



# ZERO CO2 Interreg Europe

## Malta Market Need Report

**Project title: “Promotion of near Zero CO<sub>2</sub> emission buildings due to energy use“**

**Project partner 9: University of Malta**

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## 1. Introduction

The Interreg Europe project entitled “Promotion of Near Zero CO<sub>2</sub> Emission Buildings Due to Energy Use” (ZeroCO<sub>2</sub>) falls under Interreg Europe priority axis 3: ‘Low-carbon economy’ and spans over two stages between April 2016 and March 2020. The overall objective is to address policies, support actions and investments to increase the levels of energy efficiency in public buildings and the housing sector, as well as to raise the share of energy from renewable sources in the overall energy mix.

The Interreg Europe ZEROCO<sub>2</sub> project within this priority axis specifically aims to:

- Define near zero CO<sub>2</sub> emission buildings due to energy use (NZCO<sub>2</sub>EB) and present the various benefits which result from this type of building;
- Analyse the combination of different technologies and energy efficiency measures, which can be used in order to achieve the abovementioned target;
- Identify state of the art policies, which will aim at promoting NZCO<sub>2</sub>EB at the local, regional and national level;
- Present various financial tools in order to promote these types of buildings.
- Monitor the implementation of the policy action plan over two years.

The project's focus is on new and existing public buildings to be renovated, including the housing sector. By Public Buildings, one understands all buildings that are frequently visited by the general public.

In order to satisfy these objectives, like other Interreg Europe projects, the ZEROCO<sub>2</sub> project follows an interregional approach, which links different policy makers and stakeholders to understand common challenges and share good policy practices among the project partner regions.

This work details the outcome of the **Market Needs Report** and analyses the current funding opportunities in Malta available for public buildings (including the housing sector), to finance renewable energy and energy efficiency measures enabling them to reduce their CO<sub>2</sub> emissions. The report complements the **Action Plan Report** for the Interreg Europe ZeroCO<sub>2</sub> project [1] and identifies the market needs to facilitate the transition of new and public buildings to be renovated to reach NZCO<sub>2</sub>EB.

## 2. Current Funding Opportunities

*What are the funding opportunities, what kind of grants are available, which measures of energy efficiency and use of renewable energy sources are funded, what is the model of funding (public private partnership, subsidies, tax reliefs, etc), what is the availability of funds, what is the process to get funds, for whom it is intended, etc.?*

The main funding sources for supporting national schemes that promote renewable energy and energy efficiency are:

- 1) National funds
- 2) ERDF (2014- 2020) funds

The following are the existing public schemes promoting energy efficiency and renewable energy sources in Malta:

1. **Promotion of renewable energy sources (solar photovoltaics)** – applicable to both residential (including the housing sector) and public buildings.

- **Two options for financial support exist:**

- Option 1: Feed-in tariffs (FIT) for 20 years with no capital grant
- Option 2: Feed-in tariffs for the first 6 years plus a 50% grant on capital cost up to a maximum of 2,000 Euro (residential sector only). The remaining 14 years will require that the PV generated electricity is sold at the spill-off electricity tariff rate (cost price of electricity), which could change from year to year.

**Funds foreseen for the period up to 2020 include:**

- Funds assigned from the Operational Programme 2014-2020;
- An estimated maximum of €140 million (over 20-year lifetime of systems) under the scheme notified to and approved by the Commission for systems larger than 1 MWp;
- An estimated maximum of €6 million per annum (active as from 2015, over 20-year lifetime of systems) for feed-in tariff for systems smaller than 1 MWp;
- An estimated €33 million in feed-in tariff scheme for systems in the residential sector (granted for a period of 6 years from installation of system).

