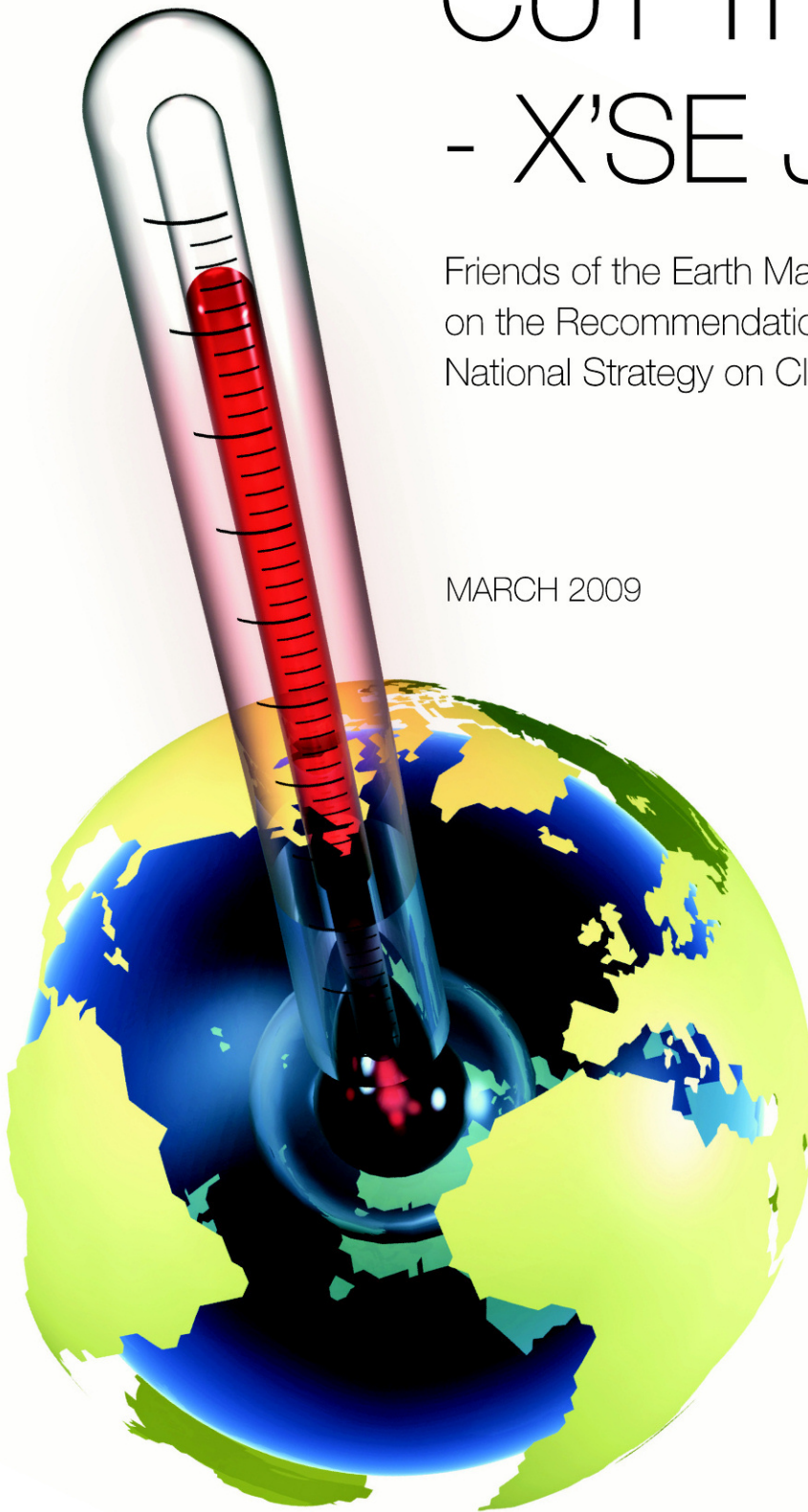


# CUT THE COST - X'SE JISWIEK?

Friends of the Earth Malta's Review  
on the Recommendations for a  
National Strategy on Climate Change

MARCH 2009



Friends of the Earth Malta believes in making life better  
for people by inspiring change and promoting solutions to environmental problems

**Friends of  
the Earth**  
M A L T A

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## Executive summary

Friends of the Earth Malta (FoE Malta) welcomes the recommendations as an intention of political will to address the issue of climate change. However, FoE Malta is concerned that the exercise currently lacks the necessary depth and analysis to be considered a serious attempt to address the core problems in relation to climate change in Malta. FoE Malta's review intends to substantiate this observation. Friends of the Earth is glad to note that the recommendations leave the option open for having an effective climate change legislation.

*Cut the Co<sub>2</sub>st – X'se jiswiek?* was researched, written and compiled by the members of FoE Malta's Research working group. It is FoE Malta's review on the Climate Change Committee's recommendations National Strategy for Policy and Abatement Measures Relating to the Reduction of Greenhouse Gas Emissions. FoE Malta's review illustrates a) observations and commentary on the contents of the recommendations and; b) FoE Malta's proposals towards a national climate change strategy. FoE Malta is dedicated to providing solutions to environmental problems.

Regrettably it is observed that the Committee set forth these recommendations with the clear intention to *not* discuss adaptation measures thus not offering a holistic climate change strategy. In addition the consultation period was limited both in timeframe and in the content and appointment of the Committee. A true consultation would have included a call for interested and knowledge parties to state their interest in participation and representation on the committee before commencing this exercise. FoE Malta firmly believes that it is an asset to decision-making on national climate change strategy and believes and believes that NGOs should be represented on such decision-making bodies.

There are no signs of monitoring being included in the strategy. Evaluation is a stronghold of scientific validity and should thus be an integral part of the strategy together with transparency and accountability. FoE Malta requests decisions based on sound knowledge and science to determine a strategy on climate change. A hunch or feeling is not to be supported within a scientific study. FoE Malta states that the limitations on analysing data available on Malta's emissions must be addressed immediately.

FoE Malta states that action on climate change issues should start immediately. Many recommendations, if followed, will start to be enacted in late 2009. However, unless an operational climate change department is set up or the current units and individuals entrusted with following climate change policy are provided with the necessary financial and human resources, it will not be easy to start working on some of the recommendations in 2009.

## Adaptation

It is observed that the Committee set forth these recommendations with the clear intention to *not* discuss adaptation measures (section 01.1)<sup>1</sup> thus not offering a holistic climate change strategy. This decision, regrettably, seems to ignore the statements made by the International Panel on Climate Change (IPCC, 2007), where adaptation is considered an essential part of climate change strategies, with the aim of reducing the risk and damage from current and future harmful impacts. It is widely accepted that with the right kind of adaptation, countries can reduce their vulnerability to the impacts of climate events and manage the evolution of climate processes (IOM, 2008; Klein, 2008; Nicol and Kaur, 2008; Schipper 2007).

In addition to this, the consultation period was limited both in timeframe (section 01.3)<sup>2</sup> and in the content and appointment of the Committee. A true consultation would have included a call for interested and knowledge parties to state their interest in participation and representation on the committee before commencing this exercise.

During a public consultation meeting a comment was made by the Committee that there is a lack of research and studies on Climate Change with special reference to the Maltese Islands (also discussed in Chapter 2)<sup>3</sup>.

There are no signs of monitoring being included in the strategy. Evaluation is a stronghold of scientific validity and should thus be an integral part of the strategy together with transparency and accountability.

The limitations on analysing data available on Malta's emissions must be addressed immediately.

FoE Malta requests decisions based on sound knowledge and science to determine a strategy on climate change. A hunch or feeling is not to be supported within a scientific study (section 05.2)<sup>4</sup>.

FoE Malta welcomes Recommendation 06 whereby a virtual network on climate change is developed. FoE Malta agrees with concerted efforts in relation to water resources, terrestrial and marine ecosystems and economic vulnerability (section 02.13 recommendation 06)<sup>5</sup>. This is a reference to the threat of increased evapo-transpiration i.e. the likeliness of increased rainfall, thus this too must be tackled within a holistic strategy on climate change.

FoE Malta is concerned that alternative energy mentioned in the recommendations rely on a single source being the link to the European Power Grid as the primary focus to forecast whether or not Malta will be able to meet the targets set to it under the Emissions Trading Scheme (ETS) mechanism.

