European Construction Sector Observatory

Policy measure fact sheet

Cyprus

Grand Scheme for the promotion of Renewable Energy & Energy Conservation

Thematic Objectives 1 & 3

February 2018

In a nutshell

Implementing body:	Special Fund Managing Committee
Key features & objectives:	Government-funded grant scheme to support energy saving upgrades to residential and non-residential buildings, including the installation of energy efficient technologies that use renewable energy sources.
Implementation date:	2004 – 2013
Targeted beneficiaries:	Residential and non-residential building owners, and energy saving product manufacturers, suppliers and installers.
Targeted sub-sectors:	Residential and non-residential (services) sectors, energy efficiency.
Budget (EUR):	100 million

Energy efficiency became an important focus for policy-making in Cyprus in the early 2000s, not least as part of the country's preparation for its accession to the European Union in 2004 and its need to align itself with European energy efficiency directives and energy saving targets. According to the Ministry of Commerce, Industry and Tourism in an address to the 1st Energy Savings Exhibition in Cyprus in 2005, Cyprus has a long-standing tradition of using renewable energy, which began in the 1930s with the mass use of windmills for pumping water. By the early 2000s, Cyprus was a leader in the use of solar energy for heating in buildings, with solar water heating systems being used by 90% of households and 53% of hotels.

The Law on Encouraging and Promoting the Use of Renewable Energy Sources and Energy Saving (Law 33(I)/2003) was introduced in 2003 to establish the legal framework for the provision of financial incentives in the form of government-backed grant funding to encourage private sector investment in energy saving measures (e.g. in buildings) and to increase the use of renewable energy sources. The law also sought to promote regional development and environmental efficiencies.

The Grant Scheme for the Promotion of Renewable Energy and Energy Conservation was launched in 2004 on the basis of the 2003 Law. It was an important component of the Cypriot government's energy efficiency policies and action plans throughout its implementation period up to 2013. The scheme provided financial support for energy saving upgrades to existing residential and non-residential buildings and for technologies that use renewable energy sources.

The scheme attracted nearly 50,000 applications for grant funding and was generally viewed as a success, although it attracted much more demand from the residential sector than from the non-residential sector. Lessons learned include recommendations for the provision of flexible or alternative funding models to encourage building owners to invest in more comprehensive building upgrades, as well as recommendations to widen the scope of similar schemes to ensure that they provide support for households on lower incomes and smaller businesses, and to conduct impact assessments to ascertain the impact of this type of scheme.

1
General description

The Grant Scheme for the Promotion of Renewable Energy and Energy Conservation was launched in 2004 and closed in 2013. The scheme aimed to provide applicants from the residential and non-residential (services) sectors with non-repayable grants to encourage and support the use of renewable energy sources (RES) and investments in energy saving installations, equipment and activities.

The scheme provided applicants with grant funding to cover between 30% and 55% of the total purchase and installation cost of a range of eligible energy saving measures. The maximum grant funding was variable depending on the type of energy saving measures detailed in each application.
The measures that were eligible for grant funding in the residential sector broadly covered work to insulate the building envelope, including the installation of insulated windows. Roof insulations in urban and rural houses that were in possession of a building permit dated before 2008 were also permitted, as was the installation of insulated walls and windows in houses located in mountainous areas (an altitude above 600m). Eligible measures also covered the installation of technical building systems, such thermal control systems and technologies that utilise renewable energy sources (RES). Measures could also include the installation of new or replacement solar heaters for domestic hot water in houses that were in possession of a building permit dated prior to 2003, as well as the installation of solar assisted central heating systems or biomass systems for space heating.

The measures that were eligible for grant funding in the non-residential (services) broadly covered improvement works to the building envelope and the installation of technical building systems, such thermal control systems and technologies that utilise renewable energy sources (RES). Applicants were however required to demonstrate that any energy efficiency technologies installed would achieve energy savings of at least 10%. Other types of energy efficient installations that were eligible for grant funding included solar heaters for heating and/or cooling, central solar systems for hot water and geothermal pumps for all building types. In its final year (2013) however, the scheme introduced a new requirement which stipulated that grants for the installation of heat generation systems using renewable energy sources could only be provided on the condition that the target premises already had roof insulation installed.

Table 1 lists the range of energy saving measures that were eligible for grant funding under the scheme. There was a specific set of eligible measures for each of the two target sectors – residential and non-residential (services) sectors.

Sectors	Eligible measures
Residential sector	1. Installation of thermal insulation (e.g. roofs, walls, etc.); 2. Replacement of windows with insulated, high efficiency windows (e.g. double glazing); 3. Off grid connected PV systems up to 30 kW; 4. Replacement of solar thermal systems for domestic water; 5. Installation of solar thermal systems for space heating or space heating & cooling; 6. Installation of geothermal heat pumps.
Non-residential (services) sector	1. Installation of any energy efficiency technology which can achieve 10% primary energy savings; 2. Installation of central solar thermal systems for domestic water; 3. Installation of central solar thermal systems for space heating/cooling; 4. Installation of geothermal heat pumps; 5. Installation of biomass investments; 6. Installation of combined heat and power systems by non-profitable organizations; 7. Installation of geothermal heat pumps for space heating/cooling for non-profitable organizations.

