A proposal for an

Energy Policy for Malta

Ministry for Resources and Infrastructure
Malta

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A Proposal for a National Energy Policy

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A Proposal for a National Energy Policy

FORWARD

It is my pleasure to put forward this energy policy proposal for public consultation at a time when energy issues are very much at the centre of attention.

The draft policy proposes a holistic balanced approach for Malta to achieve the internationally accepted objectives of security of supply and competitiveness, with due regard to environmental sustainability. The document also includes a series of measures and actions designed to reach the various objectives, as well as the entity responsible to co-ordinate the various actions.

Government is taking a number of initiatives in the energy sector, reflecting the importance that energy issues have assumed today. At the policy and direction level, complementary to this general policy, specific detailed strategies are being developed or implemented for most areas such fuel market reform, introduction of renewable energy sources and energy efficiency, while the recently announced electricity generation plan will be the next milestone in energy development in Malta.

Also at the EU level, there has been considerable activity in this area of energy policy. On the internal front, the Commission has launched a green paper on energy efficiency for public consultation, and more recently a green paper on a European strategy for sustainable, competitive and secure energy. The Commission is also very vigorously working on an E.U. external Energy policy aimed at guaranteeing a supply of energy through energy partnerships with producer and consumer countries. Simultaneous discussion or debate on the draft energy policy and the proposals at EU level will lead to a more effective and widely accepted national energy policy.

The drafting of this proposal for Malta's energy policy was co-ordinated by the Malta Resources Authority. A participatory approach was adopted during its development. The first layer of consultees were governmental stakeholders, since these often implement policies within their sphere of activities that influence the direction of energy policy.

This is the result of that first consultation process: a proposal for a national energy policy that is, in effect, a compilation and consolidation in one coherent document of Government policies in the energy sector. Now this consultation process is being extended to include constituted bodies, NGO's and the general public. The Malta Resources Authority is now being entrusted with managing this process on behalf of Government.

I augur an active fruitful participation in this consultation process. Government will consider all suggestions and comments put forward such that the final product will be an energy policy that will find consensus among all stakeholders.

Ninu Zammit

Minister for Resources and Infrastructure

Draft National Energy Policy

INTRODUCTION

This document is intended to present Government's policy in the energy sector.

Energy has a significant impact on the quality of life. It is also essential as a resource for industry – the cost of energy will have an impact on the competitiveness of the country, and on economic growth and job creation.

During the 1980's and 90's, Malta experienced relative consistency in energy supply, markets and distribution. On the international scene, fuel prices were relatively stable, while internal distribution of energy products was assured by Government-owned Enemalta Corporation.

The energy scene is changing rapidly during this decade. Prices for fuel have increased substantially. Malta's accession to the EU is leading to developments in the organisation of the energy market. The adoption of the Acquis has also led to the establishment of more demanding environmental measures.

This document provides a policy framework for today's circumstances that takes into account relations with the EU, existing legislation, and Maltese circumstances. EU legislation is considered to be best practice – if conditioned by considerations specific to our country.

While the objectives of the policy will probably not change in the foreseeable future, measures proposed will need to be continuously updated to ensure that the objective will continue to be met even in changed circumstances.

The future seems to be more challenging and opportunities are higher.

- The importance of ensuring security of supply of fuel will increase. Volatility in markets, increasing international demand and regional political instability and security risks including threats of terrorism could lead to higher oil prices and shortages.
- Climate change is becoming a major issue. To date, Malta does not have any quantified mandatory targets for the limitation or reduction of greenhouse gas emissions, either under the UNFCC/Kyoto Protocol process (being a non-Annex 1 party) or under the EU 'burden-sharing' agreement (limited to the EU-15). In the future, under an EU post-2012 regime, targets for Malta for the limitation or reduction of emissions may be a possibility. In any case, national and international opinion is demanding that energy supplies be secure and environmentally benign.
- In a global economy, Malta needs to have a competitively priced energy supply. Competitive prices and readily available energy supplies and services have become a necessary part of every day life – were they to be threatened, there could be the danger of economic and other dislocations throughout industry and society and lead to energy poverty for vulnerable members of society.

This energy policy is also developed within a framework of environmental considerations, EU legislation, technical realities and, to some extent, existing administrative structures. Energy policy also has to address or serve the demands of other national policy areas. It is strongly linked with environment, employment foreign and transport policy.

The European Union has recently proposed a number of initiatives in energy policy. The Commission has published a green paper on a European strategy for sustainable competitive and secure energy. The Energy Council and the Spring European Council have debated and reached conclusions on an energy policy for Europe. Various sectoral initiatives have been launched – notably in the fields of energy efficiency and biofuels – or will soon be proposed – such as in heating through renewables.

Constraints also exist.

The size of Malta's energy market is not conducive to economies of scale or of scope. At the same time, European Union policy for the energy sector is based on the use of market-based tools. These tools need to be carefully assessed in their transposition and implementation since they were not designed for a small economy such as ours, where the potential for effective competition is limited since a sufficient number of competitors is not feasible.

The absence of detailed statistics of the energy market that allow the design of focused measures is another constraint.

The energy industry is, by its nature, infrastructure based. From importation (fuel terminals, cables or pipelines) to storage, to transformation (electricity generation plant) to distribution (electricity distribution, petrol stations), infrastructure is costly and intended to last a long time..

This energy policy is set out to address these challenges.

CLIMATE CHANGE AND AIR QUALITY

Environmental policy has a major influence on the shape of this policy. In terms of climate change, although Malta does not have any quantified mandatory targets for the limitation or reduction of greenhouse gas emissions, any commitments in this area – say through participation in the emissions trading scheme – will have a high impact on the flexibility of options in energy policy. Emissions limits on power stations, and air (and fuel) quality directives and treaties, also have a large impact on energy policy options.

Climate change

Climate change issues are ever increasingly gaining in importance, even in the international political scene (ex. as observed in recent G8 summit). It is important to ensure that climate change is taken into consideration when proposing and implementing policies and measures in the energy sector, a major contributor to the anthropogenic causes of climate change. Climate change considerations in the international energy scene will potentially also have an effect on the local energy scenario. Malta is a non-Annex 1 party to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (KP) and therefore does not have any legally binding commitments to limit or reduce its national emissions of greenhouse gases under these international instruments.

Annex B of the KP sets out quantified emission limitation/reduction targets for Annex 1 parties. The Kyoto Protocol came into effect last February following ratification by the Russian Federation.

The European Community, as a party in itself to the Protocol, has a reduction target of -8% of 1990 levels by the KP commitment period 2008-2012. To ensure fulfilment of this overall target, the then EU15 decided upon a 'burden-sharing' agreement that sets out specific targets for the 15 Member States. Many of these member states have reduction targets, under this burden-sharing agreement, which are different from those set out in the KP.

To date, the 'burden-sharing' agreement has been maintained for the original 15 Member States already forming part of it. After the May 2004 accession, those new Member States that are also Annex 1 parties (eastern European states with economies in transition) continue to abide by their KP targets. Malta and Cyprus retained their position of having no emission reduction or limitation targets. It is not envisaged that the situation changes before 2012, however it could be expected that a new 'burden-sharing' agreement post-2012, incorporating all current EU Member States, may be negotiated. This may be heavily influenced by developments on the international scene and the future stance of the EU with regards to global negotiations on post Kyoto strategies.

The monitoring regime established by the EU indicates that the Union has delivered on its overall commitment under the UNFCCC of stabilizing emissions of carbon dioxide at 1990 levels. However, while a number of UE-15 Member States have also reached their ‘burden-sharing’ agreement targets (e.g. UK, Germany, Sweden) or are close to achieving their targets, others are still far from doing so (ex Ireland, Portugal, Spain). Most of the new eastern European member states have not only reached their respective KP emission reduction targets but also gone significantly beyond. This has mainly been due to the economic transition and industrial restructuring that these states are undergoing.

The EU efforts to ensure that KP targets are reached has led to a number of policies and measures being taken that either directly or indirectly lead to actual limitations or reductions of emissions of greenhouse gases, especially in the energy generation and use sector and the transport sector. These two sectors are the main contributors of emissions of greenhouse gases, especially carbon dioxide (through the use of fossil fuels), with the transport sector showing the highest rate of increase in emissions in recent years. Similarly, in Malta, these two sectors are by far the highest contributors of emissions. Malta, although not having any quantified emission limitation or reduction targets, still needs to implement the legislative measures taken by the EU.

In particular, large energy generation installations fall within the scope of Directive 2003/87/EC (Emissions Trading Scheme Directive). Local (existent and future) energy generation plants need to take into account the implications of this scheme in their planning. A national allocation plan for the second trading period (2008-2012) will be submitted by June 2006.

The Global Environment Facility through UNDP funded the first phase of Malta's Climate Change Project. The first phase of the Project has been completed. Malta's First National Communication was one of its accomplishments. The other achievements of this first phase were:

(1) Compilation of an annual greenhouse gas inventory for 1990-2000,

(2) Greenhouse gas abatement analysis,

(3) Analysis of vulnerability to climate change and adaptation measures,

(4) Public Awareness through two national symposia, workshops, publications, comprehensive project website, TV and radio programmes, feature articles in newspapers,

(5) Co-operation between many experts and organizations,

(6) Training of consultants for future national communications - capacity building and project sustainability.

Following Cabinet approval of the First National Communication, this was submitted officially to the UNFCCC during April 2004 and officially presented at the twentieth meeting of the Subsidiary Bodies of the UNFCCC to held in June 2004.

The objectives for the next phase of the project are:

- Identification of technology needs for emission reduction,
- Identification of technology needs for adaptation to climate change,
- Establishment of a climate change programme for Malta based on identification of emission reduction and adaptation technology needs,

- Establishment of national and regional networks,
- Establishment of climate change information portal,
- Public awareness of climate change issues and initiatives,
- Capacity building through training,
- Preparation of programs to address climate change,
- Establishment of a permanent national entity for compilation of greenhouse gas inventories.

Air quality

Air quality is one of the areas in which Europe has been most active in recent years. The EC aim has been to develop an overall strategy through the setting of long-term air quality objectives. A series of Directives has been introduced to control levels of certain pollutants and to monitor their concentrations in the air.

The following directives relate to air quality arising directly from the quality of fuel, and exclude a number of directives related to emissions from vehicles:

- Council Directive 80/1268/EEC of 16 December 1980 on the approximation of the laws of the Member States relating to the fuel consumption of motor vehicles;
- Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels;
- European Parliament and Council Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations;
- Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels;
- Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels;
- Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants;
- Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants;
- Directive 2005/33/EC of the European Parliament and of the Council of 6 July 2005 amending Directive 1999/32/EC as regards the sulphur content of marine fuels

Government has negotiated transitional periods from a number of these directives.

Environmental planning

In adopting new climate change commitments, Government will also be considering medium and long term impacts of the objectives of this energy policy. This policy synergises with, and will be taken account in – but is not intended to replace – other national environmental policies currently under development. These policies include the National Sustainable Development Strategy being developed in terms of the Environment Protection Act, and the National Allocation Plan in connection with the Emissions Trading Scheme.

OBJECTIVES AND PRIORITIES OF THE ENERGY POLICY

A **secure**, **competitively priced**, and **environmentally sound** energy supply is a basic requirement for a competitive Maltese economy. Without an energy supply with these characteristics, sustained economic growth, employment and prosperity will be jeopardised.

These three objectives of an energy policy are all essential, though there are different perspectives with respect to their relative importance. Indeed, in certain instances, these objectives are clearly complementary, while in other instances they appear to be mutually competitive.

Policy decisions sometimes involve tradeoffs between one objective and another. For example, improvement in energy efficiency will address all objectives of the energy policy. Similarly, investment in renewable energy sources addresses environmental protection and security of supply (though not necessarily competitive pricing).

The importance of **security of supply** can be realised by considering the cost of energy not being available when required by an end-user. Interruption to energy supply, or threats of interruption, quickly leads to widespread disruption. Better security can be achieved by ensuring that energy sources are reliable, that markets are designed and regulated appropriately, and that energy systems are resilient to shocks through a combination of diversity and flexibility.

The availability of **competitively priced high quality energy services** has a significant effect on the Maltese economy. This can be deduced from the debates that ensue when end-use prices are adjusted, with particular reference to affordability. These prices have an impact on the competitiveness of industry and services and on the achievement of the Lisbon Strategy objectives. They also have a direct impact on the life of the individual citizen.

Where **environmental responsibility** is involved, there is a growing consensus on the need to ensure sustainable development, and the measures that are being proposed will not conflict with but rather should be compatible with this concept.

THE ENERGY POLICY

Policy area 1: Energy efficiency

Policy statement: **Government will encourage and facilitate the achievement of increased energy efficiency in electricity generation and distribution, and in energy end-use, and will lead by example.**

Policy area 2: Reducing reliance on imported fuels

Policy statement: **Government will continue to provide opportunities in oil exploration, and support the reasonable development of sources of renewable energy.**

Policy area 3: Stability in energy supply

Policy statement: **Government will seek to diversify the current reliance on oil products while ensuring that contingency plans are in place to cater for short-term disruption in oil supply. Malta will interconnect with the European electricity system.**

Policy area 4: Delivering energy efficiently and effectively

Policy statement: **Government will reform the energy sector to ensure maximum competition possible within the limits imposed by the market, while ensuring that operators deliver the best quality of service at the cheapest possible prices through market forces complemented by robust regulation.**

Policy area 5: Ensuring that the energy sector can deliver

Policy statement: **Government will ensure that fiscal policy and policy in education and research support the general objectives of ensuring security of supply, environmental protection and competitiveness.**

POLICIES

POLICY AREA 1: ENERGY EFFICIENCY

Policy statement: Government will encourage and facilitate the achievement of increased energy efficiency in electricity generation and distribution, and in energy end-use, and will lead by example.

Background

Energy efficiency is a key objective in the Government's energy policy. Energy efficiency finds synergy in the achievement of all Government's objectives - it can assist the economy, as well as help to achieve social and environmental objectives.