<sup>1</sup> [extract] Section 01.1: It is thus with pre intent that the CCC does not discuss at any length adaptation measures that Malta may consider vis-à-vis Climate Change.

<sup>2</sup> Section 01.3: The report prepared by the CCC is subject to the following limitations: 01. Given the timeframe within which the CCC had to prepare this report the process of consultation was limited. Insofar that it was possible, key government entities that either have a role to play in Climate Change or are impacted by it were consulted. The four main political parties were consulted as well as a number of constituted bodies and NGOs. Whilst it was not the intention of the CCC to hold a far ranging consultation and discussion process prior to the drafting of the report it is pertinent to add that the CCC participated in a National Conference held by the UHM titled Climate Change and Employment held on 25th November 2008.

<sup>3</sup> Section 02.1: Although a growing number of policy studies have contributed towards greater understanding of the implications of Climate Change in European island regions, this remains a relatively undeveloped policy area in the European context. Malta is an island nation state and, together with many other European islands, experiences higher vulnerability in general and deserves particular policy attention when designing and implementing policies, guidelines and standards for Climate Change adaptation and mitigation.

<sup>4</sup> Section 05.2 Assessing the Supply Side of the Abatement Measures relating to the Electricity Sector: While this Chapter attempts to give a clear and correct picture, as stated above, it does this within limitations. The assessment is not built, due to the absence of modelling tools, on a highly sophisticated model for population growth, inflation, energy prices etc. It uses simple variables which, the CCC feels [underline of FoE Malta], allow the decisions being taken to be isolated from a more complex and volatile environment and thus allow for a clearer understanding of the main issues.

This section of the report does not take into consideration alternative energy sources, other than the link to the European Power Grid as the primary focus of this section is to determine whether the abatement measures proposed in the report would result in Malta meeting the targets that will be set to it under the ETS mechanism.

<sup>5</sup> Section 02.13 (i): Water Resources

The most likely changes in this regard will be:

(i) increased evapotranspiration rates due to an increase in the ambient temperature, leading to disturbances in the soil balance;

**Proposal 1:** FoE Malta proposes the implementation of a representative team dedicated to research, development and dissemination of information on climate change. This team would also contribute towards the development and implementation of a monitoring system towards Malta's emissions and strategy on climate change. This team may include a sub-group that works within localities to support the dissemination of information on climate change and aid with gathering data for monitoring analysis and evaluation to feed back into the team referred to in this proposal. Funds may be sourced from a Climate Change Fund to be generated from Eco Taxes, Polluter Pays Principal and other related funding sources; for planning and implementing renewable energy systems.

FoE Malta proposes that all plans and policies should be part of the Integrated Spatial Development Plan which according to the draft National Commission for Sustainable Development is to be developed by 2010. With this target in place policies and sustainable climate change planning will be strengthened across all sectors (section 02.12 Planning Considerations relevant to Climate Change).<sup>6</sup>

FoE Malta welcomes the suggestion of immediate enforcement of rainwater capturing from 1<sup>st</sup> July 2009 (Section 04.3.8 Recommendation 56)<sup>7</sup>.

FoE Malta welcomes the subsidy of 50% of costs for rainwater capturing and integration of plumbing system for secondary class water and urges the government to enforce this initiative on all new developments whereby developers must incorporate it in the structure when the building is still in its planning phase (section 04.3.8 Recommendation 57)<sup>8</sup>.

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<sup>6</sup> Section 02.12: The planning system in Malta is based on a hierarchy of plans ranging from a national strategic plan to Local Plans, the latter being a more detailed interpretation of the former. Planning covers the whole of the national land territory and extends onto the coastal waters. The planning documents are based on extensive research and wide-ranging public consultation processes which involve a broad spectrum of organisations, agencies as well as the general public.

<sup>7</sup> Section 04.3.8 Recommendation 56: In a country that suffers from chronic water supply shortages, and which produces desalinated water at a great expense, and which is facing major difficulties with its water table due to illegal, yet sustained water extraction the current practice not to invoke legal provisions that mandate that buildings must have rainwater capture reservoirs or wells should be repealed and the legislation should be enforced with effect from 1st July 2009.

<sup>8</sup> Section 04.3.8 Recommendation 57: The Government should introduce a fiscal scheme, in the period 2010 to 2013, to incentivise domestic users, by subsidising 50% of the costs required, to integrate their water in their wells or rainwater capture reservoirs with the plumbing system for secondary use and sustain this initiative with an aggressive knowledge and information campaign.

## Economic aspects

FoE Malta is concerned that the exercise currently lacks the necessary depth and analysis to be considered a serious attempt to address the core problems in relation to climate change in Malta. The below comments substantiate this observation from an economic aspect – dealing with Chapter 3 of the report specifically, and the economics of the report in general.

The report would also have benefited from an understanding of the socio-economic drivers that have led to the generation of greenhouse gas emissions in Malta. This would then have provided the necessary pointers to the policy measures that would be called for.

An assessment of the socio-economic benefits and costs of the recommendations made also appears to be missing. The recommendations would benefit from a. an assessment of the expected emission reductions (beyond the energy sector), b. an evaluation of the social costs (including private costs, social and environmental impacts) and c. an evaluation of the social benefits wherever these extend beyond GHG emission reductions (e.g. impacts on air quality). As correctly stated in the report, the economics of climate change are not limited to private costs and benefits but to the costs and benefits for society as a whole. Recommendations should therefore only be considered once these broad economic considerations are taken into account.

In section 3.1, the potential of the use of market based instruments to address climate change seems to exclude the most obvious instrument necessary to address climate change:

**Proposal 2:** FoE Malta proposes a tax or charge on products and services that are intensive on the use of fossil fuels, however this cannot be adopted seriously by government until alternatives are made easily available to the public at large.

Furthermore, it would have been useful for the recommendations to assess the success or otherwise of relevant market based instruments already in place in Malta, with a view to improving their performance.

The sections on Marginal Abatement Costs, on the Shadow price of CO<sub>2</sub> emissions and on the Market Carbon Transaction Approach (section 3.1) are theoretically sound. However their application should have been reflected in the report itself and not been restricted to a partial case study on the implications in the (already regulated) energy sector.

Beyond a description of the Emissions Trading Scheme (ETS) in section 3.2, a critical analysis of whether the ETS has actually functioned in Malta, today and the implications to Malta of the extension of the scheme to aviation and to shipping is missing. The potential for GHG reductions from economic sectors that do not form part of the ETS and the economic costs and benefits of these also appear to be missing in the report.

On the use of flexibility mechanisms (section 3.2 and 3.3) the report could have examined the implications to Malta and the relevant costs and benefits of the use of such mechanisms. In relation to the potential of CDM, the report should take account of the fact that Malta has committed itself to change to Annex 1 status – which would have repercussions on Malta's ability to host CDM projects.

The economic implications of Malta's need to adapt to climate change are not assessed. Whilst it may have been beyond the scope of this committee to assess the economic impacts of climate change on Malta, yet the impacts of climate change on the future scenarios of energy demand and on the recommendations themselves could have been considered.

Malta being highly dependent on tourism and having a tourism product which is very sensitive to the climate cannot remain a mass tourism destination. Mass tourism causes greater pressure on the demand of water supplies, air conditioning and all other amenities tourists require during their stay. According to the report '*Climate change and tourism: where will the journey lead*' published by Deutsche Bank, sun, sand and sea destinations in the Mediterranean region, Malta included, are most likely to lose due to climate change

effects as it is noticeable that they will suffer from rising temperatures by the 2030, with Malta being classified as one of the losers.<sup>9</sup>

Therefore, FoE Malta suggests that we should adopt a more effective niche market tourism strategy in order to attract more tourists during the shoulder months. Niche tourism may range from cultural tourism to sports tourism to rural tourism and other forms of niche tourism. This may aid towards increasing tourism throughout the whole year, and may counteract the adverse impacts created by mass tourism. Mass tourism has harmed the physical and natural environment, the landscape and architectural heritage, and influenced cultures and societies negatively. FoE Malta proposes that in order to remain a competitive and attractive destination, the government should appoint destination managers to work hand in hand with Malta Tourism Authority and MEPA to coordinate a strategy for tourism which offers: great opportunities, is more sustainable, economically more prosperous, less damaging to the Malta's natural environment and society at large, and most importantly – capable of delivering high-spending tourism targeted towards responsible tourists.

