Table A: Description of measures, implementiing parties and policies

Individual Measure Reference No.	Short Description	Full Description of Measure	Obligated/ Participating/Entrusted Party	Policy Measures
Sector: Obligation on Enemalta Corporation				
EMC-1a	To instruct consumers in wise energy use in the home through appropriate messages (both general and specific) via smart meters. Smart meters will also detect fraud and hence control excessive use of energy which usually accompanies fraud.	In 2008, Enemalta Corporation awarded a contract for a smart meter system. The smart meters roll out started in 2009 and is expected to be completed by end 2014. Smart meters enable restructuring of the billing process, improved customer relationship management and the introduction of e-services that further empower clients to manage their energy consumption better. It will enable Enemalta Corporation to inform consumers on wise energy use through messages via the meter, including personalised messages based on the specific consumption level or pattern (e.g. pointing out high energy consumption as it occurs prompting reflection towards energy efficiency).	Enemalta Corporation	Energy Efficiency Obligation
EMC-1b	To use the smart meter innovatively as a tool to overcome consumer complacency towards energy efficiency in the long term	The literature reports, and this is confirmed by observation of other events, that the effect of such measures tapers off after a time, say 2 years for this application. Enemalta Corporation is expected to manage the smart meter system directly and indirectly to overcome this tendency, e.g. by involving children in education for wise energy consumption.	Enemalta Corporation	Energy Efficiency Obligation
EMC-2	The Progressiveness of the Domestic Residential Household Tariff System	Enemalta Corporation will adopt a 'progressive' rising block tariff whereby consumption at higher ranges are 'penalised' through higher rates per kWh.	Enemalta Corporation	Energy Efficiency Obligation
EMC-3	The Incentive towards Energy Efficiency in the Tariff Structure (Eco-reduction)	Enemalta Corporation will adopt an appropriate mechanism wherby it rewards economy in consumption of energy. Consumers are granted rebates if their consumption is below a stipulated level.	Enemalta Corporation	Energy Efficiency Obligation
Sector: Public Services				
P-1	Street Lighting Retrofitting (Gozo)	The project will consists of: - the replacement of roads and street lighting – over 6000lamps - from the present lighting luminaries to LED's. The existing lighting infrastructure, that is the poles and the cables, are retained and hence only the light fittings will be replaced. - the introduction of smart lighting, including dimming capability. LUX mapping design to maintain the appropriate standard for arterial roads and junctions will be adopted.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
P-2	Street Lighting Retrofitting (All Malta)	The project will consists of: - the replacement of roads and street lighting by Transport Malta – over 500 lamps in 12 kilometers - from the present lighting luminaries to LEDs. The existing lighting infrastructure, that is the poles and the cables, are retained and hence only the light fittings will be replaced. - the replacement of roads and street lighting through PPP – over 33,000 lamps - from the present lighting luminaries to LEDs. The existing lighting infrastructure, that is the poles and the cables, are retained and hence only the light fittings will be replaced. - the introduction of smart lighting, including dimming capability. LUX mapping design to maintain the appropriate standard for arterial roads and junctions will be adopted.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
Sector: Public Buildings				
PB-1	Retrofitting of Energy Efficient Measures in Public Schools	Measure includes the retrofitting of a number of public schools. Modification will not be limited to the building envelope (e.g. apertures, windows and provision of insulation) but will include a changeover of the existing lighting system to energy-efficient lighting.	Foundation for Tomorrow's Schools	Control through national budget and Public Sector leading by example
PB-2	Retrofitting of Energy Efficient Measures at St. Vincent De Paul – Rehabilitation Centre & Old Peoples' Home	Measure includes the retrofitting and replacement of apertures, AC, insulation installation and replacement of light fittings. The poject also includes replacement of an old boiler with energy-efficient CHP.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-3	Retrofitting of Energy Efficient Measures at Armed Forces of Malta Barracks	A number of Armed Forces Barracks in Safi, Luqa and Gozo will have their lighting systems and lighting fixtures substituted to energy-efficiency lighting systems.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-4	Retrofitting of Energy Efficient Measures at Civil Abattoir	The retrofitting of the civil abattoir will include the improvement of the building envelope through the installation of double glazing windows, roof insulation and the changeover to energy-efficiency lighting.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-5	Retrofitting of Energy Efficient Measures at Auberge D'Aragon	The current lighting system (including fixtures) will be substituted with an energy-efficient lighting system.