



The Maltese Energy Sector

An Overview

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MALTA RESOURCES AUTHORITY

Outline

- ✓ EU Energy Roadmap 2050
- ✓ Energy Strategy 2020
- ✓ Energy policy for Malta
- ✓ Energy Data and Status
- ✓ Renewable Energy





EU Energy Roadmap -2050

- ✓ a **low carbon, resource efficient and climate resilient economy**
- ✓ **Security of energy supply** and reduction of fuel imports
 - ✓ EU27 imports 82-84% Oil and 63-65% Gas consumption
- ✓ **Sustainable management** of greenhouse gas emissions
 - ✓ EU27 accounts for 11% of global CO₂ → 8% in 2035
- ✓ **Competitiveness**
 - ✓ EU → leader in research and innovation and green economy



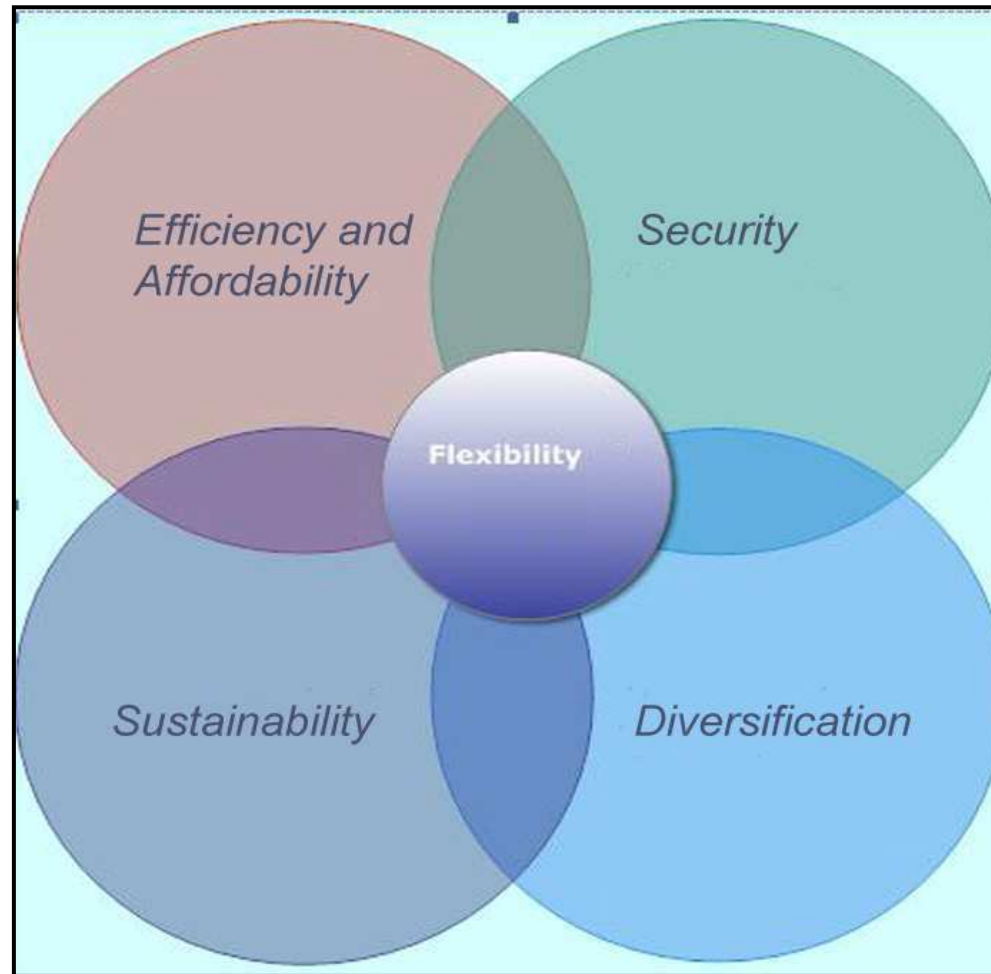
Energy Strategy 2020

A strategy for competitive, sustainable and secure energy

- ✓ An efficient use of energy towards an EU overall 20% savings by 2020
- ✓ Ensure free movement of energy
- ✓ Secure, safe and affordable energy for citizens and businesses
- ✓ Technological shift to low carbon energy sector
- ✓ Strong international partnership