Finally, contrary to what is stated in the report in section 3.1, the economics of Climate Change (namely the social and private costs and benefits) are not “on the fringes of the debate” but is the very core of the debate on climate change both at a European Union and at an international level (UNFCCC). FoE Malta considers that the economics of climate change have largely been left unaddressed in these recommendations, beyond a theoretical (albeit sound) analysis. It is the concern of FoE Malta that failure to address this central issue risks directing effort in areas which do not guarantee results and which could potentially result in other perverse results to the detriment of the environment, society and the economy.

FoE Malta believes in the importance of an awareness campaign to the Maltese public regarding the relationship between cleaner air and water and improved health levels for the whole population. This would also address the concern that people really understand the importance of investing in climate friendly initiatives for environmental reasons.

Below are comments in relation to the specific recommendations made in Chapter 3 of the report<sup>10</sup>:

### **Section 03.3 Recommendation 07<sup>11</sup>**

FoE Malta considers that besides the electricity sector, targeted through the ETS, there are potential significant opportunities to target GHG emissions in other sectors (principally transport). Without an assessment of the reduction potential in these other sectors, it is difficult to justify why the ETS – electricity sector is being proposed as the “primary focus”. Furthermore, as the ETS for the energy sector is already in place, it would appear that the “primary focus” being proposed goes no further than what has already been put in place. Within the ETS it is technically MRRR/MEPA which will need to direct efforts to reduce CO<sub>2</sub> emissions, ideally through a one stop shop system. In so doing all GHG producers including the manufacturing and tourism sectors will be required to meet the reduction targets of Greenhouse Gas emissions whilst Enemalta must meet the targets set out under the Large Combustion Plant Directive, under the IPPC Directive, as well as its contribution to air pollution (besides GHGs).

### **Section 03.3 Recommendation 08<sup>12</sup>**

Whilst this may be a useful exercise, which FoE Malta would support, the most useful application of this shadow price would be to price carbon accordingly through appropriate market based instruments (e.g. a tax on fuel). Failure to do so would imply that the shadow price remains a theoretical construct.

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<sup>9</sup> Ehmer 2008 – *Climate change and tourism: where will the journey lead*  
Source: <http://www.dbresearch.com> and search by title of research.

<sup>11</sup> Section 03.3 Recommendation 07: The electricity sector with particular reference to the Emissions Trading Scheme should constitute the primary focus of concentrated efforts to reduce CO<sub>2</sub> emissions and in doing so the Government should adopt a strategy that directs efforts towards those abatement measures that will render the highest level of tCO<sub>2</sub>e reduction for each €1 of investment made.

<sup>12</sup> Section 03.3 Recommendation 08: The Ministry of Finance, Economy and Investments should establish a Shadow Price of Carbon for Malta by June 2009.

**Section 03.3 Recommendation 09<sup>13</sup>**

The same comment for Recommendation 08 above applies. Furthermore, FoE Malta considers that the evaluation of policy and investments that have a significant carbon impact should not wait for the computation of a shadow price. There are significant investments under way (particularly those funded by the EU through the Structural Funds) whose potential to generate GHG should be evaluated with immediate effect.

**Section 03.3 Recommendation 10<sup>14</sup>**

FoE Malta fully agrees with this recommendation.

**Section 03.3 Recommendation 11<sup>15</sup>**

FoE Malta agrees with this recommendation.

**Section 03.3 Recommendation 12<sup>16</sup>**

FoE Malta agrees with this recommendation. The responsibilities to Malta stemming from the Aarhus convention and the EU's directive on access to information should be borne in mind.

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<sup>13</sup> Section 03.3 Recommendation 09: The Management Efficiency Unit within the Office of the Prime Minister should be tasked to work with the Ministry of Finance, Economy and Investment to introduce by June 2009 policy and supporting guidelines for the consistent and mandatory application of a Shadow Price of Carbon by public entities in the evaluation and assessment of policy and investments that have a significant carbon or other GHG impact.

<sup>14</sup> Section 03.3 Recommendation 10: In an ambience where international, supra-national, and regional frameworks and policies on Climate Change have a pervasive impact on national finances and economics, the Government should, at the earliest opportunity possible, graft the economics of Climate Change onto both the national budgetary and macro- and micro- economic planning framework.

<sup>15</sup> Section 03.3 Recommendation 11: The Government should build a strong indigenous Climate Change budgeting and economic planning capacity within the Ministry of Finance, Economy and Investments as well as such capacity within the Enemalta Corporation, Malta Resources Authority, and Malta Transport Authority.

<sup>16</sup> Section 03.3 Recommendation 12: The Ministry of Resources and Rural Affairs should establish and lead a Working Group with the support of the National Statistics Office and including key stakeholders in order to establish by no later than December 2009 a national statistics framework for Climate Change.

## Abatement measures

As stated in previous public communications, FoE Malta believes a report is fairly useless unless there is a sound implementation structure. In this specific case we believe that this should be nothing less than a Bill. This has been tried and tested in the UK and is currently being discussed in many other European countries. Other FoE groups in 16 different countries are in fact asking for such legislation. The U.K. is also a signatory to EU commitments, yet the UK government has taken the steps to include climate change in national legislation.

We thus firmly believe that the national strategy and legislation to fight climate change should go hand in hand.

**Proposal 3:** FoE Malta proposes that in order to meet its target reductions of greenhouse gas emissions, emissions reductions should be included in applications for plans and programmes from the very start in view of LN418/2005 (see extract from LN418/2005 on p.27 of this review). The effects of greenhouse gas emissions on the environment should be taken into consideration by a Strategic Environmental Assessment (SEA) and carried out by the proponent, i.e. the entity which is proposing the plan or programme which might result in an increase in emissions.

Again, legislation without a solid strategy and enforcement regime has proven to be ineffective in various other sectors. Government should hence ensure that proper enforcement is done.

**Proposal 4:** FoE Malta proposes a Green Community Neighbourhood Watch which will cooperate within or in affiliation with Local Councils and consist of voluntary or paid staff providing training and informal education on environmental challenges and how to tackle them. They will also carry out studies and surveys in their localities to measure the progress/deterioration of their locality's environment. They will also work closely with the police and have the authority to give fines for littering in their locality and to admonish anyone who degrades the environment of their locality. The Green Community Neighbourhood Watch will have the capacity to manage and maintain this centre via funding sources to recruit and maintain staff and volunteers. ETC may also be a valuable asset in the setting up and running of the Green Community Neighbourhood Watch.

FoE Malta welcomes and agrees with a national policy on environmental education and hence a holistic educational strategy (section 04.7 Preparing Individuals to respond to Climate Change)<sup>17</sup> and emphasises that it must be implemented across all sectors and not just specific sectors. FoE Malta suggests that by engaging local councils in this educational strategy of such proportions may facilitate its effectiveness. FoE Malta suggests that success may be achieved more efficiently via the use of a variety of modern and efficient dissemination techniques.

FoE Malta states that the initiative of producing energy from the waste burned at the incinerator would mean that the Maltese will be required to generate more and more waste for the incinerator to work efficiently which goes against the principle of: Reduce, Reuse, Recycle.

[extract] 05.1 "This is because within the period made available to the CCC, including its request to extend its period by 4 weeks, it was not possible for the CCC to carry out an economic assessment on every abatement measure proposed in its report."

FoE Malta reiterates that the exercise currently lacks the necessary depth and analysis to be considered a serious attempt to address the core problems in relation to climate change in Malta.

<sup>17</sup> Section 04.7: [extract] The main emphasis of any educational campaign should be on learning not on teaching: i.e. the learner not the information to be conveyed. This implies that the individual is considered as an active citizen – irrespective of age, gender, social role and responsibility – contributing and actively participating in decision making. Education, thus, is the means through which the individual is empowered – through the acquisition of knowledge and skills as well as the development of attitudes and values – to develop an ethic that embraces sustainable development and Climate Change. This ethic ensures that Climate Change always features in the individual's concerns: whether structuring policies of a national / entrepreneurial nature or deciding upon adopting a particular lifestyle – both equally important in addressing Climate Change.

## Solar Cooling

With reference to the point which states that electricity consumption climaxes during the summer period<sup>18</sup>, FoE Malta points out that this is mainly due to the increase of air conditioning units in Malta.<sup>19</sup>

It might sound like a strange idea to think of using the sun to cool your home or office, but in fact, absorption cooling was the first type of air conditioning. Absorption cooling is still practical for remote homes in places where there is an excess of heat energy available. This is definitely the case for the hot and sunny Maltese summers.