**Funds used so far**

Part 1: Capital grant schemes for residential buildings issued by the Malta Resources Authority (MRA), which was then moved to the Regulator for Energy and Water Services (REWS). Between 2010 and 2015, a total of 39.1 million Euro was paid from ERDF. This figure only concerns PV systems installed in the residential sector that have benefitted from a grant administered by the REWS [2][3]

Part 2: ERDF 2007-2013 capital grant schemes for non-residential sector issued by the Malta Enterprise – Between 2009 and 2013, a total of 11,405,188 Euro were given as grants to industry and commercial entities for investing in energy efficiency and renewables [4].

Part 3: ERDF 2007-2013. By end of 2012, capital grants issued by the Planning and Priorities Coordination Division (PPCD) for various EU funded projects (under both OP 2007-2013 and 2014-2020) – PA4 Climate Change and Resource Efficiency amounting to 2,807,183 Euro [5].

Part 4: Feed-in tariff expenditure for PV: 2010: 0, 2011: 0, 2012: 623,421 Euro, 2013: 5,000,000 Euro, 2014: 5,000,000 Euro, 2015: 7,000,000 Euro [6].

The scheme (currently open) requires applicants to have unshaded rooftop space available to install PVs.

A scheme was also available for residential households with no access to rooftops to benefit from PVs via **a communal solar PV farm scheme (1 MWp)** built on top of a large water reservoir. The scheme was a first-come first-served basis and has been fully subscribed. Households had the opportunity to invest up to a maximum of 3 kW<sub>p</sub>. The communal PV farm at Fiddien, Rabat was meant to act as a pilot project to demonstrate market demand for such a product, whilst fulfilling one of the electoral manifesto proposals – the idea being for the Government of Malta to spearhead the initiative, so that the private sector would then follow suit. In this regard and for the time being, it is not the intention of the Government to engage in constructing another solar farms, because this can be fulfilled by the private sector. The government is therefore encouraging the private sector to follow its example and offer similar opportunities to households and enterprises.

2. **Grant scheme for domestic solar water heating** – applicable only to residential buildings. The current national scheme provides a grant of 40% on capital cost of solar heating system up to a maximum of 400 Euro and this is not restricted by any social criteria. It is primarily financed by national funds.

**Foreseen funds:** Approximately 0.25 million Euro per annum

**Funds used so far:** Approximately 3.5 million Euro (end 2015) from national funds

3. **Promoting financial instruments for energy efficiency**- applicable only to residential dwellings. The scheme is funded through national funds, and applies to roof thermal insulation material and double-glazed windows or doors. Eligible expenditure for roof insulation is capped at €60 / m<sup>2</sup> of insulation material and €150 / m<sup>2</sup> for the double glazed material excluding the frame.

**Foreseen funds:** Approximately 50,000 Euro per annum

**Funds used so far:** Approximately 350,000 Euro (end 2015)

4. **Heat pump water heater scheme:** applicable only to residential dwellings. The National Scheme provides a grant on capital of 40% up to a maximum of 400 Euro.

**Foreseen funds:** Budget allocated for 2018 is 450,000 Euro

**Funds used so far:** scheme started in October 2017 and no data is available as yet.

5. **Investment aid for high-efficiency cogeneration:** Issued by Malta Enterprise in 2016 for the purpose of incentivising high-efficiency cogeneration that shall fulfill the following criteria [7]:

- a. Production from cogeneration units shall provide a calculated primary energy savings rate of at least 10% compared with the references for separate production of heat and electricity.
- b. Production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high-efficiency cogeneration.

For new equipment, the eligible cost shall be the extra investment costs for the equipment needed for the installation to operate as high-energy efficiency cogeneration equipment, when compared to conventional electricity or heating installations of the same capacity.

Or

For upgrades, the extra investment cost to upgrade the equipment to a higher efficiency when an existing installation already meets the high-efficiency threshold.

The costs not directly linked to the achievement of a higher level of energy efficiency shall not be eligible.

