



MALTA RESOURCES AUTHORITY

# **Energy Efficiency Policies and Measures in Malta**

## **ODYSSEE- MURE 2010**

### **Monitoring of EU and national energy efficiency targets**

Malta Resources Authority

Malta, September 2012

## **Contacts:**

**Ing. George Cassar**

Malta Resources Authority

Millenia, 2<sup>nd</sup> Floor, Aldo Moro Road,

Marsa MRS 9065

Malta.

Tel: +356 22955000

[www.mra.org.mt](http://www.mra.org.mt)

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.

## Contents

	Page
<b>1 Executive Summary .....</b>	<b>2</b>
<b>2 Key messages .....</b>	<b>3</b>
<b>3 The Background to Energy Efficiency .....</b>	<b>4</b>
3.1 Overall economic context .....	4
<b>4 Overall Assessment of Energy Efficiency Trends .....</b>	<b>6</b>
4.1 Overall trends in energy intensity .....	6
4.2 Industry .....	9
4.3 Households .....	10
4.4 Services .....	11
4.5 Transport:.....	11
4.6 Assessment of energy efficiency/savings through ODEX: total and by sector.....	13
4.7 CO <sub>2</sub> -emissions trends: total and by sector; role of fuels substitutions and of energy efficiency .....	13
<b>5 Energy efficiency measures.....</b>	<b>14</b>
5.1 Recent Energy Efficiency Measures .....	14
5.2 Patterns and Dynamics of Energy Efficiency Measures.....	18
5.3 Innovative Energy Efficiency Measures .....	21
5.4 Energy efficiency measure evaluations.....	23
5.4.1 Semi-quantitative Impact Estimates of Energy Efficiency Measures .....	23

5.4.2	Lessons from Quantitative Energy Efficiency Measure Evaluations.....	26
-------	--	----

**Annex 1: Energy Efficiency Measure Summary by Country**

**Annex 2: Country Profile**

## Index of Figures

Figure 1: Ratio final/primary intensity.....	6
Figure 2 - Primary intensity trend.....	7
Figure 3 - Primary intensity with climatic correction .....	7
Figure 4 - Final intensity in constant 2000 €.....	8
Figure 5 - Final intensity in constant 2000 € with climatic correction .....	8
Figure 6 - final energy intensity of manufacturing.....	9
Figure 7 - Electricity consumption per dwelling .....	10
Figure 8 - Energy intensity in services .....	11
Figure 9 - Unit fuel consumption per car equivalent.....	12
Figure 10 - Energy consumption in air transport .....	12
Figure 11: Residential measures spider graph.....	18
Figure 12: Transport measures spider graph .....	19
Figure 13: Tertiary measures spider graph .....	19
Figure 14: Industrial measures spider graph.....	20
Figure 15: Cross-cutting measures spider graph .....	20



## Index of Tables

Table 1: ODEX ratings.....	13
Table 2: CO2 emissions from EEA .....	13
Table 3: Residential Sector measures .....	14
Table 4: Transport sector measures .....	15
Table 5: Industrial Sector measures .....	15
Table 6: Public sector measures.....	16
Table 7: Cross-cutting measures .....	17
Table 8: Energy savings .....	23

## **1 Executive Summary**

Energy efficiency is a key policy area outlined in the Government's energy policy for Malta. It can have a significant impact on the demand for energy, and so can reduce the country's energy consumption and the release of GHG emissions.

The overall trend in the energy consumption according to the fuel used and the economy sectors was studied by comparing the consumption during 2000 with that of 2010.

The energy intensity is the ratio of the energy consumed by the country's GDP. It is a measure of the energy efficiency of a country's economy. In recent years, the final/primary intensity ratio has stabilised to a value of 0.5.

Both recent and on-going energy efficiency measures can be found in all the relevant sectors. The three most innovative measures chosen were incentives for the up-take of micro-RES Systems, ECO-Gozo and the passenger vehicle scrappage schemes.

The impact of most of the measures in all sectors is expected to increase in 2016 compared to what was expected to be achieved in 2010. The buildings sector proves to be the sector which offers the largest opportunity for energy savings by a considerable margin.



## 2 Key messages

- A notable improvement in energy savings can be seen in all sectors and the overall trend promises continuing improvements in the near future.
- The will to increase energy savings is highly present as can be seen from the numerous schemes and incentives that are on-going at the moment.
- Data gathered throughout one year, may not indicate the actual overall trend of energy savings. Being a small country, single events, tend to give a disproportionate element to the gathered data. Examples include unusually warm summers and cold winters, and special schemes which may be started from time to time.
- These yearly fluctuations may be compensated for to obtain a more realistic picture of the energy savings. Moving averages can also be used to smoothen out these yearly fluctuations.

## **3 The Background to Energy Efficiency**

### **3.1 Overall economic context**

The energy policy for Malta is based on three overriding and horizontal objectives; security of supply, competitively priced energy services and environmental responsibility.

The policy addresses these objectives in six policy areas:

- Energy efficiency
- Reducing reliance on imported fuels
- Stability in energy supply
- Reducing the emissions from the energy sector
- Delivering energy efficiently and effectively
- Ensuring that the energy sector can deliver

In addressing the country's energy challenge, Malta's energy policy is significantly influenced by a number of EU energy and environmental policies. The targets set by the relevant EU Directives for Malta are as follows:

- Energy End Use Efficiency: 9% by 2016;
- Renewable Energy Target: 10% of final energy consumption by 2020;
- Bio-fuel contribution in the fuel mix: 10% of final energy consumption of fuels by 2020;
- Reduction in GHG emissions under Effort Sharing Decision: +5% over 2005 levels by 2020.

The interim target for energy end use efficiency was 3% by 2010 and this was achieved in 2010.

Energy efficiency is a key policy area outlined in the Government's energy policy for Malta. It can have a significant impact on the demand for energy, and so can reduce the country's energy consumption and the release of GHG emissions. The draft national energy policy commits to co-ordinate all initiatives set out within NEEAP and to propose new initiatives.

## Energy Efficiency Policies and Measures in Malta in 2012

This action plan generally follows the template put forward by the Commission. Some familiarity with Directive 2006/32/EC is required in its reading. It is meant to be read in conjunction with the first NEEAP, as well as the NEEAP update of 2008.

## 4 Overall Assessment of Energy Efficiency Trends

### 4.1 Overall trends in energy intensity

Final energy consumption covers energy supplied to the final consumer for all energy uses. It is calculated as the sum of final energy consumption of all sectors. These are disaggregated to cover industry, transport, households, and services and agriculture.

On the other hand, primary energy consumption refers to the direct use of energy at the source, or supply to users without transformation. This is also referred as crude energy, that is, energy that has not been subjected to any conversion or transformation process.

The energy intensity is the ratio of the energy consumed by the country's GDP. It is a measure of the energy efficiency of a country's economy. The graph below shows the ratio of the final to the primary energy intensity for Malta. In recent years, the final/primary intensity ratio has stabilised to 0.5. Significant changes are expected when the new power plant and the inter-connector start to function.

