

Assessment of climate change policies as part of the European Semester

Country Report Malta

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Ecologic Institute, Berlin and eclareon GmbH

to DG Climate Action

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1 Short Summary

The main climate and energy policy priority in Malta is the reduction of energy dependence from oil imports and of emissions from energy generation. As an island state without domestic fossil fuel sources, Malta is currently nearly fully dependent on energy imports. Electricity is generated using crude oil, which is very emission intensive. However, measures to diversify the energy mix, such as an electricity interconnection to Sicily, the construction of gas-fired power capacities using liquefied natural gas including the necessary infrastructure and the support of renewable energy (in particular solar) are in progress.

The Malta non-ETS target under the Effort Sharing Decision (ESD) is +5% (compared to 2005) but non-ETS emissions were reduced by 3.8% between 2005 and 2013 which is above the interim target. According to the latest national projections submitted to the Commission and taking into account existing measures, the 2020 target is expected to be met by a margin of 1 percentage point.

The key policy developments of 2014 have been the extension of support schemes for renewable energy sources, efficiency in buildings and for low-emission road transport. The National Energy Efficiency Action Plan suggested promising measures, such as smart meters, energy audits, energy management systems and an obligation scheme for the energy supplier Enemalta. However, many of these measures still have to be introduced.

2 Climate and energy policy priorities

Malta is an island nation with no domestic fossil fuel resources. For its energy supply, it is nearly completely dependent on the import of oil products. 99% of primary energy consumption is covered from imported crude oil and petroleum products mainly used for electricity generation and transport; the rest is covered from renewable energy sources (Eurostat, 2014). Most of the GHG emissions of the country come from energy industries (66%) (EEA, 2014d). Moreover, Malta's energy networks are completely isolated. Security of supply and energy dependence are, therefore, important issues for Malta to address.

In 2009, the Maltese National Strategy for Policy and Abatement Measures relating to the Reduction of GHG Emissions was introduced to implement the national 2020 climate and energy targets and set out actions to be adopted relating to climate change mitigation. The Strategy prioritises actions on the basis of financial cost and economic impact, feasibility and environmental impact (Ministry for Resources and Rural Affairs, 2009).

The 2012 Energy Policy for Malta is based on the objectives of security of supply, competitively priced energy services and environmental responsibility. These objectives are addressed through policies targeting energy efficiency and affordability, security of supply, diversification, flexibility and sustainability. A main focus is the reduction of energy dependence from oil imports and of emissions from energy generation (Government of Malta, 2014a).

As part of the implementation of the Energy Policy, a submarine cable connection to Sicily is being implemented and after a delay is now expected to be commissioned by June 2015 (Power Engineering International, 2015). This will connect the Maltese electricity grid to that of the mainland Europe. Once this is operational, it will increase stability and Malta will be able to import electricity, thus reducing its dependence on oil while at the same time reducing the GHG intensity of the national electricity sector. Furthermore, Malta plans to diversify its energy mix using liquefied natural gas (LNG). In 2013, Malta approved the permit for a new 215 MW gas-fired combined cycle gas turbine power plant, as well as the necessary infrastructure, such as a floating LNG delivery, storage, regasification and natural gas supply facility, and a pipeline connection to the plant. Also the old diesel-operated 144 MW Delimara 3 power plant will be converted to run on natural gas. Electricity supply from the gas-fired plants is expected to start by 2016. (Ministry for Finance, 2014a; Enemalta, n.d. a).

This investment is expected to improve Malta's electricity generation efficiency and reduce emissions (Enemalta, n.d. b).

The 2020 renewable energy goal for Malta is to reach a share of 10 % in final energy consumption. Until 2013, this had been planned to be mainly accomplished by the installation of offshore wind farms. However, this option has been discarded and instead, the Maltese Government now wants to focus on meeting the target with solar energy mainly as it is believed to be more feasible regarding the climatic conditions of Malta (see Chapter 4.2.3) (Government of Malta, 2013). Recent provisional figures published by the Maltese National Statistics Office suggest that Malta is on track towards its 2020 target, with a share of 3% in final energy consumption in 2014 (Times of Malta, 2014a). Increasing domestic renewable energy capacities would help to decrease energy dependence and improve security of supply.

Renewable energy can also generate economic advantages and contribute to bringing Malta on a pathway to a green economy. The renewable energy sector in Malta generated a turnover in 2012 of approximately 45 million EUR, with 40 million EUR stemming from photovoltaic industries and services and 5 million EUR from solar thermal installations, and employed a total of around 100 fulltime employees (EurObserv'ER, 2013). In November 2014, the Minister for Sustainable Development, the Environment & Climate Change met with representatives of the private sector, banks, trade unions and civil society to discuss the formulation of a strategy and an action plan on the development of a green economy that is currently being developed (Malta Independent, 2014).