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-6	Retrofitting of Energy Efficient Measures at Malta Police Force Buildings	Retrofitting of buildings currently occupied by the Police Force (Headquarters, Training School, Dog and Horse Mounting Sections and garage) will undergo a retrofitting programme which includes the improvement of the building envelope through the installation of double glazing windows and the changeover to energy-efficiency lighting.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-7	Retrofitting of Energy Efficient Measures at Project House, Blocks A and B	The retrofitting envisaged will include the improvement of the building envelope through the installation of double glazing windows, roof insulation and the changeover to energy-efficiency lighting.	Ministry for Energy and Conservation of Water	Control through national budget and Public Sector leading by example
PB-8	Installation of Cogeneration Plant at Gozo General Hospital	A new CHP will be installed in 2014 to replace an old inefficient 260 Tonnes/Annum fuel oil boiler and approximately 1.359 GWh/Annum of grid-sourced electricity.	Ministry for Health	Control through national budget and Public Sector leading by example
PB-9	Installation of Cogeneration Plant at a Hospital with High Heat-to-power Ratio	It is envisaged that a cogeneration plant shall be installed at a hospital with high heat-to-power ratio. A potential case has been identified to replace old boilers and also place electricity on the grid. The intention of the unit is to provide hot water for the hospital.	Ministry for Health	Control through national budget and Public Sector leading by example
Sector: Government-Owned Industries				

WSC-1	Reduction of Power Requirements in the Transfer and Distribution of Water through Various Pipelines	WSC is seeking to upgrade three old pipelines which are currently operating inefficiently due to their internal surface condition and their capacity in relation to the demand upon them. The WSC is also seeking to lay a new pipeline to change the potable water supply system to the north east part of Malta from a direct pumping system to a gravity system, resulting in improved consumption of electricity. Lengths of Pipelines: - Ta' Bakkja Pumping Station to Ta' Qali: 4km - Ħondoq Booster to Ta' Ċenċ (Gozo): 9km - Ta' Qali to Naxxar Transfer: 4km - Ta' Qali Reservoir to North East Area: 8km	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-2	Reduction of Power Requirements through the Use of Variable Speed Drives for Groundwater Abstraction Pumps	WSC is seeking to install closed loop variable speed drive systems on groundwater production pumps in Gozo to operate these pumps more efficiently with regards to both power consumption and water quality. This reduces the specific energy consumption of water abstracted from the aquifer which is an integral part of the daily routine operations. Some existing pumps also need to be replaced with ones compatable to variable speed systems. This would also control the amount of water that is drawn from each source, hence avoiding the need of further treatment further downstream in the supply process.	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-3	Upgrading of RO High Pressure Pumps and Energy Recovery Systems	WSC is seeking to replace the older less efficient high pressure and energy recovery systems with more technologically advanced systems to improve on the specific energy consumption of its RO plants, taking advantage of the more efficient equipment available today.	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-4	Reduction of Power Requirements through Replacement of RO Auxiliary Pumps	WSC is seeking to replace aging less efficient auxiliary pumps at its RO desalination plants with new pumps to improve on the specific energy consumption of its RO plants. These new pumps are also more suitable for the current plant operational mode. Auxiliary pumps are used to pump feed water into the plant, boost water through filters within the plant to the high pressure pumps for the actual RO process, and to pump product water out of the plant.	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-5	Replacing Desalinated RO Water by Groundwater	WSC is seeking to push the quality of the water produced from three of its pumping stations to potable standards throughout the year. These pumping stations, two in Malta and one in Gozo, are subject to source contamination over prolonged periods throughout the year which renders them unfit for potable water extraction purposes. Through this intervention, the need of substitute RO water (whose production is energy intensive) would be reduced to make good for polishing reject only. This measure entails installation of ultra filtration (UF) units in Gozo to polish and render potable ground water which is currently being diverted to drain, including civil engineering work..	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-6	Reducing Electricity Consumption through the Elimination of Seawater Infiltration in the Sewage Collection Network	The sewage collection network is predominantly a gravity system. Part of the network, namely that in coastal areas, runs below sea level. Given the characteristic local fissured stone, any flaws in the pipework would immediately result in seawater infiltration into the system. Such infiltration results in increased pumping volumes, increased treatment requirements, and increased salinity in the treated effluent with a direct adverse impact on its potential for reuse. Seawater infiltration thus results in an overall net increase in power consumption. WSC is seeking to rehabilitate sewage collection pipes which are installed below sea water level mainly by in situ repairs with the aim of reducing seawater infiltration into the sewage collection network. It is required to purchase equipment for the in situ rehabilitation of sewers and manholes and carry out rehabilitation works.	Water Services Corporation	Own inititive and dialogue with Regulator
