

Non-cost barriers to renewables – *AEON* study

Malta

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- Confidential -

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1 Introduction

The content of this report results from interviews conducted with the Malta Energy Efficiency and Renewable Energies Association (MEEREA), the Malta Resource Authority (MRA henceforth) and from discussions held during the REPAP meeting of February 12th 2010 in Malta.

Malta is totally dependent upon imported fossil fuels for its energy needs. Little development of RES exists so far; the share of RES in total primary energy consumption is well below 1%. However, the potential for solar and off shore wind is substantial, though costs are high. The 2020 target for Malta is 10% RES. Solar thermal applications for hot water requirements are RES with highest penetration rate in Malta.

As stated in the plans to achieve its RES target set for 2020, the forecasted role of the different sources, per macro area, is as follows.

Value in %	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
RES – H&C	8,7	9,4	9,1	8,8	8,5	8,2	7,9	7,3	7,1	6,7
RES – E	1,2	1,6	3,8	7,9	8	10,5	15,7	15,4	15,1	14,7
RES – T	0,8	0,8	0,8	0,8	0,8	0,8	1,2	1,7	2,1	2,9
Overall RES	1,9	2,2	3,3	5,3	5,3	6,6	9,3	9,2	9,1	9,2
Share										
Of which required from cooperation mechanism										0,81
Surplus for possible cooperation mechanism		0,06		1,3		1,43		2,72		

1.1 Summary of main barriers

Photovoltaics

At a micro level, there has been a huge leap from 10 years ago until now as regards RES development in the country. Micro level photovoltaic has grown at an average yearly rate of 35% from 1995 to 2005 (1,8 kW to 40 kW) and of 63 between 2005 and 2010 (40 kW to 450 kW). The reasons for this large growth are twofold:

- A rise in electricity prices;
- The availability of grants (up to 50% in households, to a maximum of 3000€).

At a macro level, grants are available mainly through the European Regional Development Funds, which have allocated €10 million for industry. The tender winner will be able to install photovoltaic panels for 1 MW with a 50% grant. The status of the tender procedure is still in the beginning. The Expression of Interest has closed in January 2010, developments will be in terms of publishing a call. Another call for an instalment of 2 MW is being developed.

Solar heating

Solar heating is present in about 15.000 households out of 130.000.

Transport

The application of renewable energy technologies is a failure in transport. The Government gives support for purchasing electric cars up to 15% or 500€ Biofuels sales were limited to 1% in 2007; the only incentive for their purchase is that no taxes are applied on them.

Malta has exceeded the target for biofuel production it had set for 2005 (0.30%); the share of biofuels in 2006 was 0.58%. Biodiesel in Malta is retailed either directly from the manufacturers or from a number of petroleum filling stations, which retail B100 biodiesel from their pumps. Around 30 petroleum filling stations, equivalent to about 40% of total petroleum filling stations, retail biodiesel. Biodiesel, though, has a separate pump in the filling station, forcing drivers to create the mix themselves by taking fuel from two separate pumps. This creates a barrier to the uptake, as it adds one step to the procedure of re-filling. Furthermore, high temperatures in the summer create concerns as regards volatile components and health-related issues.

Waste

Recycling exists and is rather developed in Malta. The maximum theoretical potential obtainable from waste is 3% of the overall energy demand of Malta. Three treatment plants should become operational by 2013, and would supply about 30 GWh of electricity annually. Biogas has a very small potential in Malta, pretty much negligible. Furthermore, natural gas is not supplied in Malta, therefore a gas grid is not in place.

Wind

Many studies have been undertaken and the accepted solution is to focus on offshore wind (chosen site: Sikka l-bajda, with an expected potential of 95MW). As of now there is one offshore wind mast to monitor and collect data. Two onshore wind farms are being studied, with a total potential of 14,4 MW. At micro level, wind energy is being limited.

Heat pumps

This technology has a large potential in Malta. A full-scale implementation could provide supply for around 2% of the overall energy demand in Malta.

2 Issue 1 Administrative Procedures

2.1 Introduction

Administrative procedures appear to be the main issue in Malta. This applies in particular to large-scale projects, which lack any rules or guidelines for implementation (this is also due to the small size of the country and to its density of population, which renders large scale projects actually non-applicable in Malta).