Besides emissions from energy industries, the transport sector is the second largest emitter. Further actions are needed - Malta is far from reaching its non-ETS emission target. In November 2014 the Maltese Minister for Finance announced the Budget for 2015 along with financing for emission reduction measures in transport. These include the implementation of a new public transport system and the facilitation of car pooling, tax incentives for vehicles with smaller engines, the renewal of a scrappage scheme and the scheme for the conversion of vehicles to LPG (Ministry for Finance, 2014b; Transport Malta, 2014).

3 GHG trends and projections

Malta reduced its total GHG emissions by 10% between 2005 and 2013; these reductions only happened between 2012 and 2013 and were in the energy supply sector. The share of GHG emissions not covered by the European Emission Trading Scheme (EU ETS) is around 37% in Malta, which is significantly below the EU28 average (see Table 1).¹

		National data			EU28	
		2005	2011	2012	2013	2013
Total GHG emissions	Mt CO ₂ eq	3.0	3.0	3.1	2.7	4,539
Non-ETS emissions	Share in total emissions	34%	36%	35%	37%	58%

Table 1 Key data on GHG emissions

Source: EEA 2014a; EEA 2014c

By 2020, Malta can increase its emissions not covered by the EU ETS by 5 % compared to 2005, according to the Effort Sharing Decision (ESD). The latest data for 2013 show that Malta emitted 9.9

¹ The European Environment Agency has developed a complex methodology to measure progress on the Non-ETS/ESD targets of all EU Member States. This report uses the figures derived on this basis. A detailed explanation and the underlying absolute amounts are contained in Annexes 1-3 of the EEA report No 6/2014 "Trends and projections in Europe 2014. Tracking progress towards Europe's climate and energy targets for 2020" available at <u>http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014/</u>

percentage points less than it was allowed under the annual allocation interim target under the ESD for the year 2013 (see figures in Table 2). National projections indicate that the country will not only meet but exceed its 2020 target by about 1.0 percentage points with existing measures (WEM) and by about 3.0 percentage points with additional measures (WAM) (EEA, 2014a).

		Compared to base year
2013	ESD interim target	+ 6.1%
	ESD emissions	- 3.8%
2020	ESD target	+ 5.0%
	ESD projections WEM	+ 4.0%
	ESD projections WAM	+ 2.0%

Table 2 Non-ETS emission targets, trend and projections

Source: EEA 2014a. Green indicates target met or exceeded, orange indicates a value below.

GHG emissions are mainly created by the energy industry followed by the transport sector and international aviation (see figure below for historic and estimated emissions by sector). Projections indicate that by 2020 emissions will remain relatively stable except for emissions from the energy industry, which are set to be reduced significantly under both scenarios (with both existing and additional measures) after slow but steady increase since 1990.

Figure 1 GHG trends and projections by sector



Source: EEA 2014a. Actual data until 2012 (recent decrease mentioned above not yet included in the official GHG inventory data) and projections from 2010 onwards. Dashed lines indicate the WEM projection, dotted lines the WAM projection.

4 Policy development

This section covers significant developments made in key policy areas between January and December 2014. It does so through two different perspectives: 1) progress on the policies communicated under the National Reform Programme; and 2) developments in the identified national priority sectors and policy areas.

4.1 Key policies as outlined in the National Reform Programme

Member States prepare National Reform Programmes (NRPs) each April outlining the country's progress and the key policies and measures to achieve targets under the EU 2020 Strategy. Malta's report is less detailed than the NRPs of other Member States, however key policies and measures are summarised in the following table and their current status is provided.

Table 3 Key policies and measures as outlined by the NRP 2014

Electricity interconnection to Sicily			
Status in the NRP	Operational by end of 2014		
Status as per Dec 2014	In progress. Expected to be operational by June 2015		
Description of policy	See Chapter 4.2.4		

Construction of a LNG delivery, storage, re-gasification and natural gas supply facility, gas- fired power capacities and necessary infrastructure			
Status in the NRP	In December 2013 the ElectroGas Malta consortium was tasked to realise the project.		
Status as per Dec 2014	In progress. According to the tasked contractor it is expected to be operational by 2016		
Description of policy	See Chapter 2		

Feasibility Assessment of a gas pipeline connection to Sicily			
Status in the NRP	A cost-benefit study is currently being prepared.		
Status as per Dec 2014	In progress		
Description of policy	See Chapter 4.2.4		