A minimum investment of €15,000 is required. **The aid shall be granted in a form of a tax credit.** The capping will not exceed the following percentages of the eligible costs: Small system (65 %), medium system (55 %) and large system (45%). The scheme has a budget of 5 million Euro. The scheme will run until March 2019

**Funds used so far:** None

6. **MHRA BEST scheme for hotels (to be launched in 2018)**

- The Malta Hotels and Restaurants Association (MHRA) has launched the Benchmarking Energy Sustainability Targets (BEST) Scheme [8], compliant with state aid rules, which includes a benchmarking and ranking system that awards points to participating hotels according to:
  - I. Their Energy Efficiency Key Performance Indicators (KPIs)
  - II. Energy Efficiency Projects undertaken during the previous year

Hotels that rank above an established threshold within their category shall be awarded a credit, which can be used to finance eligible future energy efficiency related projects. A cap of €30,000 will be applicable per property per calendar year. The fund for each hotel can be used to cover between 30 % and 50 % of the cost of any approved energy efficiency project depending on the category of the hotel size, as defined by the EU parameters for Small, Medium and Large enterprises.

**Foreseen funds for the MHRA BEST scheme: Budget allocated for 2018 is € 800,000**

- The Malta Enterprise haad issued a scheme for the hospitality sector between 2011 and 2016. It focused on energy efficiency measures for the hospitality sector [9]. Licensed hotels, guesthouses, hostels, farmhouses, snack bars and restaurants could all benefit from a loan financed by Malta Enterprise. Loans approved under this incentive may not exceed €400,000 or 80% of the total investment, as approved by the Enterprise. The loan has to be repaid within 5 years at an advantageous interest rate of 1.5% over the discount rate charged by local commercial banks. Unfortunately, no assistance has been awarded under this support measure for the duration of the incentive. The reason may be due to the long payback period of various retrofitting measures, given Malta's mild climate and low electricity tariffs. Also, when loans are applied to finance investments, payback periods further increase due to interest rates.

**7. Energy Audit Voucher Scheme (January – June 2017)**

The Energy Audit Voucher Scheme [9] launched by the Malta Enterprise allows undertakings that have their annual energy consumption between 10,000 and 75,000 kWh, to engage an Energy Auditor to carry out a high-level energy review of their activity.

Through the energy audit, the business would identify actions and investments that may be carried out to reduce energy consumption. The scheme was not fully subscribed as only two beneficiaries have received support under this Scheme for the period indicated. The total amount awarded was of € 500.

The low uptake may be due to lack of awareness about the scheme and about the benefits of undertaking energy audits. More promotion on such schemes is required to increase public awareness.

**8. ERDF Energy Grant Scheme (Closed Measure)**

The ERDF Energy Grant Scheme [9] supports enterprises to invest in energy saving measures and alternative energy sources.

Projects benefiting from this incentive should be completed within 18 months of the issue of the Letter of Approval from Malta Enterprise. For an application to be considered for co-funding, the minimum project value (based on eligible expenses) must be at least 25,000 Euro and must not exceed 200,000 Euro. The resultant minimum grant value per project is 12,500 Euro.

**Energy Saving Measures**

Investments for the implementation of energy saving solutions and lighting, such as the installation of intelligent lighting systems, solar heating, thermal insulation, building management systems and energy-saving lighting are all eligible.

**Alternative Energy Sources**

Investments in renewable energy solutions, such as the installation of energy generating solutions based on the use of solar power and wind power are also eligible.