2.2 Description of barriers & solutions

2.2.1 Detailed description of the barriers and solutions

Barrier 1.1 – Inefficient general administrative procedures (including no/insufficient specific rules for building integrated/small scale RES installations)

Guidelines for RES installations exist only at micro level. Installation of PV panels or solar heaters is rather straightforward and does not pose particular difficulties from an administrative point of view.

Micro wind energy is being somewhat limited in the built environment by the Malta Environment and Planning Authority (MEPA henceforth) because of the requirements, which include a complete environmental impact assessment and pose a large burden on the applicant.

As for large-scale project, there are no rules or guidelines, nor a clear sharing of responsibilities. The Malta Resource Authority (MRA henceforth), MEPA and Enemalta (energy company) refer to three different ministries and the responsibilities of each one are not clear to the other two. Private investors have come to Malta for developing renewable energy projects, however, they backed out mostly because of administrative reasons (time costliness, unclear procedures...). As of now there are no established rules for developing large scale projects and different authorities do not know how to deal with such request, resulting in lack of coordination, unclear responsibilities and time costliness for applying. A better coordination between these bodies would be beneficial for the country, however considerations need to be done in terms of coordination costs vs. possible benefits, given the small opportunities that Malta offers for large-scale projects.

Barrier 1.2 – Inexistent or insufficient spatial planning

The demographic and geographic characteristics of the country create issues of spatial planning alone, as Malta is a very small and densely populated state. Spatial planning, thus, takes into consideration the issue of devoting areas to RES, but often clashes with other planning needs. Large-scale RES installations are not possible in Malta, also for this

reason. For example, the two onshore wind farms that are being studied, may not be implemented because of the destination of the area, which could be made a natural reserve, and because of its vicinity to a village.

Furthermore, spatial planning is not done at a long-term level.

For these reasons, large-scale (except offshore wind) approaches are not really possible in Malta. As for photovoltaic, the Government has tendered out the installation of photovoltaic panels on the largest possible scale (public buildings and schools). Once completed, no larger installation will be possible. The largest roof available will be of 30.000 m².

Barrier 1.3 – Competing public interests

Competing public interest is present in referral to the issues of spatial planning (e.g. the possible onshore wind farms neighbouring a village).

Barrier 1.4 – Other Barriers

No further barriers have been identifies under this issue.

2.2.2 Best practice elements and indicators

No.	Benchmark	Result
1.1	Is one stop-shopping possible?	Yes, for micro level
1.2	Do authorisation procedures take into account the specificities of those renewable energy technologies?	n/a
1.3	Are timetables and deadlines usually communicated and respected?	n/a
1.4	Amount of money to be invested in administrative process (including cost of work and costs like fees) (in EURO)	n/a
1.5	Time to be spent for administrative process (duration to get the main permits) (in weeks)	n/a
1.6	Number of administrations that must be contacted	1-3

3 Issue 2 Technical Specifications

3.1 Introduction

The lack of technical specification is a widespread situation in Malta. Specifications for renewable energy exist only for solar boilers, however only in order to receive a grant. In all other cases, there are no specifications.

3.2 Description of barriers & solutions

3.2.1 Detailed description of the barriers and solutions

Barrier 2.1 – Weak definitions

No barrier detected

Barrier 2.2 – no EU standards applied

No barrier detected

Barrier 2.3 – Specified locations for testing and/or certification

No barrier detected

Barrier 2.4 – Barrier to trade

No barrier detected

Barrier 2.5 – Other barriers

No barrier detected

3.2.2 Best practice elements and indicators

No.	Technology	Benchmark/comments	Result
2.1		Are the technical specifications to be eligible for subsidies / building obligations expressed in terms different than European standards (including eco-labels, energy labels and other technical reference systems), though such European references exist?	N/a

4 Issue 3 Building integrated technologies

4.1 Introduction

The issue of Building integrated technology is relatively important in the overall RES panorama in Malta, given the fact that such technologies are mainly implemented at household level and thus, given the RES situation in Malta, are to be kept in consideration.

4.2 Description of barriers & solutions

4.2.1 Detailed description of the barriers and solutions

Barrier 3.1 – Renewables obligations insufficient

No particular obligations for building integrated technologies are present.

Barrier 3.2 – Exemplary role of public buildings neglected

Public buildings and schools already provide examples of renewable energy installations are the main targets of a very large photovoltaic tender. A request for an expression of interest was closed in January, further developments will follow.