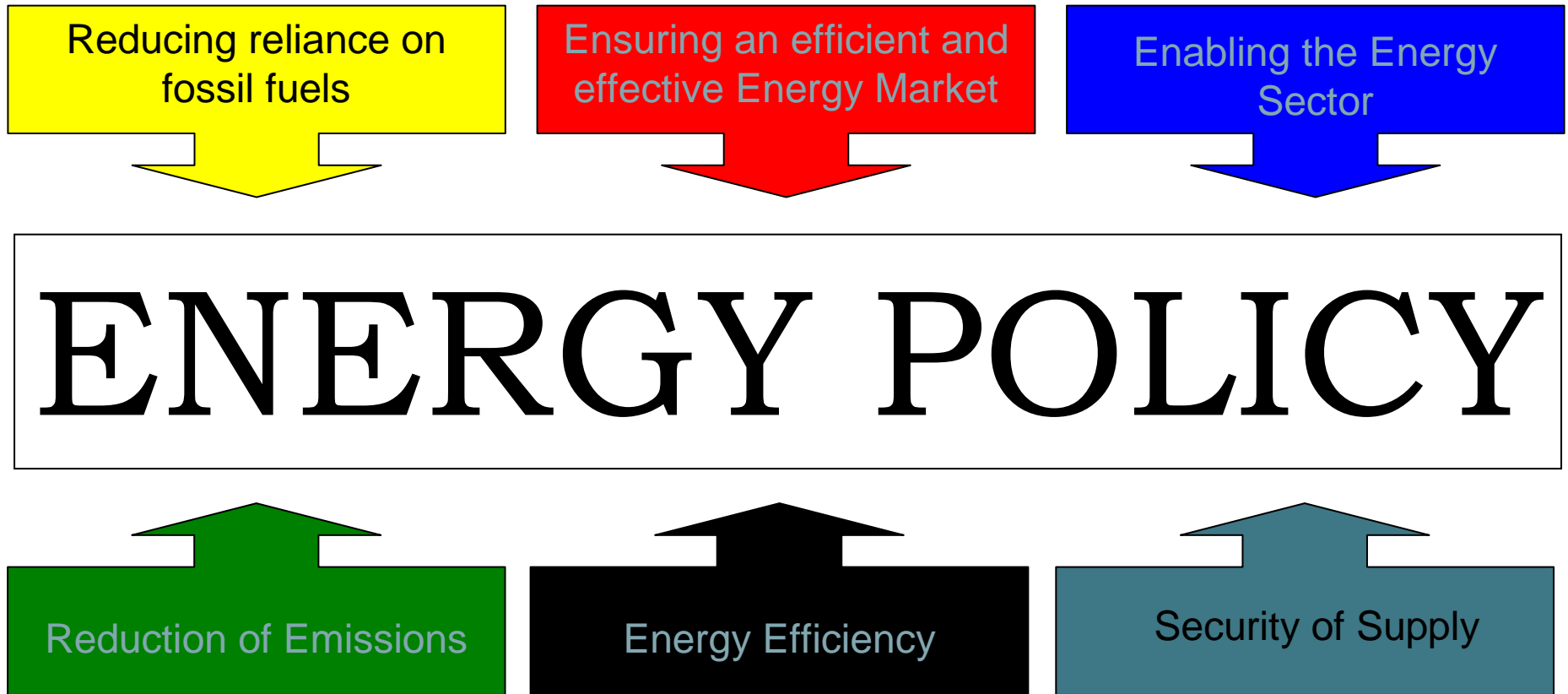


Energy Policy for Malta - Principles



•Source: *The National Energy Policy for the Maltese Islands*

Energy Policy for Malta – Policy Areas

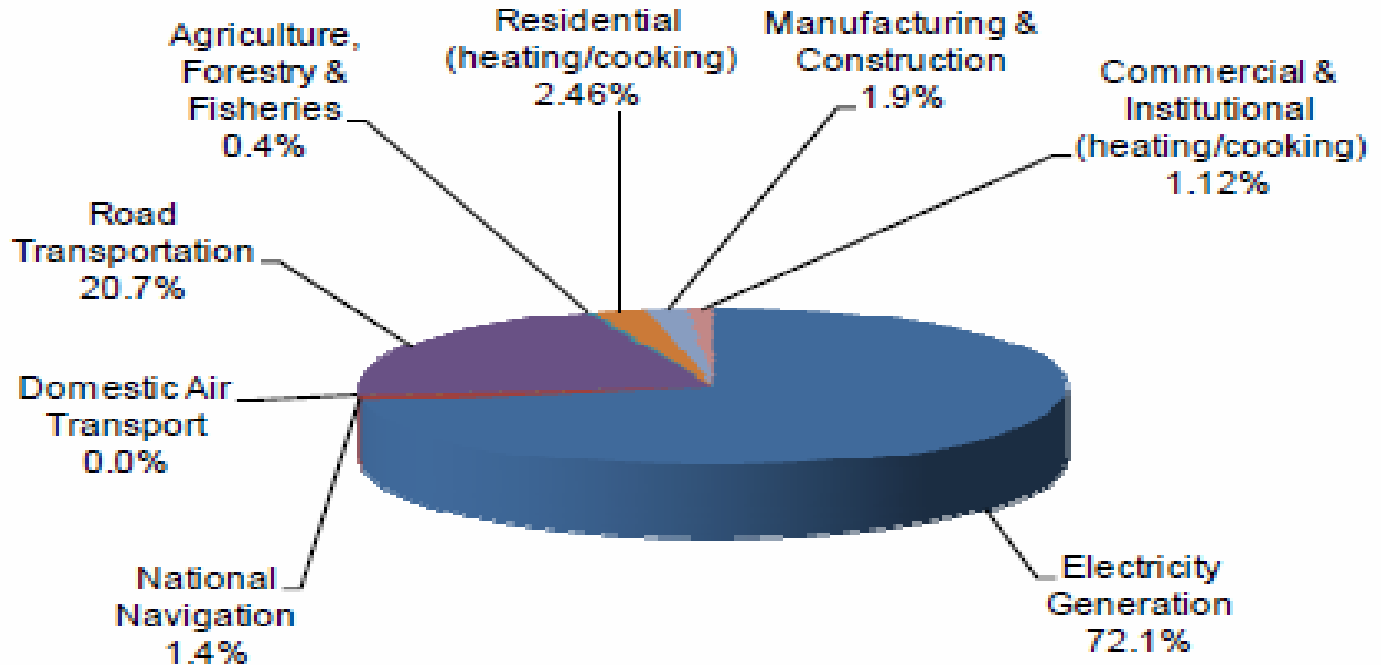


Energy Data - 2012



Energy Sector	GWh	%
RES - Electricity	22.54	0.41%
RES - Heat	67.07	0.95%
RES - Transport	32.40	0.60%
Electricity- Enemalta	2268.60	41.75%
Fuels- Heat	497.89	9.16%
Fuels- Transport + Industry	2298.06	42.29%
Capping for aviation @ 4.12%	262.66	4.83%
Total	5449.22	100%