There are several basic types of solar cooling technologies. Absorption cooling, which can use solar thermal energy to vaporize the refrigerant; desiccant cooling, which can use solar thermal energy to regenerate (dry) the desiccant; vapour compression cooling, which can use solar thermal energy to operate a Rankin-cycle heat engine; evaporative cooling; and heat pumps and air conditioners that can be powered by solar photovoltaic systems.

In absorption cooling, heat drives the system, instead of electricity. There are two basic types of systems. The single-stage systems, are driven by any warm fluid (not necessarily water) heated to around 100 degrees Celsius. On the other hand the two-stage systems work at around 120 degrees Celsius. These can use low temperature solar energy to "pre-heat" the air. A high-temperature energy source (e.g. natural gas or oil) is used in the second cooling stage.

Desiccant coolers are the other very popular style of solar cooling. Desiccant coolers remove moisture from air. This does not actually cool the air but reduces the humidity, making it seem cooler. These are often used in combination with other types of solar coolers such as vapour compression or evaporative, which really do lower temperature.

Vapour compression cooling uses solar thermal energy to operate a Rankin cycle heat engine, whilst the evaporative cooling method uses a mechanical device that takes the heat from the outside air and uses this to evaporate water held in pads inside the cooling unit. This 'sucks' heat out of the air and the cooled air is blown into the home by a fan.

Solar cooling saves electricity and unlike solar heating it has absolutely no storage needs as the need for cool air is almost exactly in-sync with available solar energy.

## Carbon Capture and Storage

In the past Friends of the Earth has been opposed to carbon capture and storage because it was technically unproven and because it risked diverting attention and economic support away from energy saving, renewable power and the development of a low carbon economy. The Intergovernmental Panel on Climate Change (IPCC) has since produced a draft report assessing the technological potential of carbon capture and storage.

There are some storage options which are less understood and some which, in Friends of the Earth's opinion, pose unacceptable environmental risks. For example, while the petroleum industry has experience with the injection of CO<sub>2</sub> in oil and gas fields, there is limited experience of injection into saline aquifers and limited geological knowledge of potential sites. Also, the use of marine storage poses significant environmental impacts on little understood and vulnerable ecosystems. As the IPCC draft report states, the suitability of storage sites can only be determined on a case-by case basis. FoE Malta will consider each case on its merits. It will oppose all marine storage proposals.

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<sup>18</sup>Mr George CASSAR & Mr Anthony Sammut - March 2007 - Mediterranean and National Strategies for Sustainable Development Priority Field of Action 2: Energy and Climate Change Energy Efficiency and Renewable Energy Malta - National study, Malta Resources Authority - Plan Bleu Regional Activity Centre and Energy Profile for Malta - M.E.E.R.E.A. Vincent Buhagiar, Robert Farrugia, Edward Scerri and Charles Yousif (August 2007).

<sup>19</sup> Section 04.2: In terms of electricity consumption, the CCC considers a number of specific areas towards which R&D&I efforts should be directed. The first relates to cooling: which is the prime trigger for peak electricity consumption which occurs during summer due to the increased use of domestic airconditioning equipment. Alternative technology relating to alternative powering of cooling equipment is emerging. Focus in this regard should be directed to seek solutions of how domestic, as well as industrial cooling equipment, can be generated through the use of alternative technology.

### **Wind Turbines – Siting**

Although land is a limiting factor, FoE Malta sees nothing wrong in exploring the potential of onshore wind farms as long as they are sited in reasonable locations and planned on a scale appropriate to our landscape. These could provide the cheaper and faster route towards our renewable future.

This could be seen as the first step towards more widespread offshore energy harvesting plants. The onshore facilities will serve as a test bed and help us gain the knowledge and experience before delving into the more expensive and challenging environment of the open seas. The deployment of wind turbines and other renewable energy sources should also come from the general industry, including tourism since they are the main energy drain. This could take place in collaboration with the Malta Tourism Authority's "green leaf" or the European Union's "green flower" initiatives.

However, much more needs to be done in the development of clean and renewable energy at household level. The deployment of small-scale wind turbines and solar panels over the roofs of the Maltese houses should be encouraged and given the right importance, also with fiscal and economic incentives. Whilst many Maltese families are ready to invest in a cleaner future, the Government is not offering the appropriate incentives.

### **Sub-Sea electricity inter-connector**

With regards to the sub-sea electricity inter-connector between Malta and Sicily, this is one option that could be taken into consideration due to our national circumstances. Having said that, FoE Malta will in no way support such a move if the intention is to buy electricity generated from nuclear plants.

### **Nuclear Energy**

We believe that nuclear is a false solution and the EU should do well to move away from this technology. Nuclear energy can not survive in a liberalised energy market, especially if the astronomical costs of decommissioning and long-term waste storage for thousands of years are taken into account. Above all, 20 years after the Chernobyl disaster, nuclear power remains the most dangerous mechanism of generating electricity. And, globalised terrorism makes nuclear power stations and the uncontrolled proliferation of nuclear material a serious security hazard.

Let's also bear in mind that the costs of a serious nuclear accident will be borne by society and not by the plant operator's insurance.

**Proposal 5:** FoE Malta proposes the integration of human resources to improve the capacity of MEPA in regards to Clean Development Mechanism (section 02.11.05 UNFCCC Clean Development Mechanism).<sup>1</sup> By including NGOs and Internships of tertiary education students and graduates within policy and decision-making strata the capacity at the Designated National Authority (MEPA) will increase. This would enhance relationships, train students and allow all those included to develop creative ideas in assisting with CDM projects.

The nuclear industry hopes to trigger a revival of its dangerous technology, arguing that nuclear power is cheap, emission-free and thus has a role to play in securing the supply of energy. But nuclear power accounts for significant emissions if uranium mining, transportation, plant construction and decommissioning and waste storage are included in the calculation.

Nuclear power is expensive and comes with high opportunity costs. Every Euro spent on new nuclear power could save many times more emissions if it was invested in energy conservation measures.

FoE Malta questions a national strategy which includes a document which has to date not been made public. The document is the one referred to in section 04.4.1 - Agriculture Waste Management Plan.<sup>20</sup>

<sup>20</sup> Section 04.4.1 Recommendation 58: The Government should embark on the implementation of the Agriculture Waste Management Plan as from 2009.

FoE Malta emphasises the need to promote and encourage the consumption of local food thus reducing the high use of packaging and giving local economy a much needed boost.

FoE Malta questions the inclusion of the abattoir in section 04.4.3 Hazardous Waste<sup>21</sup>, in relation to unclear procedures; and asks if the abattoir waste will be processed via an upgrading system using clinical and industrial procedures.

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<sup>21</sup> [extract] section 04.4.3 Hazardous Waste: Clinical waste, in addition to abattoir waste, would assist the new incinerator to be able to achieve the thermal capacity for which it was designed. This will contribute to making the facility operate efficiently with fixed overheads being absorbed by higher waste volumes and waste with higher calorific values.

## Energy consumption

Business advisory scheme needs to be on a longer term and strengthened, which helps industry to understand about efficient technology and its use (section 04.3.3.2 Recommendation 28)<sup>22</sup>.

FoE Malta emphasises that the introduction of the smart meters should not augment the already sky high bills introduced in October 2008 (Section 04.3.3.3 Recommendation 29)<sup>23</sup>.

The introduction of smart meters has the full support of FoE Malta. If implemented in the correct way this could have a positive influence on how we use our energy resources.

In an experiment done in California it was shown that an average peak demand reduction of 13% occurred where customers were given warning of 'super-peak' prices (45p kWh –1). This is a matter of 'shifting demand' and delaying such activities as washing clothes to a time of lower electricity prices.

An excellent technological fix such as this one will nonetheless be useless unless the general public is familiarised with the system and the benefits it can offer. This could thus be an opportunity for cooperation between NGOs and government.

The meters should read:

- KWh
- KVAh
- Average consumption in KW and KVA
- Peak consumption in both in KW and in KVA;

and have the ability to:

- measure power flowing in and out as in the case of in house generation of electricity;
- switch off the supply through the meter to your house only as in the case of apartment block.

Additional features for the smart meter could also include the ability to:

- indicate incurred costs to date and how many units are left as in the case of a prepaid scheme, to ensure that consumers pay upfront for their consumption and will be far more careful in order to top up less saving energy – which could increase Enemalta's cash flow.