Energy efficiency can have a significant impact on the demand for energy, and so can reduce the country's fuel bill and the release of carbon into the environment. It is widely perceived that the potential for improving energy efficiency exists in Malta.

In improving energy security and reducing carbon emissions, it has arguably the lowest cost, and highest reversibility of all options available to Government to meet its objectives. It is even more rewarding than the introduction of renewables in the achievement of environmental objectives, and hence deserves priority. The most important aspect of the energy efficiency policy is for that part of the technical potential that yields the most savings for a given investment to be identified and exploited first.

The EU is giving high priority towards energy efficiency and is also using Community technology research and demonstration programmes, such as the 6th RTD Framework Programme (2002-2006) and Intelligent Energy – Europe (2003-2006) to support energy efficiency. During 2005, the Commission has also launched a green paper on energy efficiency, followed, in 2006, by a green paper on a European strategy for sustainable, competitive and secure energy.

POLICY AREA 1A: EFFICIENCY IN ELECTRICITY GENERATION AND DISTRIBUTION

1A.1 Background

The main use of fossil fuels in Malta is for the generation of electrical energy for onward distribution and consumption within the Maltese Islands.

Electrical power is generated by two conventional thermal power stations owned by Enemalta Corporation and located in Marsa and in Delimara. These power plants utilise heavy fuel oil for conventional steam plant (boiler/turbo-generation) and gasoil for gas turbines.

The Marsa Power Station houses the older generation plant, some of which is past its expected useful life both from a technical and economic perspective. A large portion of the steam plant at this station was purchased second hand and dates back to the early 1950s. The Delimara Power Station houses relatively new plant, which was commissioned between 1992 and 1998 mostly using modern and cleaner technologies.

Equipment	Size (MW)	Number	Notes
Boilers	60	2	
	30	4	
	12.5	2	
Steam turbine	60	1	
	30	5	
	12.5	2	Not in service
Gas turbine (open cycle)	37.5	1	Cannot be used as synchronous compensator

Table 1 - Marsa power station plant list

Equipment	Size (MW)	Number	Notes
Boilers	60	2	Pressurised
Steam turbines	60	2	
Gas turbine (open cycle)	37.5	2	Can be used as synchronous compensators
Combined cycle gas turbine	110	1	2 gas turbines & 1 steam turbine

Table 2 - Delimara power station plant list

Consumption of electrical energy has been increasing steadily. This can be attributed to a number of factors including:

- Growth in the islands' economic activity;
- Higher standard of living, which has contributed to the increase in electrical loads; and
- Improved distribution network and use of electrical energy.

Until recently, the active power maximum demand (measured in MW) in any one year occurred on a cold winter day, but now the summer active power (MW) maximum demand has been approaching the winter maximum demand in terms of magnitude. The winter active power maximum demand is associated with the use of electrical heaters, which are predominantly resistive in nature. The maximum summer demand is further associated with the high reactive power demand that is associated with the increased use of air-conditioning systems.

Action at EU level

A driver to improving energy efficiency in power generation is the National Allocation Plan 2005-2007 that has been drawn up in accordance with Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading. The two power stations in Malta (operated by Enemalta) fall under this scope of this Plan. Under this plan, Enemalta's power generation installations have been allocated a quantified amount of allowances to cover projected emissions of carbon dioxide for the three-year period under consideration. If the installations need to emit more than they are allocated for, extra allowances need to be acquired from other participating installations through the trading market. The cost of purchasing allowances would potentially be passed on to the consumers through an increase in electricity prices. Alternatively, improving efficiency of power generation (in terms of emissions per amount of electricity generated) would result in emissions lower than the amount of allowances allocated. This could result in financial gains for the installations through the sale of excess, unused allowances on the trading market. A second allocation plan covering 2008-12 will soon be drawn up.

Directive 2004/8/EC on the promotion of cogeneration (combined heat and power) based on useful heat demand, aims to increase energy efficiency and improve security of supply. It aims to create a framework for promotion and development of high efficiency cogeneration of heat and power based on useful heat demand and primary energy savings in the internal energy market, taking into account the specific national circumstances especially concerning climatic and economic conditions.

The Integrated Pollution Prevention and Control Directive 96/61/EC and the use of Best Available Techniques (BAT) under this directive will improve energy generation efficiency (and making energy generation cleaner). The use of BAT will also be taken into account in the issue of allowances from the new entrant reserve to new installations under the emissions trading scheme.

1A.2 Objectives

Improving energy efficiency in generation and distribution will have an impact on the cost of delivered electricity and hence on the country's competitiveness. It will also gear any improvements in energy efficiency measures taken by customers and lead to lowering emissions from the power station and to improving security of supply.

1A.3 Work undertaken

Government has established energy efficiency as an important consideration for the authorisation of any new generation plant by the Malta Resources Authority and for the granting of any integrated pollution prevention permit by Malta Environment and Planning Authority.

It is also ensuring, through the budget approval process, that Enemalta strives continually to improve its efficiency of operations.

1A.4 Measures proposed

Considering the efficiency of the existing Enemalta electricity generation plant, there is scope for investment in new generation to raise energy efficiency levels. Complementary to measures proposed in other sections in this policy, Government will:

- Ensure that electricity producers seek ways to increase the efficiency of the electrical power generation plants, either by improving the efficiency of existing plant, or by retiring of older inefficient plant and investing in newer more efficient plant;
- In opening up the generation sector to competition to encourage investment by the private sector, ensure that applications for authorisations to generate electricity are decided on the basis of, amongst other things, considerations of energy efficiency;
- Improve the efficiency of the distribution network;
- Implement demand management measures intended to decrease the discrepancy between peak and minimum loads;
- Promote the generation of electricity produced from high-efficiency cogeneration plant in industry that uses heat and power in its manufacturing process

POLICY AREA 1B: ENERGY END-USE EFFICIENCY

1B.1 Background

Energy efficiency by consumers is so widely accepted that it seems inconceivable that it needs promotion by Government. Action in the form of informing the public and facilitating uptake of schemes will be taken. These will counteract barriers including:

- a lack of visibility of savings potentials and hidden costs of inefficient energy use;
- limited access to capital considering the long payback of energy efficiency measures;
- lack of knowledge on the cost-effectiveness, returns and risks of investments in energy end-use efficiency
- investor-user dilemma where owners of buildings or hire-car companies try to minimise investment costs in efficient energy-using technology since the resulting higher running and energy costs from using less efficient technology will not be paid by them but by their clients.

Action taken in this sector will be mainly intended to have a long-term effect, without restricting the possibility of an increase in justifiable energy consumption, due, for example, to strong economic growth or structural changes.

Action at EU level

The current EU strategy is to ensure the development of market based instruments to encourage energy efficiency. There are limitations to what such instruments can achieve and the manner of their implementation in such a small economy as Malta, due to the small size of the market.

Directive 2002/91/EC on the energy performance of buildings was enacted to promote the improvement of the energy performance of buildings, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness. This directive still needs to be transposed into national legislation.

Directive 2006/32/EC (just published) sets targets energy efficiency achievements in energy end use for each Member State with a cumulative target of at least 1% of inland energy consumption for each year reaching a total 9% reduction within 9 years. The idea is to improve energy efficiency in all end-use sectors, with a view to solving environmental, self-sufficiency and cost problems while adequately providing for increasing needs for lighting, heating, cooling and motive power without major upheavals. This is especially true when seen in the light of the Kyoto Agreement to reduce carbon dioxide emissions, where improved energy efficiency will play a key role in meeting the EU Kyoto target in an economic way.

A number of directives have been enacted on energy labelling, including Directive 2005/32/EC setting a framework for the setting of eco-design requirements for energy-using products, energy labelling for vehicles, and the energy star program for office equipment.

The Commission did not consider the individual pieces of legislation sufficient and a green paper on energy efficiency (Com(205)265) was launched in June 2005 for public consultation.

1B.2 Objectives

Energy efficiency measures in end use will enhance the country's competitiveness. Efficiency improvements will translate into lower energy bills for customers, or, more likely, higher productivity and greater comfort for the same expenditure in energy. In the commercial sector, an improvement in energy efficiency will result in an increase in productivity, which translates into higher incomes and may contribute to higher demand. In the domestic sector, the extra efficiency may be offset against greater comfort from the same expenditure in energy.

Energy efficiency measures will also have an effect on security of supply and emissions, since due to the inherent physics of conventional power generation, each kWh saved at the consumer's side will have a multiplier effect of around two to three kWh on the net inland fuel consumption figures.

1B.3 Work undertaken

Government has appointed green leaders for the public sector, entrusted amongst other things, for encouraging energy efficiency in the sector. MITI has also drafted a corporate energy policy for these green leaders to ensure a coordinated effort in reducing the negative environmental impact of Government investments and to ensure that entities operate in the most efficient manner and with the least possible cost.

The Water Services Corporation has been particularly successful in reducing electricity demand from a peak of around 15% of all electricity exported from the power stations in 1995 to around 6% in 2004. Similar work has been carried out by other large energy customers.

Government provides a grant on the purchase of electric vehicles of 15.25% of the purchase price up to a maximum of Lm500. A similar grant is provided by Government to subsidise roof insulation in the domestic sector.

Enemalta and the Water Services Corporation have also started indicating on energy bills the consumption by domestic consumers compared with the previous consumption of the same customer and against the average consumption for similar consumers.

The Malta Resources Authority is currently working on a national action plan whereby sectors have been identified for detailed study, with a view to establishing knowledge-based targets and implementing sector-specific energy measures.

Malta Enterprise and the Malta Tourism Authority have also been very active in funding energy efficiency measures under the 2004 – 2006 structural funds. The current schemes are now closed.

At least one local bank is also providing subsidised loans for investment in energy efficiency.

The Housing Authority, following the pilot energy saving project at Birkirkara tal-Ftieh, has decided that the following energy saving features will be incorporated, where possible, in its housing projects as from January 2005: Double glazing in apertures, window and door louvers, roof insulation, storm water cisterns, and solar water heaters. The specific results of the pilot project still have to be calculated following the monitoring exercise that is still underway, and these will be taken into consideration when taking the necessary steps to enhance further the design of new projects to achieve better energy performance.

1B.4 Measures proposed

The developments that will be undertaken in this sector will follow the proposed EU directive that establishes best practice for energy efficiency in the EU. Government therefore will:

- Bring all current initiatives within a more holistic national energy efficiency action plan by 2007 including targets for energy efficiency up to 2015;
- Ensure that competitively priced energy services are made available and promoted to final customers;
- Adopt exemplary energy efficiency practices in the public sector;
- Develop and adopt legislative and administrative instruments to achieve energy efficient and environmentally friendly buildings and services;

POLICY AREA 1C: ENERGY EFFICIENCY IN TRANSPORT

1C.1 Background

A reduction of fuel consumption in the transport sector can be achieved through an improvement in efficiency in transport in general. Although vehicle performance is expected to improve in this regard, this is unlikely to have any significant effect in the near future. However, if mass transportation can be improved to the point where current private vehicle users are attracted to using public transportation then there is likely to be considerable room for improving the country's transportation fuel bill. This will concurrently generate other improvements including reduction in air and noise pollution and other direct and indirect benefits associated with reduced pressures on the transport infrastructure.

Socio-economic developments, including an increase in the household disposable income, status associated with car ownership, dispersed land use developments and a public transport service which does not reflect the current travel demands, have resulted in the rise in car ownership and use. Overall, the net result is one of high fuel consumption.

The age of the national vehicle stock has improved in recent years though 33% of vehicles are over 10 years old, and another 41% are between 6 and 10 years old.

Action at EU level

EU institutions are currently working on a proposal (COM (2003) 739) that will set targets energy efficiency achievements in energy end use for each Member State with a cumulative target of at least 1% of inland energy consumption for each year reaching a total 6% reduction within 6 years. Part of these reductions will have to be achieved in the transport sector, through a variety of measures.

The EU's aim is to reach - by 2010 at the latest - an average CO_2 emission figure of 120 g/km for all new passenger cars marketed in the Union, based on the following three options:

1) Agreements committing the automobile manufacturers to reduce CO_2 emissions from passenger cars mainly by means of improved vehicle technology. Through the current EU voluntary agreement, car manufacturers have agreed to reduce carbon dioxide emissions of new cars by 25% on 1995 levels by 2008, effectively securing better fuel efficiency.

2) Improvements of consumer information on the fuel-economy of cars, including a Directive relating to the availability of consumer information on fuel economy and CO2 emissions in respect of the marketing of new passenger cars

3) Market-orientated measures to influence motorists' choice towards more fuel-efficient cars. This led to a proposal from the Commission for a Council Directive on passenger car related taxes that aims, inter-alia, at introducing a CO2 element in the calculation of car taxes for those Member States that have such taxes.

A proposal for a directive (Com(2005)634) issued late in 2005 requires that 25% of vehicles >3.5 tonnes purchased by public bodies are clean vehicles.

1C.2 Objectives

Energy efficiency will help meet all three policy objectives. In particular, energy efficiency in the transport sector could have a significant impact on climate change and air pollution, particularly in town and village centres since transport accounts for around 50% of energy end use in Malta.

1C.3 Work undertaken

The white paper on transport being implemented by Government envisages a number of measures that lead to improved energy efficiency in transport.

In an effort to increase the usage of the public transport service, a number of buses have been replaced and improvements carried out to the public transport infrastructure and in providing reliable passenger information, while certain bus routes have been restructured and new ones introduced. Concessionary fares for elderly and students were introduced to improve accessibility for the transport disadvantaged.

The white paper envisages the following measures that will have an impact on energy efficiency:

- Re-organise the operations and upgrade the infrastructure of the public transport system;
- Restraining non-essential car use by parking management to restrict the availability of free parking, promoting employment schemes to encourage commuters to use public or shared transport, introducing car access restrictions and integrating land use and transport planning ;
- Increase the accessibility for pedestrians, cyclists, through the use of safer infrastructure;
- Develop guidelines for good practices in urban transport planning;
- Commission feasibility studies on alternative mass transit systems for Malta.