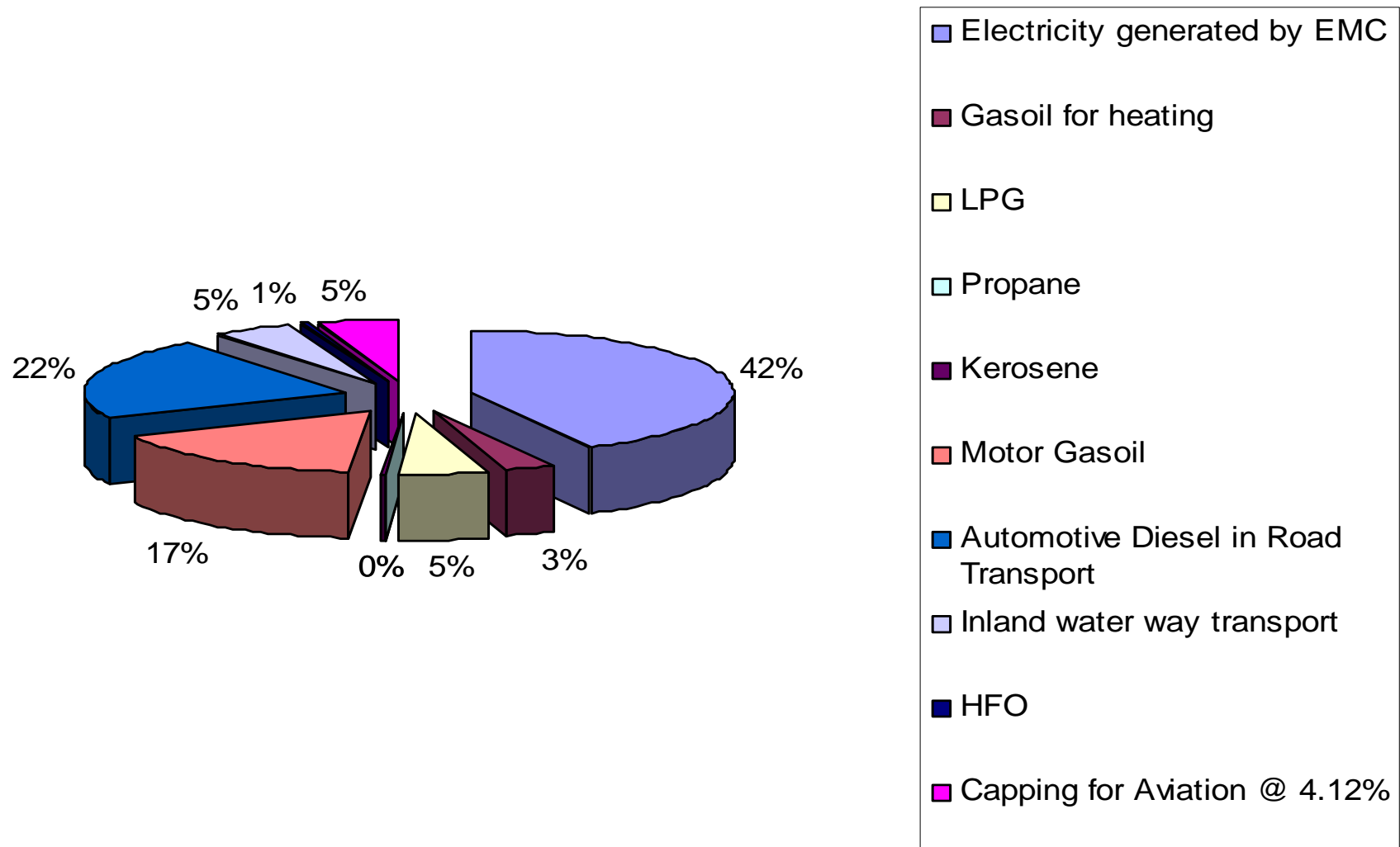
Consumption of Energy Imports



•Source: *The National Energy Policy for the Maltese Islands*



Consumption of Energy - Types





Energy Sector Status : Electricity

✓Operational installed nominal capacity in the power station at the end of 2012 was MPS : 157 MW and DPS: 454MW with Base Load 160MW and Peak 425MW Summer time

✓The estimated overall power station efficiency based on the first two months of 2013

MPS: 28% DPS: 39%

✓In 2012 the Fuel mix was : HFO/Gasoil (89%/11%)



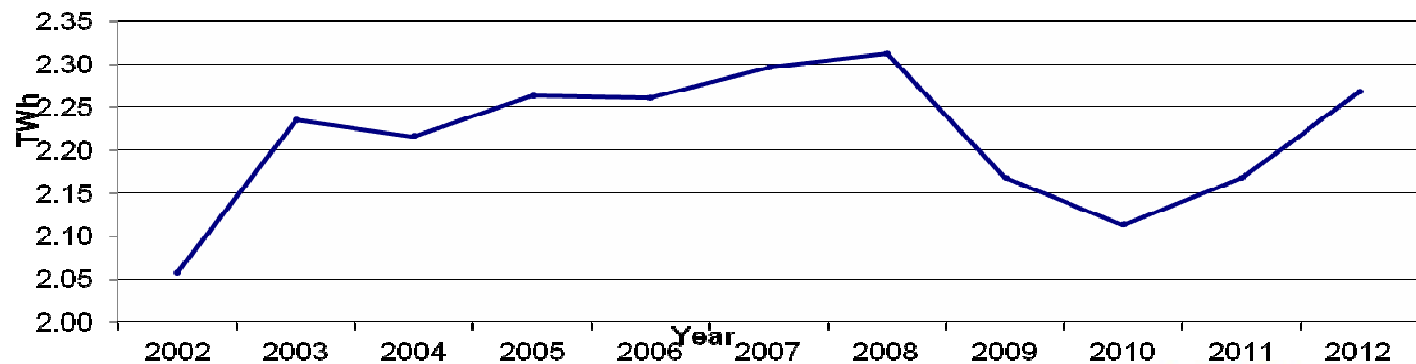
Energy Sector Status : Electricity

Constraints

- ✓ high dependence on oil
- ✓ No interconnections: limits integration of intermittent RES
- ✓ Aging and inefficient generation plant
- ✓ Distribution Network issues
- ✓ Demand profile with large difference between peak and low.