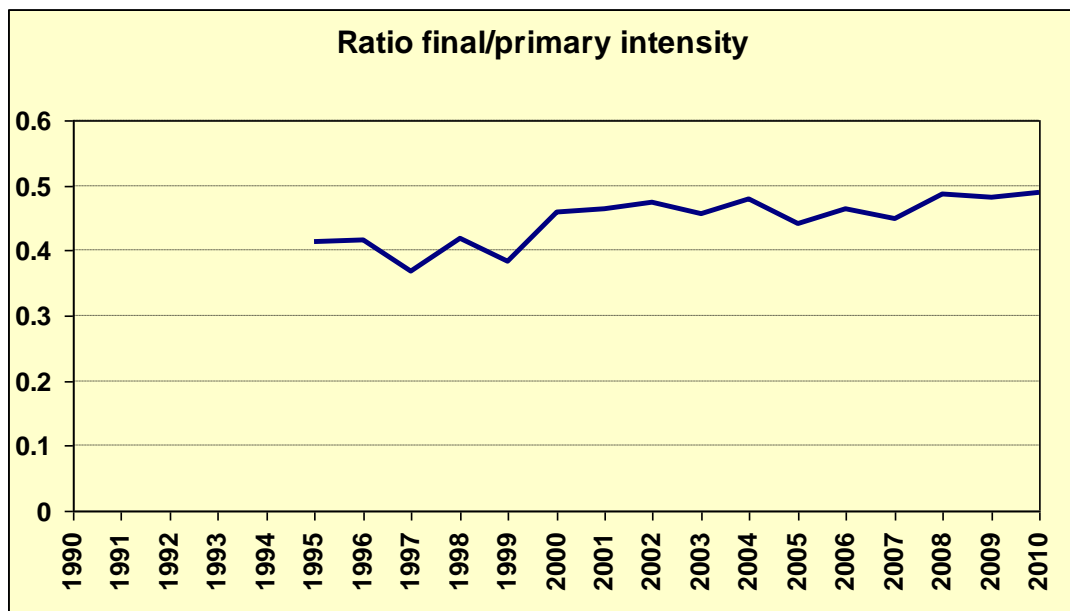


Figure 1: Ratio final/primary intensity

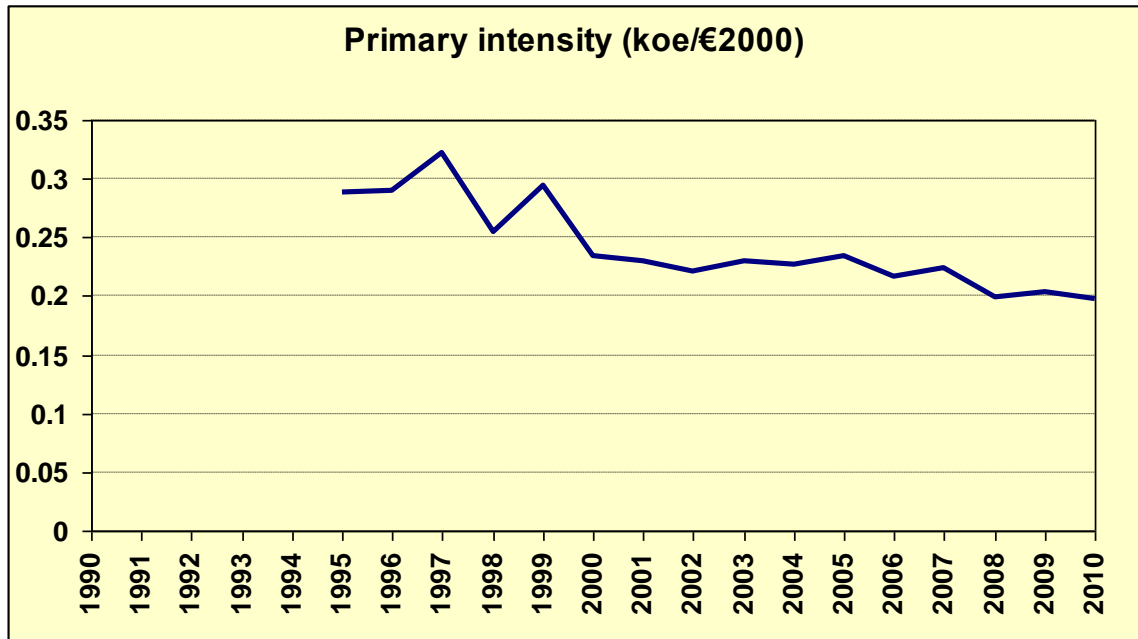


Figure 2 - Primary intensity trend

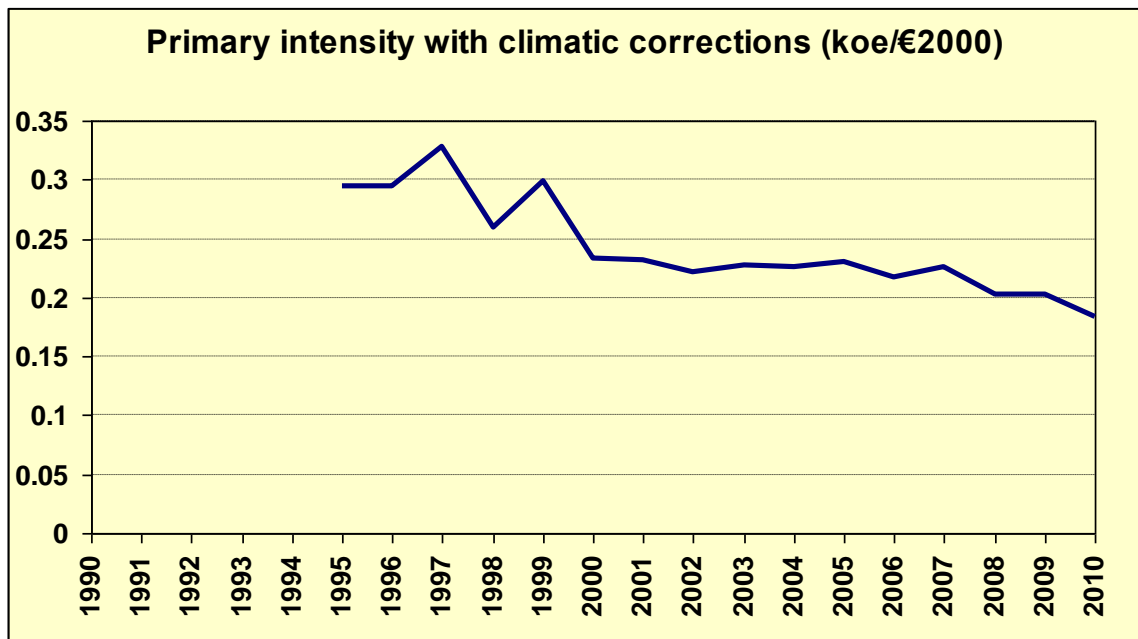


Figure 3 - Primary intensity with climatic correction

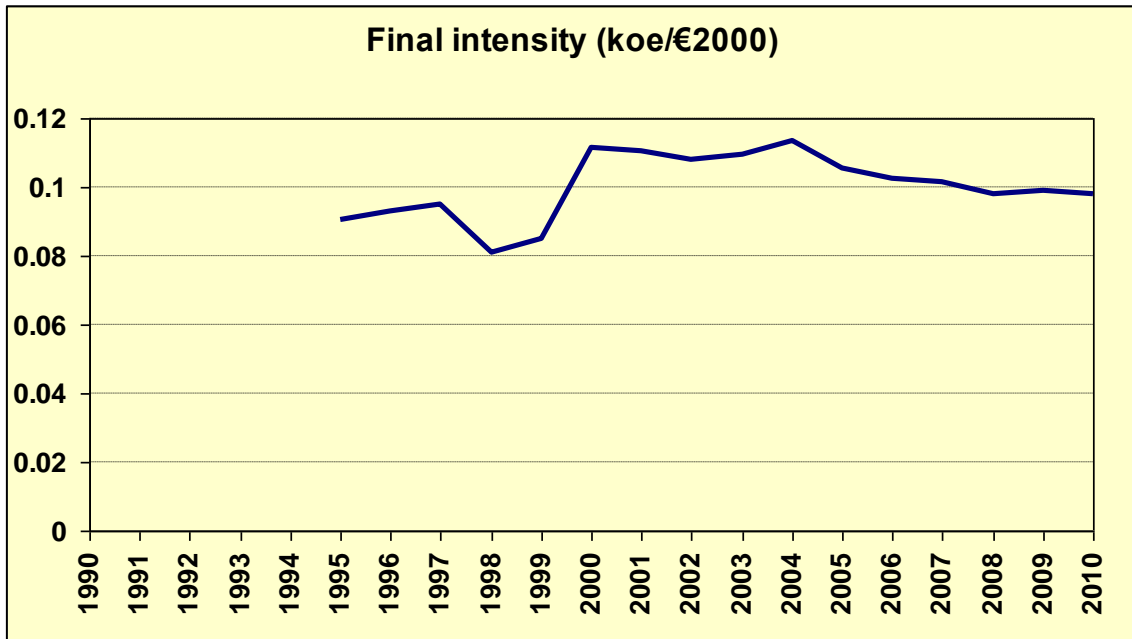


Figure 4 - Final intensity in constant 2000 €

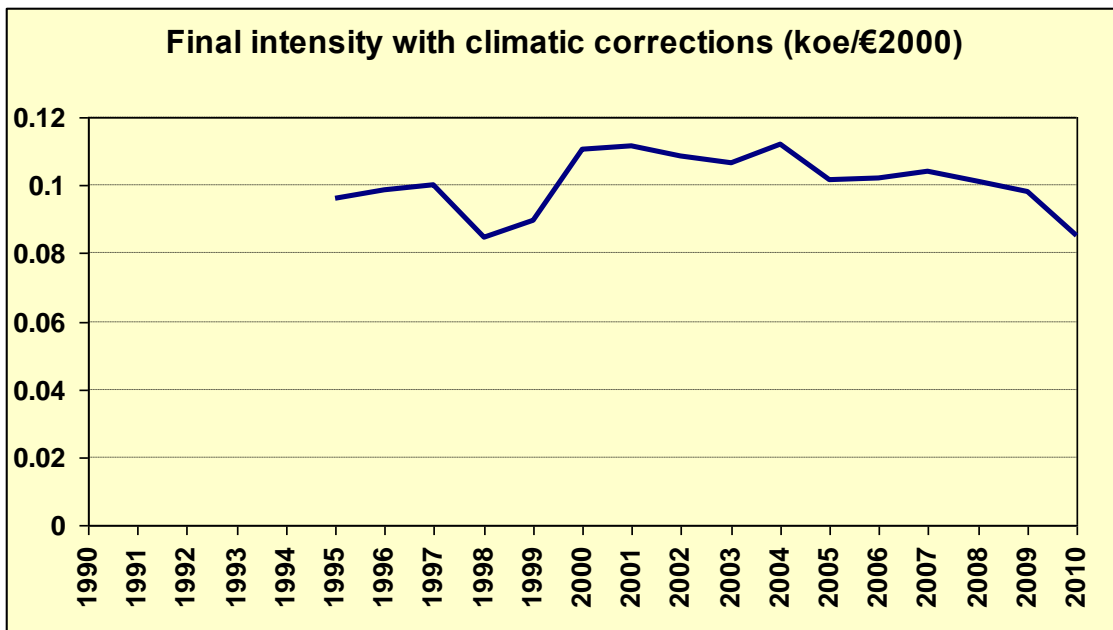


Figure 5 - Final intensity in constant 2000 € with climatic correction

## 4.2 Industry

The figure below shows the trend in final energy intensity of manufacturing. In general, there is an increasing trend over the years, which does not indicate any signs of improving efficiency.

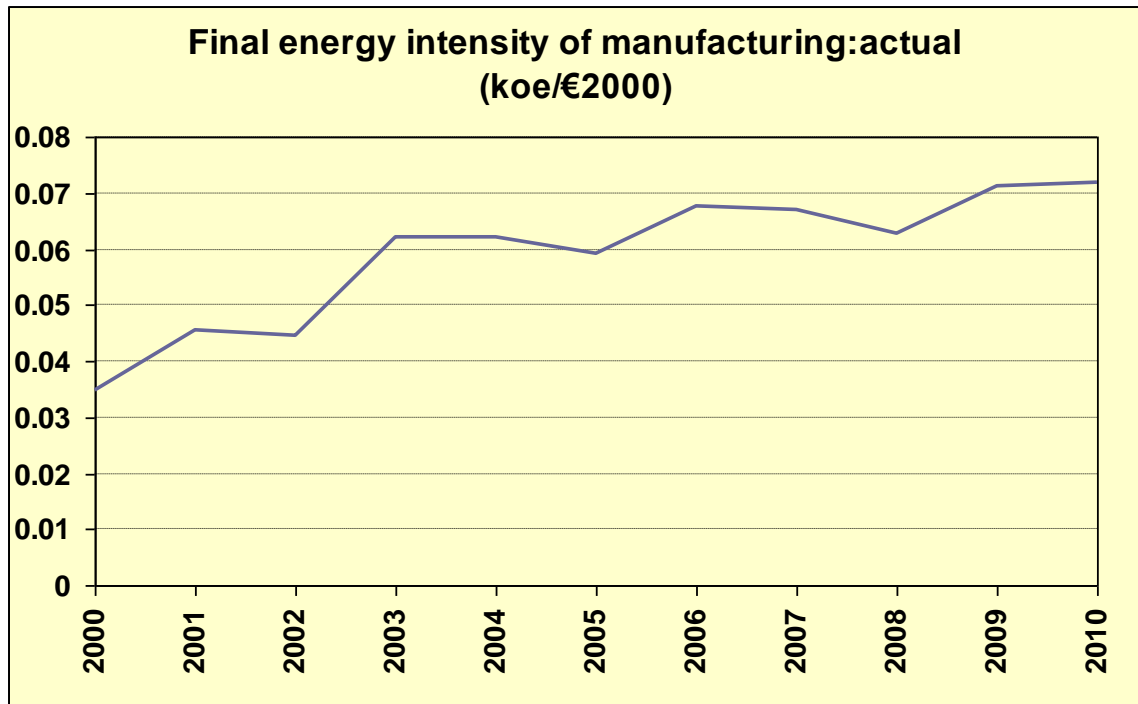