In addition, other actions being envisaged in the transport sector include:

- Introduce improvements to the national single vehicle approval system that would result in a reduction in the importation of older vehicles imported from outside the European Union;

- Carry out more vehicle roadworthiness and vehicle emission checks by the roadside.

1C.4 Measures proposed

Government will:

- Support initiatives at EU level to promote the manufacture and marketing of more efficient vehicles and components;
- Undertake advisory services intended to change attitudes and influence behaviour in transport use;
- Ensure that transport policy and its implementation aim to improve efficiency in energy use in the transport sector with particular emphasis on public transport systems;
- Promote the use of more efficient or environmentally friendly alternative fuels for transport and/or modes of transportation;

POLICY AREA 2: REDUCING RELIANCE ON IMPORTED FUELS

Policy statement: Government will continue to provide opportunities in oil exploration, and support the reasonable development of sources of renewable energy.

Background

While the benefits of undertaking all necessary action to ensure that the demand for energy is the minimum required to meet social and economic needs are self evident, a parallel and equally beneficial step is to try to reduce Malta's total dependency on imported fuels for its energy requirements.

Indigenous oil production offers the possibility of eliminating this dependency. Though efforts have not yielded any results so far, success in oil exploration efforts will reduce the energy dependency on foreign sources significantly.

Renewable sources of energy are the long-term option of choice, offering socio-environmental benefits, such as lower externalities when compared to conventional generation. At the same time, their potential in the short term is limited due to the capital cost, intermittency and the period of availability of such energy. A contribution of 5% or less from renewable sources cannot be considered as significant from the point of view of reducing the reliance on imported fuels.

The renewable sources that could be exploited in Malta, provided that their feasibility can be demonstrated, are:

- Large scale wind (onshore, offshore);
- Medium and small scale wind (medium scale 20kW- 500 kW and micro-scale < 20 kW);
- Solar (photovoltaic)
- Energy crops & waste;
- Landfill gas;
- Sewage treatment plant gas;
- Biogases;

POLICY AREA 2A: OIL EXPLORATION

2A.1 Background

Malta has no indigenous fossil fuel. Although exploration for petroleum has been going on since 1958, no commercial discovery has yet been made. This activity has led to the identification of numerous prospects and the drilling of 12 exploratory wells. Several drillable prospects remain to be tested and the possibility of making a commercial discovery in the future is realistically good.

Most activity is carried out offshore in an area of about 70,000 km^2 parcelled into blocks and made available to the oil industry for exploration. Geologically, this area is made up of different sedimentary domains some of which produce petroleum in nearby Sicily and Libya. In particular, the Ragusa Basin of SE Sicily extends in the northern parts of Malta’s offshore while in the south, the oil prolific Lower Eocene nummulitic trend of offshore Libya and Tunisia is seen to extend well inside Maltese acreage.

In Malta, subsoil natural petroleum resources belong to the State. According to the Petroleum Production Act, the Government may delegate companies the right to explore and produce petroleum. There are two categories of licences, an exploration licence granted under an Exploration Study Agreement, and an exploration and production licence granted under a Production Sharing Contract. To facilitate applications, model texts of these agreements are published and distributed to the oil industry.

An exploration licence is restricted to prospecting activities and is normally undertaken under an Exploration Study Agreement that gives its holder an exclusive right to prospect for petroleum in a specified area. The agreement is for 2 years but may be extended up to 5 years. During this period, and for an additional 3 months after the termination of the agreement, the holder may negotiate to convert the exploration licence to an exploration and production licence.

Petroleum can only be developed under an exploration and production licence. Such licences are granted under Production Sharing Contracts and are valid for a period of 30 years that may be extended. The licence gives its holder an exclusive right to explore and extract petroleum in a specified area.

Action at EU level

EU legislation on oil exploration has been transposed into national legislation as Legal Notice 320 of 2001.

2A.2 Objectives

Domestic production of oil can contribute towards ensuring security of supply by reducing reliance on imported fossil fuels. Natural gas sources, if utilised for local electricity generation, would also contribute towards reductions in emissions.

2A.3 Work undertaken

Exploration and production of petroleum in Malta enjoys a favourable legal and fiscal regime. Under the current legislation, the process of granting exploration and production permits is short and of a duration compatible with the decision-making process of oil and gas companies. Moreover, specific incentives exist for exploration and exploitation in water depths greater than 250m. The sharing of revenue derived from petroleum also encourages the exploitation of marginal discoveries.

2A.4 Measures proposed

Government will:

- Seek to intensify exploration by oil companies
- Negotiate with neighbouring countries where disputed boundaries exist, with a view to enabling oil exploration to take place in currently disputed areas

POLICY AREA 2B: RENEWABLE SOURCES OF ENERGY

2B.1 Background

Studies on the availability and potential of renewable energy sources and consideration of available technologies that were carried out indicate that wind, solar photovoltaic (PV), solar thermal, biomass wastes, landfill gases and sewage treatment plant gas offer some potential for exploitation. On the other hand tidal flow, geothermal, hydropower, biomass energy crops and wave do not appear to offer significant opportunities for exploitation on a commercial scale.

Given the specific opportunities offered by wind and solar (PV and thermal) and biomass (waste), these issues are treated separately in this policy.

2B.2 Objectives

Use of renewable sources of energy will contribute towards mitigating climate change as less carbon will be released into the atmosphere and towards lower air pollution as such sources of energy do not release gases such as NO_x and SO_x. This policy will also have a positive, though marginal, impact on security of supply.

On the other hand, electricity generated from renewable sources of energy available in Malta (primarily wind and solar) will most likely need support mechanisms to compete with conventional electricity generation. There are also, at present, technical problems due to the characteristics (intermittence, low intensity) of most renewables.

2B.3 Work Undertaken

Government has funded a study on the development of a strategy for the exploitation of renewable energy sources in Malta. The strategy incorporates the legal and regulatory aspects, economic and fiscal aspects and administrative issues and procedures for the introduction of renewable energy. Until the completion of this strategy, the Malta Resources Authority in conjunction with Enemalta Corporation has drawn up transitory arrangements for licensing small-scale electricity generation from RES.

Further details related to wind and solar energy and biomass are specified in separate sections of this policy and will be amplified in a separate strategy document.

2B.4 Measures proposed

In order to promote all forms of RES, Government will:

- Continue the development of a strategy for the promotion of RES to meet 2010 targets and identifying which cost efficient efforts are necessary to establish and achieve longer term targets;
- Establish support mechanisms for RES electricity;

Measures related specifically to wind and solar energy (PV and solar heating) and to biomass (solid waste, wastewater and biodiesel) are listed in separate sections of this policy.

WIND AND SOLAR ENERGY

2Bi.1 Background

Large onshore wind is the most cost-effective technology though visual and landscape impacts and cumulative effects are likely to be serious obstacles to large onshore wind farm construction in Malta and Gozo. Government is concerned of the high visual and landscape impacts within the urban Maltese environment associated with large-scale on-shore and near-shore wind-farms and such developments will not be authorised for construction. Offshore wind is the second best technology option in terms of costs and development would require resolving technical issues as well as issues relating to the conflicting use of available sites. There are barriers to uptake of micro-wind because of the planning constraints that are likely to originate due to visual impacts on the Maltese townscape. The current Maltese planning framework is more favourable to medium scale wind exploitation but this comes at an economic cost.

The PV resource potential in Malta is enormous though this requires financial support.

Solar energy for thermal applications (solar water heaters and potentially solar cooling) is another potential RES application.

Action at EU level

EU Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market has been transposed into local legislation through LN 186 of 2004.

The promotion of electricity produced from renewable energy sources is a high Community priority for reasons of security and diversification of energy supply, of environmental protection and of social and economic cohesion. RES is also a major priority area within the EU through the support of various programmes seeking its development and uptake (e.g. FP6, Intelligent Energy for Europe etc.).

Amongst other things, Directive 2001/77/EC requires the establishment of national indicative targets by Member States for the electricity produced from renewable energy sources. Government has notified the Commission that the potential for electricity generated from renewable energy sources is, for 2010:

- Large scale wind farm: 30GWh
- Solar photovoltaic: 0.5 to 1.1GWh
- Medium scale wind: 1.5GWh
- Solid waste: 0.68GWh

2Bi.2 Objectives

Wind and solar applications contribute to climate change mitigation, though they may have significant adverse environmental effects (mainly visual). They may contribute towards competitiveness when the cost of electricity produced from PV's and wind farms becomes cheaper than the cost of conventionally produced electricity.

2Bi.3 Work Undertaken

The generation of electricity using PV panels with a peak installation capacity of 3.7kW is being permitted to connect to the electricity grid subject to established conditions. Permits issued by Enemalta Corporation for connection to the grid have been simplified during 2004 with the objective to reduce administrative barriers. A fast-track notification system for small-scale auto-generators has been established where the maximum capacity of the installation is less than 3.7kWp. Separate permits and authorisations may also be required by Enemalta Corporation and the Malta Environment and Planning Authority.

As part of the transitory arrangements, the amount of electricity generated in such cases and supplied to the grid is purchased by Enemalta Corporation at the rate of 3 Malta cents/kWh. In the budget for 2006, Government has introduced a number of financial support measures in favour of small scale RES. To increase the penetration of electricity generation from PV systems, a capital grant of 20% (maximum Lm 500) is being given to domestic households.

Government also increased the one-time grant for installation of solar water heaters to 25% (max Lm 100) from 15% (max Lm 50) for 2006. The network operator also provides, when a solar water heater is installed in new buildings, a rebate on connection fees (of Lm 60). Between 2001 and 2003, 12,000 solar water heaters were imported in Malta and penetration is estimated at 7-8%. During 2004, there were 363 applications for Government grants.

Government further announced that this 25% grant (max Lm 100) is also applicable as a capital subsidy on installation of micro-scale wind generating systems.

During 2004, the Malta Resources Authority has also recommended to the Malta Environment and Planning Authority the review and amendments to the Policy and Design Guidance 2000 with respect to planning permits for photovoltaic installations and solar water heaters. This was done with the aim of reducing existing planning barriers. The Policy and Design Guidance 2005 was reviewed by the Malta Environment and Planning Authority and a number of the recommended amendments incorporated in these revised guidelines.

Between September 2004 and January 2006, the Malta Resources Authority received 9 notifications for installation of photovoltaic installations with a capacity less than 3.7 kWp. The total installed capacity of these installations is estimated at approximately 15 kWp. The annual electricity generation is estimated to be 22 MWh.

While the current transitory measures have facilitated the administrative aspects for licensing of small-scale solar energy installations and reduced bureaucracy in dealing with the administrative aspects, the uptake has been, up to now, still low. This may be expected since existing payback periods for PV installations with the current feed-in fees are very long.

The government is also assisting financially the installation of solar water heaters. The Institute for Energy Technology is providing a free service to audit solar water heaters.

2Bi.4 Measures proposed

Government will:

- Promote small-scale RES systems;
- Promote off-shore wind farms if viable and feasible;
- Promote solar thermal applications.

BIOMASS

2Bii.1 Background

This policy area covers biomass, landfill gas, sewage treatment plant gas and biogases. Biomass is the biodegradable fraction of products, waste and residue from agriculture (including vegetal and animal substances), forestry and related industries as well as the biodegradable fraction of industrial and municipal waste.

Malta is a country with negligible potential in biofuels from agriculture. The limited freshwater resources (50% of potable water is supplied from desalination), high population density and poor soil fertility contribute to these factors. This is confirmed in a 2003 report by the Joint Research Centre at Ispra, Italy.

Industrial and domestic waste is the only substantial source of biomass. In this respect, Government policy[1] so far has been as follows:

- to reduce the quantity of waste and to encourage higher levels of reuse;
- to increase recycling and composting;
- further development of energy recovery technologies;
- safe disposal of residues that cannot be otherwise managed.

A study on energy recovery from waste is being carried out by Government through a Working Group on Waste-to-Energy. Recommendations are expected soon.

The two options for use of biomass as an energy product are:

- Generation of electricity from landfill gas, sewage treatment plant gas, waste and biogases (anaerobic digestion waste treatment facilities); and
- Production of biofuels from waste cooking oils.

Biofuels are liquid or gaseous fuel produced from biomass. There is potential for waste oil to be collected and converted to biodiesel. Mixed with fossil diesel in ratios up to 5%, it can then be used directly in recently marketed diesel vehicles.

Action at EU level

EU Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport has been transposed into local legislation through LN 528 of 2004.

The Directive aims at promoting the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes in each Member State, with a view to contributing to objectives such as meeting climate change commitments, environmentally friendly security of supply and promoting renewable energy sources.

[1] A solid waste management strategy for the Maltese Islands, September 2001.

Amongst other things, the EU Directive 2003/30/EC requires the establishment of national indicative targets by Member States for biofuel and other renewable fuels to be placed on the market calculated based on the energy content of all petrol and diesel for transport purposes.

Preliminary indications are that the proportion of biofuels placed on the market and calculated based on energy content, of all petrol and diesel for road transport purposes by 31 December 2005 will exceed 0.5%. Work is proceeding on establishing a target for 2010.

Furthermore, biomass will also be expected to contribute towards meeting the indicative national target for production of electricity from renewable sources of energy specified in EU Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. During negotiations, the indicative target for electricity generated from waste was established at 3% and Government is currently revising this target.

2Bii.2 Objectives

The use of fuels derived from waste, such as biodiesel, will be beneficial from the environmental point of view of reducing used oil from entering the waste stream. It will also help (to a limited extent) reduce Malta's dependence on imported fossil fuel, thus improving our security of supply. Finally, producing biodiesel locally contributes towards a sustainable economy.

2Bii.3 Work Undertaken

During 2003, Government decided to proceed with testing the use of biodiesel on its heavy plant. During 2004 and 2005, various Government entities, including Environment Department, St.Vincent De Paule Hospital, the Agriculture Department, the Malta Environment and Planning Authority and the Ministry for Resources and Infrastructure, have made use of biodiesel produced locally from waste oil. Malta Environment and Planning Authority together with local producers of biodiesel launched an information campaign on the benefits of biodiesel.