The new meter will cut down drastically on 'tricks' which are being applied to the present meter to slow it down or even stop it from operating for most of the day because technical knowledge will be required to cheat the smart meters.

A percentage of non-technical losses in Enemalta's distribution of electricity is not accounted for. Hence, with the installation of the smart meters Enemalta will potentially start getting paid an additional percentage to what it presently receives.

The installation of smart meters may reduce the electricity unit cost once Enemalta will be paid for what it is producing. Enemalta must not over charge those who pay their bill to overcome the 7% which they have not been billed for in the past.

FoE Malta believes that this must be on a shorter time frame. Other countries have already started using efficient street lightning controls such as minimising the amount of light or energy used, according to the presence of cars and/or people. Knowledge and skill-sharing with countries which have already adopted these systems would benefit Malta's implementation of efficient street lighting.

<sup>22</sup> Section 04.3.3.2 Recommendation 28: The Climate Change Committee positively notes the introduction, in the 2009 National Budget, of the Business Advisory Scheme to support industry and enterprise in the undertaking of energy audits, and proposes, given this is a significant positive abatement measure for the reduction of CO2 emissions, that the scheme should be maintained in the long term and continuously strengthened in terms of the quantum of fiscal support provided.

<sup>23</sup> Section 04.3.3.3 Recommendation 29: The Government should, dependent on the pace of roll-out of the Smart Meter technology, design a policy of differentiated tariffs resulting in lower pricing for electricity consumed during non-peak hours.

1. Efficiency information must not only be on household appliances but also for vehicles and other energy guzzling appliances.
2. Eco contribution from inefficient items needs to feed the efficient initiatives thus money can be channelled into RES projects.
3. An increased understanding of the various forms of alternative energy which could be sourced for Malta is required. For example: Hybrid cars are not mentioned in the recommendations. Potential consumers of energy efficient vehicles need to be given incentives to encourage them to carry out the purchase. Such incentives must be part of a holistic climate change strategy.

## Renewable energy sources

The recommendations mention that the EU commission states that Malta has a potential of 6% renewable energy resources by 2020 whereas in fact Malta has a target of 10%. FoE Malta questions this incongruity (Section 04.3.4 Stimulating the Penetration and Use of Renewable Energy Sources)<sup>24</sup>. Since this is outlined as a relative difficult deadline it makes more sense for investment in renewable energy to be included in a potential climate change bill with a yearly target together with a longer term target.

A climate change bill would therefore not only impose a year on year target and a longer term reduction in CO<sub>2</sub> emissions but would also cater for a yearly investment in renewable energy resources that would make the 10% by 2020 more realistic. Although the last budget has given incentives for Renewable Energy Sources (RES) it is not part of a specific yearly target that will lead realistically to reach the target of 10% reduction of Co<sub>2</sub> emissions by 2020.

FoE Malta indicates that a national climate change strategy should explain the reason why one or more Renewable Energy system/s is/are chosen over others. This is not done in the recommendations.

Table 7<sup>25</sup> shows the photovoltaic output as a percentage (%) of electricity demand per annum. Although it is stated that to date the capacity of photovoltaic systems installed is 227kWp it is not mentioned whether in the period until 2020 this capacity could actually increase as the technology is in continuous improvement. The committee recommends that 4% of the 10% of renewable energy should come from photovoltaic cells requiring 76,800m<sup>2</sup> of land space<sup>26</sup>. FoE Malta questions the source of these statistics. The climate change committee states plainly that the impact of the photovoltaic scheme in the last budget was blunted by the limited population it targeted. A limited scheme could very well limit even the target of 4% to be reached. RES technology needs to continuously be supported by financial incentives.

FoE Malta also questions if land space includes roofs of buildings which could be used to install photovoltaic cells which; for example the roofs of factories and large buildings which may be utilized for the installation of photovoltaic cells to generate electricity for the building the photovoltaic cell lies on, and if more energy were to be produced than the building requires, this energy may then be distributed to households.

The committee encourages government to achieve 75% of the 4% photovoltaic energy generation by 2012. FoE Malta encourages the climate change committee to state how much investment in photovoltaic incentives between 2009 and 2012 should take place to reach 75% of 4%<sup>27</sup>. The inclusion of a feed-in tariff scheme in a national strategy on climate change needs to be specified before comments are made on such a scheme. The recommendations simply state that the feed-in tariff scheme should be “*significantly more attractive to that in place today*” (section 04.3.4.1 Recommendation 44)<sup>28</sup>.

The introduction of autogas as a substitute for fuel by 2010 is discussed however, FoE Malta states that without an explanation of the short and long term benefits of this move it does not provide sound information to make a decision<sup>29</sup>.

<sup>24</sup> Section 04.3.4 Stimulating the Penetration and Use of Renewable Energy Sources: As discussed in Chapter 2, in the third energy package the EU Heads of State and Government agreed a binding target of 20% of the EU total energy consumption from renewable sources by the year 2020. This target will be further broken down to national targets, taking into account national circumstances. In the case of Malta, a target of 10% was agreed. It should be noted that the assessment of the national potential for Renewable Energy Sources (RES), by the Commission resulted in Malta having a potential of 6% RES by 2020, which renders the Maltese Government's 10% target challenging.

<sup>25</sup> Section 04.3.4.1 Photo Voltaic Technology

<sup>26</sup> Section 04.3.4.1 Photo Voltaic Technology: [extract] Strategically positioning PV technology to account for 4% of the 10% target of energy reduction would require approximately 76,800 m2 of land space.

<sup>27</sup> Section 04.3.4.1 Recommendation 43: Government in 2009 should transfer the policy instrument vis-à-vis Photo-Voltaic technology penetration into a strategic initiative directed to achieve 75% of the 4% Photo-Voltaic energy generation by 2012: that is prior to the start of Phase III of the European Trading Emission Scheme.

<sup>28</sup> Section 04.3.4.1 Recommendation 44: The Government should carry out an assessment, that incorporates the shadow price of carbon, on the introduction of a strategic initiative that seeks to achieve 75% of the 4% energy generated through PV technology by 2012 directed towards:

c) Domestic users: through the financing of 60% of the capital and installation costs of the PV technology.

d) Industrial and enterprise users: the introduction of a feed-in-tariff scheme that is *significantly* more attractive to that in place today.

<sup>29</sup> Section 04.3.7 Recommendation 54: The Government should initiate measures to introduce autogas as an accessible and affordable substitute for fuel for vehicle drivers, with autogas to be available for distribution by not later than 2010.

## Transport

The implementation of teleworking is a positive policy and it should be encouraged in both public and private sectors, also by removing the bureaucratic barriers for its implementation. Teleworking surely provides an incentive for alleviating traffic and congestions, although FoE Malta is aware that this is not possible in all jobs.

FoE Malta supports car sharing and car free days and believes that these initiatives will be more productive once the public transport will be functioning efficiently.

FoE Malta agrees that “further park-and-ride systems should be introduced to service major town shopping and other business communities in order to reduce congestion and unnecessary mileage in the search for parking.” (section 04.5.5 Recommendation 78)<sup>30</sup> – and emphasises that parking areas must always abide by planning and conservation regulations.

In the section regarding transport hydrogen cars and electric cars for public transport are recommended. FoE Malta questions why electric private cars are not addressed by the recommendations. The reform on public transport impacts only a small fraction of vehicles about 1300 vehicles in all. Since at the end of December 2008, the number of licensed privately owned motor vehicles stood at 222,761<sup>31</sup> the number of privately owned vehicles far exceeds the number of vehicles used for public transport, thus it is highly admonishable that cleaner fuels for privately owned vehicles are not addressed in these recommendations.

**Proposal 6:** FoE Malta proposes a service with mobile devices could be included, where the drivers ask for information about a certain journey by sending a text message and receiving feedback on their mobile device. This could aid to ease traffic in certain locations.

**Proposal 7:** FoE Malta proposes that the government offers a financial incentive for private electric cars and private hybrid cars whereby these are made to be tax free when the driver hands in their old vehicle and they can then be asked to pay a low license fee to incentivise their use. FoE Malta also proposes the implementation of solar plug in stations in parking areas for electric cars.

In order to substantiate a national strategy on climate change all public and private sectors, public transport included, should require an assessment and monitoring of how they can achieve and are achieving results towards reducing their greenhouse gas emissions.