**ERDF Energy Grant Scheme – [Programming Period 2007-2013]**

**No. of entities applying for the scheme**

Call No.	Call 1	Call 2	Call 3
Applications	90	107	246

**Number of Beneficiaries that were awarded with a Grant Agreement]**

Call No.	Call 1	Call 2	Call 3
Grant Agreements Awarded	44	59	90

**Total amount awarded as per Grant Agreements indicated above: 14.9 million Euro**

**The most common energy saving and alternative energy measures financed from the ERDF grant schemes**

*ERDF Energy Grant Scheme:*

Alternative Energy -PV Systems

Energy Saving Measures – Power Factor Correction, Rooftop Insulation and Solar Water Heaters

**Estimated site energy or CO2 emissions savings from the ERDF grant schemes**

*ERDF Energy Grant Scheme: 22,420.945 MWh/annum achieved*

**9. Funding for renewable energy and energy efficiency investment projects:**

Ministries, Government Departments, Central Government Authorities and the Public Sector Companies are eligible to apply for ERDF funds (under Priority Axis 4) 'Shifting towards a low-carbon economy' for investment projects related to renewable energy and energy efficiency. Currently the public buildings listed in section 4.0 are benefitting from these funds to reduce their CO<sub>2</sub> emissions.

## 10. (Private) funding opportunities for renewable energy and energy efficiency:

- **Green loans:** The main banks in Malta (including HSBC [10], APS [11], BOV [12], [13] and BNF [14]) all offer green loans to households and/or businesses at competitive / preferential interest rates for energy efficiency and renewable energy technologies. One of the popular schemes is the Personal Loans scheme to assist individual households investing in photovoltaic systems. Since inception of the Government Grant Schemes to individual households over the past couple of years, the Bank of Valletta (BOV) has assisted over 2,500 households with total loan of circa 20 million Euro.

However, the BOV “Joint Assistance Initiative for Maltese Enterprises (JAIME)” scheme that can be used to finance energy efficiency and renewable energy measures for Small and Medium Sized Enterprises (SME) has not been as popular, due to clients having to choose between either government incentives or the BOV JAIME financing package due to EU funding / state aid rules.

The Malta Developers Association (MDA) has also launched a loan scheme for renewable energy technologies [15].

- **Energy performance contracting (EPC):** Energy Performance Contracting is identified at EU level as a key instrument to finance and implement ambitious energy efficiency investments. However, its roll out faces numerous barriers including a lack of understanding and information, distrust in suppliers, high transaction costs, inadequate accounting and procurement rules, different procedures in each country and problems accessing financing. A consultative exercise regarding EPCs has been carried out by the Energy and Water Agency and can be found in [16]. The EPC model uptake in Malta seems to have limited potential and is still at its very early stages.

## 3. Policy Background

*Based on which strategy, policy the funds are granted (e.g. based on a long-term strategy for investment in the energy renovation of buildings)? What are expected results for region (e.g.: total renovation of xxx m<sup>2</sup> floor area in public buildings, annual renovation of public buildings, etc.)?*

The policy background is focused at enabling Malta to reach the EU 2020 targets related to renewable energy (10 % target) and energy efficiency (27 % of primary energy consumption) as set out in the National Renewable Energy Action Plan [17] and the National Energy Efficiency Action Plan [18], respectively. Policies are also directed to ensure Malta compliance with the EPBD recast [19] requirements both in terms of the cost-optimal and NZEB energy performance requirements [20] for new buildings and for buildings undergoing major renovation, as well as to achieve the 3 % annual renovation rate for public authority buildings.

Malta is also committed to a reduction in its GHG emissions by up to 5% on 2005 levels by 2020 as detailed in Malta's low carbon development strategy [21].

#### 4. Current Local and Regional Investment Projects

*List three ongoing investments in the field of energy efficiency and renewable sources in public sector and the measures, type of funding and model of funding.*

The following are energy efficiency and renewable energy projects currently being co-financed under ERDF 2014-2020:

- 1) ERDF.04.0070 - The upgrading and energy retrofitting of the Administration Centre, Victoria Gozo with a total investment of 1,323,750 Euro.