WSC-7	Upgrading the Quality of Treated Sewage Effluent to Replace Desalinated RO Water for Non-potable Uses	The Project is aimed to provide an alternative water resource. Three polishing plants will be installed, thus making secondary treated sewage effluent suitable and safe for various non-potable purposes, thereby substituting energy-intensive RO desalinated water.	Water Services Corporation	Own inititive and dialogue with Regulator
WS-1	Rendering Plant (Autoclave) for Animal Waste in the Civil Abattoir	The project entails the construction of a rendering plant for the treatment of three categories of waste of animal origin. The facility new addition to the present plant will decrease the amount of fuel required for the incineration process after the animal waste would have passed the rendering process . The facility shall also include ancillary facilities including waste water treatment plant for the treatment mechanism for the slaughtering waste from the Civil Abattoir to the rendering plant and other ancillary facilities such as sanitary facilities and administration office.	Wasteserv Malta Ltd.	Own inititive and dialogue with Regulator
Sector: Residential - Buildings				
RSB-1a	Incentive Scheme for Building Envelope Improvement (Double Glazing)	An incentive scheme to help people upgrade their residence to one which is more energy efficient.	Malta Resources Authority	Fiscal incentives
RSB-1b	Incentive Scheme for Building Envelope Improvement (Roof Insulation)	as for RSB-1a	Malta Resources Authority	Fiscal incentives
RSB-1c	Solar Water Heater Incentive Scheme	as for RSB-1a	Malta Resources Authority	Fiscal incentives
RSB-2	Energy Efficiency in Low Income Houses in MED Grant Scheme (following already-completed Energy Audits)	Following already-completed energy audits, the energy efficiency of low-income houses will be improved through the installation of solar water heaters, double glazing and roof insulation.	Malta Intelligent Energy Management Agency	Fiscal incentives with social dimension
RSB-3	Scheme for the Installation of Heat Pumps (Domestic)	This is a scheme intended for subsiding heat pumps for domestic use for heating water so as to incentivise their use in those premises where solar water heater cannot be installed, such as due to lack of airspace in apartments. Through this scheme, householders will be offered a financial incentive towards the capital cost of this device.	Malta Resources Authority	Fiscal incentives
Sector: Transport				
TR-1	Grant Scheme to Improve Vehicle Fleet Efficiency	Between €500 and €900 grant towards the purchase of a new M1 vehicle provided another M1 vehicle older than 10 years is scrapped.	Transport Malta	Fiscal incentives
TR-2	Grant Scheme to Improve Vehicle Fleet Efficiency	A grant of up to €2000 towards the purchase of a new M1 vehicle provided a vehicle another M1 vehicle older than 10 years is scrapped.	Transport Malta	Fiscal incentives
Sector: Private				
PS-1	Cogeneration Plant at Neptunes Aquatic Sports Association Malta, St. Julian's	Cogeneration Plant at Neptunes Aquatic Sports Association Malta to replace old boilers and also place electricity on the grid. The intention of the Unit is to heat the pool in the winter period.	Private Sector	Financing Schemes and fiscal incentives
PS-2	Cogeneration Plants in the Hospitiality Sector	Cogeneration Plant in 8 Hotels (75% of the availibility quoted from the MRA Analysis of Cogeneration Potential 2009) in this Category to replace old boilers and also place electricity on the grid. The intention of the Unit is to provide hot water for the hotel.	Private Sector	Financing Schemes and fiscal incentives
PS-3	Cogeneration Plants in the Hospitiality Sector	Cogeneration Plant in 12 Hotels (50% of the availibility quoted in the MRA Analysis of Co-generation Potential 2009) in this Category to replace old boilers and also place electricity on the grid. The intention of the Unit is to provide hot water for the hotel.	Private Sector	Financing Schemes and fiscal incentives

PS-4	Installation of 37 Solar Thermal Water Heaters	This project involves the installation of solar water heaters in two premises under the responsibility of the Daughters of the Sacred Heart - Malta. Through these installations, 20% electricity saved from SWH. Apart from the environmental benefits, the congregation is also going to organise an environmental awareness campaign amongst the school and provincial community residing in the premises.	Private Sector	Financing Schemes and fiscal incentives