Barrier 3.3 – Tenancy law and ownership law impede development of building integrated RES technologies

Solar heating is present in about 15.000 households out of 130.000. The following issues impede its full development:

1. Over 50% of the population lives in apartment buildings, therefore they either
 - a. do not have access to the roof (except for the last floors)
 - b. live too far away from the roof to make it an efficient choice – a façade instalment would be a choice, but the Maltese Environment Protection Authority (MEPA henceforth) does not easily give a permit, for aesthetic reasons or for lack of knowledge, as this is a rather new technology in Malta;
2. Most detached-house tenants are elderly couples, which have a smaller interest in installing, also because the tendency, after their death, is to sell the property, demolish the house and build apartment buildings, leading to the issue described at point 1.
3. In Malta there are no solar rights, meaning that if a building has a new flat built at its top, which will cast shadow on the solar panels of the neighbouring building, no compensation is paid to the solar panel owner;

Barrier 3.4 – Other barriers

N/a

4.2.2 Best practice elements and indicators:

No.	Benchmark	Result
3.1	Is this installation type in normal cases exempted from an authorization procedure (building permit)?	No
3.2	Are legal-administrative requirements inadequate for this installation type?	n/a
3.3	Is there a Renewables Obligation that operates sufficiently?	n/a
3.4	Number of administrations that must be contacted	n/a

5 Issue 4 – Promotion of energy efficient renewable energy equipment

5.1 Introduction

It appears that promotion schemes at the level desired for this study are not in place, thus no results have been obtainable through the chosen criteria.

5.2 Description of barriers & solutions

5.2.1 Detailed description of the barriers and solutions

Barrier 4.1 – Non-compliant promotion schemes

N/a

Barrier 4.2 – Lack of substitution of existing inefficient systems

N/a

Barrier 4.3 – Use of national procedures

N/a

Barrier 4.4 – Insufficient information

N/a

5.2.2 Best practice elements and indicators

No.	Benchmark	Result
4.1	Are the requirements of Art 13 (6) of the Directive concerning the promotion of efficient bioheat and heat pumps fulfilled?	N/a

6 Issue 5 Information/awareness raising

6.1 Introduction

Information and awareness raising do not pose a barrier in Malta. The usage of RES at a micro level is common and the advantages of these technology seem to be understood by the population. Support schemes are also generally known by the citizens, mainly with regard to small-scale technologies for households, i.e. solar energy and solar boilers. There is, however a lack of technical knowledge in the Government, as described below.

6.2 Description of barriers & solutions

6.2.1 Detailed description of the barriers and solutions

Barrier 5.1 – Insufficient availability of information on support measures & of guidance for planners and architects

N/a

Barrier 5.2 – Insufficient public funding for campaigns/programmes

N/a

Barrier 5.3 – Insufficient campaign-/programme-design

N/a

Barrier 5.4 – Other barriers

The Government, and politicians in general, lack technical knowledge, as there is only one engineer involved in politics, the rest being architects, economists and lawyers. Technical know-how is given by external advisors, which makes energetic and environmental policy dependent on them and which therefore lacks continuity. Political will is present, there is a lot of interest but no factual commitment, due to the large lack of coordination between the involved authorities.

Planning is done on a very short-term range (1-3 years). There is no national policy, GHG reduction plan or adaptation of the energy performance in buildings directive.

The Maltese energy policy has been drafted twice (2006 ad 2009) but still no final version is available.

6.2.2 Best practice elements and indicators

No.	Benchmark	Result
5.1	Is sufficient information on support measures available?	N/a

7 Issue 6 Certification

7.1 Introduction

Certification of installers is covered by no regulation in Malta. As of now there are no laws obliging installers to receive a certification and certified installers are also not requested by Maltese households or companies. Competence levels of installers are varied, and there is no guarantee that their work will always be up to EU standards. Progress is being made but no tangible results are foreseen in the near future. Information on trainings without certification and on the potential factual outcome of these trainings is not available.