Figure 6 - final energy intensity of manufacturing

### 4.3 Households

As indicated in the following figure, the average consumption per household started to decrease as from 2005. Increased awareness plus a number of government initiatives such as promotion of solar water heaters, distribution of CFLs, promotion of energy efficient appliances started in 2005.

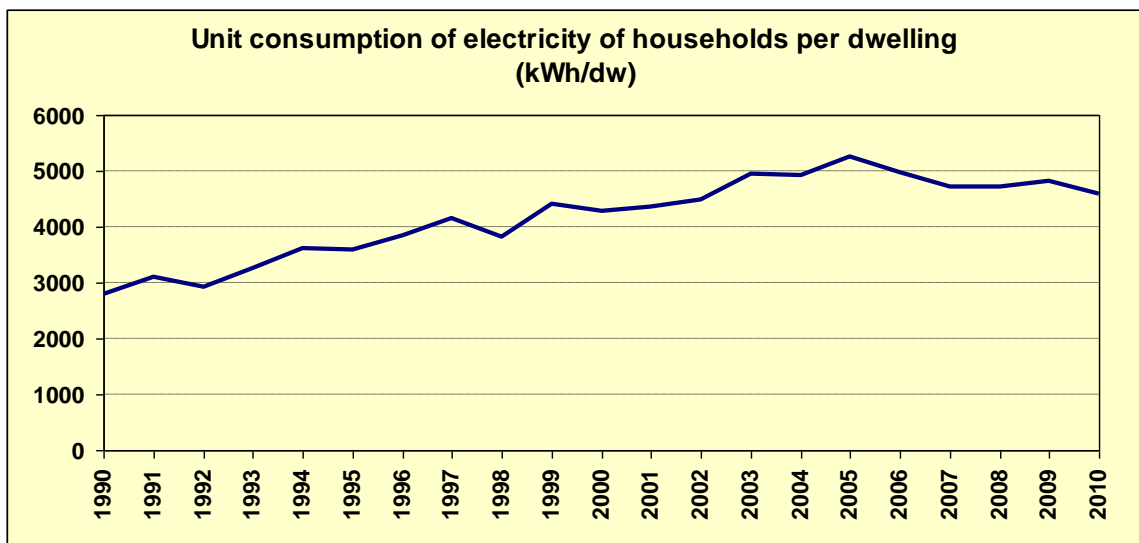


Figure 7 - Electricity consumption per dwelling



## 4.4 Services

As indicated in the following figure, the electricity intensity in services decreased as from 2004. A number of initiatives, particularly in the tourism sector, led to this reduction, though fuel substitution also increased.