The biomass content (i.e. percentage element) in blended biodiesel has also been exempted from the excise duty. In 2005, approximately 1.5 million litres of biodiesel were sold. It has been estimated that Government's support in excise duty for this biodiesel amounted to Lm 157,000.

2Bii.4 Measures proposed

Government will:

- Recover energy from waste;
- Promote the manufacture of biofuels produced from indigenous sources, primarily waste biomass;
- Monitor the use of biodiesel and amend strategy and targets accordingly.

POLICY AREA 3: STABILITY IN ENERGY SUPPLY

Policy statement: Government will seek to diversify the current reliance on oil products while ensuring that contingency plans are in place to cater for short-term disruption in oil supply. Malta will interconnect with the European electricity system.

Background

A secure energy supply is essential for any economy to flourish and Malta's is no exception. Malta currently depends on fossil fuels for practically all its energy needs and, as presently it has no extractible indigenous fossil fuel reserves, is totally dependent on imports of fuels to satisfy its needs. Furthermore, 50% of the island's potable water requirements are provided for by desalination of seawater, a process requires electrical energy.

The risks inherent in such a high dependence on imported fuels to meet vital needs are of concern, as an energy supply crisis, actual or threatened, will cause serious social and economic disruptions. Security of supply of all forms of energy and fuel stocks in particular is therefore vital.

Malta's physical isolation makes it heavily dependent on imported goods and materials for its domestic and industrial needs. The bulk of imported goods arrive in Malta by sea so that the availability of fuels for sea going vessels operating to and from Malta is also vital.

The world scenario is rapidly changing, and measures to ensure a stable energy supply essentially revolve around seeking alternative energy sources to supplement or replace dependency on oil and planning for disruption in oil supply.

POLICY AREA 3A: DIVERSIFICATION: INTERCONNECTION AND ALTERNATIVE SOURCES

3A.1 Background

The only source of energy used at present in Malta is fossil oil (and derivatives). The major other fuels used or traded in Europe are electricity, natural gas, coal, nuclear power and hydro power.

Coal is no longer used in Malta due to its environmental effects and hydropower is not available in Malta. Nuclear power generation in Malta is not considered as a feasible option.

Natural gas can be transported by pipeline at high pressures in a gaseous state, or by ship in a liquefied state. The nearest connection points for pipeline are Sicily and Libya and possibly Tunisia. Liquefied natural gas is liquefied at around -170ºC and is transported in special insulated ships. In Malta, a re-gasification process would be needed before gas is pumped through a pipeline system to users.

Electricity interconnection is relatively simple (using a high voltage direct current cable with Sicily), which would allow suppliers in Malta to purchase electricity (including that generated from hydro or other renewable sources or nuclear sources) from producers in other EU states.

The interconnection will involve revisiting Malta’s position relative to EU legislation since certain aspects of the present derogations applicable to small isolated systems that have been applied to date in Malta would probably not be sustainable in the new scenario. However, on balance, Government believes that having an inter-connection with the European electricity grid breaks once and for all the insularity of this island, gives us security of supply and enables us to access the market of green energy.

3A.2 Objectives

Diversification of sources will provide insurance against disruption of any one particular source of energy, and hence improve security of supply. In addition, properly planned, natural gas may be more environmentally friendly than fossil oil.

3A.3 Work undertaken

Studies were carried out by Enemalta and third parties on the feasibility of interconnection by electricity cable and natural gas pipeline during the past decade. All the studies showed that both inter-connections would be technically feasible.

3A.4 Measures proposed

Government has decided that Malta will interconnect electrically with Europe and , will:

- ensure the development of the electricity interconnection with the European grid by directing Enemalta (as a Government owned entity) to issue a request for proposals for such inter-connection and encouraging any private initiative that may want to invest in such infrastructure.

POLICY AREA 3B: PLANNING FOR DISRUPTION

3B.1 Background

The larger portion of energy requirements has, for the foreseeable future, to be met through imported fuel. The most feasible solution so far is to continue to depend substantially on fossil oil products. Planning for oil disruption is an essential element of ensuring security of supply.

Action at EU level

A two-pronged approach has been devised by the EU to deal with oil supply disruption.

EU Directive 73/238/EEC provides for measures to be taken by competent authorities to mitigate the effects of difficulties in the supply of crude oil and petroleum products. Article 2 (2) of this Directive establishes that Member States are to draw up intervention plans for use in the event of difficulties arising with regard to the supply of crude oil and petroleum products.

EU Directive 68/414/EEC requires that Member States are to maintain a 90-day security stock of oil. Any withdrawal below the minimum level is to be notified to the EU Commission with full details. Malta negotiated a transition period with the EU up to 31st December 2006 for the full implementation of this directive.

The types of oil products imported in Malta and covered by this directive are:

- Category 1 - gasoline (petrol: unleaded and lead replacement) for automotive use;
- Category 2A - aviation fuel and jet fuel used by the aviation industry;
- Category 2B - kerosene used for heating and cooking purposes and gasoil (diesel) used in power generation, by industry and for automotive use;
- Category 3 - fuel oil used for heating purposes and by industry and heavy fuel oil for power generation;

Liquefied petroleum gas is also used in Malta, mainly for cooking. This is not one of the products for which 90-day storage is required by EU legislation or is being implemented.

3B.2 Objectives

Planning for disruption will aid security of supply. There are environmental costs (since the storage of fuel can have environmental risks that would need to be minimised) and obvious financial costs.

3B.3 Work undertaken

Government has prepared a plan is to deal rapidly with a disruption in the supply of oil and to mitigate the impact and offsetting the negative effects arising from such a disruption, intended to deal with varied situations ranging from industrial disputes, to fire at storage depots to international oil crises.

This plan is also intended to regulate the distribution of oil fuels during an oil emergency in such a manner as to promote and safeguard in order of preference:

1. maintenance of the health, safety, welfare and security of the community;
2. provision and prioritisation of such essential services to specified groups of users; and
3. minimising the disruption to economic activity.

The plan seeks to identify the risks and incidents leading to oil supply disruption in Malta and the responsibilities, procedures and measures to respond to oil supply shortages and plan the best options for stockholding.

3B.4 Measures proposed

In the context of the emergency response plan, Government will

- Ensure that as far as possible, the institutions, information, hardware and infrastructure are available, ready, and coordinated so as to perform efficiently and expeditiously in any emergency, while leaving the freedom and flexibility to respond to any circumstance as it arises and as best thought fit;
- Ensure the availability of stock of oil leading up to 90 days worth of oil products by 2007 with the least possible costs.

POLICY AREA 3C: INTERNATIONAL ACTION

3C.1 Background

Security of supply can be promoted through concerted effort at international level.

Much of what is necessary to achieve major results at a global level needs to be carried forward through the EU, and through other international fora. Many of the wider issues of oil security are already handled through the EU.

In the Mediterranean context, the Euromed has already seen a cooperation framework set up - the Euro-Mediterranean Energy Forum and an Action Plan for the period 1998-2002 implemented. The Granada Forum 2000 (third forum) is a significant step in the cooperation process. Priorities have been established in the following main areas:

- Reform of the legislative and regulatory framework and restructuring of the energy industry;
- Integration of Mediterranean markets and development of interconnections;
- Sustainable development and use of renewable energy

Action at EU level

Malta is a signatory of the Energy Charter Treaty and of the Protocol on Energy Efficiency and Related Environmental Aspects.

3C.2 Objectives

These actions will all contribute towards improving security of supply. A external energy policy is also currently being debated in the Council. This aims to guarantee the supply of energy through energy partnerships with producer and consumer countries.

3C.3 Work undertaken

Malta participates actively in a number of international initiatives, particularly those related to the Mediterranean region. In particular, it has been active in the Rome Mediterranean Energy Platform.

3C.4 Measures proposed

Government will:

- Actively support international initiatives that will:
    a. promote political and economic stability in the main producer countries,
    b. improve the climate for energy sector investment, encourage more openness and transparency in international energy markets;
    c. ensure the efficient and sustainable use of energy resources; and
    d. halt and address global warming which is a major concern particularly to low-lying islands and small states including many Commonwealth countries.
- Continue to strengthen its diplomatic ties with supplier and producer countries of crude oil and derived products.

POLICY AREA 4: DELIVERING ENERGY EFFICIENTLY AND EFFECTIVELY

Policy statement: Government will reform the energy sector to ensure maximum competition possible within the limits imposed by the market, while ensuring that operators deliver the best quality of service at the cheapest possible prices through market forces complemented by robust regulation.

Background

Enemalta Corporation, a state owned organisation, is presently the principal entity responsible for the provision of energy products in Malta. Its functions include the importation, distribution and sale of all fuels for the inland and aviation markets. Enemalta Corporation is also currently the sole player in the electrical energy industry with responsibilities ranging from generation to the delivery of electrical energy to all consumers.

Enemalta Corporation was established in 1977 by virtue of the Enemalta Corporation Act (Cap 272). Enemalta Corporation operated as a monopoly in the inland energy sector while, at the same time, it carried certain activities of a regulatory nature.

Following the initial phase of the restructuring of the energy sector through the enactment of the Malta Resources Authority (MRA) Act (Cap. 423), regulatory responsibilities for the inland energy sector were transferred to MRA.

The current market arrangements need to change due to commitments to liberalise the fuel market and to organise the electricity market in line with the electricity directive 2003/54/EC where the generation sector is open to competition. This issue will be revisited as the country interconnects its electricity system with the European grid.

In the opening of the sector to competition, changes and reform will be undertaken in a spirit of prudent innovation. While permitting initiatives, the Government's policy is to emphasise caution that will allow stakeholders to learn as the reform proceeds, give adequate time for regulatory and administrative procedures to be consolidated while ensuring progress at a sustained rate.

The size of Malta's energy market is not conducive to economies of scale or of scope. At the same time, European Union policy for the energy sector is based on the use of market-based tools. These tools need to be carefully assessed in their transposition and implementation since they were not designed for a small economy such as ours, where the potential for effective competition is limited since a sufficient number of competitors is not feasible.

While reform in Malta has been preceded by similar efforts in other countries, which provide case studies of interest in some aspects, the future is unknown and has to be dealt with flexibly. Benchmarking will also be useful as an eye-opener to the likely response of stakeholders and consumers to the reform process. Indeed, Government believes that market forces in Malta will not be sufficient to bring these about in the sector.

POLICY AREA 4A: COMPETITION AND REGULATION

4A.1 Background:

EU law requires the liberalisation of the importation, stocking and wholesale marketing of petroleum products and electricity. Enemalta, the state-owned electricity company, enjoyed a monopoly in both sectors.

Fuels

For fuels, EU legislation means that other enterprises have the right to import these products. It will also give consumers a choice. However, in order to give Enemalta sufficient time to adapt to liberalisation, Malta requested a transitional period until the end of 2005 before applying full liberalisation. The request was accepted by the EU. This process started with consultation on the strategy to be adopted for liberalisation.

Electricity

For electricity, Directive 2003/54/EC on common rules for the internal market in electricity was legislated to ensure the creation of a fully operational internal electricity market, in which fair competition prevails, to achieve benefits of efficiency gains, price reductions, higher standards of service and increased competitiveness.

Inbuilt in the directive is a possibility (under Article 26) to request derogation from Chapters IV to VII of the directive, for ‘small isolated systems’. These chapters relate to transmission, distribution, unbundling and transparency of accounts, and organisation of access to the system. Derogation will be granted by the Commission if there are “substantial problems for the operation of the system”. Malta does qualify as a ‘small isolated system’ as defined in the Directive, and Government gave notice to the Commission that it would request derogation from the obligation to open up the market (which obligation provides that customers would be eligible to purchase electricity from a supplier of their choice.)

Government has in fact requested derogation from the requirement to ensure that consumers have the right to an electricity supplier of their choice, because there cannot be effective free competition in electricity in Malta, as explained below.

In the electricity generation sector, the number of suppliers will be limited because:

- The Maltese electricity system is not interconnected to any other system, and hence there can be no cross-border trade in electricity.
- The electricity demand in Malta is small with a total installed capacity of 550MW. Technical literature indicates that the most economical sizes of generation plant are large compared to the Malta’s total demand. In practice,

the size of generation plant installed in Malta has been constrained by the need to ensure flexibility in operation (i.e. certain plant designed for peak loading or black start with short ramp-up time, certain plant designed for base load).

- The only energy source that is feasible for conventional plant at the moment in Malta is fuel oil. Investment in such a market is therefore not very attractive since the risks are higher than in interconnected and larger markets (due to the volatility in prices of oil and technical obsolescence)

In the pure supply business ("wholesale customers"), the costs amount only to 1.5% of the total costs of electricity supplied to customers. In such a situation, competition will not on the basis of prices, but the good supplied will highly branded and possibly differentiated (e.g. by bundling with non-electricity products).

Effective competition in the electricity sector in Malta therefore cannot exist because the key criterion – a large number of sellers – does not exist in Malta. Such a market structure has the potential for collusion and high profits.

Furthermore, in order to support free competition in electricity markets where customers are able to choose a supplier of their choice, highly sophisticated systems have been developed. These systems are unnecessarily administratively complex and costly for a market the size of Malta, and are not sufficient to prevent market failures such as collusion.

Other transitory mechanisms have to be developed to ensure that customers have access to a competitively priced and secure source of electricity. These mechanisms will be revisited as the country's electricity system is connected to the European system.

Action at EU level

The Treaty establishing the European Community (Articles 81 and 82), and more specifically Directive 2003/54/EC on common rules for the internal market in electricity, are the main EU legislation for this policy area.

Regulation

The two main regulatory pieces of legislation in the energy sector in Malta are the Malta Resources Authority Act and the Competition Act.