Carbon dioxide emission reduction measures have been taken into consideration by:

- I. Replacing the current split-type air conditioning systems with a centralised more efficient VRF systems;
- II. Introducing a mechanical ventilation system with heat recovery to provide fresh air into office spaces;
- III. Introducing a monobloc heat pump for hot water production;
- IV. Replacing the current lighting system with LED luminaries;
- V. Installing a building management system (BMS) to help manage, control and monitor the building's technical services (HVAC and lighting) and the energy consumption of devices used by the building;
- VI. Insulating the rooftop of the Ministry for Gozo using polyurethane spray on foam. This was topped up by a roof screed layer with appropriate gradient in order to collect maximum rainwater surface run off, for re-use;
- VII. Replacing the current single glazed apertures with double glazed apertures filled with argon and complete with an aluminium frame, a 4-mm thermal break and a UV reflective film.

The Ministry for Gozo already also has a PV system comprising of 108.01 kW<sub>p</sub> installed on its rooftops.

- 2) ERDF.04.0069 - Investing in an energy efficient system for St. Vincent de Paul Residence (a respite home). The project seeks to invest in an energy efficient lighting system together with heating, ventilation and air-conditioning (HVAC) systems that will reduce the carbon footprint and minimise energy demand for the residence.

Total investment: 2,057,921.18 Euro

- 3) ERDF.04.0067 – Malta Information Technology Agency (MITA) Data Centre: Photovoltaic Grid-Connected System.  
Total investment: 12,749.22 Euro

## 5. Policy / Funding Compatibility

*What condition have to be fulfilled to get funding? Are there any difficulties to fulfil this condition (e.g. time consuming; first come, first served basis, etc.)?*

Each of the public schemes highlighted in Section 2 require different conditions and submittal of different application forms to be fulfilled. Application forms and conditions for the PV, domestic solar water heating, domestic hot water heat pumps and insulation/double glazing can be found and are detailed in the REWS website[22]. Planning Authority regulations also have to be fulfilled for solar installations as detailed in [23]. The conditions for the Investment Aid for High-Efficiency Cogeneration are found in the Malta Enterprise website [7], while the conditions for the BEST scheme conditions for hotels are detailed in [8]. The applications are generally time consuming to fill up and can involve various entities. A one-stop shop for all schemes is currently non-existent for energy schemes. However, the idea of a one-stop shop is not new to Malta, as it has been applied for other sectors such as Government Services to the general public (Servizz.gov.mt). Funding for energy schemes is generally on a first-come first-served basis until the set quota is reached.

Application of ERDF funding is a long and time-consuming process both at application and execution stage. All awards of ERDF must comply with European Union competition law (including State Aid Law and Government procurement in the European Union). Failure to follow these legal requirements may result in irregularity rulings, which carry financial implications.

## 6. Market Need

*Questions to be answered: Should new funds be created, should tax incentives be created to stimulate investment in ZEROCO2 buildings, how much support is available (funds, support from policy maker to implement ZEROCO2 building in to the policy). Could the ZEROCO2 concept be implemented in all kind of buildings? Should there be only focus on public buildings, and if yes, which types (social housing, hospitals, schools, sports facilities or local government offices)? Is it possible to finance ZEROCO2 buildings with private money, public-private partnership or trough crowdfunding? Could ZEROCO2 buildings help to reach regions target (reduction of CO2, etc)? And in what scale?*

The above sections have detailed the current funding opportunities available for public buildings (including the housing sector) to invest in energy efficiency and renewable energy and facilitate their transition to NZCO2EB.

As depicted from Section 2, national scheme measures are available for both the housing sector and public buildings. It can be seen, that there is a good mix of incentive mechanisms that vary from grants, to feed-in tariffs and tax incentives. Following discussion with various stakeholders throughout the project and based on lessons learnt from project partners, the following main proposals have been identified to facilitate the market's transition of public buildings to NZCO2EB in Malta.