Extension of the roof thermal insulation and double glazing window scheme			
Status in the NRP	In force since May 2012		
Status as per Dec 2014	Extended until end of 2015		
Description of policy	See Chapter 4.2.2		

Feed-in tariff for photovoltaic installations		
Status in the NRP	In force since 2010	
Status as per Dec 2014	Extended until April 2015 with reduced tariffs	
Description of policy	See Chapter 4.2.3	

4.2 National policy priorities

The below sub-sections provide updates on key existing and new policies in priority sectors and policy areas of relevance to the energy and climate targets under the Europe 2020 strategy². Each sector or policy area contains information on the most important policy instruments in operation or development.

4.2.1 Environmental Taxation

In Malta the implicit tax rate on energy is the fifth highest in the EU with 200 EUR per tonne of oil equivalent in 2012 (Eurostat, tsdcc360). Moreover, the share of environmental tax revenues in overall tax revenue was 8.9% in 2012 and therefore above the EU average of 6.1% and the fifth highest in the EU (Eurostat, ten00064). Similarly, when comparing environmental tax revenues with GDP, Malta lies above the EU average with 3% in 2012 (while the average is 2.4%) (Eurostat, ten00065). However, Malta does not have a landfill tax, indexation of environmental taxes, or an overall strategy to eliminate environmentally harmful subsidies (Commission Staff Working Document, 2014).

In Malta a car registration tax is applied that is based on CO_2 emissions, the registration value and the length of the vehicle. Furthermore, an ownership tax exists that is based on CO_2 emissions and the age of the vehicle (ACEA, 2014). No road use charges apply (CE Delft, 2012).

Companies producing, processing, holding, receiving, or dispatching energy products are obliged to pay excise duty. The level of excise duties is well above the EU average. Exemptions exist for gas and oil for maritime commercial activities and for the biomass content in biodiesel.

4.2.2 Energy Efficiency

Within the EU28, Malta has the eleventh least energy-intensive economy and is close to the EU average. However, energy intensity declined by 25% from 2005 to 2012, which is above the EU average reduction of 13% (Eurostat, tsdec360). In contrast, final energy consumption increased by 18% from 2005 to 2012 with the increases coming mainly from the industry, transport and service sectors. Thus, Malta is one of the seven EU MS that did not reduce their final energy consumption at all (Eurostat, tsdpc320). Due to this development, Malta is currently not on track to meet its indicative EU energy efficiency target for final energy consumption. In contrast, however, but it is on track to meet its target for primary energy consumption (EEA, 2014a).

In June 2014, Malta published its third National Energy Efficiency Action Plan (NEEAP) (Government of Malta 2014a) proposing measures to close the gap towards its 2020 target. According to the NEEAP Malta will introduce an obligation scheme for Enemalta Corporation to cover parts of the target from the Energy Efficiency Directive (EED). Enemalta is the only licensed electricity supply company and the only electricity distribution system operator in Malta. The NEEAP obligates Enemalta to adopt end-use energy efficiency policies and measures, such as a smart meter scheme that covers 100% of consumers connected to the national grid (87% of old meters had been exchanged by August 2014), as well as to introduce electricity tariffs that incentivise energy efficiency, such as a reward for consumption that is lower than a stipulated level. Furthermore, Enemalta will have to offer energy services, such as free energy audits to domestic consumers. More focused 'second- round' audits will have to be offered to small and medium-sized enterprises (SME's) depending on the findings of the walk-through programme. Energy audits of SME's will be co-financed through Malta Enterprise Schemes funded from national funds (Government of Malta, 2014a).

The Maltese legislation transposing the EED introduced in June 2014 also implemented obligatory energy audits and energy management systems for large companies. Enterprises with more than 240 employees are obliged to undertake an energy audit and implement a plan of action for improving the companies' energy efficiency. This process needs to be done at least once every four years. The deadline for the first plans to be concluded is 5th December 2015 (Malta Business Bureau, 2014).

² The Consortium jointly with DG Clima identified these based on identified challenges in Country Profiles (EEA, 2014), share of sectors in total GHG emissions, and Country Specific Recommendations (2014). DG Clima has identified additional relevant issues to be reviewed for some or all Member States, including country specific energy challenges.