The Malta Resources Authority Act established a sectoral regulator with the functions:

a) to regulate, monitor and keep under review all practices, operations and activities relating to energy, water and mineral resources;
b) to grant any licence, permit or other authorisation, for the carrying out of any operation or activity relating to energy, water and mineral resources;
c) to regulate and secure interconnectivity for the production, transmission and distribution of the services or products regulated by or under the act;
d) to ensure fair competition in all such practices, operations and activities;

e) to establish minimum quality and security standards for any of the said practices, operations and activities and to regulate such measures as may be necessary to ensure public and private safety;
f) to secure and regulate the development and maintenance of efficient systems in order to satisfy, as economically as possible, all reasonable demands for the provision of the resources regulated by or under the act;
g) to carry out studies, research or investigation on any matter relating to the resources regulated by or under the act;
h) to provide information and issue guidelines to the public and to commercial and other entities on matters relating to the said resources;
i) to regulate the price structure for any activity regulated by the act and where appropriate to establish the mechanisms whereby the price to be charged for the acquisition, production, manufacture, sale, storage and distribution thereof is determined;
j) to establish the minimum qualifications to be possessed by any person who is engaged or employed in any activity regulated by or under the act;
k) to establish measures for the protection of the environment in the practices, operations and activities regulated by or under the act;
l) to ensure that international obligations entered into by the Government relative to the matters regulated by or under the act are complied with;
m) to advise the Minister on the formulation of policy in relation to matters regulated by the act, and in particular in relation to such international obligations;
n) otherwise to advise the Minister on any matter connected with its functions under the act;
o) to formulate and implement the policies and strategies with short-term and long-term objectives, in relation to the activities regulated by the act;
p) to perform such other functions as may from time to time be assigned to it by the Minister.

And in relation specifically to energy:

(i) to promote, encourage and regulate the harnessing, generation and use of all forms of energy; and
(ii) to encourage the use of alternative sources of energy and for such purpose in accordance with such regulations as may be prescribed, to impose levies on energy produced by non renewable sources and grant subsidies in connection with the production of energy from renewable sources;

The Competition Act (Chapter 379 of the laws of Malta) is a general law regulating competition in all sectors of the economy in Malta. The principles enshrined therein have been inspired from the corresponding competition provisions in the EC Treaty. The pertinent substantive provisions are the following:

- prohibition of agreements between undertakings, decisions by an association of undertakings and any concerted practice between undertakings having the object or effect of preventing, restricting or distorting competition within Malta;

- prohibition of the abuse of a dominant position by one or more undertakings within Malta.

The Competition Act establishes the Office for Fair Competition and the Commission for Fair Trading as the overall guardians of competition in Malta. The Office for Fair Competition (OFC) currently forms part of the Consumer and Competition Division. The Commission for Fair Trading (CFT) is independent from the OFC.

The European Court of Justice has ruled that the energy sector falls within the scope of the competition rules. The Commission too has applied the competition rules to the energy sector. Indeed, the effective application of Articles 81 and 82 EC are considered as essential tools to ensure that liberalization is not undermined by anti-competitive conduct on the market and in recent years there has been a considerable increase in activity to enforce these rules, both from the regulators and by third parties eager to gain access to the market. The Commission has also dealt with electricity mergers and aims to ensure an effective merger policy to enhance competition in energy markets. In the context of several mergers, the Commission has imposed appropriate remedies.

The OFC and the CFT are responsible for the implementation and enforcement of the competition rules in all sectors of the market as contained in the Competition Act and in the Regulations enacted under it and in Articles 81 and 82 of the EC Treaty where there is an effect on inter-state trade (as, for instance, in the case of interdependent networks). The OFC and CFT can therefore also act and exercise their powers in the energy sector. In the interpretation of the law and in analysing cases the OFC and the CFT will have due regard to the EU corresponding legislation and will be guided by EU case-law.

In terms of Article 4(1) of the Malta Resources Authority Act (Cap 423), the Malta Resources Authority has as one of its functions the ensuring of fair competition in all practices, operations and activities relating to energy, water and mineral resources. The MRA Act moreover empowers the Minister responsible to make regulations in this respect, where the function of the MRA is further amplified. At law, the MRA also has a role to play in promoting and protecting competition in the energy sector. In performing this function the MRA enforces the sector-specific regulation and in doing so plays an ex ante role. The OFC, on the other hand, plays an ex post role under the general competition law framework.

At the same time, the Enemalta Act (Cap 272) provides for the House of Representatives to approve the financial estimates and the accounts of Enemalta (Articles 21 and 22), and for Enemalta, with the approval of the Minister responsible for Enemalta, to establish prices for tariff of prices, fees and charges within price structures that are established by the MRA.

4A.2 Objectives

Action in this policy area will affect mainly the competitiveness of supply of electricity. It will have little effect on achievement of the other two objectives. In addition, diversification of fuels, assuming the availability of the required technology, can be economically beneficial through allowing the generation of electricity using the cheaper fuel at any one time.

4A.3 Work undertaken

The electricity generation market has been liberalised and the legislative structure has been put in place. Fuel supply at the airport has also been liberalised.

The regulator has intervened in the sector in a number of disputes but there is otherwise little experience in Malta so far relating to competition issues in the energy sector.

4A.4 Measures

In order to ensure that the appropriate regulatory oversight is maintained, Government will:

- Regulate the energy sector using practices and policies that are coherent, impose minimum bureaucratic obligations and are least intrusive and ensure the minimum duplication and conflict with existing structures, while aiming towards affordability of fuels and customer protection, and where possible open up the market to competition;

POLICY AREA 4B: OPENING UP THE FUEL SECTOR TO COMPETITION

4B.1 Background

All fuels in Malta for inland use are imported and stored by Enemalta Corporation. Enemalta is responsible for the importation, distribution and sale of all fuels for the inland and aviation markets. Enemalta Corporation markets these fuels in wholesale to retailers who are licensed by the MRA for the specific activity.

The retail of fuel for automotive use, i.e. diesel and petrol (leaded and lead replacement petrol) is carried out by fuel-filling stations. Other fuels, namely kerosene, gas oil and light cycle oils are used by industry, commercial outlets, and households. These are served by a retail distribution system of ‘jobbers’ and ‘hawkers’.

Enemalta’s current monopoly in the importation, storage and wholesale marketing of fuels will cease. Currently the MRA issues a number of licences in the fuel sector including licences for petrol stations, jobbers, kerosene hawkers and gas distributors while Customs issues certificates of approval for authorised traders. The basis of the existing licensing regime is not considered satisfactory. It has developed and grown up with successive agreements between the Enemalta and trade associations and was not administered properly, transparently or uniformly.

The bunkering sector was liberalised with the introduction of the Bunkering (Fuel) Tax Act in 1995 when the then existing restrictions were removed and new licences were issued.

4B.2 Objectives

A reform of the fuel market will mainly ensure that the overall quality and costs of the services provided to consumers will improve. It may also contribute towards improving security of supply by apportioning responsibilities appropriately.

4B.3 Work Undertaken

The Government has commissioned a study to assist it in the development of a strategy for the reform of the inland fuel market. The scope of this study is to evaluate and to select the most suitable strategy for the liberalisation of the fuel supply market, based on the pre-established criteria, Government’s sectoral policy and Malta’s international obligations.

The work incorporated an analysis of the existing fuel market situation and structure including the legal and regulatory regime, licensing and administrative framework, Governmental obligations, economic and social assessment and environmental considerations and their various interactions. A regulatory framework and intervention including legal, technical, fiscal, economic and administrative procedures has been developed.

4B.4 Measures proposed

Government will:

- Reform the fuel market by adopting the necessary legal, administrative, fiscal, economic measures consistent with Government obligations, economic, environmental and social considerations and strategic concerns;
- Establish satisfactory design and operating standards for operators in the fuel market;
- Monitor and enforce compliance to standards and fair competition;
- Divest Enemalta from operations in the fuel sector

POLICY AREA 4C: AN EFFECTIVE ELECTRICITY SECTOR

4C.1 Background

Three distinct activities can be identified in the electricity sector.

- Generation is the activity dealing with conversion of fuel (or renewables) into electricity. This sector is open to competition.
- Distribution deals with the transport of electricity on a distribution network. This is a natural monopoly and will be carried out by Enemalta.
- Supply deals with retail to customers. Government is requesting derogation from the Electricity Directive to ensure that this activity is carried out by Enemalta until Malta interconnects with the European electricity system.

In this context, Enemalta Corporation is a key player in the electricity sector in Malta, even though the generation sector is now open to competition. Its experience and stature have been a valuable contribution to security of electricity supply.

A survey of 550 domestic electricity consumers randomly chosen from the Malta Telephone Directory indicated main concerns to be:

Priorities in respect to electricity service:

- Low prices	36%
- Uninterrupted supply	21%
- Protection of the environment	35%
- Other	8%

Current electricity prices:

- too high	64%
- reasonable	32%
- too low	4%

The policy in this sector will therefore revolve on ensuring that the Corporation is restructured and rendered efficient to compete successfully in a liberalised generation market and renders the electricity supply in Malta the cheapest possible within the parameters of quality, environmental and fair competition standards.

4C.2 Objectives

A reformed electricity sector will introduce competition in generation, leading to greater efficiency and reduced costs in the sector.

4C.3 Work undertaken

Legislation that ensures competition in generation has been enacted and criteria for the authorisation of new generation plant published. Private investors have already shown interest.

4C.4 Measures proposed

Government will, through appropriate legislation,

- Ensure that Enemalta becomes the most cost effective organisation possible within social and environmental constraints.
- Ensure that there is free entry into the competitive generation market.
- Take measures to ensure security (including security of supply); regularity, quality and price of supplies; environmental protection, (including energy efficiency and climate protection) social and economic cohesion and customer protection.
- Ensure that technical safety criteria are defined and that technical rules are developed establishing the minimum technical design and operational requirements for the connection to the electricity system.

POLICY AREA 5: ENSURING THAT THE ENERGY SECTOR CAN DELIVER

Policy statement: Government will ensure that fiscal policy and policy in education and research support the general objectives of ensuring security of supply, environmental protection and competitiveness.

POLICY AREA 5A: FISCAL POLICY

5A.1 Background

Used judiciously, taxation can serve to achieve certain objectives by placing a value to a cost or benefit that is not valued by the market, such as environmental externalities. An example is the removal of excise tax on biofuels that served to stimulate the market.

The fiscal area is constrained by the Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity. Malta has obtained transitory arrangements on this directive as follows:

- Electricity: 50% of EU minimum rate as from 1 Jan 2007 till 2010
- Gas oil and kerosene used as propellants: 245€/1000l till 2010
- Unleaded petrol used as propellant: 287€/1000l till 2010
- Leaded petrol used as propellant: 337€/1000l till 2010
- Natural gas used for heating: 50% of EU minimum rate as from 1 Jan 2007 till 2010
- Solid fuel: 50% of EU minimum rate as from 1 Jan 2007 till 2010

Structural and national funding will also be utilised judiciously to support key Government initiatives.

5A.2 Measures proposed

Government will:

- Continue to implement the transitory arrangements for energy taxation as agreed with the EU;
- Use fiscal policy to promote environmental and other Government priorities in the energy sector;
- Allocate funding from the Cohesion Policy 2007-13 to the energy sector, including funding for energy efficiency measures and alternative sources of energy

POLICY AREA 5B: EDUCATION AND RESEARCH

5B.1 Background

Research is essential to ensure that the sector develops in line with the highest standards internationally. Demonstration projects and innovative introduction of the latest technology has been successfully applied in other sectors and there is advantage in applying such skills to the energy sector. The EU has a number of initiatives that could support financially, and through access to other institutions, such research. However, in Malta, there is a need for a structured approach to research in energy.

The achievement of the policy objectives also requires the availability of a skilled workforce. Education is essential to maintain and develop energy systems that provide high quality supply.

5B.2 Measures proposed

Government will:

- Promote research projects of direct benefit to Malta, and exploit best the specific conditions, particularly climatic, in Malta;
- Develop analytical (energy modelling scenarios, indicators) and sector monitoring tools to develop perspectives on long term demand and supply.

POLICY AREA 5C: INVESTMENT AND INDUSTRY PROMOTION

5C.1 Background

Malta is located at the centre of the Mediterranean, in the midst of all offshore oil and gas activity in the region. This makes for short sailing distances to the major offshore platforms in the area, and to the main ports in Algeria, Tunisia, Libya and Egypt. Malta has served as a base for the major oil operators, drilling contractors and pipe laying contractors in and offshore North Africa, particularly Libya. It has extensive berthing, key and storage facilities.

Other benefits Malta has to offer include:

- Longstanding experience in servicing the oil and gas industry.
- State-of-the-art transshipment terminal and distripark facilities within a free zone environment
- Storage and warehousing facilities, including oil terminal
- Expertise in manufacture, repair and conversion of ships and rigs.
- Excellent telecommunications facilities

In the local context, the strength of Malta in the oil and gas industry lies in its strategic location and its use as a logistics and maritime base. In particular, Malta Enterprise is considering targeting the following organisations during 2005 – 2010:

- companies involved in the maintenance and repair of oil rigs and installations, tapping into the skills of people deployed in the process as well as the close proximity of the market; and
- logistics centre for the distribution of oil in the Mediterranean and back office support tapping once again on the geographic location of the island thereby creating synergies with the logistics sector and the shared services sector;

It also encourages the development of specialist areas to build internationally recognised centres of excellence in this sector with highly focused training institutions and research and development organisations.

5C.2 Measures proposed

Government will, through Malta Enterprise:

- Promote investment in the oil and gas sector, and in renewable sources of energy and energy efficiency, and pursuing job creation in the energy industry, serving both Malta and other counties;

SUMMARY – OBJECTIVES AND POLICY MEASURES

This section links up the measures proposed with the objectives set for the energy policy. Each measure will have a positive impact on at least one objective.

Protection of the Environment
The objective of protecting the environment will be achieved through the following measures. These will mainly impact carbon emissions and improvement in air quality.