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<sup>30</sup> Section 04.5.5 Recommendation 78: Riding on the success of the park-and-ride system for Valletta / Floriana, further park-and-ride systems should be introduced to service major town shopping and other business communities in order to reduce congestion and unnecessary mileage in the search for parking.

<sup>31</sup> This figure was reached by calculating from the statistic shown in Motor Vehicles: Q4/2008 by the National Statistics Office of Malta. It can be downloaded from [http://www.nso.gov.mt/statdoc/document\\_view.aspx?id=2353](http://www.nso.gov.mt/statdoc/document_view.aspx?id=2353)

## Supply and demand of economic impacts on abatement measures

When stating, “This assessment is limited to the abatement impact of the measures proposed in this report vis-à-vis reducing CO<sub>2</sub> emissions in the generation of electricity.”<sup>32</sup> – the Committee reduces the options being proposed for the reduction of CO<sub>2</sub> emissions in the generation of electricity to a political agenda instead of a true scientific study.

FoE Malta strongly agrees with the report stating that the recommendations mentioned are not to be considered conclusive. To achieve conclusive results the recommendations proposed in Chapter 03<sup>33</sup> of this report have to be implemented.

FoE Malta notes that as discussed earlier in the recommendations, 62% of the CO<sub>2</sub> emissions emitted in Malta stem from the generation of electricity, the climate change committee consciously decided to focus the assessment of its abatement measures on this important sector.

The fundamental assumptions are:

- a. The projected demand of electricity consumed. The inputs in both models are based on the projects of demand made by the Economic Planning Division (EPD), as explained in Appendix IV.
- b. The CO<sub>2</sub> emission factor in the generation of electricity as a result of the abatement measures introduced is taken to be 0.6. This has been estimated by Enemalta Corporation (EC) on the basis of current technology and it could potentially be improved. However it is a considerable reduction of 0.28 on the current state of play where the CO<sub>2</sub> emission factor of generation is 0.88.

FoE Malta questions the source of the above statistics since they are not referenced in the recommendations. FoE Malta requests facts based on sound knowledge and science to make decisions regarding climate change.

FoE Malta criticises the fact that this section only considers the alternative energy source being the link to the European Power Grid as the primary focus of this section to forecast whether or not Malta will be able to meet the targets set to it under the Emissions Trading Scheme (ETS) mechanism.

FoE Malta notes that in this section there are plans for: upgrades to the current power stations, the installation of a new generating plan, and the decommissioning of the Marsa Power Station (MPS). The new plants will not be replacing the old MPS units.

The savings in CO<sub>2</sub> emissions alone gained by replacing the present, almost 30 year old, plants is in the region of 30%. Thus, from a climate change policy perspective what is therefore important is that the

<sup>32</sup> section 05.1 Introduction *first paragraph*

<sup>33</sup> Section 03.3 Recommendation 07: The electricity sector with particular reference to the Emissions Trading Scheme should constitute the primary focus of concentrated efforts to reduce CO<sub>2</sub> emissions and in doing so the Government should adopt a strategy that directs efforts towards those abatement measures that will render the highest level of tCO<sub>2</sub>e reduction for each €1 of investment made.

Section 03.3 Recommendation 08: The Ministry of Finance, Economy and Investments should establish a Shadow Price of Carbon for Malta by June 2009.

Section 03.3 Recommendation 09: The Management Efficiency Unit within the Office of the Prime Minister should be tasked to work with the Ministry of Finance, Economy and Investment to introduce by June 2009 policy and supporting guidelines for the consistent and mandatory application of a Shadow Price of Carbon by public entities in the evaluation and assessment of policy and investments that have a significant carbon or other GHG impact.

Section 03.3 Recommendation 11: The Government should build a strong indigenous Climate Change budgeting and economic planning capacity within the Ministry of Finance, Economy and Investments as well as such capacity within the Enemalta Corporation, Malta Resources Authority, and Malta Transport Authority.

Section 03.3 Recommendation 12: The Ministry of Resources and Rural Affairs should establish and lead a Working Group with the support of the National Statistics Office and including key stakeholders in order to establish by no later than December 2009 a national statistics framework for Climate Change.

technology solutions adopted are the ones that provide the highest level of CO<sub>2</sub>/tCe reduction for each €1 invested. This section is unclear and needs further explanation.

FoE Malta notes that Table 11 shows the CO<sub>2</sub> levels on a yearly basis based on the demand for electricity. It does not include the switch over to Natural Gas. By the year 2014 the graph shows that the emissions will be below the 1990 levels but this will only be true to reality if reductions forecasted in the model are carried out as shown in the model<sup>34</sup>.

FoE Malta notes that figure 34<sup>35</sup> shows the energy production versus projected demand. It highlights the decommissioning of the MPS plant in 2015, preceded by a significant reduction in its utilisation which started in 2008. Output from the current plant at the DPS is also reduced significantly in 2014, following the introduction of the second new plant at the Power Station.

The current plant at Delimara Power Station (DPS) is projected to stop producing electricity in 2020. The graph also shows the introduction of the feed from the European Electricity Grid in 2012. This can be seen as a way of topping up the electricity being produced locally but as is discussed later on in the recommendations as having a beneficial effect on both economical and emissions perspectives.

FoE Malta points out that using the feed from the European Electricity Grid would allow us to buy electricity without having the adverse effects of air pollution in Malta. FoE Malta thus questions if the CO<sub>2</sub> emissions refer to Malta's CO<sub>2</sub> emissions.

FoE Malta notes that figure 35<sup>36</sup> shows the cost of producing electricity without taking into account the cost of investment while taking in the abatement benefits / effects of implementing the elements of the said investment. It shows the costs of producing energy using each of the different plants based on projected Fuel, Operations and Maintenance, Transportation and Network and Distribution Costs. All figures are taken as at 2008 with no adjustment for inflation or fluctuations in prices. These figures are detailed in Table 16.

FoE Malta notes that Figure 36<sup>37</sup> above further refines the figures by including the effect of the investment items. These have been amortised based on International Accounting Standards using periods comparing the two graphs one can immediately see that although there is substantial investment this has very little overall effect on the cost of energy production compared to the other costs. The overall impact is of 4.2% over the whole period 2008-2020. This is based on straight estimates and does not include financial, environmental and social costs.

FoE Malta notes that figure 38<sup>38</sup> shows the CO<sub>2</sub> emissions against the total cost of production of electricity. A significant event that should be noted is the reduction, both in cost and emissions, brought about by the introduction of the cable link to the European Electricity grid in 2012.

FoE Malta states that the sooner the cable link to the European Electricity grid is introduced the quicker the reduction in emissions and cost would be. FoE Malta emphasises that Malta is not supposed to depend on this link and should be able to operate entirely on its own with the link only being a back up solution.

FoE Malta berates the fact that all figures are taken as at 2008 with no adjustment for inflation or fluctuations in prices.

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<sup>34</sup> Section 05.2.1 Scenario without the introduction of Natural Gas: Figure 31: Abatement Measures and CO<sub>2</sub> Emissions Reduction

<sup>35</sup> Figure 34: Energy Production vs Demand – Without Natural Gas

<sup>36</sup> Figure 35: Cost of Production of Electricity – Without Natural Gas

<sup>37</sup> Figure 36: Cost of Production of Electricity with Investment – Without Natural Gas

<sup>37</sup> Figure 43: Cost of Production of Electricity with Investment – With Natural Gas

FoE Malta notes that even when taking into account the investment of €390 million needed to cater for the conversion to natural gas, the graph for the cost of production of electricity shown in Figure 43<sup>39</sup> is very similar to that obtained for the scenario without Natural Gas shown in Figure 36. This is primarily caused by the efficiencies derived from utilising Natural Gas over HFO and Gasoil which offsets the additional cost caused by the capital expenditure.

FoE Malta notes that it is far more efficient to use natural gas and it is also a cleaner fuel.

FoE Malta notes that the emission credits, that are allowances, are being sold so that our emissions will be exactly at the 1990 levels instead of below the 1990 levels.

FoE Malta emphasises that this only encourages the financial and not the environmental aspect of the reason behind the main aim of the recommendations, that is, to reduce the CO<sub>2</sub> emissions to **below** the 1990 levels.

## Funding for climate change and renewable energy projects

FoE Malta is in agreement with the Committee when it states,

“In theory government can compensate the consumer from the extra revenue it gains from the Emissions Trading Scheme such that the consumer is not worse off. In practice this will not necessarily be entirely possible since it is contemplated that part of these funds should be invested in alternative energy sources and measures to address climate change.”