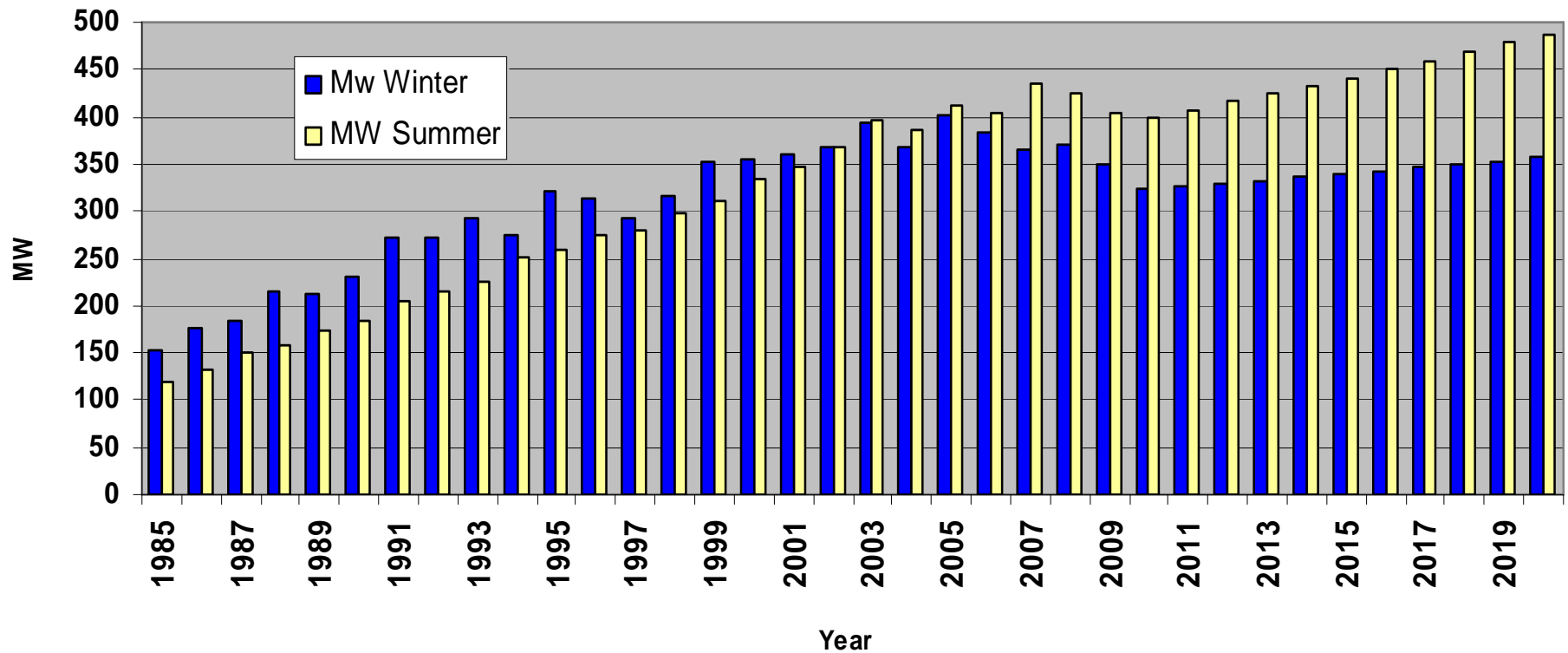


Electricity Generation in TWh



Energy Sector Status : Electricity

Winter / Summer Peak Load





Energy sector status : Petroleum

Petroleum internal market

- ✓ Malta depends 100% on petroleum imports
- ✓ Fuel internal market liberalised as from 2007
- ✓ Competition in the LPG market
- ✓ Introduction of biofuels substitution obligation in transport fuel in 2011
- ✓ Old storage facilities
- ✓ Petrol stations upgrade
- ✓ Fuel quality control



Issues

- ✓ *The need for upgrade of primary storage facilities*
- ✓ *Limited competition in retail sector*