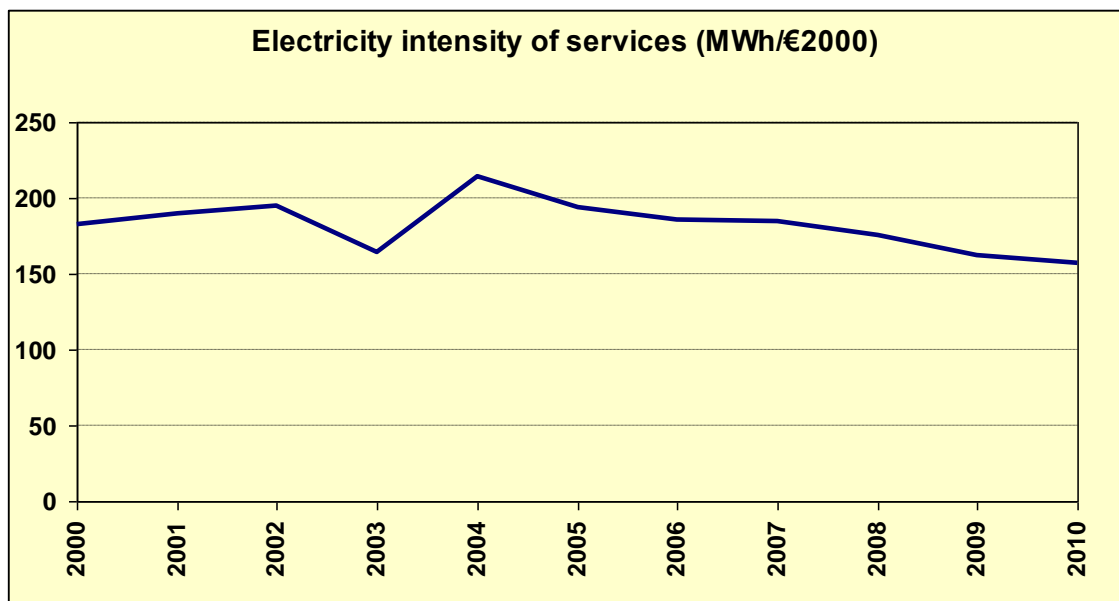


Figure 8 - Energy intensity in services

## 4.5 Transport:

The unit fuel consumption per car equivalent decreased over the years. This is due to the scrapping of a number of older vehicles being replaced with more efficient transport equipment. A similar decreasing trend in unit consumption of air transport is also evident.

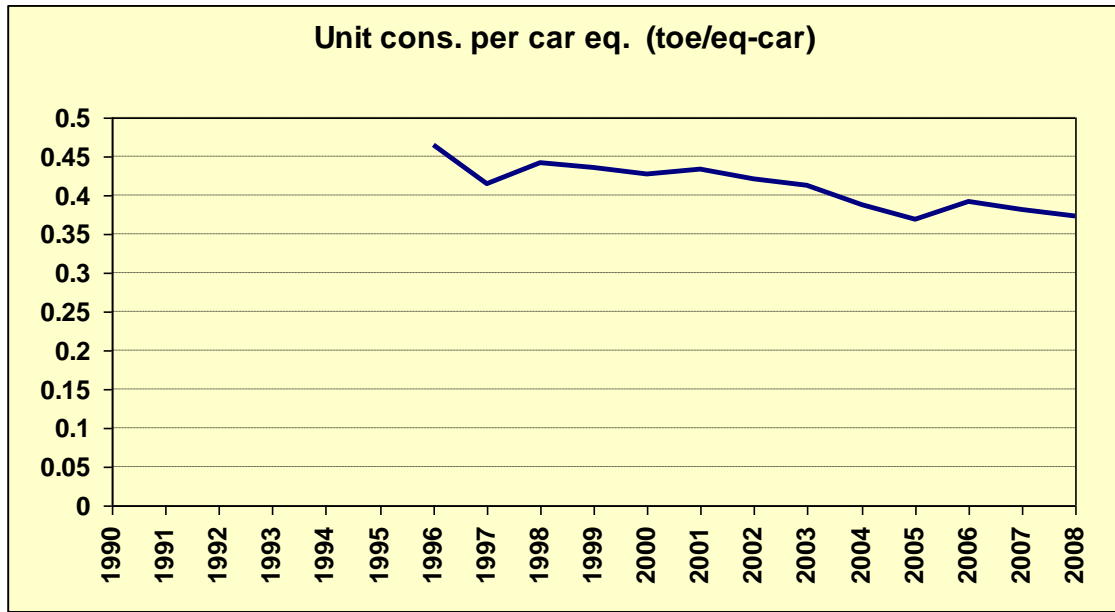


Figure 9 - Unit fuel consumption per car equivalent

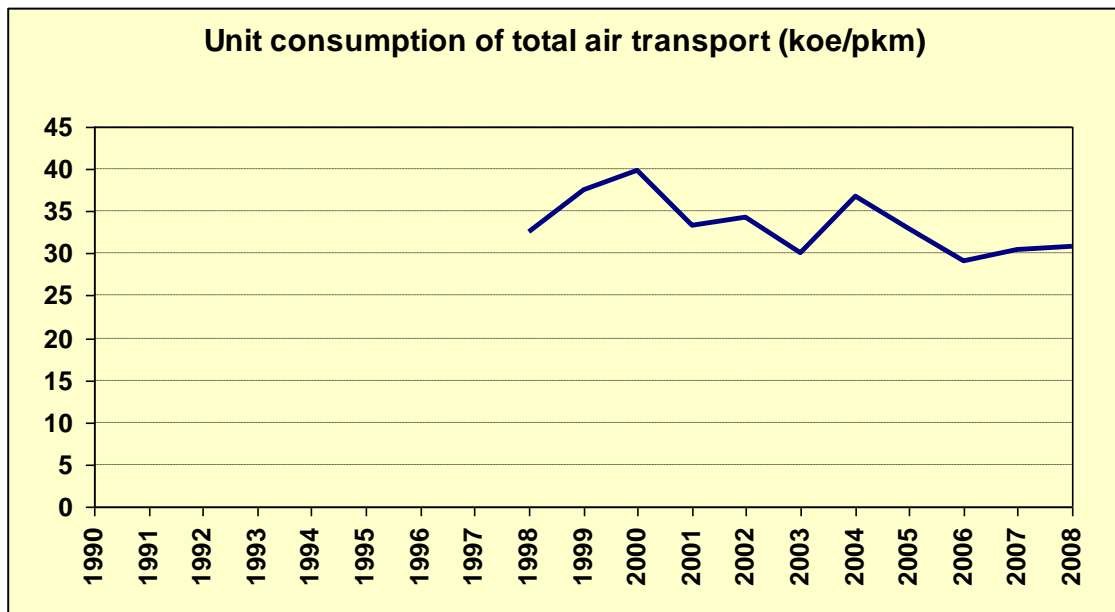


Figure 10 - Energy consumption in air transport

#### 4.6 Assessment of energy efficiency/savings through ODEX: total and by sector

Table 1: ODEX ratings

Ratings	ODEX Transport		ODEX Residential		ODEX Industry		ODEX Total	
	Malta	EU27	Malta	EU27	Malta	EU27	Malta	EU27
2000	100	100	100	100	100	100	100	100
2005	86	94	95	96	126	93	97	95
2010	84	95	91	98	45	91	79	95