Maltese households have the lowest energy consumption per dwelling in Europe (Odyssee-Mure, 2012). Minimum performance standards for buildings and energy performance certificates have been introduced. The roof thermal insulation and double glazing window scheme, which had already been implemented since 2012, was extended in 2014 until the end of 2015 (Malta Resources Authority, 2014a). In this context, grants of 15.25% of the total costs up to a maximum of 1,000 EUR are paid by the government for the thermal insulation of roofs as well as for double glazing of windows. Further financial support for energy efficiency measures is available in the form of low-interest loans, such as the ECO Personal Loan from the Bank of Valletta, supporting products, systems or services that reduce energy consumption, including Class 'A' white goods, double glazing, residential energy management systems and thermal insulation products (Government of Malta, 2014a).

A green public procurement plan and demonstration projects for renovation has been in place since 2012. A further number of energy efficiency projects in public buildings will be funded within the next years to serve as a model for the private sector. These will include institutional and housing units, covering more than 5% of new buildings (Government of Malta, 2014a).

4.2.3 Renewable Energy

The share of renewables in gross final energy consumption was 1.4% in 2012, which is below the indicative 2012 target of 2.0% set out by the Renewable Energy Directive (RED). The average annual growth rate was 23.4% between 2005 and 2012. Thus, going forward, an annual growth rate of even only 35.5% is needed between 2013 and 2020 to reach the 2020 target of 10% (EEA, 2014a). The share of renewable electricity generation in final electricity consumption increased from 0% to 1.1% between 2005 and 2012, while the share of renewable heating almost tripled from 4.7% to 13.0% (Eurostat, SHARES 2014).

On 13 October 2014, the Maltese National Statistics Office published provisional figures on energy generation proving that Malta has met its 2014 interim renewable energy target (3% in final energy consumption) and is therefore on track towards the national target from the Renewable Energy Directive. The main increase resulted from new solar photovoltaic (PV) cells (Times of Malta, 2014a).

While the renewable target was originally expected to be met mainly through the build-up of off-shore wind energy capacities, the government discarded this plan mostly due to environmental concerns, cost reasons and issues of spatial planning (Spitzley et al., 2014, Times of Malta 2014). Instead, it is planned to have a larger number of small installations of technologies that are already available in Malta, such as PV, solar water heaters and micro wind (Government of Malta, 2013).

Renewable electricity is promoted through a feed-in tariff for photovoltaic installations. For installations approved between 1 November 2014 and 30 April 2015 the feed-in tariff amounts to 0.155 EUR per kWh for roof-mounted PV installations below 40 kW capacity and 0.15 EUR per kWh for roof-mounted PV installations of 40 kW or more, granted for 20 years. The total national amount of units that may be approved in this feed-in tariff scheme cannot exceed 6,400,000kWh/annum (Malta Resources Authority, 2015). Ground-mounted PV systems are not supported due to a shortage of available land.

Renewable heating and cooling are supported through grants for solar thermal installations from the Malta Resources Authority, covering up to 40% of eligible costs up to a maximum of 400 EUR per installation (RES Legal, 2014). Barriers to further investment include a lack of long term visibility of the existing support scheme, as it is always prolonged at the end of each year, as well as insufficient monetary incentives for other technologies such as district heating, heat pumps or biomass (Spitzley et al., 2014).

Additionally, the European Regional Development Fund (ERDF) is currently funding 14 projects with a total of 25 EUR million for research and promotion of cleaner energy sources (Government of Malta 2014c).

4.2.4 Energy Networks

Within the framework of the interconnection project, the Maltese electricity grid is currently being connected to the European grid via Sicily. The costs of the project are approximately 183 million EUR and will be partially funded by the European Energy Programme for Recovery (Enemalta, 2012). The implementation of the project might lower Malta's GHG emissions, since the line would enable Malta to import electricity instead of generating it through its own high-carbon oil-based power stations. The interconnector is also meant to increase security of supply through a diversification of energy imports. After several delays, it is currently expected to be commissioned by June 2015 (Power Engineering International, 2015).

The government is also considering connecting Malta to the trans-European Natural Gas Network through a pipeline to Sicily. The 2014 Budget document indicates that the Government of Malta is conducting a feasibility study, which is said to be the basis on which a decision will be taken. This project has been classified as a Project of Common Interest (PCI) by the EU (Ministry for Finance, 2013).

4.2.5 Transport

Overall, emissions from transport have increased between 1990 and 2012 but have fluctuated around the same level since 2005. The same holds true for the proportion of these emissions in Malta's total emissions. In 2012, their share was 16%. Energy consumption from transport has increased between 1990 and 2012 (Eurostat, tsdcc210 and tsdpc320).