### A. One-stop shop

One of the most important requirement to make the funding process for national schemes more efficient is to ease the administrative barriers of such funding via a one-stop shop. A one-stop shop can simplify the process of making interested entities more aware of the different funding mechanisms available for renewable energy and energy efficiency. A website detailing all funding opportunities is currently non-existent. The application process also involves dealing with various entities. A one-stop shop should enable the applicant to deal with only one entity throughout the application process thus reducing bureaucracy and administrative burdens.

### B. Improving the photovoltaic, domestic solar water heating and energy efficiency (insulation/ double glazing) schemes

A PESTEL analysis for the photovoltaics, domestic solar water heating and energy efficiency schemes (insulation/ double glazing) has already been carried out in detail in [24]. The main findings from this PESTEL analysis following stakeholders' feedback showed that:

- I. Statistics show that investment in new solar heating systems has seen a constant decline over the past few years as PVs are being seen to be more financially attractive. The domestic solar water heating grant, which has remained the same throughout the years and never considered the added costs of physically connecting the solar heating system to the hot water setup, has to be revised upwards so as to regenerate interest in solar water heating. Solar water heating, given its storage capability, is currently the only viable RE source that provides an effective way to reduce peak electricity loads at the power station (About 90% of households still use electric boilers for water heating);
- II. Heat pumps provide a good alternative to solar water heaters in public buildings and the housing sector, where the rooftop may not be sufficiently large to cover a high percentage of electricity demand using solar PV panels or is already occupied by other services;
- III. A heat pump water heater grant for residential dwellings has been introduced for the first time in October 2017. Grants should however be extended to install solar water heaters and / or hot water heat pumps for the hospitality sector (hotels / restaurants), residential people homes and sports complexes, where hot water consumption is much higher. Despite the fact that these technologies always feature in cost optimal studies for new and renovated buildings, they are not yet cost effective and would require strong incentives;
- IV. Fenestration enhancement should not focus on double glazing alone . Various studies [25] [26] have shown that double glazing should not be high on the priority list for energy savings given Malta’s mild climate. Incentives should focus on solar shading and / or spectrally selective coatings and films for the commercial building sector. Although such technologies result to be cost optimal in most cases they are generally not yet cost-effective;
- V. Bundled incentives combining two technological options such as PVs / SWH, PVs / Heat pump for existing buildings and incentives that combine envelope improvement with RES such as roof insulation / PVs or roof insulation / SWH or roof insulation and shading/heat pump for existing buildings to be renovated should be considered to further reduce CO<sub>2</sub> emissions.
- VI. Government communal solar farm projects can be extended to households who despite having a roof cannot install PVs due to shading from adjacent obstacles or buildings. Another possibility can be to extend communal PV farm schemes, to allow commercial entities (such as many restaurants) that do not own a roof top, to participate in them.

### C. The housing sector

From the schemes shown in Section 2, there are currently no open schemes for the housing sector. Such sector is unlikely to have the necessary capital to invest in technologies that reduce CO<sub>2</sub> emissions. One suitable policy would be to renovate 5 % of the public housing sector to reduce their CO<sub>2</sub> emissions by 30 % or more by end of 2020. Such deep renovation shall also enable the housing communities to improve their thermal comfort.

#### **D. (Private) funding opportunities for renewable energy and energy efficiency**

Provision of green loans by private banks and the Malta Enterprise is a suitable measure for public buildings that do not have the initial capital to invest in energy efficiency and renewable energy. However, such loans may not be so popular with beneficiaries, due to the increase in payback period caused by the added repayment of interest. Furthermore, many energy efficient measures do not have favourable short payback periods given Malta's mild climate and cheap electricity tariffs. An alternative measure to encourage one to invest in energy efficiency and renewable energy and which will in addition improve the public perception of energy performance certifications would be to encourage banks to calculate maximum loan limits for potential property buyers based on the energy performance rating of the property.