#### 4.7 CO<sub>2</sub>-emissions trends: total and by sector; role of fuels substitutions and of energy efficiency

Table 2: CO<sub>2</sub> emissions from EEA

CO <sub>2</sub> emissions from EEA	Units	2000	2009
Energy	MtCO <sub>2</sub>	2.3	2.5
Fuel Combustion - Sectoral Approach	MtCO <sub>2</sub>	2.3	2.5
Energy Industries	MtCO <sub>2</sub>	1.7	1.9
Public Electricity and Heat Production	MtCO <sub>2</sub>	1.7	1.9
Manufacturing Industries and Construction	MtCO <sub>2</sub>	0.1	0.1
Iron and Steel	MtCO <sub>2</sub>	0.1	0.1
Transport	MtCO <sub>2</sub>	0.5	0.5
Commercial/Institutional	MtCO <sub>2</sub>	0.1	0.0
International Bunkers	MtCO <sub>2</sub>	0.0	3.7

## 5 Energy efficiency measures

### 5.1 Recent Energy Efficiency Measures

#### Residential Sector

Table 3: Residential Sector measures

Rebates on energy efficient domestic appliances	MRA	2006 - 2008	2.4	2.4
Distribution of Energy Saving Lamps in the Domestic Sector	MRA	2009 – 2010	40.8	40.8
Promotion of Solar Water Heaters in the Domestic Sector	MRA	2005 – ongoing	11.5	28
Incentives for the uptake of PV systems and micro-wind	MRA	2005 – ongoing	5.6	36
Subsidy Schemes for Building Envelope Improvement	MRA	2006 -2010	0.95	1
Requirements on the energy performance of buildings regulations	Buildings Regulations office	2008 – ongoing		
Energy Management Plans for Major Projects	Malta Environment and Planning Authority	2006 - ongoing		
Energy audits for households	Enemalta / MRRA	2012		

## Transport Sector

Table 4: Transport sector measures

Promotion of transport modal shift towards public transport	Malta Transport	2011 - 2012		45
Promotion of e-work or tele-working	Public Administration HR office	2008 - ongoing	0.2	1
Vehicle Registration Tax Reform	Ministry for Finance, the Economy and Investments	2007 +		
Promotion of more efficient vehicles and electric vehicles	Ministry for Resources and Rural Affairs	2005 - ongoing		
Passenger vehicle scrappage schemes	Ministry for Finance, the Economy and Investments	2010- 2011		
Traffic Congestion Reduction in Capital City	Malta Transport	2006 - ongoing		
Green Travel Plans in University and Colleges	MCAST	2009 +		
Provision of advisory services on energy efficient driving	Transport Malta	2009 +		

## Industrial Sector

Table 5: Industrial Sector measures

Malta Enterprise Energy Grant Scheme	Malta Enterprise	2009 - 2013	4	27.5
--------------------------------------	------------------	-------------	---	------

Energy Efficiency Policies and Measures in Malta in 2012

Energy Saving Measures in Government Owned Industry	Water Services Corporation	1995 - ongoing	42	42
Energy Efficiency Measures for the Hospitality Sector	Malta Tourism Authority	2011 +		
Energy Audits for the commercial sector	Malta Tourism Authority	2010 +		
Promotion of Groundwater Heating/Cooling	MRA	2009 - ongoing		
Support Scheme for SME's	Malta Enterprise	2011 +		
Promotion of CHP for Industry and Large Tourist Complexes	MRA	2009 - ongoing		

**Public Sector**

Table 6: Public sector measures

Green Leaders in the Public Sector	Ministry for Resources and Rural Affairs	2004 - ongoing	0.2	1
National Green Public Procurement Action Plan	TSDU – OPM	2011 - 2013		
Improving Energy Performance of Public Buildings	Ministry for Resources and Rural Affairs	2008-2014		3.5
Energy Performance Contracting	Ministry for Finance, the Economy and Investments	2011 +		

Energy Efficiency Policies and Measures in Malta in 2012

Improving Energy Efficiency in Public Sector Transport	Ministry for Finance, the Economy and Investments	2007 – ongoing		
Energy Saving Measures in Social Housing	Housing Authority	2004 -2013	.05	.2
Energy Saving and RES measures in state schools	Foundation for Tomorrow's Schools	2005 - ongoing	.24	0.63
Eco-Gozo	Ministry for Gozo	2010 - 2020		
Participation by Local councils in Covenant of Mayors	Local councils	2009 - ongoing		
Government incentives for local councils to reduce energy use	Local councils department	2008 – ongoing	.44	.84

**Cross-cutting**

Table 7: Cross-cutting measures

Creation of an Energy Efficiency Fund	Ministry for Finance, the Economy and Investments	2009 +
Information Campaigns	Ministry for Resources and Rural Affairs	2008 +
Revision of Administrative Arrangements	Ministry for Resources and Rural Affairs	2009 +
Participation and Research regarding Energy Saving Measures	Malta Council for Science and Technology	2007 +

## 5.2 Patterns and Dynamics of Energy Efficiency Measures

The two time periods used for the evaluation of the change in the focus of policy measures in Malta were the 2000 – 2004 period and after 2004.

In the residential sector, legislative/normative measures were the focus for the 2000 – 2004 period. However, after 2004, the focus shifted to financial policy measures in this sector as can be seen from the spider graph shown below.

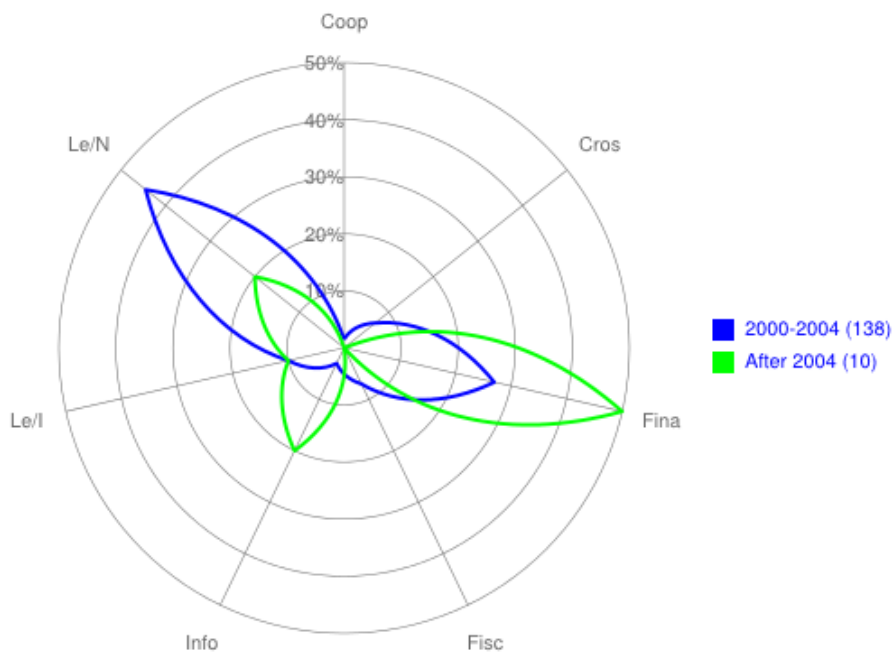


Figure 11: Residential measures spider graph

In the transport sector, legislative/normative measures were the focus for the 2000 – 2004 period. However, after 2004, the focus shifted to infrastructural policy measures in this sector as can be seen from the spider graph shown below.