The main problem seems to be the increasing number of private cars, which has counteracted much of the efficiency increases: average emission rates for newly registered cars are very low in Malta with a level of 118.4g CO_2/km . The level is the sixth lowest in the EU and has decreased by 21% between 2005 and 2012, at a rate similar to the EU average reduction of 22% (Eurostat, tsdtr450). Fuel taxation in Malta is slightly below the EU average concerning excise duties on both petrol and diesel (EEA, 2014b).

Vehicle registration taxes take into account CO_2 emissions among other factors such as registration value and vehicle length. From November 2014 the registration tax on all-terrain vehicles or quad bikes will be reduced in order to promote the use of vehicles with small, less polluting engines (Transport Malta, 2014). The vehicle circulation tax is based on CO_2 emissions and vehicle age. However, for new cars the tax only depends only on CO_2 emissions for the first 5 years, after that on both criteria. It varies between 100 EUR for a car emitting up to 100 g/km and 180 EUR for cars emitting between 150 and 180 g/km (ACEA, 2014). No road use charges apply (CE Delft, 2012).

A Scrapping Scheme, first introduced in 2010, was renewed for 2015 and offers one-time grants to every person who scraps a passenger car that is at least 10 years old and registers a new passenger car with a length of not more than 4.46 m and a CO_2 emission level of less than 100g/km (900 EUR) or 101-130 g/km (700 EUR). The Scrapping Scheme has an allocated total budget of 500,000 EUR (Transport Malta, 2014; Times of Malta 2014b). The Gas Conversion Scheme to Convert Vehicles to Autogas, launched in 2013, offers a grant of 200 EUR for passenger cars converted to liquefied petroleum gas used for private purposes. The Autogas Scheme will be active until the end of 2015, or until the maximum of 250 claims has been reached (Transport Malta, 2014; Malta Today, 2015).

Malta also addresses its transport emissions by promoting electric mobility: the National Strategy for the introduction of electric mobility in Malta (MRRA) outlines the indicative target of reaching 5,000 electric vehicles by 2020. The strategy highlights the role of electric vehicles regarding the reduction of CO_2 emission and the achievement of the renewable energy target in the transport sector: Annually, around 7.7 kt CO_2 eq could be reduced and about one percentage point of the 10% renewable energy transport target could be delivered through the use of e-mobility if the best case scenario is considered (Ministry for Resources and Rural Affairs, 2012).

As a further measure to meet the 10% target share of renewable energy for transport, a substitution obligation for fuel imports was implemented by the Maltese government in 2011. The regulation requires importers and wholesalers of liquid road fuels to include an amount of biofuel content in any

product that is sold in the Maltese fuel market. The obligation amounted to 1.5% in 2011 and will be raised gradually to 10% in 2020. According to the National Renewable Energy Action Plan (NREAP), the obligation amounted to 4.5% in 2014 (Malta Resources Authority, 2014b).

On 17 November, the Maltese Minister for Finance, Edward Scicluna, presented the Budget for 2015 including the following further measures to reduce emissions in transport (Ministry for Finance, 2014b):

- Improvement of the public transport system: More bus routes and an overall improvement in the service of public transport
- During 2015, the Government will grant a sum equivalent to 15.25 % of the cost of bicycles in order to promote the use of alternative transport media.
- Car pooling: Bus lanes will be opened to those cars which are carrying at least three passengers in order to support car-sharing.
- A pilot project for the promotion of greater use of bicycles: a number of bicycle racks will be installed around the capital city.

5 Policy progress against Country Specific Recommendations issued 2014

The EU Commission provides Country Specific Recommendations (CSRs) for each MS for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges in relation to the targets of the EU 2020 Strategy. In the following table, the CSRs relevant for climate change and energy are listed, and their progress towards their implementation is assessed.

Existing CSRs	Progress
Continue efforts to diversify the energy mix and energy sources, in particular through increasing the take up of renewable energy and the timely completion of the electricity link with Sicily. Maintain efforts to promote energy efficiency	Diversification: The electricity link to Sicily has been delayed several times and is now expected to be commissioned by June 2015. Liquefied natural gas will be added to the energy mix. New gas-fired electricity generation capacity and necessary infrastructure are currently being installed and expected to be commissioned in 2016.
and reduce emissions from the transport sector.	Renewable Energy: Malta mainly relies on PV and solar thermal energy to increase its renewable energy share, which are supported through a feed-in tariff and grants respectively.
	Efficiency: Malta names several measures to tackle energy efficiency in its NEEAP, such as smart meters, energy audits and energy management systems and an obligation scheme.
	Transport: Transport emissions are being tackled through incentives towards use of vehicles with smaller engines, bicycles, electric vehicles, car pooling and use of public transport.

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