Energy Performance Contracting is identified at EU level as a key instrument to finance and implement ambitious energy efficiency investments. In order to reduce the barriers and uncertainty factors for such financing models and to make such models more popular in Malta, the following actions may be considered:

- Government should take the lead and implement such a model to perform energy renovation on existing public authority buildings. All calculations, lessons learnt and energy savings should be made transparent.
- Provide training and standard template/s for energy performance contracts.
- Provide a guide on best-practice methods to renovate public buildings according to that specific sector, such as schools, offices, health centres and housing projects to facilitate their transition to NZCO2EB status. The guide should quantify typical savings from various measures and aim to quantify any uncertainty factors.
- Provide training and continuous professional development to architects, engineers and project managers on aspects of design, technologies, life cycle costings and energy performance certification to facilitate the transition to NZCO2EB.

#### **E. MHRA BEST scheme**

The scheme is a very good initiative by the MHRA to motivate hoteliers to invest in renewable energy and energy efficiency and can be extended to other sectors. The system of awarding points and eventually, funding to hotels who already have the best energy performance makes good sense from an economic point of view. Once the low hanging fruit i.e. measures that can be easily accomplished are carried out, it becomes more technically and economically challenging to further improve the energy performance. However, it should also be made sure that the low hanging fruit is not missed by other public building owners, who lack motivation in carrying out energy saving measures.

Awareness on social media of the importance for energy saving can be carried out by providing non-biased information campaigns on the most effective measures, including energy management practices. The campaign should also focus on the role of energy performance certification so as to improve the public perception on the building's energy performance certificate and enhance its utilisation.

#### **F. Use of ERDF funds for public authority buildings**

Public authority buildings should have a high energy performance and serve an example and aspiration to the general public and as a model for other buildings. This means that projects should be devised to improve the energy performance rating of public authority buildings, such as Ministries, public offices, health centres, public schools and sports complexes from ERDF funds.

Priority to such ERDF funds should not be given to low hanging fruit but for technologies and measures that carry a degree of uncertainty and have yet to be proven and studied in our local climate. Such projects should serve as a learning curve for contractors and installers and to reduce the costs and uncertainties for such measures and technologies, that can reduce CO<sub>2</sub> emissions and make energy performance contracting more successful.

#### **G. The role of NZCO2EB**

The Maltese island's are currently undergoing a construction boom, which means that putting in the right policy framework to enable the transition to reach NZCO2EB has never been more urgent, so as to reduce CO<sub>2</sub> emissions due to operational energy use from the building stock. It is also now the right time to consider introducing a mandatory minimum renewable energy share in new constructions and buildings that will undergo major renovation.

## 7. Conclusions

Based on section 6, the market needs to enable the transition of public buildings to NZCO2EB can be summarised as follows:

1. Reduced bureaucracy through one-stop shop;
2. Targeted support schemes towards specific sectors;
3. Upgrade of unsuccessful grants and schemes and target them towards most effective energy efficiency measures;
4. Increased public acceptance and good use of Energy Performance Certificates and their accompanying recommendation reports;
5. Provide incentives, tax rebates or schemes to allow public building / housing sector with no or shaded rooftops to achieve low operational CO<sub>2</sub> levels;
6. Reduced barriers and uncertainties when undertaking Energy Performance Contracting;
7. Provide support schemes targeted towards the public housing sector;
8. Public authority buildings to serve as exemplary buildings;
9. Introduce minimum mandatory renewable energy share for new constructions and for buildings undergoing deep renovation;
10. Promote measures achieving deep energy renovation / low CO<sub>2</sub> emissions as opposed to shallow renovation;
11. Increased awareness & improved technical expertise.

The measures to satisfy these market needs identified in section 6 are divided into soft measures and measures that require ERDF / national funding in the action plan. As of January 2018, 55 % of the current funding under ERDF 2014-2020 Priority Axis 4 (amounting to € 25,370,934.05) has not yet been allocated. This gives the opportunity to allocate a portion of these unallocated funds to the ZEROCO2 action plan, so as to aid the transition of public buildings to reach NZCO2EB.



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