- All measures intended to improve efficiency in use of energy (Policy area 1)
- All measures intended to promote the use of renewable sources of energy (Policy area 2)
- Measures resulting in the reduction of the use of fossil oil (Policy area 3)
- Measures intended to deliver energy more efficiently (Policy area 4)
- Measures in fiscal, education and research, and investment promotion areas (Policy area 5)

Security of supply
The objective of security of supply will be achieved through the following measures.

- All measures intended to improve efficiency in use of energy (Policy area 1)
- All measures intended to reduce reliance on imported oil (Policy area 2)
- Measures to ensure stability in oil supply (Policy area 3)
- Measures intended to deliver energy more efficiently (parts of Policy area 4)
- Measures in fiscal, education and research, and investment promotion areas (Policy area 5)

Competitive pricing
The objective of a competitively priced energy supply will be achieved through the following measures.

- All measures intended to improve efficiency in use of energy (Policy area 1)
- Measures intended to reduce reliance on imported oil (Policy area 2)
- All measures to ensure stability in oil supply (Policy area 3)
- All measures intended to deliver energy more efficiently (Policy area 4)
- Measures in fiscal, education and research, and investment promotion areas (Policy area 5)

Summary

The impact of each measure against the objectives is summarised below:

Policy area	Measure	Environment	Security of supply	Competitive pricing
	1 Energy efficiency			
1A	**1A Supply side efficiency**			
	Ensure that electricity producers seek ways to increase the efficiency of the electrical power generation plants, by improving the efficiency of existing plant and investing in newer more efficient plant;	✔	✔	✔
	Promote the generation of electricity produced from high-efficiency cogeneration plant in industry that uses heat and power in its manufacturing process;	✔	✔	✔
	In opening up the generation sector to competition to encourage investment by the private sector, ensure that applications for authorisations to generate electricity are decided on the basis of, amongst other things, considerations of energy efficiency;	✔	✔	✔
	Implement demand management measures intended to decrease the discrepancy between peak and minimum loads;	✔	✔	✔
1B	**1B Energy end use efficiency**			
	Bring all current initiatives within a more holistic national energy efficiency action plan by 2007 including targets for energy efficiency up to 2015;	✔	✔	✔
	Ensure that competitively priced energy services are made available and promoted to final customers;	✔	✔	✔
	Adopt exemplary energy efficiency practices in the public sector;	✔	✔	✔
	Develop and adopt legislative and administrative instruments to achieve energy efficient and environmentally friendly buildings and services;	✔	✔	✔
1C	**1C Efficiency in the transport sector**			
	Support initiatives at EU level to promote the manufacture and marketing of more efficient vehicles and components;	✔	✔	✔
	Undertake advisory services intended to change attitudes and influence behaviour in transport use;	✔	✔	✔
	Ensure that transport policy and its implementation aim to improve efficiency in energy use in the transport sector with particular emphasis on public transport systems;	✔	✔	✔
	Promote the use of more efficient or environmentally friendly alternative fuels for transport and/or modes of transportation;	✔	✔	✔
2	**2 Reducing reliance on imported fuels**			
2A	**2A Oil exploration**			
	Seek to intensify exploration by oil companies;	-	✔	✔
	Negotiate with neighbouring countries where disputed boundaries exist, with a view to enabling oil exploration to take place in currently disputed areas;	-	✔	✔

Policy area	Measure	Environment	Security of supply	Competitive pricing
2B	**2B Renewable sources of energy**			
	Finalise strategy for introduction of RES	✔	✔	-
	Establish support mechanisms for RES electricity	✔	✔	-
2B	**2Bi Wind and solar energy**			
	Promote small scale RES systems	✔	✔	
	Promote off-shore wind farms if viable and feasible	✔	✔	
	Promote solar thermal applications	✔	✔	
	2Bii Biomass			
	Recover energy from waste	✔	✔	-
	Promote the manufacture of biofuels produced from indigenous sources, primarily waste biomass	✔	✔	-
	Monitor the use of biodiesel and amend strategy and targets accordingly	✔	✔	-
3	**3 Stability in energy supply**			
3A	**3A Interconnection and alternative sources**			
	Ensure the development of the electricity interconnection with the European grid by directing Enemalta (as a Government owned entity) to issue a request for proposals for such inter-connection and encouraging any private initiative that may want to invest in such infrastructure	✔	✔	✔
3B	**3B Disruption planning**			
	Ensure that as far as possible, the institutions, information, hardware and infrastructure are available, ready, and coordinated so as to perform efficiently and expeditiously in any emergency, while leaving the freedom and flexibility to respond to any circumstance as it arises and as best thought fit;	-	✔	-
	Ensure the availability of stock of oil leading up to 90 days worth of oil products by 2007 with the least possible costs.	-	✔	-
3C	**3C International action**			
	Actively support international initiatives that will: a. promote political and economic stability in the main producer countries, b. improve the climate for energy sector investment, encourage more openness and transparency in international energy markets; c. ensure the efficient and sustainable use of energy resources; and d. halt and address global warming which is a major concern particularly to low-lying islands and small states including many Commonwealth countries.	✔	✔	✔
	Continue to strengthen its diplomatic ties with supplier and producer countries of crude oil and derived products.	-	✔	-
4	**4 Delivering energy efficiently and effectively**			
4A	**4A Competition and regulation**			
	Regulate the energy sector using practices and policies that are coherent, impose minimum bureaucratic obligations and are least intrusive and ensure the minimum duplication and conflict with existing structures, while aiming towards	✔	✔	✔

Policy area	Measure	Environment	Security of supply	Competitive pricing
	affordability of fuels and customer protection, and where possible open up the market to competition;			
4B	**4B Open the fuel sector to competition**			
	Reform the fuel market by adopting the necessary legal, administrative, fiscal, economic measures consistent with Government obligations, economic, environmental and social considerations and strategic concerns	✔	✔	✔
	Establish satisfactory design and operating standards for operators in the fuel market	✔	✔	-
	Monitor and enforce compliance to standards and fair competition	-	✔	✔
	Divest Enemalta from operations in the fuel sector	-	✔	✔
4C	**4C Electricity sector reorganisation**			
	Ensure that Enemalta becomes the most cost effective organisation possible within social and environmental constraints.	-	-	✔
	Ensure that there is free entry into the competitive generation market.	-	-	✔
	Take measures to ensure security (including security of supply); regularity, quality and price of supplies; environmental protection, (including energy efficiency and climate protection) social and economic cohesion and customer protection.	-	✔	✔
	Ensure that technical safety criteria are defined and that technical rules are developed establishing the minimum technical design and operational requirements for the connection to the electricity system.	-	✔	✔
5	**5 Support measures**			
5A	**5A Fiscal policy**			
	Continue to implement the transitory arrangements for energy taxation as agreed with the EU;	✔	✔	-
	Use fiscal policy to promote environmental and other Government priorities in the energy sector;	✔	✔	✔
	Allocate funding from the Cohesion Policy 2007-13 to the energy sector, including funding for energy efficiency measures and alternative sources of energy	✔	✔	✔
5B	**5B Research and education**			
	Promote research projects of direct benefit to Malta, and exploit best the specific conditions, particularly climatic, in Malta	-	✔	✔
	Develop analytical (energy modelling scenarios, indicators) and sector monitoring tools to develop perspectives on long term demand and supply.	-	✔	✔
5C	**5C Investments and industry promotion**			
	Promote investment in the oil and gas sector, and in renewable sources of energy and energy efficiency and pursuing job creation in the energy industry, both serving Malta and other counties	✔	✔	-

ANNEX I - SOME TECHNICAL DATA

Salient points about the energy sector in Malta:

- The yearly total gross inland consumption of fuel in Malta is about 0.82 million tons of oil equivalent (toe), or 2.10 toe/person (EU: 3.639 toe/person).
- Malta is 100% dependent on oil imports. Although we are surrounded by oil producing nations, so far Malta has been unsuccessful in its exploration for oil. Oil imports are all carried by sea since there is no fixed energy transport infrastructure connecting Malta with its suppliers. The average dependency on oil for the EU based on the year 2000 is of 38.4%. Other fuel percentages making up the EU gross inland consumption are:

  Solids: 18.3%
  Natural gas: 22.8%
  Nuclear: 14.4%
  Renewable Energy: 5.9%

- Final energy demand by sector in Malta is:

Industry:	0.05 Million tons of oil (EU – 310.2)
Residential:	0.08 Million tons of oil (EU – 279.1)
Tertiary:	0.06 Million tons of oil (EU – 154.3)
Transport (including aviation):	0.29 Million tons of oil (EU – 333.1)

- The electrical system grid is isolated and is not connected to any other grid network.
- Total electricity generated annually in Malta is around 2.2TWh. This is equivalent to 5,641kWh per person (EU: 6,834kWh per person).
- Total installed generating capacity is 571 MW, of which 350 MW are supplied by steam turbines, 111 MW are supplied by open cycle gas turbines whilst 110 MW are supplied by a combined cycle plant. The average conversion efficiency of the power stations in Malta is 27.8%.
- Electricity generation fuel oil used up to 2001 was of high sulphur content (<3%). In July 2001, Enemalta started purchasing medium sulphur content (<2%) and is now using low sulphur content (<1%).
- The amount of energy generated by RES is practically inexistent apart from very small systems.
- The total energy consumed for road transport in Malta is about 0.41toe/capita (EU: 0.75 toe/capita).
- During the last five years the average gasoline consumption was of 69,000 thousand tons of oil equivalent but showed a decreasing trend of 200toe/year (-0.289%). During the same period the average consumption of gas oil was

72,000 thousand tons of oil showing an increase of 3,300 toe/year, equivalent to an annual increase of 4.5%.

- Malta’s GHG emissions per GDP: 910 tonnes CO_2 equivalent per million EUR – higher than EU average but lowest among the 10 new member states. Compared to EU average, economic development is not efficient (emissions wise) although it is the most efficient amongst the new member states.

ANNEX II - POLICYMAKERS AND IMPLEMENTERS

Ministries and government entities that have a statutory role in the energy sector include the following:

Ministries:

Office of the Prime Minister

Ministry for Resources and Infrastructure

Ministry of Finance

Ministry for Investments, Industry and Information Technology

Ministry for Rural Affairs and Environment

Ministry for Urban Development and Roads

Ministry for Education, Youth and Employment

Ministry for Tourism

Regulatory entities:

Entity	Major statutory role / mandate	Key responsibilities in the energy sector
Malta Resources Authority	The Malta Resources Authority is a public corporate body with regulatory responsibilities relating to water, energy and mineral resources in the Maltese Islands. It was set up by the Maltese Parliament through the Malta Resources Authority Act of 2000. The MRA has wide ranging responsibilities essentially involving regulation of water and energy utilities	- regulation of energy sector.

Entity	Major statutory role / mandate	Key responsibilities in the energy sector
Malta Enterprise	Malta Enterprise is the focal point for enterprise in Malta. Its role is to act as a single point of contact for all enterprise considering trade, investment or commercial links with Malta. The organisation is committed to creating the right environment for successful enterprise in Malta. It provides a range of practical services and solutions to Maltese enterprises seeking to internationalise their operations and to international companies seeking to trade with or invest in Malta. Malta Enterprise provides a comprehensive package of assistance and advisory services to international companies and investors wishing to set up manufacturing, R & D, international trading, regional representation and other operations in Malta.	- relationship of energy issues with competitiveness - impact of energy issues in attracting industry and new investment to Malta. - R&D and investment in energy related business
Malta Environment and Planning Authority	MEPA is the Authority assigned responsibilities under the Planning Development Act of 1992 and the Environment Protection Act of 2001. MEPA is responsible for the establishment of long and short-term objectives and strategies in the environment field, for the setting of environmental standards, guidelines and regulations and for the control and management of activities having an impact on the environment through a licensing and permit system. It is also responsible for the promotion and control of proper land development, both public and private, in accordance with approved policies and plans.	- environmental legislation, particularly those relating to climate change and air quality. - planning development considerations and constraints, particularly those related to new energy infrastructure.

Entity	Major statutory role / mandate	Key responsibilities in the energy sector
Malta Maritime Authority	The Malta Maritime Authority was set up as a distinct and autonomous corporate body to supervise the organisation of the primary maritime services. It was established by law in 1991 as a Government Agency and so vested with detailed regulatory powers. The set-up of this Authority was to enable ports, merchant shipping and yachting centres to operate within centralised framework. The Malta Maritime Authority develops and supports policies and initiatives consonant with the functions and duties stipulated in the Malta Maritime Authority Act (XVII) of 1991.	- bunkering
Malta Transport Authority	The Malta Transport Authority comprises a Board that is appointed by Government. In accordance with the Malta Transport Authority Act [XXIII of 2000], the legal functions of Authority include a requirement for it to plan or provide or secure or promote the provision of, a properly integrated, safe, economical and efficient transport system by road by any means presently obtaining or that may be available in the future.	- energy demand for transport - transport policies that would have an impact on fuel demand / quality
Malta Standards Authority	The MSA was set up in terms of the MSA Act of 2000. Its mission is to effectively co-ordinate standardization and related activities to meet the needs of the Maltese community in accordance with European and internationally recognized standards and practices, that enhance economic efficiency and international competitiveness, and fulfil the community's demand for consumer protection and for a safe and sustainable environment.	- standards relating to energy - legislation dealing with energy efficiency of products
National Statistics Office	The National Statistics Office came into being in March 1947. It is responsible for the collection, compilation, analysis and publication of a wide range of statistical information and related matters. The National Statistics Office is governed by the Malta Statistics Authority Act, 2000.	- statistics related to energy

Government departments:

Department	Major statutory role	Key responsibilities in the energy sector
Consumer and Competition Division	The Consumer and Competition Division is responsible to carry out the functions assigned to the Office of Fair Competition required under the Competition Act, including the responsibility to advise undertakings, associations of undertakings and the public in relation to matters concerned with fair trading practices and procedures and to carry out all the functions and duties assigned to it under the Competition Act related to the investigation, determination and suppression of restrictive practices.	- competencies for fair trading and prevention of abuse of dominant position, particularly those relating to fuel trade and utilities.
Oil Exploration Division	The Department is set up to implement and administer the provisions of the Petroleum Production Act (Cap.156), the Continental Shelf Act (Cap. 194) and the Petroleum (Production) Regulations, 2001. It also administers related terms on petroleum exploration and production as set out in contracts with oil companies operating in Malta.	- current and new policies in oil exploration.