Renewable Energy

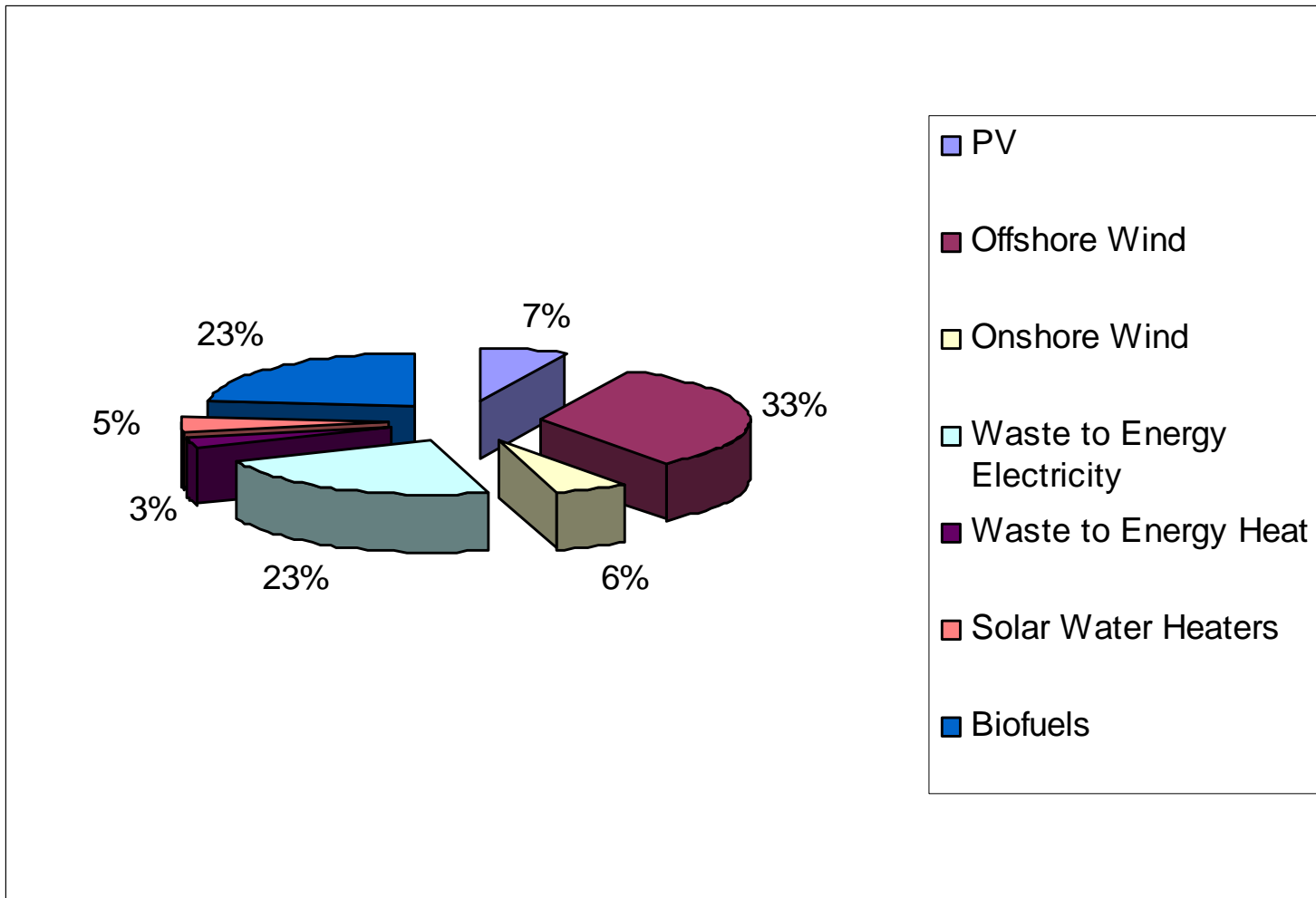
- ✓ 10% share of RE in the gross consumption of Energy by 2020 (with a separate target of 10% RE in transport)
- ✓ RES Percentage share in gross energy contribution