PS-5	Scheme for the installation of heat pumps for industrial use	This is a scheme intended for subsiding heat pumps for heating water in commercial premises so as to incentivise their use in those premises where solar water heater cannot be installed, such as due to lack of airspace (access to suitable and sufficient solar radiation) or high rate of water usage. Through this scheme, a number of commercial operators (300) will be offered a financial incentive towards the capital cost of this device. The main objective of this measure is to effect a change in mentality in favour of intelligent energy use in the sector.	Private Sector	Financing Schemes and fiscal incentives
PS-6	Tax Incentive Scheme for Industry for the Improvement of its Energy Consumption for Air Conditioning (Climate Control - Cooling)	The National Statistics Office has estimated through a previously conducted survey that a total 16 GWh of electricity are used for air cooling purposes (air conditioning) in enterprises that employ more than 250 people. A tax rebate is proposed to incentivise this sector to introduce modern efficient equipment that could be operated intelligently for space cooling and heating in the cold months where appropriate (AC). The main objective of this measure is to affect a change in mentality in favor of intelligent energy use for such applications in the sector.	Private Sector	Financing Schemes and fiscal incentives
PS-7	Tax Credit Scheme to Shift to More Energy Efficient Lighting	A tax credit scheme under the responsibility of Malta Enterprise will support the substitution of present light fittings with ones which emit less CO_2 and consume less energy. Hence the switch has have several advantages, which include longer life time and short payback period (2 to 3 years) while the consumption of energy will be reduced by half. Also with the new type and modern luminaries the power factor shall be improved and hence the losses shall continue to decrease.	Private Sector	Financing Schemes and fiscal incentives
Other Measures				
OM-1	To carry out a pilot project on a stratified sample of about 10,000 households to model consumer behaviour and their response to initiatives	The study shall be conducted with the help of the Institute for Sustainable Energy, the Malta Intelligent Energy Management Agency and the National Statistics Office.	Ministry for Energy and Conservation of Water	Modelling
OM-2	Energy Saving Settings from Government PCs	Re-configuration of energy savings settings on the 15,836 desktop computers used by Government employees. Based on data supplied by MITA, settings are adjusted to reduce the time it takes for an idle PC to go to sleep mode (and turn off the device) increasing the average time a PC spends in sleep mode by 10%. Envisaged savings are equal to 209,035kWh/annum for a toal of 1,254,211kWh over the period 2014-2020.	Ministry for Energy and Conservation of Water MITA	Good Practices in Public Service
OM-3	Energy Audits in Households	Quoting from the Budget Document 2014, published by the Ministry for Finance, dated 4th November 2013, the second main measure - Energy Efficiency Support - reads as follows: "This measure is intended to give support to Maltese households in order to help them implement measures and applicable systems which would lead to a reduction in the energy use at home. Every family will be given the opportunity to have an energy audit, on a voluntary basis. The household would then be given advice on how to reduce consumption. This measure will lead to an increase in energy efficiency at home and to a reduction in energy use and CO_2 emissions. In addition, it would also lead to lower energy expenditure."	Ministry for Energy and Conservation of Water	Control through national budget and own initiative
OM-4	Green Public Procurement – National Action Plan August 2011 Office of the Prime Minister	“In essence, this National Action Plan maps out the way for a strategic and co-ordinated approach to Green Public Procurement. Whilst on the one hand it sets out challenging targets, on the other it treads with caution in order to avoid market distortions and puts into motion the right culture change.” (Quote from the Executive Summary of the same National Action Plan)	Ministry for Finance	Good Practices in Public Service
OM-5	Greening our National Economy - Practical policy recommendations and implementing instruments	Edited by: Stefano Mallia and Bernard Mallia On the basis of the ideas of the Green Economy Working Group operating under the auspices of the MFEI and the Hon. Mr. Robert Arrigo Authored by: Stefano Mallia; Bernard Mallia; Ramon Muscat; Robert Geismann On commissioning of the Ministry of Finance, the Economy and Investment Published on 12 December 2011 “... the scope of this document is to present a set of proposed instruments that are aimed at stimulating the growth of the green economy in general and the achievement of specific policy objectives in particular.” (Quote from the scope of the same document)	Ministry for Sustainable Development and Climate Change	Good Practices in Public Service
OM-6	Green Leaders in the Public Sector	In 2004, Government appointed Green Leaders, one in each Line Ministry, in an initiative aimed towards meeting Government’s corporate responsibilities with regards to the environment. The Green Leaders have a duty to create environmental awareness within their Ministries and act as catalysts for action to promote environmentally friendly practices amongst which are energy efficiency measures and renewable energy.	Ministry for Energy and Conservation of Water Office of the Ptime Minister	Good Practices in Public Service