Government consultative bodies

Department	Major statutory role	Key responsibilities in the energy sector
Building Industry Consultative Committee	The BICC complements the activities of the Works Division, besides acting as the official link between the private sector and Government on matters related to the construction industry.	- design guidelines related to energy consumption in buildings
Consumer Affairs Council	The Council advises on Consumer Affairs and strives to promote consumer interests. It monitors and keeps under review trading and business practices related to the supply of goods and services to consumers	- identification of issues important to small consumers
Institute of Energy Technology	The aims of the Institute are to assist in the development of national energy plans through studies in the use of new and renewable energy sources and methods of energy conservation. It is also intended that the Institute should organise and participate in teaching programmes and research projects in the field of energy technology. Other objectives include the dissemination of appropriate methods and techniques relevant to the Institute's areas of interest and to design equipment adapted to local conditions.	- wind and solar energy data
Malta Council for Science and Technology	The Malta Council for Science and Technology is the national advisory body to Government on science and technology policy. The MCST is responsible for identifying and addressing major science and technology challenges and issues of strategic importance for Malta, thereby contributing to the development of coherent and sustainable policy visions and initiatives.	- R&D in Malta, considering long experience in coordinating FP6 programmes.

Implementing agencies and others:

Entity	Major statutory role	Specific roles
Enemalta Corporation	Enemalta Corporation offers a broad range of services to both the industrial, commercial and domestic sectors in the energy field. Set up in 1977 by virtue of the Enemalta Act of 1976, the Corporation today undertakes a broad range of operations, incorporating the importation and distribution of petroleum products and liquefied petroleum gas as well as the generation and distribution of electricity to all sectors of Maltese society.	- major role as a supplier of energy products in a reformed energy market. - investment plans and programmes to improve technical and organisational efficiency
WasteServ Ltd	WasteServ Malta Ltd. was established in November 2002. The company is responsible for organizing, managing and operating integrated systems for waste management including integrated systems for minimisation, collection, transport, sorting, reuse, utilisation, recycling, treatment and disposal of solid and hazardous waste.	- waste to energy plans

ANNEX III - SELECTED EU LEGISLATION RELATED TO ENERGY

Directive 68/414/EEC of 20 December 1968 imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products amended by Directives 1972/425 and 1998/93 and related to Decisions 1968/414 and 1973/238
Decision 68/416/EEC of 20 December 1968 on the conclusion and implementation of individual agreements between Governments relating to the obligation of Member States to maintain minimum stocks of crude oil and/or petroleum products
Directive 73/238/EEC of 24 July 1973 on measures to mitigate the effects of difficulties in the supply of crude oil and petroleum products
Decision 77/706/EEC of 7 November 1977 on the setting of a Community target for a reduction in the consumption of primary sources of energy in the event of difficulties in the supply of crude oil and petroleum products related to Decision 1979/639 (proposed repeal)
Decision 79/639/EEC of 15 June 1979 laying down detailed rules for the implementation of Council Decision 77/706/EEC
Directive 84/360/EEC on the combating of air pollution from industrial plants
Directive 90/377/EEC of 29 June 1990 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users
Directive 92/42/EEC of 21 May 1992 on efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels
Directive 92/75/EEC of 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances
Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels
Regulation (EEC) No 926/93 of 1 April 1993 amending Regulation (EEC) No 1696/87 laying down certain detailed rules for the implementation of Council Regulation (EEC) No 3528/86 on the protection of the Community's forests against atmospheric pollution
Directive 94/2/EC of 21 January 1994 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric refrigerators, freezers and their combinations
Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons
Regulation (EC) No 1091/94 of 29 April 1994 laying down certain detailed rules for the implementation of Council Regulation (EEC) No 3528/86 on the protection of the Community's forests against atmospheric pollution
Directive 94/22/EC of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons
Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations
Directive 95/12/EC of 23 May 1995 implementing Council Directive 92/75/EEC with regard to energy labelling of household washing machines
Directive 95/13/EC of 23 May 1995 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric tumble driers)
Directive 96/57/EC of 3 September 1996 on energy efficiency requirements for household electric refrigerators, freezers and combinations thereof
Directive 96/61/EEC concerning integrated pollution prevention and control
Directive 96/60/EC of 19 September 1996 implementing Council Directive 92/75/EEC with regard to energy labelling of household combined washer-driers
Regulation 736/96 of 22 April 1996 on notifying the Commission of investment projects of interest to the Community in the petroleum, natural gas and electricity sectors as applied by Regulation

2386/1996
Directive 97/17/EC of 16 April 1997 implementing Council Directive 92/75/EEC with regard to energy labelling of household dishwashers
Directive 98/11/EC of 27 January 1998 implementing Council Directive 92/75/EEC with regard to energy labelling of household lamps
Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC
Directive 98/93/EC of 14 December 1998 amending Directive 68/414/EEC imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products
Decision 98/537/EC of 13 July 1998 approving the text of the amendment to the trade-related provisions of the Energy Charter Treaty and its provisional application agreed by the Energy Charter Conference and the International Conference of the Signatories of the Energy Charter Treaty
Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air
Directive 1999/94/EC of 13 December 1999 relating to the availability of consumer information on fuel economy and CO emissions in respect of the marketing of new passenger cars
Decision 1999/280/EC of 22 April 1999 regarding a Community procedure for information and consultation on crude oil supply costs and the consumer prices of petroleum products as implemented by Decision 1999/566/EC
Decision 1999/566/EC of 26 July 1999 implementing Council Decision 1999/280/EC regarding a Community procedure for information and consultation on crude oil supply costs and the consumer prices of petroleum products
Directive 2000/55/EC of 18 September 2000 on energy efficiency requirements for ballasts for fluorescent lighting
Directive 2000/84/EC of 19 January 2001 on summer-time arrangements
Directive 2001/77/EC - The promotion of electricity produced from renewable energy sources in the internal electricity market.
Directive 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants
Directive 2001/81/EC of 23 October 2001 on national emission ceilings for certain atmospheric pollutants
Directive 2002/31/EC of 22 March 2002 implementing Council directive 92/75/EEC with regard to energy labelling of household air-conditioners.
Directive 2002/40/EC of 8 May 2002 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric ovens.
Directive 2003/30/EC of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport
Directive 2003/54/EC of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC
Directive 2003/55/EC of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC
Directive 2003/73/EC of 24 July 2003 amending Annex III to Directive 1999/94/EC
Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC
Directive 2003/92/EC of 7 October 2003 amending Directive 77/388/EEC as regards the rules on the place of supply of gas and electricity
Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity
Decision No 1229/2003/EC of 26 June 2003 laying down a series of guidelines for trans-European

energy networks and repealing Decision No 1254/96/EC
Directive 2004/8/EC of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC
Directive 2004/17/EC of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors
Directive 2004/22/EC of 31 March 2004 on measuring instruments
Directive 2004/67/EC of 26 April 2004 concerning measures to safeguard security of natural gas supply
Directive 2004/74/EC of 29 April 2004 amending directive 2003/96/EC as regards the possibility for certain member states to apply, in respect of energy products and electricity, temporary exemptions or reductions in the levels of taxation
Regulation (EC) No 807/2004 of 21 April 2004 amending Council Regulation (EC) No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks
Directive 2005/32/EC of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products
Directive 2005/33/EC of 6 July 2005 amending Directive 1999/32/EC as regards the sulphur content of marine fuels
Directive 2005/89/ of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment
Regulation (EC) No 1775/2005 of 28 September 2005 on conditions for access to the natural gas transmission networks
Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services

ANNEX IV – ACTION PLAN

Measure	Lead Agency	Actions	Agency	Targets and deadlines
Horizontal				
Prepare strategy papers and action plans to tackle specific areas of the Energy Policy as need arises.	MRES	Plans identified to date are specified in the policy areas below.		
1 Energy efficiency				**Preliminary indicative energy savings targets:** **National: 9% by 2015** **Ministries: 3% per year** **Public bodies: 2% per year**
1A Supply side efficiency		Note synergy with electricity sector reorganisation measures		
Ensure that the main electricity producer seek ways to increase the efficiency of the electrical power generation plants, by improving the efficiency of existing plant and investing in newer more efficient plant;	Electricity producer	1. Install new plant at its Delimara installation to continue meeting consumer demand for electricity. Because of its technology and the fuel utilised, it is expected that such plant will increase the overall efficiency of electricity generation in the current installations, and reduce overall pollutant emissions. 2. Develop a plan covering the supply/demand balance on the national market, the level of expected future demand and envisaged additional capacity being planned or under construction, and the quality and level of maintenance of the networks, as well as measures to cover peak demand and to deal with shortfalls in generation capacity	Electricity producer MRA based on input of network operator	Generation plan published Bi annual
Promote the generation of electricity produced from high-efficiency cogeneration plant in industry that uses heat and power in its manufacturing process;	MRA	1. Systematic collection of information on CHP potential and identify barriers to adoption of CHP in industry, through the FOI and other bodies; 2. Design approach to promote adoption of CHP;	MRA MRA	2006 2007
In opening up the generation sector to competition to encourage investment by the private sector, ensure that applications for authorisations to generate electricity are decided on the basis of, amongst other things, considerations of energy efficiency;	MRA	1. Ensure that criteria for the approval of generation plant include energy efficiency; 2. Ensure the use of best available technology in connection with new generation plant in the consideration of the IPPC permit	MRA MEPA	In hand In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
Improve the efficiency of the distribution network;	Network operator	1. Network operator will continue to offer tariff incentives for large consumers to improve their power factor 2. Commission new 132kV and 33kV distribution centres in order to lower transmission and distribution losses by using higher operating voltages. Currently there are 18 33kV and 132kV distribution centres, with new ones planned for the future. The commissioning of distribution transformer capacity has continued at a rate of almost 40MVA per year in a 20 year period.	Network operator Network operator	Ongoing In hand
Implement demand management measures intended to decrease the discrepancy between peak and minimum loads;	Network operator	1. Install an advanced energy metering system which will enable it to acquire (and supply to the consumer) more detailed information on the consumer's electricity usage. Such information will enable a more intelligent application of demand side measures to increase energy efficiency.	Network operator	2007-2008
1B Energy end use efficiency		Note synergy with fiscal measures,		
Bring all current initiatives within a more holistic national energy efficiency action plan by 2007 including targets for energy efficiency up to 2015;	MRA	1. Establish energy efficiency indicators, and benchmark performance with other EU member states; 2. Initiate a structured holistic programme to promote energy efficiency 3. Initiate a programme of inspections to ensure energy labelling 4. Finalise national action plan including targets	MRA MRA CCD MRA	2007 2007 2006 2007
Ensure that competitively priced energy services are made available and promoted to final customers;	EMC	1. Revise Enemalta Act to permit EMC to provide energy services 2. Develop a structure that permits and encourages the development of providers of energy services in Malta	EMC MRA	2007 2007
Adopt exemplary energy efficiency practices in the public sector;	MRAE	1. Appoint green leaders in all government owned entities 2. Carry out one energy audit per year per Ministry 3. Adopt green government plan and a corporate strategy for the entities where there is government investment 4. Develop a green public procurement national action plan taking account energy efficiency. 5. Implement measures to further reduce consumption of electricity in the water sector for desalination 6. Implement guidelines to reduce energy consumption in new government schools 7. Prepare and implement a Green Public Procurement Policy 8. Include energy saving features in all Housing Authority projects, and the results of the Birkirkara pilot project will be analysed to achieve better energy performance in housing units designed by the Authority; 9. Establish green travel plans for commuting to Valletta	MRAE MRAE MIIIT MRAE WSC FTS Housing MUDR	In hand 2006 In hand 2006 In hand In hand On-going In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
Develop and adopt legislative and administrative instruments to achieve energy efficient and environmentally friendly buildings and services;	BCID	1. Transpose and implement EU legislation on energy performance of buildings; 2. Draft regulations to set minimum energy performance requirements for buildings and building services and issue legislative/regulatory notice to render such requirements obligatory. 3. Draft and issue a standard national methodology for the calculation of the energy performance of buildings 4. Introduce energy certification of newly constructed or renovated buildings and buildings that change ownership or are rented out 5. Take measures to see that buildings with a useful floor area over 1000 sq.m. occupied by public authorities and institutions providing services to a large number of persons display an energy certificate in a prominent place. 6. Introduce and operate a system for the regular inspection of boilers and air conditioning systems as indicated in articles 8,9 & 10 of Directive 2002/91/EC 7. Identify and disseminate information on best practices in building design and construction	MRES / BCID	November 2005 draft issued for public consultation. In force by November 2006 Partially completed December 2009 December 2009 December 2009 On-going
1C Efficiency in the transport sector		Note synergy with RES measures		
Support initiatives at EU level to promote the manufacture and marketing of more efficient vehicles and components;	MSA			
Undertake advisory services intended to change attitudes and influence behaviour in transport use;	ADT	1. Ensure that customer information on the fuel economy and carbon dioxide emissions of new passenger cars is made available at the point of sale	MEPA / CCD	In hand
Ensure that transport policy and its implementation aim to improve efficiency in energy use in the transport sector with particular emphasis on public transport systems;	ADT			
Promote the use of more efficient or environmentally friendly alternative fuels for transport and/or modes of transportation;	MRA	1. Develop standards (national annexes) for biofuels and LPG 2. Develop regulatory mechanisms and promote the development of markets for alternative fuels 3. Investigating feasibility of voluntary agreements with stakeholders 4. Establish a master plan for electric transportation	MSA MRA MRA MRAE	In hand 2007 In hand In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
2 Reducing reliance on imported fuels				
2A Oil exploration		Note synergy with foreign policy measures		
Seek to intensify exploration by oil companies;	OED	1. Establish competitive terms and returns for oil companies that are commensurate with the risk undertaken; 2. Promote exploration activity in offshore Malta by making presentations to the oil industry and by participating at major international oil & gas exhibitions, and permit companies to review and sample data from offshore Malta 3. Continue to revise model contract terms to keep them competitive and in line with prevailing international trends 4. Negotiate and award exploration licences in offshore Malta particularly in deep water areas that have not yet been explored	OED	On-going
Negotiate with neighbouring countries where disputed boundaries exist, with a view to enabling oil exploration to take place in currently disputed areas;	OPM	1. Joint oil exploration agreement with Tunisia	MFA	In hand
2B Renewable sources of energy		Note synergy with fiscal policy measures		
Continue the development of a strategy for the promotion of RES to meet 2010 targets and identifying which cost efficient efforts are necessary to establish and achieve longer term targets;	MRA	1. Complete detailed study of the potential and feasibility of RES options, taking into account technical, environmental and commercial issues by and decide and set priorities for the implementation of RES projects; 2. Establish a waste to energy policy; 3. Complete study on options for recovery of energy from agricultural waste 4. Complete study on options for recovery of energy from sewage sludge	MRA MRAE MRAE MRAE	2006 2006 2006 2006
Establish support mechanisms for RES electricity;	MRA	1. Implement appropriate mechanisms for the support of electricity generated from renewable sources; 2. Develop mechanisms to issue guarantees of origin; 3. Establish feed in fees for large scale RES electricity; 4. Develop a green certification mechanism for RES;	MRA MRA Network operator / MRA MRA	2006 2006 2006 2006