[extract] Section 05.3 Assessing the Demand Side of the Abatement Measures relating to the Electricity Sector

FoE Malta urges the government to ensure that these funds go directly to clean energy production by careful monitoring to reduce or hopefully get rid of the abuse of these funds where the funds would not end up being spent on renewable energy.

FoE Malta is in agreement with the Economic Policy Division Ministry of Finance when it states,

“If the investment necessary to meet the renewable energy targets is not met, this will cost Malta at least an additional EUR 36.2 million over and above the costs of the ‘baseline’ scenario. This excludes penalties which will need to be paid by Malta as a result of its failure to meet the renewable energy targets. At EUR 100 per extra tonne of CO<sub>2</sub> the fine could reach a staggering EUR 82 million over the eight-year period or EUR 10 million per annum.” [extract] *The Opportunity Cost of Investment in Renewable Energy from An Analysis of the Direct Costs of Exceeding Proposed Emission Targets in Energy and Transport Report* presented by the Economic Policy Division Ministry of Finance, the Economy and Investment November 2008.

## Recommendations

FoE Malta also welcomes the following recommendations:

Section 02.13 Recommendation 06: The Ministry of Resources and Rural Affairs should establish a virtual network on Climate Change that will allow research institutions, government entities and ad hoc initiatives such as the Climate Change Committee to synergise their work, as well as to complement and supplement their work, thus securing continuity over time, by allowing for new work to build on past initiatives and efforts.

Section 04.3.3.5 Recommendation 40: The appropriate government entity should hold discussions with the Ministry of Education to obtain priority ranking in request for sponsorship through the Malta Government Scholarship Fund in postgraduate studies on energy efficiency building design.

Section 04.3.8 Recommendation 56: In a country that suffers from chronic water supply shortages, and which produces desalinated water at a great expense, and which is facing major difficulties with its water table due to illegal, yet sustained water extraction the current practice not to invoke legal provisions that mandate that buildings must have rainwater capture reservoirs or wells should be repealed and the legislation should be enforced with effect from 1st July 2009.

Section 04.3.8 Recommendation 57: The Government should introduce a fiscal scheme, in the period 2010 to 2013, to incentivise domestic users, by subsidising 50% of the costs required, to integrate their water in their wells or rainwater capture reservoirs with the plumbing system for secondary use and sustain this initiative with an aggressive knowledge and information campaign.

Section 04.4.4 Recommendation 62: Malta has embarked on an extensive investment initiative to re-build its sewage infrastructure which presents an opportunity to incorporate, at the design stage of the new sewage infrastructure, an appropriate distribution infrastructure (network or other cost effective distribution which may include reservoirs) for the use of treated sewage water, subject that the source of treated sewage meets the appropriate quality levels, in agriculture and industry - thereby reducing the need for the extraction of groundwater and thus contributing to reduce the current deficit in Malta's freshwater budget.

Section 04.5.1 Recommendation 63: Bottleneck Junctions, such as Kappara Junction, which create congestion at all times of the day, should be given priority in the road infrastructure upgrading programme.

Section 04.3.4.1 Recommendation 45: The surface area on roofs of public buildings and of buildings and public areas in Industrial Parks and Estates should be optimised so that their surface area is made available for the accelerated penetration of Photo-Voltaic technology.

*Note:* FoE Malta welcomes this recommendation with a reservation - a specific scheme should be developed which could fall under the responsibility of local councils.

Section 04.3.4.1 Recommendation 46: In order to further establish access to renewable energy by industry and commercial entities, the Government should designate land sites suitable for alternative technology. These sites should meet all planning requirements and have ready connectivity to the energy grid.

Section 04.3.4.1 Recommendation 47: A policy directed to stimulate use of alternative energy generation brings to the fore the right of access to solar energy; and in this regard the Climate Change Committee recommends (i) that the right of servitude is extended to include the installation of solar water heaters; and (ii) persons who have no access to surface area to install Photo Voltaic technology are provided by Government with alternative surface area.

Section 04.3.4.3 Recommendation 49: In order to build the appropriate technical human capacity, discussions by the appropriate Government entities should be initiated with the Malta Council for Arts, Science and Technology so that applied training programmes relating to renewable technologies are introduced in the near future.

Section 04.3.4.3 Recommendation 50: The Government should establish short term and long term internships that will be directed towards undergraduates and graduates specialising in different disciplines relating to Climate Change in order to foster the development of such human capital.

Section 04.3.4.3 Recommendation 51: The Malta Standards Authority and the constituted body representing the renewable technology sector should team up to design and introduce appropriate

accreditation programmes for staff, and firms that invest in such programmes would be awarded an Energy Quality Certification and will be marketed through the Efficient Energy One Stop Shop Portal.

Section 04.3.6 Recommendation 53: The Biofuel market in Malta should continue to be expanded within the constraints of the EU sustainability criteria for Biofuel and with specific focus directed towards secondary Biofuel sources such as recycled domestic and industrial oil waste.

Note: FoE Malta will only support the part of this recommendation that focuses directly towards secondary Biofuel sources such as recycled domestic and industrial oil waste but considers other sources of agrofuels as a false solution to climate change.

Section 04.5.2 Recommendation 69: The Government with the support of the relevant Unions should consider staggering working hours of its officials working from Floriana and Valletta in order to alleviate congestion.

*FoE Malta notes:* Staggering working hours may alleviate the problem of slow moving traffic. Workers might object to changing their working hours but the competent authorities must carry out a study to verify how the various work sectors operate their working hours and the workers' opinions on a change in work hours which would minimise traffic thus bringing the strategy to a holistic approach which incorporates the people.

Section 04.5.3 Recommendation 72: The Climate Change Committee supports the public transport reform recommendation presented by the Ministry of Infrastructure Transport and Communication including the establishment of intercommunity transportation which, were so appropriate, should be serviced by electric mini buses.

Section 04.5.3 Recommendation 73: The Climate Change Committee supports the public transport reform recommendation presented by the Ministry of Infrastructure Transport and Communication to establish that a Water Taxis system should be introduced to service the Grand Harbour and Sliema Creek area and adds that the assessment of the electric tram system, which is currently underway, should take into account the Shadow Price of Carbon.

Section 04.5.4 Recommendation 75: The Climate Change Committees agrees with the public transport reform strategy to introduce a new fleet of buses of different passenger capacities (in line with the type of route served) and adds that, to the extent possible, these should be powered by alternative technology and should incorporate the best carbon abatement technologies possible.

Section 04.5.4 Recommendation 76: The Climate Change Committee proposes that complementary to the White Taxi reform strategy, the Government should encourage the further introduction of electrically powered taxis as currently servicing the Valletta Park and Ride system.

Section 04.7 Recommendation 87: A National Policy on Environment Education is designed in 2009 and introduced in 2010 as an integral part of the National Curriculum.

Note: Although FoE Malta is in agreement with this recommendation in principle, the recommendation in itself does not provide sound information to make a decision.

## Conclusions

FoE Malta strongly believes that action on climate change, both on mitigation and adaptation measures should start immediately. The recommendations are indeed a first step. Many recommendations, if followed, will start to be enacted in late 2009. However unless an operational climate change department is set up, or the current units and individuals who are monitoring and implementing climate change related policy are given the necessary financial and human resources, it will not be easy to start working on some of the recommendations in 2009. The roadmap also takes all recommendations as if they are of the same weight when there are some recommendations, as is setting up the climate change department which will have to be very speedy to reach the targets set by this committee.

There lies a conflict of interpretation between the presentations given at public consultation meetings by the Climate Change Committee and what is put forth in the political agenda. Whilst the Committee, during a public consultation meeting states that there was not sufficient data to carry out an in-depth analysis, the political agenda is pushing the recommendations forward as an integral part of a climate change strategy for Malta.

FoE Malta reiterates that the exercise currently lacks the necessary depth and analysis to be considered a serious attempt to address the core problems in relation to climate change mitigation and adaptation in the Maltese islands.

# Annex I - FoE Malta Position Paper on Climate Change

*December 2008*

## **A) An Introduction**

Climate change is already affecting Malta, resulting in more extreme weather patterns. Ground water supply is also under threat. Predicted sea level and temperature rises will damage the tourism sector and have negative effects on the health of the resident population.