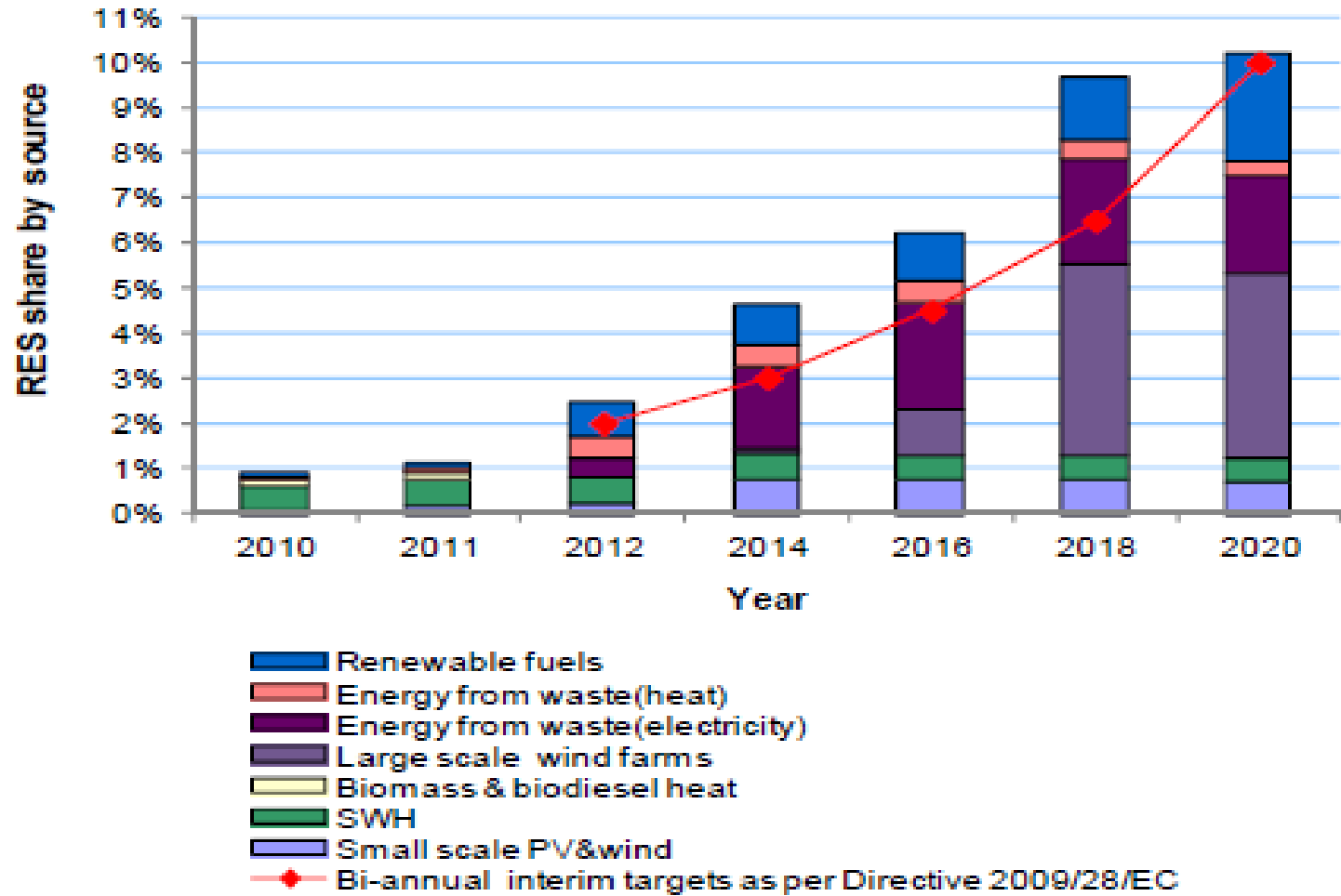


	2012	2015	2020
PV	0.21	0.72	0.69
Offshore Wind	0	0	3.48
Onshore Wind	0	0.3	0.61
Waste to Energy Electricity	0.14	2.18	2.18
Waste to Energy Heat	0.15	0.45	0.32
Solar Water Heaters	0.71	0.56	0.52
Biofuels	0.55	1.03	2.4
		Total	10.2