7.2 Description of barriers & solutions

7.2.1 Detailed description of the barriers and solutions

Barrier 6.1 – Lack of a Certification body

N/a

Barrier 6.2 - Lack of guidelines

N/a

Barrier 6.3 Lack of training

N/a

7.2.2 Best practice elements and indicators

No.	Benchmark	Result
6.1	Is there an appointed national certification body?	n/a
6.2	Is there a sufficient training on RES issued during the education of installers, planners, architects?	n/a

8 Issue 7 Infrastructure Development

8.1 Introduction

This issue does not apply to Malta.

8.2 Description of barriers & solutions

8.2.1 Detailed description of the barriers and solutions

Barrier 7.1 - Problems concerning development of electricity network infrastructures according to a long-term strategy

N/a

Barrier 7.2 - Problems concerning grid expansion processes of existing electricity networks

N/a

Barrier 7.3 - Problems concerning development of a Trans-European Electricity Network

N/a

8.2.2 Best Practice Elements and Indicators

No.	Technology	Benchmark	Result
7.1	All	Presence of an efficient (in terms of capability of achieving its stated objectives) plan for the reinforcement of the interconnection capacity with neighbouring countries.	N/a
7.2	All	Presence of an efficient plan for the reinforcement of the connection capacity within the country.	N/a

9 Issue 8 Power Grid Issues

9.1 Introduction

Enemalta Corporation, the grid operator is obliged to enter contracts with system operators, except for the following cases. System operators are statutorily entitled against the grid operator to the usage of the grid. Operators of renewable energy systems are given priority access to the grid. Authorisation is in general not required, except for micro photovoltaic panels, where the situation is as follows:

- For panels below 13 ohms, a notification of the connection must be sent to the MRA;
- For panels above 13 ohms, the MRA must give its authorisation for connecting the system.

9.2 Description of barriers & solutions

9.2.1 Detailed description of the barriers and solutions

Barrier 8.1 - Problems concerning grid connection

N/a

Barrier 8.2 - Problems concerning grid access

N/a

Barrier 8.3 (former barrier 9) - Problems concerning TSOs and DSOs

N/a

Barrier 8.4 – Other Barriers

N/a

9.2.2 Best Practice Elements and Indicators

No.	Benchmark	Result
8.1	Are there sufficient rules to ensure the priority of grid connection?	n/a
8.2	Are there sufficient rules to regulate dispatchment in an adequate way?	n/a

10 Issue 9 Gas Network Issues

10.1 Introduction

This issue does not apply to Malta, as there is no gas network. Biogas from waste has almost a null potential in Malta. Some landfills for biodegradable material are present and usage of this bio waste is being planned to for 2015. Nevertheless, biogas would have a very limited, negligible impact in Malta. Further information is not available.

10.2 Description of barriers & solutions

10.2.1 Detailed description of the barriers and solutions

Barrier 9.1 – Problems related to the upgrading process

N/a

Barrier 9.2 – Lack of information

N/a

Barrier 9.3 – Inefficient authorisation procedures

N/a

Barrier 9.4 – Insufficient cooperation of grid operators

N/a

10.2.2 Best Practice Elements and Indicators

No.	Benchmark	Result
9.1	If green certificates and/or subsidies for biogas are in place, do they de facto make unattractive to feed green gas into the grid due to the high level of subsidy for biogas used for electricity generation?	n/a
9.2	Are the costs of grid connection for producers of gas from renewable energy sources objective, transparent and non-discriminatory?	n/a
9.3	Do transmission and distribution tariffs discriminate against gas from renewable energy sources?	No
9.4	Average time needed for grid connection approval (from application for grid connection to formal approval) in months (#).	n/a

11 Issue 10 District Heating

11.1 Introduction

This issue does not apply to Malta, as district heating systems are not in place.

11.2 Description of barriers & solutions

11.2.1 Detailed description of the Barriers and solutions

Barrier 10.1 – Lack of positive conditions for the increase of the share of renewables in existing DHC systems

N/a

Barrier 10.2 – Lack of positive conditions for the initiation and expansion of DH systems largely based on renewables

N/a

Barrier 10.3 – Other Barriers

N/a

11.2.2 Best Practice Elements and Indicators

No.	Benchmark	Result
10.1	Are there policies to promote the increase of the RES share in existing DH networks? (yes/no)	N/a
10.2	Are there policies to promote the initiation / expansion of DH networks? (yes/no)	N/a
10.3	Percentage present renewable share (see ECOHEATTOOL)	N/a
10.4	Percentage CHP share (idem)	N/a