the Government to continue existing and plan new energy efficiency measures post-2020 in order to achieve energy savings in the end-use sectors. Numerous successful actions, which were already being undertaken in the previous plans, were kept, while other new measures were considered in order to achieve sustainable growth, and keeping, as far as possible, energy demand in check. Malta is doing its share to increase energy efficiency in the various end-use sectors and will continue to implement energy efficiency policies and measures.

[Note: Comparison to previous publications should be done keeping in mind that International Aviation is omitted in this year's submission as per new definitions from Eurostat]

Table 1: Sample of cross-cutting measures

Measures	NEEAP measures	Description	Expected savings, impact evaluation	More information available
Street Lighting Retrofitting (All Malta)	yes	The street lighting of Malta will be retrofitted with energy efficient lighting	2018 savings of 75,000 kWh (Savings do not reflect a full year of operation since works were still on-going in 2018.)	https://www.measures.odyssee-mure.eu/energy-efficiency-policies-database.html#/measures/271

Source: MURE

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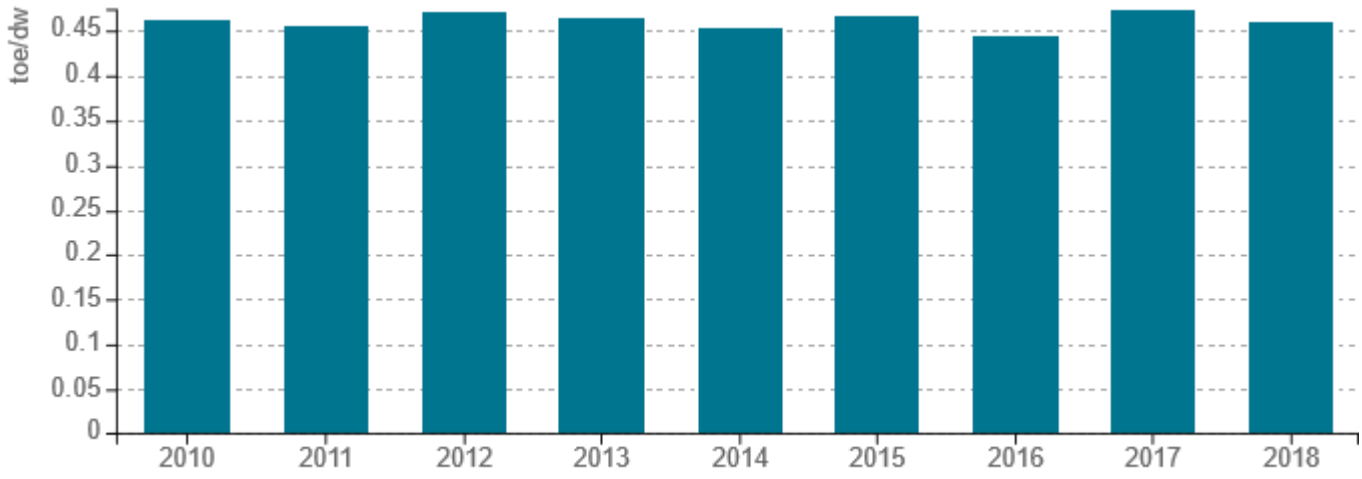
Buildings

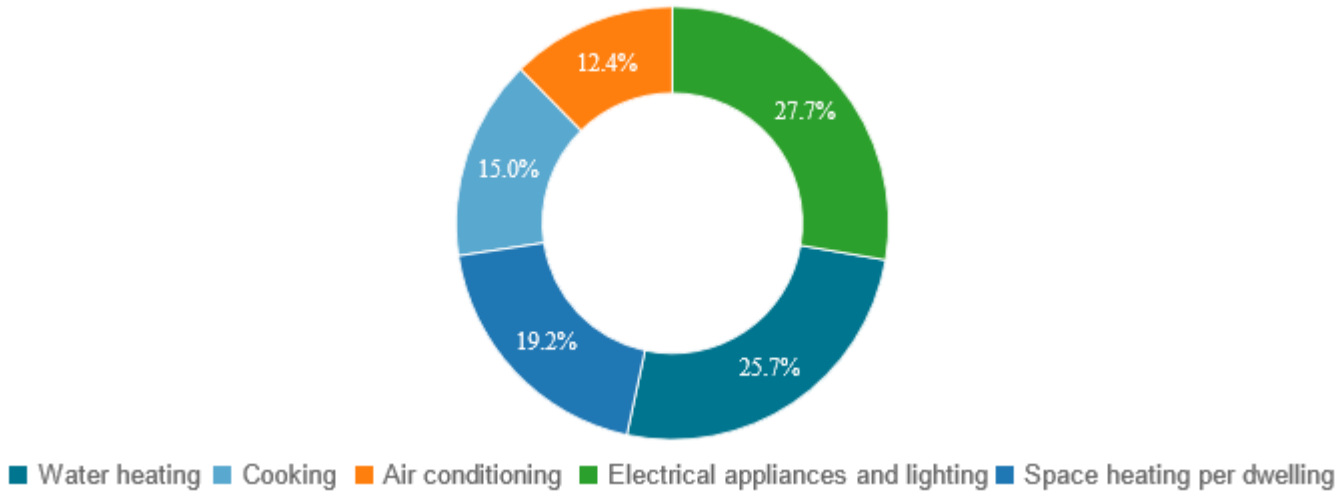
A decrease in energy consumption per dwelling was observed in 2018 compared to the previous year, which is reflected by a decrease in energy consumption for space heating attributed to a lowering of space heating requirements due to relatively milder winter temperatures. Space heating requirements in Malta remained the lowest in 2018 when compared to other EU member states, even though forming 20.4% of the total household consumption. Other end-use consumptions were seen to increase, particularly air cooling, electric appliances, and lighting.