Renewable Energy - 2020



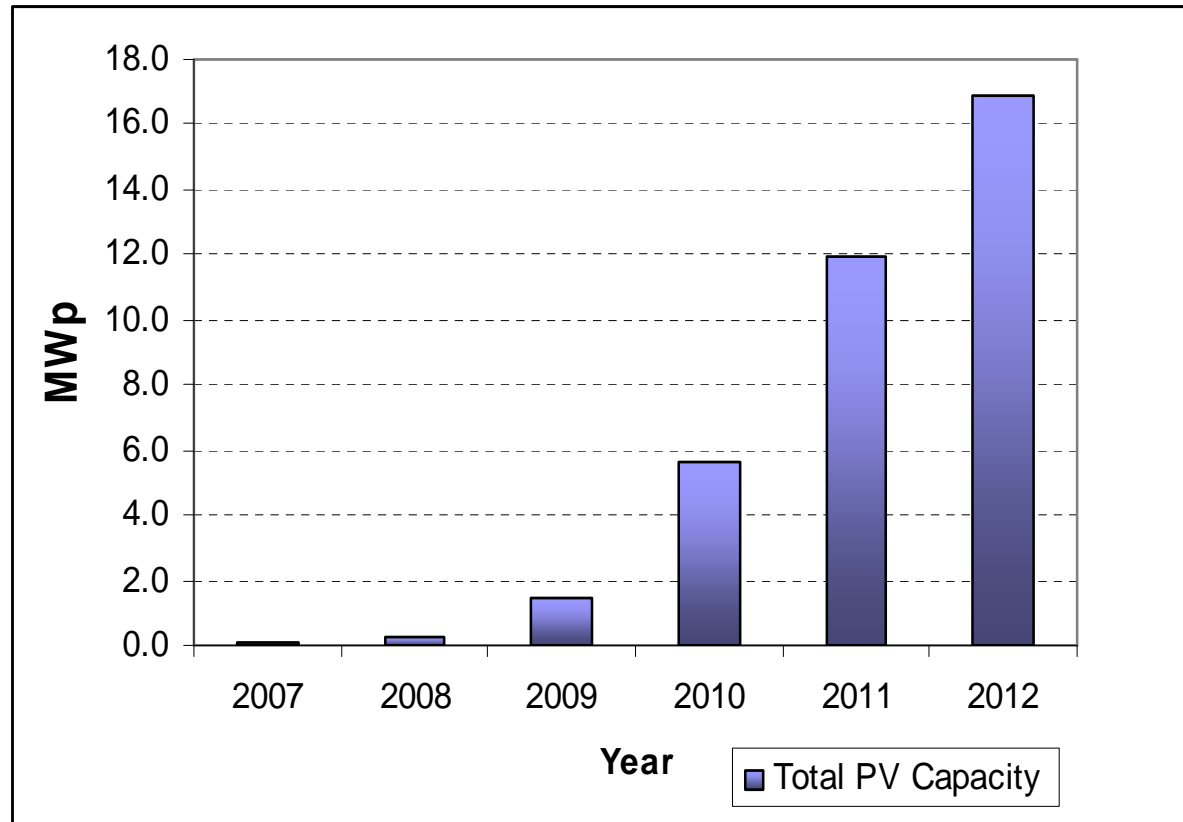


•Source: The National Energy Policy for the Maltese Islands



Renewable Energy - PVS

PV Installation uptake trend





Renewable Energy - Wind

Onshore wind

- ✓ Micro wind (2012:74kW & 2020:127kWp)
- ✓ Large scale: (Bahrija, Hal-Far: 14.4MWp)

Offshore wind

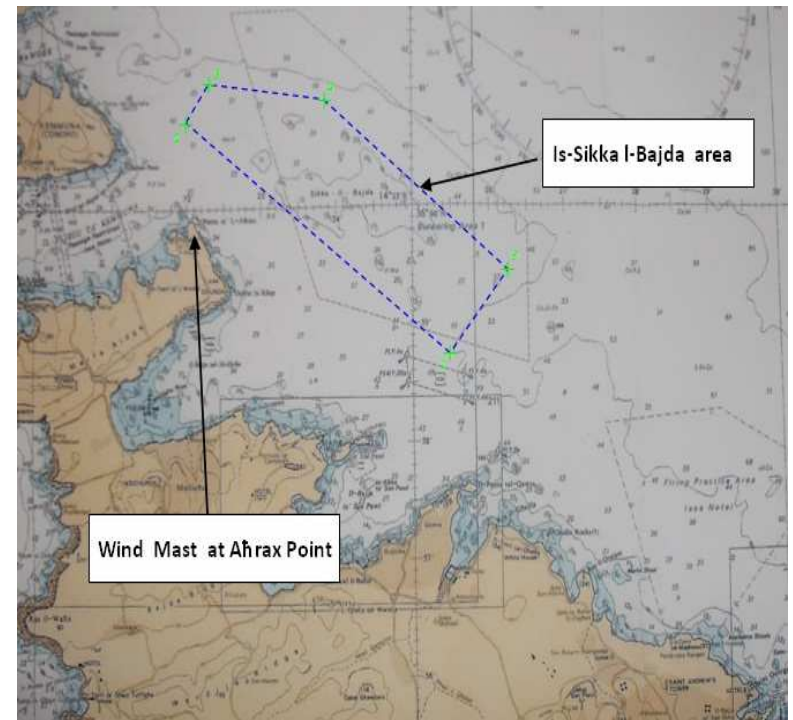
- ✓ (Sikka il-Bajda:2016-2020: 72-100MWp)
- ✓ NER 300 – Call for project to be issued shortly - floating 52MWp wind farm





Wind Energy Challenges & Risks

- ✓ Environmental issues
 - ✓ Permitting of wind farm 90MW at Sikka I-Bajda.
- ✓ Financing of projects
 - ✓ Relatively high cost technology
- ✓ Geophysical realities and environmental issues
- ✓ Economies of scale
- ✓ Public awareness and acceptance





Renewable Energy – Waste

- ✓ Landfill Gas – Electricity Biogas Started to operate end 2012
- ✓ Residue Derived Fuels – Electricity – Expected 2018
- ✓ Mechanical Biological Treatment Plants - Biogas
 - ✓ Sant Antnin –Electricity - Started to operate 2011
 - ✓ Malta North Electricity – Expected 2014
 - ✓ WSC Tal- Barkat Electricity – Expected 2015
 - ✓ Siggiewi Cattle Farm (Digestion)- Expected 2015

Note: All plants will also provide heat energy



Thank you

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