One might argue that even on a national level little can be done to help with the global effort of reducing the emissions of greenhouse gases. However every citizen on Earth has an equal responsibility in combating climate change.

## **B) The Issues**

➤ **False Solutions** Nuclear power, liquid coal, agrofuels and carbon offsets are some of the solutions put forward to help abate global warming. However, upon closer inspection, these "simple" solutions actually take longer and are more harmful to the environment overall.

**Agrofuels** The economic incentive to use land to grow crops for fuel reduces food production and causes food prices to rise. There is no doubt: growing fuel instead of food aggravates world hunger.

**Nuclear Energy** Friends of the Earth do not believe that nuclear power is a desirable or necessary source of generation to combat climate change.

➤ **Energy** Up to 10% of household energy consumption is wasted whilst equipment such as TV's and computers are on stand-by.

Using the most efficient light bulbs enables the consumer to save on emissions and costs.

In Malta, water is normally heated by non-renewable fossil fuels, which are expensive and polluting. Solar energy causes no pollution and doesn't damage the Earth's surface. Solar energy will continue as an energy source indefinitely.

Wind turbines provide a source of clean and renewable energy. FoE Malta believes that suitable land based sites must be considered for the erection of wind turbines.

Wave energy can be produced at a more constant rate than wind or solar energy. It is also located close to the densely populated coastal areas.

Renewable energy alone cannot satisfy overall energy demand, however it contributes to reducing the impact of climate change. The alternative solution is to reduce energy demand, by eliminating waste and improving efficiency.

**Efficiency in new and old buildings** New buildings should have solar water heaters pre- installed. Effective and enforceable Building regulations have the potential to reduce Malta's energy requirements, costs and greenhouse gases emissions

➤ **Transport** There is concern about the poor quality of life resulting from exhaust fumes, noise pollution and traffic congestion. The numbers of cars on Maltese roads is increasing. Driving efficiently and sensibly saves money, the environment and lives.

FoE Malta believes that, without a national system of cycle lanes, a rebate for the purchase of one bicycle will not result in a reduction of CO<sub>2</sub> emissions. Reducing or removing taxes for vehicles with a low emissions output would have more impact.

**Meat consumption** Meat production is a serious cause of greenhouse gases emissions. Rearing livestock uses grain that could otherwise directly feed people.

**Water** Over-extraction is severely depleting fresh water reserves. Unregulated illegal water extraction poses a serious risk to public health. FoE Malta wants the Government to issue a National Policy on Water, to include: use of second class water, storm water collection and the enforcement of wells in buildings.

- > **Biodiversity** Over-development and excessive water extraction are resulting in a loss of biodiversity, natural landscapes and agricultural land. Flora and fauna amongst which watercourse plants, trees such as Myrtus communis, crops and other species are endangered whilst their growth cycles are being negatively affected. Rainfall pattern is also hampering the seasonality and adaptation of species.
- > **Light Pollution** Much harm has been done to local wildlife through the increase in light pollution. Properly designed full cut-off lighting reduces operating costs, saves energy and prevents light pollution. All new public projects are now using full cut-off lighting.
- > **Use of Land** Anyone who installs a solar system should be protected by a law which prohibits the overshadowing of their system by future developments.
- > **Waste** By adopting the 4 R's (Refuse, Reduce, Reuse and Recycle) on a national and individual scale Malta will reduce its emissions and help towards a healthy environment for all.
- > **Climate Refugees** Rising sea levels and desertification will wipe whole countries off the globe and is responsible for a new category of refugees: climate refugees.

### **C) Demands to government**

**Enforcement** The government should enforce all legislation regarding care and protection of the environment. In addition, FoE Malta proposes a Green Community Neighbourhood Watch which will cooperate within or in affiliation with Local Councils and consist of voluntary or paid staff providing training and informal education on environmental challenges and how to tackle them. They will also carry out studies and surveys in their localities to measure the progress/deterioration of their locality's environment. They will also work closely with the police and have the authority to give fines for littering in their locality and to admonish anyone who degrades the environment of their locality. The Green Community Neighbourhood Watch will have the capacity to manage and maintain this centre via funding sources to recruit and maintain staff and volunteers. ETC may also be a valuable asset in the setting up and running of the Green Community Neighbourhood Watch.

**Climate Change Fund for Renewable Energy systems** A Climate Change Fund to be generated from Eco Taxes, Polluter Pays Principal and other funding sources; for planning and implementing renewable energy systems.

**Government must give defined targets** Government must commit itself to defined targets for environmental strategies, stating what it intends to achieve, by when, how and who will be responsible for what.

**Research, Development, Innovation** FoE Malta proposes support for research and development of innovative technologies. Financial rewards may also be sourced from the Climate Change fund.

### **D) Conclusion**

Incentives to empower the citizen to invest in energy efficient appliances need to be further extended to society at large in parallel with a national initiative to install solar water heaters and solar panels on the roofs of public buildings. This would not only reduce Malta's CO2 emissions but would also permit research into the efficiency of solar panels on a local and national level. By becoming more energy conscious and changing habits, every individual can successfully limit their own carbon footprint and save money on energy bills. FoE Malta's Big Ask is to lobby for the enactment of a Maltese Climate Change Legislation that enforces a net decrease of 10% below 1990 levels. Within the campaign '**The Climate is Changing... are you?**' the public is being asked to sign a petition supporting the proposed legislation. The petition will be sent to politicians.

## Annex II - The resolution approved by Parliament on Thursday 15<sup>th</sup> January 2009

Rizoluzzjoni approvat mill-Parlament fis-seduta tal-Hamis 15 ta' Jannar 2009

### TIBDIL FIL-KLIMA

Illi l-Gvern Malti għandu jpoġġi is-sebgha u tmenin (87) proposta mressqa mill-Kumitat ta' Esperti maħtur mill-Gvern bħala parti mill-Abbozz ta' Politika u Strategija Nazzjonali biex tindirizza l-isfidi mill-bidla fil-klima u biex jitnaqqsu l-emissjonijiet tal-gassijiet serra, għall-konsultazzjoni pubblika;

Għaldaqstant il-Kamra tirrisolvi illi:

- a. għandu jsir dibattitu dwar dan l-Abbozz tal-Istrategija hekk kif jispiċċa l-proċess ta' konsultazzjoni pubblika, u mhux aktar tard minn xahar mit-tmien ta' dan il-proċess;
- b. wara dan id-dibattitu li jwassal għall-approvazzjoni tal-Abbozz tal-Istrategija, titlob lill-Gvern sabiex iwettaq din l-istrategija bl-aħjar mod possibli, inklużi miżuri amministrattivi u /jew legiſlattivi;
- c. tkegġeg lill-Gvern sabiex ikompli jżid il-miżuri favur it-tnaqqis tal-gassijiet serra, bħal dawk introdotti fl-aħħar budget, fosthom inċentivi għall-użu ta' apparat li jżid l-effiċjenza fl-użu tal-enerġija bħalma huma lampi ``energy saving``, inċentivi fl-użu ta' apparat li jġġenera enerġija minn sorsi nodfa bħall-iskema tal-``photovoltaic panels`` u li fl-azzjoni tiegħiu jirraferma il-prinċipju li min iniggeż iħallas bħal fil-każ tar-riforma fil-liċenzji tal-karozzi;
- d. tiffraħ lill-Gvern tas-sehem li ta fil-Kunsill Ewropew tal-11 u 12 ta' Diċembru li għadda li wassal għall-għeluq tal-pakkett tal-miżuri li l-Istati Membri kollha, inkluż Malta, intrabtu li jwettqu fis-snin li ġejjin sabiex jonqsu b'20% l-emissjonijiet tas-CO<sub>2</sub>, tiżdied b'20% l-enerġija minn sorsi nodfa u tiżdied b'20% l-effiċjenza fil-konsum tal-enerġija; u
- e. iddaħħal fis-sistema parlamentari tagħna sistema ra' rappurtaġġ annwali mill-Gvern dwar xi jkun sar matul kull sena amministrattiva f'forma ta' Rapport Annwali tas-Sena (*annual progress report*) li mbagħad jiġi diskuss fil-Kamra nnifisha.

10.10.08

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[extract] 1.(4) The objective of these regulations is to provide for a high level of protection of the environment, including health, and to contribute to the integration of environmental and health considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with these regulations, a strategic environmental assessment is carried out on plans and programmes which are likely to have significant effects on the environment.

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