## Energy Efficiency Policies and Measures in Malta in 2012

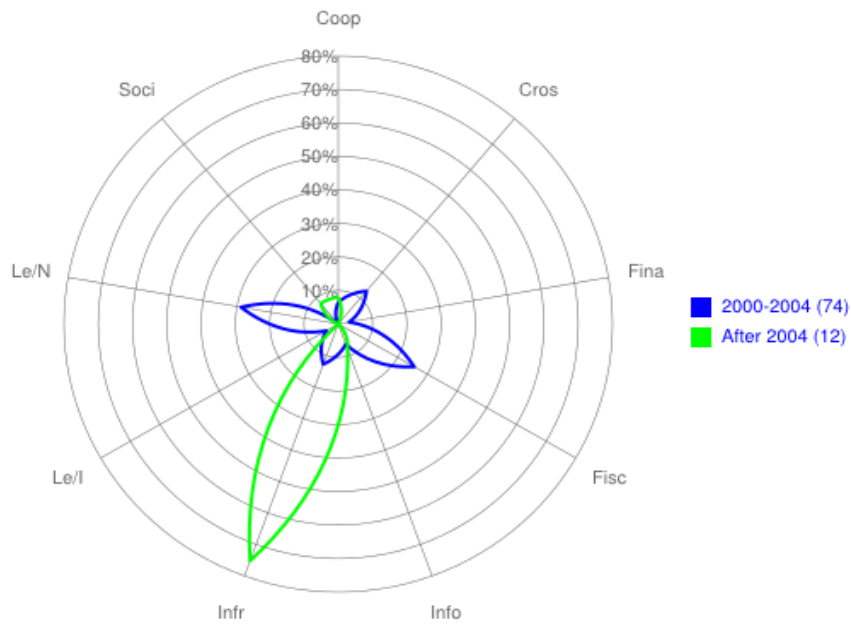


Figure 12: Transport measures spider graph

In the tertiary sector, legislative/normative measures were the focus for the 2000 – 2004 period. However, after 2004, the focus shifted to co-operative policy measures in this sector as can be seen from the spider graph shown below.

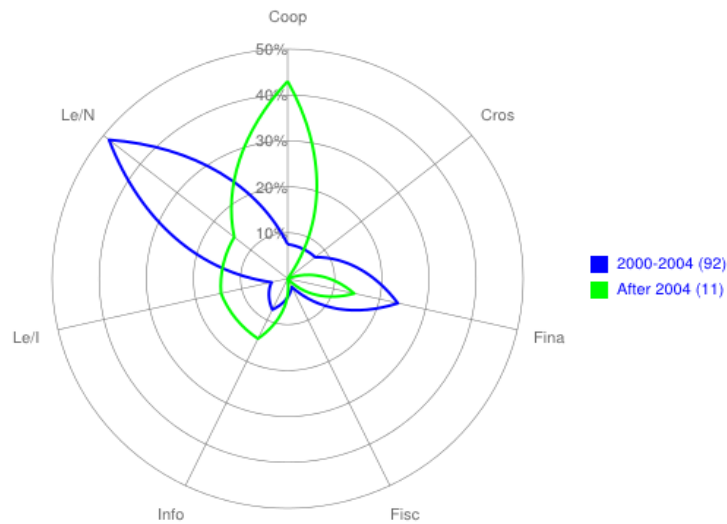


Figure 13: Tertiary measures spider graph

In the industrial sector, co-operative measures were the focus for the 2000 – 2004 period. However, after 2004, the focus shifted to financial policy measures in this sector as can be seen from the spider graph shown below.

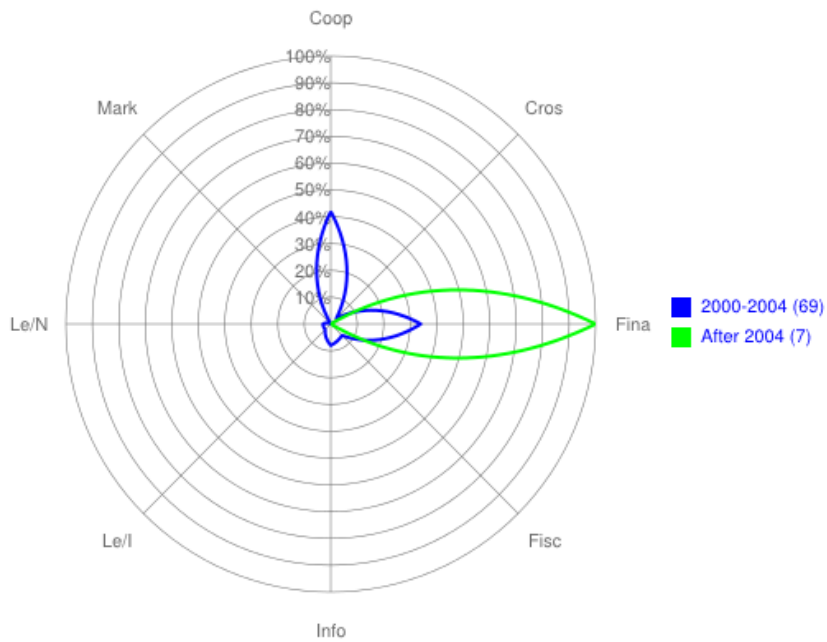


Figure 14: Industrial measures spider graph

In the cross-cutting sector, general energy efficiency/ climate change/ renewable programmes were the focus for the 2000 – 2004 period. However, after 2004, the focus shifted to financial policy measures in this sector as can be seen from the spider graph shown below.

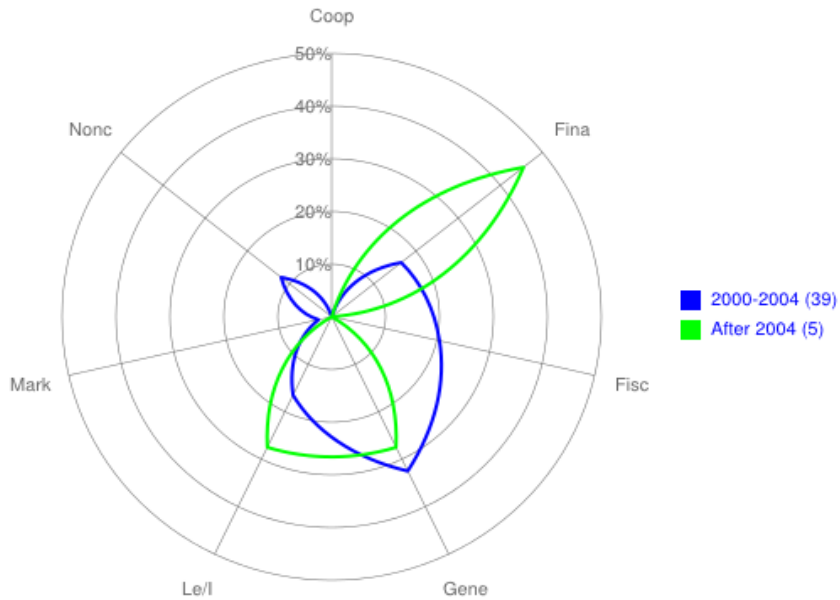


Figure 15: Cross-cutting measures spider graph

## 5.3 Innovative Energy Efficiency Measures

### 1. Incentives for the up-take of micro-RES Systems

In order to encourage electricity generation through technologies other than conventional generating plants, the government has launched schemes to promote the installation of renewable energy generation equipment in the domestic sector and has introduced a feed in tariff (FIT) regulation.

Under the FIT Regulation electricity generated by domestic PV installations and exported to the distribution system shall be paid by Enemalta at the following rates:

- Malta 25c/kWh for each unit exported (residential & domestic)
- Gozo 28c/kWh for each unit exported (residential & domestic)

The FIT is guaranteed for 8 years and is net of VAT and excise duty. Any electricity exported in excess of this threshold is paid at the marginal cost of electricity provider.

### 2. Eco-Gozo

Eco-Gozo is a concept which summarises Government's vision for the future of this island. It is a vision which aims at transforming Gozo and Gozitan society into a sustainable reality in its wider sense – not only environmentally, but also socially and economically.