Measure	Lead Agency	Actions	Agency	Targets and deadlines
2Bi Wind and solar energy				**Target for 2010: 0.54 – 1.08 GWh PV; 1.45 GWh micro-wind; Potential for 2020 80GWh offshore wind 6GWh PV 3GWh micro-wind**
Promote small scale RES systems;	MRA	1. Adopt fiscal incentives for small PV and micro-wind systems 2. Review metering arrangements and network arrangements 3. Trim bureaucratic barriers towards small scale RES development and grid connection	MFIN MRA / Network operator MRA / MEPA / Network operator	Established - revise annually Established – revise in 2006 Revise in 2007
Promote off-shore wind farms if viable and feasible;	MRA	1. Continue investigation of deep-water wind farm potential with a view towards exploitation. 2. Seek to ensure the availability of Community financial aid for renewable energy source development such as offshore wind connections, should their feasibility be demonstrated; 3. Promote installation of offshore wind farm away from coast at deepwater sites (>20 m depth)	MRA MRES MRA	2006 2007 In hand
Promote solar thermal applications;	MRA	1. Provide and keep under review fiscal incentives to promote solar thermal penetration	MFIN	On-going
2Bii Biomass				**Potential from waste: 2010: 10-13GWh post 2010: 100GWh Target for biofuels to be established in 2007, in line with reference value of 5.75% of road transport fuel**
Recover energy from waste	MRAE	1. Capture of gas from landfills 2. Mechanical Biological Treatment Plant with input capacity of 35,000 t/annum organic waste 3. Mechanical biological treatment plants for remaining fraction of organic waste if feasible; 4. Recovery and use of refuse derived fuels; 5. Recovery of energy from agricultural waste and sewage sludge	WasteServ WasteServ WasteServ WasteServ WasteServ	Phase1 in 2007 On line in 2008 Subject to waste management strategy review
Promote the manufacture of biofuels produced from indigenous sources, primarily waste biomass	MRA	1. Provide fiscal incentives to biodiesel producers 2. Ensure that biodiesel producers provide information to the public on the availability of biofuels and other renewable fuels;	MFIN MRA / licensed operators	Established – revise annually 2006

Measure	**Lead Agency**	**Actions**	**Agency**	**Targets and deadlines**
Monitor the use of biodiesel and amend strategy and targets accordingly	MRA	1. Monitor sales of biodiesel and compare to target 2. Ensure that there is specific labelling at the sales points for percentages of biofuels, blended in mineral oil derivatives, exceeding the limit value of 5 % of fatty acid methyl ester (FAME) or of 5 % of bio-ethanol; 3. Monitor the effect of the use of biofuels in diesel blends above 5% by non-adapted vehicles; 4. Revise and update the national indicative target of the proportion of biofuels to be used in road transport;	MRA MRA MRA MRES / MRA	Annual Annual 2006 2007
Stability in energy supply				
3A Interconnection and alternative sources		Note synergy with electricity sector reorganisation measures and with fiscal measures		
Ensure the development of the electricity interconnection with the European grid by directing Enemalta (as a Government owned entity) to issue a request for proposals for such inter-connection and encouraging any private initiative that may want to invest in such infrastructure	MRA	1. Issue a request for proposals for an electricity interconnection following the result of the technical study; 2 Encourage any private initiative that may wish to invest in interconnection. 3. Assess in detail the impact of an electricity interconnector with Europe and the changes that would be necessary in the sector structure, organisation and regulation, together with the feasibility of development of natural gas infrastructure; 4. Seek to ensure the availability of Community financial aid through the designation of gas and electricity interconnections and LNG terminal as projects of common interest relating to trans-European energy networks in the relevant EU decisions; 5. Participate in key EU gas and electricity regulatory regional initiatives with a view to facilitating the adjustments necessary in the event of an interconnected market.	MIIIT / Enemalta MRES /MRA MRES MRA	Seek to ensure adoption in time for 2007 call for proposals
3B Disruption planning				
Ensure that as far as possible, the institutions, information, hardware and infrastructure are available, ready, and coordinated so as to perform efficiently and expeditiously in any emergency, while leaving the freedom and flexibility to respond to any circumstance as it arises and as best thought fit;	MRA	1. Continue to develop and test contingency plans capable of managing an energy crisis;	MRA	In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
Ensure the availability of stock of oil leading up to 90 days worth of oil products by 2007 with the least possible costs.	MRA	1. Establish security stock holding following a call for tenders (to replace current obligation on Enemalta); 2. Establish stock holding levy on all operators in the market; 3. Investigate the feasibility of owning or leasing stocks or of holding stocks in part in other Member States; 4. Investigate the feasibility of holding stocks of other fuels (LPG) in Malta.	MRA MRA MRA MRA	2006 2006 2007 2007
3C International action		Note synergy with oil exploration measures		
Actively support international initiatives that will: a. promote political and economic stability in the main producer countries, b. improve the climate for energy sector investment, encourage more openness and transparency in international energy markets; c. ensure the efficient and sustainable use of energy resources; and d. halt and address global warming which is a major concern particularly to low-lying islands and small states including many Commonwealth countries.	MFA	1. Seek to contribute to the development of Community policy and measures and to take actions that favour reaching policy objectives; 2. Participate appropriately in the Energy Charter Treaty 3. Promote and participate in Euro-Mediterranean processes in the energy sector	MFA / MRES / MRA MRA MFA / MRA	On-going On-going On-going
Continue to strengthen its diplomatic ties with supplier and producer countries of crude oil and derived products.	MFA	1. Open discussions with governments of producer countries to explore the viability of importing fuel at advantageous costs; 2. Assist, as necessary, other Government Ministries, entities or agencies in the effort to engage in discussions with key energy players and to explore the options related to sourcing of energy and energy supplies;	MIIIT MFA	In hand In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
4 Delivering energy efficiently and effectively				
4A Competition and regulation				
Regulate the energy sector using practices and policies that are coherent, impose minimum bureaucratic obligations and are least intrusive and ensure the minimum duplication and conflict with existing structures, while aiming towards affordability of fuels and customer protection, and where possible open up the market to competition;	MRA	1. MRA and OFT study the particular characteristics of the market, such as the extent of market power of the incumbent undertakings, the low elasticity of supply and demand for electricity and gas and the impossibility to store electricity, with the aim of establishing how these characteristics affect the economic analysis undertaken in competition cases concerning the definition of the market, assessing dominance and the abuse thereof and restrictive practices; 2. Draft memorandum of understanding between MRA and OFC cooperate effectively in tackling cases in the field of competition; 3. Revise the MRA Act to ensure that the Authority can adequately monitor and efficiently take action and enforce its decisions. 4. Develop tariffs structured to remove discrimination between customers and that promote energy efficiency.	MRA / OFT MRA / OFT MRES / MRA MRA	2006
4B Open the fuel sector to competition				
Reform the fuel market by adopting the necessary legal, administrative, fiscal, economic measures consistent with Government obligations, economic, environmental and social considerations and strategic concerns	MRA	1. Establish the strategy and adopt the necessary legislation for the reform of the inland fuel market; 2. Establish licences necessary for the operation of the fuel market; 3. Study the safe adoption of auto gas as an automobile fuel; 4 Develop and issue regulations catering for the disposal of waste and spent oils; 5. Establish an economic monitoring regime on operators and price structures for all fuels.	MRES / MRA	2006
Establish satisfactory design and operating standards for operators in the fuel market	MRA	1. Establish technical inspection scheme for primary storage facilities; 2. Ensure the development of appropriate disaster mitigation and contingency plans; 3. Develop a harmonised code of practice relating to health and safety issues throughout the market chain;	MRA	2007
Monitor and enforce compliance to standards and fair competition	MRA	1. Establish fuels quality monitoring schemes, and marking and fuel dyeing procedures; 2. Establish measures for the correct measurement and reporting of fuel imports; 3. Implement a fair, objective supervisory regime to ensure fair competition and customer service offered by fuel retailers;	MRA	2007

Measure	**Lead Agency**	**Actions**	**Agency**	**Targets and deadlines**
Divest Enemalta from operations in the fuel sector	MIIIT	Initiate commercialisation process of the entire gas function and supply chain and the supply chain leading from the importation of fuel for the general market to its distribution in petrol stations from Enemalta Corporation	MIIIT / Privatisation unit	To commence by end 2006
4C Electricity sector reorganisation		Note synergy with interconnection measures and fiscal policy measures		
Ensure that the electricity operator becomes the most cost effective organisation possible within social and environmental constraints.	MIIIT	1. Review internal procedures to reduce costs 3. Ensure that the electricity operator concentrate on its core business as well as to improve its cash flow in the short term; 4. Ensure adequate financing for electricity generation and distribution	Operator	
Ensure that there is free entry into the competitive generation market.	MRA	1. Take measures to ensure information transparency 2. Adopt dispatching rules and balancing rules and tariffs that are objective, non-discriminatory and transparent 2. Monitor the electricity sector	Network operator / MRA Network operator / MRA MRA	2006 2006 annually
Take measures to ensure security (including security of supply); regularity, quality and price of supplies; environmental protection, (including energy efficiency and climate protection) social and economic cohesion and customer protection.	Network operator	1. Identify which public service obligations are essential to ensure security of supply, quality of supply, and social and environmental considerations in a competitive electricity market; 2. Monitor the supply/demand balance on the national market, the level of expected future demand and envisaged additional capacity being planned or under construction, and the quality and level of maintenance of the networks, as well as measures to cover peak demand and to deal with shortfalls in generation capacity; 3. Provide sufficient and efficient electrical power generating plant and network capacity to serve demand at specified levels of reliability.	MRA / Network operator Network operator / MRA Network operator	In hand
Ensure that technical safety criteria are defined, and that technical rules are developed establishing the minimum technical design and operational requirements for the connection to the electricity system.	MRA	1. Adopt network code 2. Amendments to electricity supply regulations 3. Adopt Maltese standards for wiring installations 4. Review current wiremen licence to ensure its updating in line with modern requirements	MRA MRA MSA MRA	2006 2006 2008 2007
Horizontal and support measures				
5A Fiscal policy		Note synergy with all other measures		
Continue to implement the transitory arrangements for energy taxation as agreed with the EU;	MFIN			
Use fiscal policy to promote environmental and other Government priorities in the energy sector;	MFIN	1. Develop proposals for fiscal incentives for RES; 2. Identify areas where fiscal policy can leverage government policy in the energy sectors; 3. Provide funds and funding mechanisms to encourage RES and energy efficiency in the public sector and among consumers;	MRA MFIN	2006 In hand

Measure	Lead Agency	Actions	Agency	Targets and deadlines
Allocate funding from the Cohesion Policy 2007-13 to the energy sector, including funding for energy efficiency measures and alternative sources of energy	Regional Policy			
5B Research and education				
Promote research projects of direct benefit to Malta, and exploit best the specific conditions, particularly climatic, in Malta		1. Establish, structure and fund research programmes intended to achieve objectives of national relevance 2. Seek to ensure community funding is available in areas specific to national concerns. 3. Promote participation in EU funded educational and research projects in the energy sector	MCST MRES / MCST MCST / MRES / MRA	2007 In hand In hand
Develop analytical (energy modelling scenarios, indicators) and sector monitoring tools to develop perspectives on long term demand and supply.		1. Develop energy model complying with international standards. 2. Develop emissions model and monitoring system	 MEPA	2007 2006
5C Investments and industry promotion				
Promote investment in the oil and gas sector, and in renewable sources of energy and energy efficiency and pursuing job creation in the energy industry, both serving Malta and other counties	ME	1. Provide fiscal incentives, such as advantageous tax rates, special loans and loan guarantees, training grants and subsidised property rates to investors in the oil and gas sectors;	ME	In hand

Key:

ADT = Malta Transport Authority
CPD = Civil Protection Department
MCST = Malta Council for Science and Technology
MFA = Ministry for Foreign Affairs
MRA = Malta Resources Authority
MSA = Malta Standards Authority
BICC = Building Industry Consultative Committee
Education = Ministry for Education
ME = Malta Enterprise
MFIN = Ministry for Finance
MRAE = Ministry for Rural Affairs and Environment
NSO = National Statistics Office
CCD = Consumer and Competition
EMC = Enemalta Corporation
MEPA = Malta Environment and Planning Authority
MIIIT = Ministry for Industry, Investments and IT
MRES = Ministry for Resources and Infrastructure
OED = Oil Exploration Division