Figure 3: Energy consumption per dwelling



Source: ODYSSEE

Figure 4: Energy consumption per dwelling by end-use in 2018



Source: ODYSSEE

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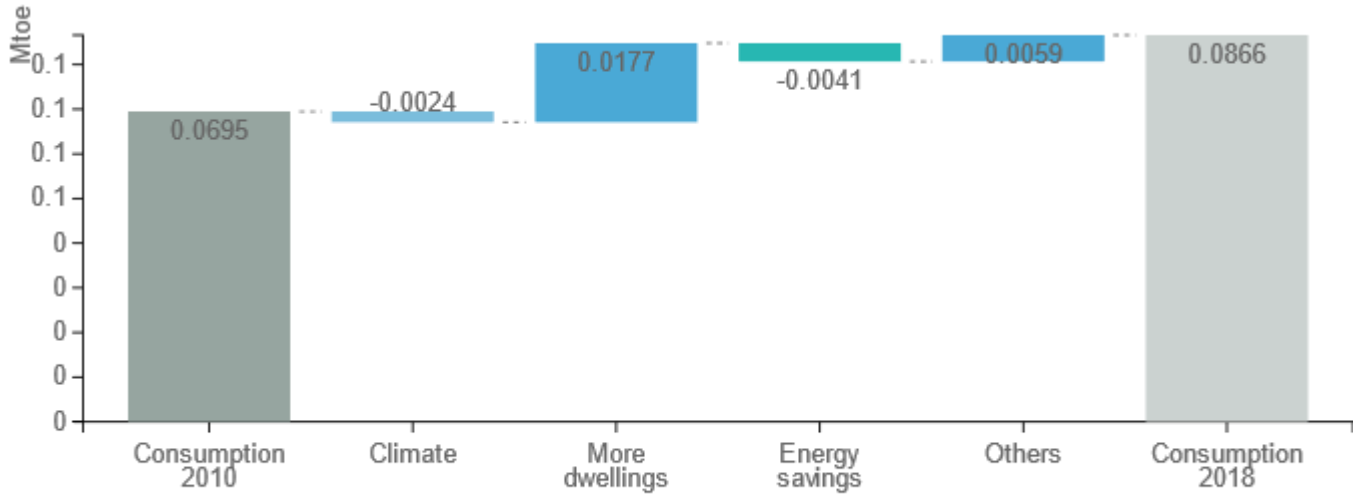
Figure 5 shows a large increase in household energy consumption between 2010 and 2018 due to the increase in population and economic growth, resulting in an increase in construction of new dwellings. An increase in appliances per dwelling was also seen which is offset by energy saving measures and more efficient technologies.

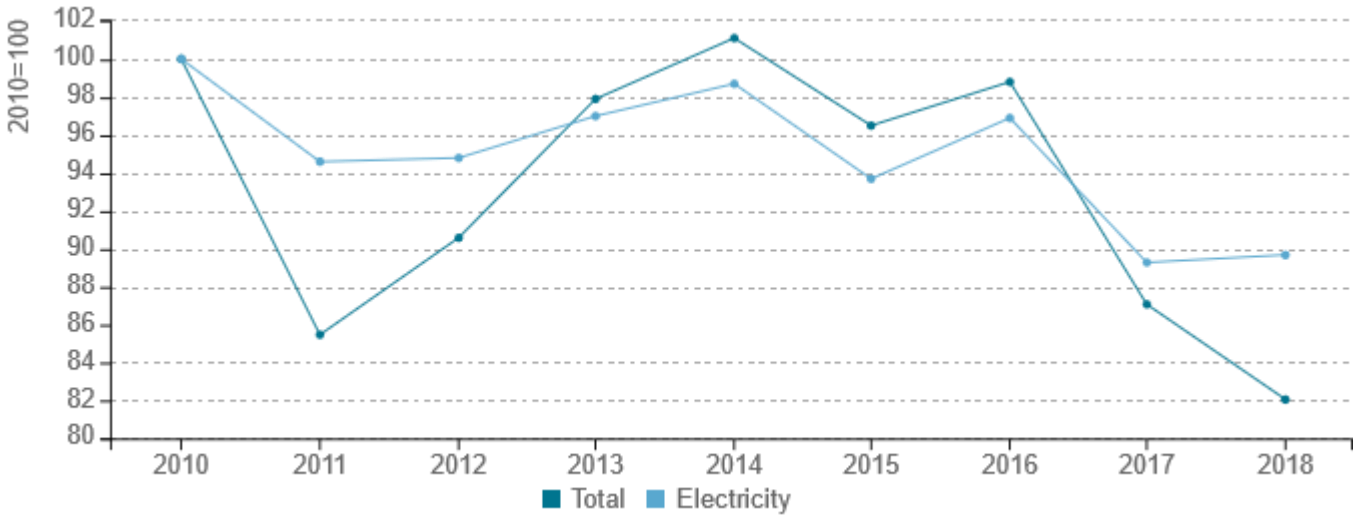
Figure 5: Main drivers of the energy consumption variation of households