This is a new way of looking at Gozo and its future, banking on the island's strengths and tapping its attractive potential for the benefit of the island's inhabitants, its visitors and investors, so that all benefit from:

- A better quality of life
- A society exerting less pressure on the environment
- A wholesome natural and cultural environment
- More sustainable jobs
- A caring society for all

- More quality investment
- An enhancement of the island's identity

An innovative project as part of the Eco-Gozo concept is the 'Save and Reduce'. The project aims to inform all Gozitan residents how to reduce the carbon and water footprints of their household and to encourage appropriate waste management practices by adopting various measures. The project is a joint venture with the Institute for Sustainable Energy within the University of Malta. The scope of the project is to provide consultancy visits to all households in Gozo. Officers in charge of this project have been trained to consult families on Energy Conservation, Water Conservation, Renewable Energy options and Waste Separation.

An information booklet will be distributed to all the households during the visits, containing qualitative and quantitative information on Eco-Gozo's main trust and objectives, tips on energy and water conservation, renewable energy technologies possible and better waste management.

### 3. Passenger vehicle scrappage schemes

The Government has introduced the car scrappage scheme to incentivise the removal of some of the most energy guzzling and polluting private passenger vehicles from the national vehicle fleet. The first call was issued in 2010 and is aimed at replacing not more than 2,000 vehicles. The grant is capped to a maximum of 15.25% on the vehicle CIF price capped to a maximum grant of 2000 Euro. Cars eligible to be scrapped as part of the scheme are required to be older than 10 years. The car purchased needs to be of Euro IV or higher, have CO<sub>2</sub> emissions which do not exceed 150g/km and does not exceed a length of 4460mm. Additionally the new car has to have never been registered in any country. The scheme only applies to passenger vehicles for private use. The scheme is also open to those who buy a new car but do not have an old car to scrap. In that case, only a €1,000 rebate will be given with the other €1,000 being paid into a government fund which will be used to scrap other cars.

Tighter Euro Emission standards will obviously mean that less fuel is used per km travelled even without the introduction of such a scheme. Hence, emissions in Malta will decrease over time.

The scheme is helping to remove older type vehicles from the national fleet and promote the uptake of more efficient vehicle types. This implies that less fuel will be used in road transport as a result of this scheme.

## 5.4 Energy efficiency measure evaluations

### 5.4.1 Semi-quantitative Impact Estimates of Energy Efficiency Measures

Table 8: Energy savings

Sector/ subsector	Title of measure	Implementing agency	Duration	Energy savings expected in 2010 (GWh)	Energy savings expected in 2016 (GWh)
<b>Buildings sector</b>					
B.1.	Rebates on energy efficient domestic appliances	MRA	2006 - 2008	2.4	2.4
B.2.	Distribution of Energy Saving Lamps in the Domestic Sector	MRA	2009 – 2010	40.8	40.8
B.3.	Promotion of Solar Water Heaters in the Domestic Sector	MRA	2005 – ongoing	11.5	28

## Energy Efficiency Policies and Measures in Malta in 2012

<b>Sector/ subsector</b>	<b>Title of measure</b>	<b>Implementing agency</b>	<b>Duration</b>	<b>Energy savings expected in 2010 (GWh)</b>	<b>Energy savings expected in 2016 (GWh)</b>
B.4	Incentives for the uptake of PV systems and micro-wind	MRA	2005 – ongoing	5.6	36
B.5	Subsidy Schemes for Building Envelope Improvement	MRA	2006 -2010	0.95	1
<b>Public sector</b>					
P.1.	Green Leaders in the Public Sector	Ministry for Resources and Rural Affairs	2004 - ongoing	0.2	1
P.3.	Improving Energy Performance of Public Buildings	Ministry for Resources and Rural Affairs	2008-2014		3.5
P.6.	Energy Saving Measures in Social Housing	Housing Authority	2004 -2013	.05	.2
P.7.	Energy Saving and RES measures in state schools	Foundation for Tomorrow's Schools	2005 - ongoing	.24	0.63
P.10	Government incentives for local councils to reduce energy use	Local councils department	2008 – ongoing	.44	.84
<b>Industry &amp; SMEs</b>					
I.1	Malta Enterprise Energy Grant Scheme	Malta Enterprise	2009 - 2013	4	27.5
I.2	Energy Saving Measures in Government Owned Industry	Water Services Corporation	1995 - ongoing	42	42

Energy Efficiency Policies and Measures in Malta in 2012

<b>Sector/ subsector</b>	<b>Title of measure</b>	<b>Implementing agency</b>	<b>Duration</b>	<b>Energy savings expected in 2010 (GWh)</b>	<b>Energy savings expected in 2016 (GWh)</b>
<b>Energy sector</b>					
E.1	Smart Metering	Enemalta	2008-2013		25
T.1.	Promotion of transport modal shift towards public transport	Malta Transport	2011 - 2012		45
T.2	Promotion of e- work or tele- working	Public Administration HR office	2008 - ongoing	0.2	1
<b>Agricultural and Fisheries sector</b>					
A.1.	Modernisation of Agricultural Hold- ings	Ministry for Resources and Rural Affairs	2008 +	0.09	0.24
<b>SUM</b>				0.29 GWh	255.11 GWh

The impact of most of the measures in all sectors is expected to increase in 2016 compared to what was expected to be achieved in 2010. There are three measures which have the largest semi-quantitative impact estimates: the distribution of energy-saving lamps in the domestic sector, the energy saving measures in government owned industry and the shift to public transport. These three measures are part of the building, industrial and mobility sectors. If one analyses the semi-quantitative impact by sector, the buildings sector proves to be the sector which offers the largest opportunity for energy savings by a considerable margin.

#### **5.4.2 Lessons from Quantitative Energy Efficiency Measure Evaluations**

The promotion of transport modal shift towards public transport can be used as an example of a measure evaluation. The evaluation method for measuring the energy savings was the top-down approach. This evaluation method was used because the data available was obtained from national statistics.

In July 2011, a completely new network of public transport was introduced. The previous 508 public transport scheduled buses were replaced by 264 Euro V buses. This radical shift in public transport would certainly causes noticeable uncertainties when estimating the energy savings achieved. The expected savings of 45 GWh in 2016 are highly dependable on the success of the new fleet and the general public's reaction to its introduction.



## **Annex 1**

### **Energy Efficiency Measure Summary by Country**

Energy Efficiency Policies and Measures in Malta in 2012

<b>Residential Measures</b>	<b>Transport Measures</b>	<b>Industrial Measures</b>	<b>Public Measures</b>	<b>Cross-cutting measures</b>
Rebates on energy efficient domestic appliances	Promotion of transport modal shift towards public transport	Malta Enterprise Energy Grant Scheme	Green Leaders in the Public Sector	Creation of an Energy Efficiency Fund
Distribution of Energy Saving Lamps in the Domestic Sector	Promotion of e-work or tele-working	Energy Saving Measures in Government Owned Industry	National Green Public Procurement Action Plan	Information Campaigns
Promotion of Solar Water Heaters in the Domestic Sector	Vehicle Registration Tax Reform	Energy Efficiency Measures for the Hospitality Sector	Improving Energy Performance of Public Buildings	Revision of Administrative Arrangements
Incentives for the uptake of PV systems and micro-wind	Promotion of more efficient vehicles and electric vehicles	Energy Audits for the commercial sector	Energy Performance Contracting	Participation and Research regarding Energy Saving Measures
Subsidy Schemes for Building Envelope Improvement	Passenger vehicle scrappage schemes	Promotion of Groundwater Heating/Cooling	Improving Energy Efficiency in Public Sector Transport	
Requirements on the energy performance of buildings regulations	Traffic Congestion Reduction in Capital City	Support Scheme for SME's	Energy Saving Measures in Social Housing	
Energy Management Plans for Major Projects	Green Travel Plans in University and Colleges	Promotion of CHP for Industry and Large Tourist Complexes	Energy Saving and RES measures in state schools	
Energy audits for households	Provision of advisory services on energy efficient driving		Eco-Gozo	

Energy Efficiency Policies and Measures in Malta in 2012

			Participation by Local councils in Covenant of Mayors	
			Government incentives for local councils to reduce energy use	

## **Annex 2**

### **Country Profile**

# Energy Efficiency Profile: Malta

## May 2011

### Energy Efficiency Trends

#### Overview

Between 2000-2008 the energy efficiency index for the whole economy (ODEX) improved by 8%, similar to the EU average.

#### Industry

The efficiency of the industrial sector (measured at the level of the 7 main branches in terms of energy used per unit value added) showed an improvement of 5% from 2000 to 2008. A significant difference between the EU evaluation and the Malta measurement of ODEX is that in Malta, the value added are used as a proxy for sectoral production for each industrial branch. The quality of the data relating to energy consumption will also be upgraded following an extensive exercise by the national statistics office during the course of next year.

#### Households

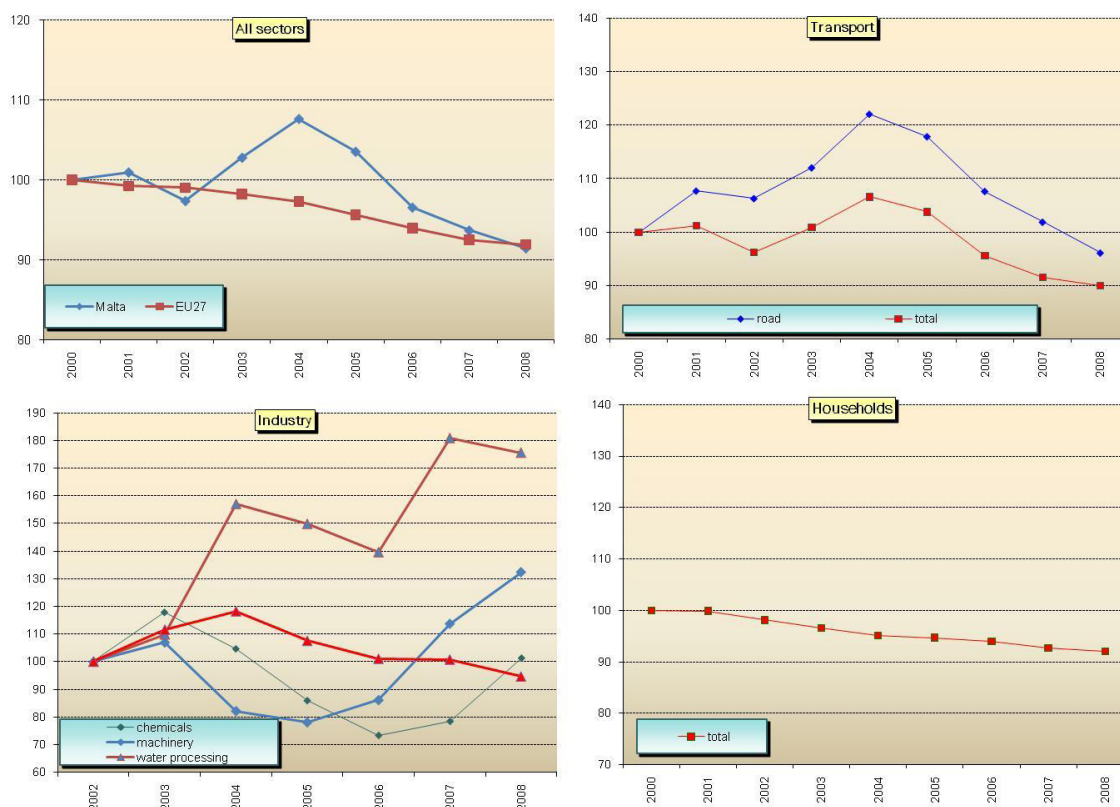
Between 2000 and 2008, the total energy efficiency of households improved by 8%. For heating, the data cannot be classified as the energy is mainly electrical, which is lumped with other consumption. Nevertheless, the energy demand for cooling is significantly on the increase with a greater import of air conditioning units. Its consumption is also lumped with other electricity uses, such as lighting and cooking. Since 2000 there was a notable shift from electric space heating to the use of portable gas (LPG) heaters; further shifts are expected in the future.

#### Transport

Between 2000 and 2006, the transport sector experienced a marginal increase in energy efficiency: 5%. This development is mainly due to the efficiency improvements in vehicle engines. Malta has no domestic air or rail transport systems.

Energy efficiency index (base 100=2000)\*

## Energy Efficiency Policies and Measures in [country name] in 2007



\* All indicators measured as a three-year moving average.  
Source ODYSSEE

## Energy Efficiency Policy measures

### Institutions and programmes

As part of Malta's alignment with EU policies, Parliament set up the **Malta Resources Authority (MRA)** in 2000, under the Minister responsible for Resources. As a public corporate body its mandate is to regulate and advise Government on matters related to energy, water and mineral resources (including quarrying and oil exploration). Its role is also to advise, co-ordinate and assist other government entities, to promote and administer energy legislation and to conduct analyses and assessments of developments in the energy sector.

Through the MRA, the Maltese Government has launched a number of energy efficiency programmes as part of a holistic energy policy, running in parallel with the three pillars of EU Energy Policy, namely security of supply, open market competition, and the protection of the environment. In tandem to the MRA, the **MEPA** (Malta Environment & Planning Authority), apart from being the Authority responsible for all master planning and local development, is also responsible for conducting air quality surveys and the drawing up of biennial 'State of the Environment Report'.

### Industry

Malta Enterprise has implemented up a number of initiatives to enhance energy savings and improve energy efficiency in the industrial sector. Other initiatives of Government include:

- Power factor correction for large scale energy users.
- Energy auditing scheme for major industrial activities (production processes).
- Eco-contribution as a disincentive to minimize waste (industrial, commercial & domestic sectors)

## Energy Efficiency Policies and Measures in Malta 2006

### Households, Services

Energy consumption in buildings is the latest intensified energy conservation focused effort. This is spelt out through a specific Legal Notice (Nov 2006). With effect from January 2007, the main initiatives include a new stringent energy requirement in the Building Regulations (part F). This will eventually lead to a harmonised energy certificate for all buildings by 2009 (effective mandatory date under EU legislation). A standard national calculation software tool is being designed in conformity with EU methodology for energy certification of buildings at design and auditing stages. Household appliances are now subjected to an improved energy labelling scheme, enhanced inspection of boilers and ventilation systems and increased efforts in energy savings and green procurement in the public sector at large.

### Transport

The Maltese government considers cost efficiency for commuters as one essential basic tool for regulating energy efficiency and minimising environmental impact of transport. In the absence of local air, surface rail or underground transport communal travel is encouraged through public transport by diesel bus. A 'Park and Ride' scheme has been in operation for almost a year and a new CVA (controlled vehicle access) scheme was introduced from 01 May 2007; this has introduced an hourly charge for entry into Valletta, a historical city, during office hours yet encouraging free access in the evenings promoting private enterprise and social activities.

### Energy prices and taxes

Energy prices and taxes are important determinants of energy consumption and have been successfully used to promote energy savings in Malta. Formerly, electricity rates were always considered a social commodity, almost by right, provided by a state-monopoly corporation, Enemalta. However, electricity tariffs went through a general overhaul in 2003, and another major review in 2008, essentially reflecting the true price of oil on international markets. Although this affected all sectors, the household and tertiary felt this most, raising a greater awareness of savings in consumption and the importance of energy efficiency at all levels.

Selected Energy Efficiency Measures Sectors		Title
Households		Promotion of solar water heaters, PVs
Households		Subsidy schemes for appliances and insulation for buildings
Households		Promotion of compact fluorescent lamps
Tertiary		Energy efficiency promotion in the tourism industry
Tertiary		Smart metering rollout
Industry		Support schemes for industry and sme's
Transport		Green travel plans for the public sector
Transport		Promotion of cleaner vehicles
Transport		Promotion of modal shifts