Source: ODYSSEE

Figure 6 shows a decrease in both electricity unit consumption and total energy consumption per employee for Services in 2018 compared to 2010, attributed primarily to an increase in inward migration and registered workers. Electricity consumption is split mainly in air cooling, space heating and office equipment from 2010 to 2018. The remainder is oil consumption for specific functions.

Figure 6: Energy and electricity consumption per employee (normal climate)



Source: ODYSSEE

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The Government has proposed several measures since 2014 to help improve the country's energy consumption profile. The Energy saving measures implemented by the country include improvement of the building envelope and the incentivising of small-scale renewable systems such as solar PVs, solar water and heat pump water heating systems.

Table 2: Sample of policies and measures implemented in the building sector

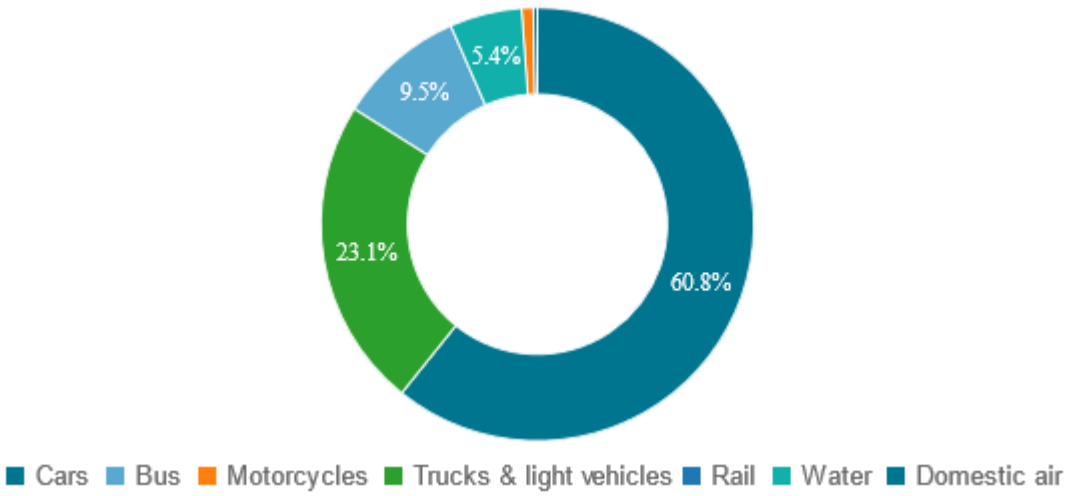
Measures	Description	Expected savings, impact evaluation	More information available
Solar Water Heaters	This scheme aims at incentivising individuals to opt for solar water heaters in their households.	Cumulative energy savings from 2014 to 2018: 11,467,248 kWh	https://www.measures.odyssee-mure.eu/energy-efficiency-policies-database.html#/measures/814

Source: MURE

Transport

Transport is by far the largest energy consuming sector in Malta even when excluding International Aviation. In 2018, the largest consumption was attributed to passenger cars, followed by trucks and light vehicles and buses. There is no rail transport system in Malta, whilst domestic aviation is almost negligible.

Figure 7: Transport energy consumption by mode in 2018



Source: ODYSSEE

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A study is currently underway to evaluate the introduction of a Mass Rapid Transport Systems (MRT) for Malta which was intended to be closed by end of 2020. The first phase of the study, which includes an options analysis, identification of the best option and proof of detailed concept design has now been concluded and the Government is now proceeding to the next phases which include other tasks and additional studies such as geo-technical studies. Several transport measures are in place in order to promote modal shift towards public transport, measures to improve the vehicle fleet efficiency such as the uptake of electric vehicles, scrappage schemes for old inefficient vehicles or the conversion of existing vehicles to run on LPG.

Table 3: Sample of policies and measures implemented in the transport sector

Measures	Description	Expected savings, impact evaluation	More information available
Grant scheme to improve vehicle fleet efficiency	'Vehicle scrappage' schemes are designed to incentivise owners to scrap old excessively fuel-consuming vehicles and replace them by new efficient vehicles thus reducing the number of old motor vehicles from the road. These schemes promote a high turnover of the vehicle fleet to take advantage of the progressively higher efficiency of new vehicle placed on the market.	Cumulative energy savings in the period 2014 - 2018: 24,640,434 kWh	https://www.measures.odyssee-mure.eu/energy-efficiency-policies-database.html#/measures/2294

Source: MURE

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