Source: M. Economidou, P. Zangheri, D. Paci (JRC, 2017)

The grant scheme had a budget of EUR 100 million and was co-financed by the Cypriot Government and the EU Cohesion Fund. It was managed by the Special Fund Managing Committee, which was made up of members from the Ministry of Energy, Commerce, Industry and Tourism (MECIT), the Ministry of Finance, Planning Bureau (currently renamed DG for European Programmes, Coordination and Development), the Cyprus Scientific Technical Chamber (ETEK) and the General Accountant of the Republic of Cyprus.

2
Achieved or expected results

The grant scheme is considered to have been broadly successful, having funded nearly 50,000 grant funding applications between 2004 and 2013. It is however difficult to measure how successful this result was against objectives, as there was no overall target defined by the scheme, for example, in terms of overall energy savings or the number of buildings to be renovated.

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The vast majority (90%) of the total number of applications received were submitted by residential building owners, with just 5% being submitted by non-residential building owners and the other 5% being unspecified.

Over half (52%) of the grant funding awarded over the course of the scheme was for residential buildings, compared to 17% for non-residential buildings. The destination of the remaining 31% is unspecified.
The large number of applications received by the scheme is evidence that it was a very popular measure. Demand grew over the course of the scheme's implementation period, which led to an incremental growth in the scheme's budget, which reached EUR 100 million by 2013.

Receiving over half of the available budget, the residential building stock was the main beneficiary of the scheme. The available data on the results of the scheme does not indicate whether any homeowners submitted more than one application. However, if one assumes that each grant awarded was for a unique residential building, then one can conclude that about 10% of the Cypriot residential building stock has benefitted from the scheme.

Energy saving measures were the most popular type of measures for which applicants requested grant funding. Table 2 lists the most popular measures and provides a breakdown of how the budget was spent in support of each type of measure.

Table 2: Budget distribution by type of measure

Most popular measures	% of funding awarded
Installation of building insulation, including insulated windows, and other energy saving measures	>50
Installation of renewable energy technologies:	<50
• Solar thermal	25
• Solar power (PV)	13
• Geothermal	3.25
• Biomass	4.68
• Wind power	0.0045
• Co/tri-generation measures	0.16

Source: M. Economidou, P. Zangheri, D. Paci (JRC, 2017)

The most popular measures in terms of accepted applications were also some of the cheapest to finance, such as:
• Installation of insulation in residential buildings in non-mountainous areas, at an average cost of EUR 1,275; and
• Installation of solar thermal systems for domestic hot water in residential buildings, at an average cost of EUR 598.

Applicants proved to be much less interested in the other types of measures that were eligible for grant funding under the scheme, as they accounted for under 3,000 applications.

In terms of volume of funding by type of eligible measure, the largest grant awards provided were for geothermal heat pumps (EUR 20,839 per application), followed by solar power (PV) systems connected to the grid (EUR 13,647 per application).

In the case of non-residential buildings, more than half (56%) of applications requested grant funding for building insulation measures. The next most popular types of measures were the installation of electrical equipment (23%) and air-conditioning systems (10%), followed by lighting systems (7%) and energy management systems 2%.

The number of wall insulation premiums awarded increased incrementally year on year from under 1,000 in 2006 to a peak of over 26,000 in 2015, with some moderate dips in annual performance in 2014 and 2016. Over an eleven-year period, the annual average number of wall insulation premiums awarded was 12,895, which is an achievement rate of 129% compared to the annual target of 10,000 set by the ERP2020.
Horizontal bars. [number of wallinsulation premiums awarded by ERP2020] 2006: less than 1,000. 2015: over 26,000:

VEA data on the results of the ERP2020 up to 2016 provides an indication of the effectiveness of the communications campaigns that were run in the early years of the scheme. They placed particular emphasis on roof insulations because they can deliver very significant energy savings. One can conclude that the campaigns were important contributors to the overall uptake of roof insulation work. In contrast, the weaker results for condensing boiler premiums (25% of total annual target) indicate that homeowners gave this measure the lowest priority. In addition to the overall results of the ERP2020 published by the VEA, results are also periodically compiled and assessed by the Flemish Social Housing Society (Vlaamse Maatschappij voor Sociaal Wonen – VMSW). On behalf of the Flemish Government, the VMSW conducts a biennial survey of social housing companies (SHMs) to evaluate the results of the ERP2020 in terms of its impact on the social housing sector.

According to the data collected by the latest VMSW surveys, the percentage of single-family social rented houses without roof insulation fell from 22% to 16% between 2014 and 2016. The total number of social rented houses without roof insulation was reduced by 4,848 units (down from 16,966 to 12,118 houses). The number of single family social rented houses with single glazing fell from 17% to 13%, with 2,914 fewer units (down from 12,895 to 9,981 houses). The number of single family social rented houses with an outdated (inefficient) heating system decreased from 17% to 15% (down from 12,925 to 11,248 houses). When compared to the data compiled by the first VMSW survey in 2010, the ERP2020 had achieved:

• 57% reduction in the number of single-family social rented houses that lacked roof insulation, down from 28,199 in 2010 to 12,118 in 2016;

• 51% reduction in the number of single-family social rented houses with single glazed windows, down from 20,231 in 2010 to 9,981 in 2016;

• 28% reduction in the number of single-family social rented houses with an outdated (inefficient) heating system, down from 15,722 in 2010 to 11,248 in 2016.

The VMSW survey data also shows that the percentage of social rented apartments without roof insulation fell from 11% to 9% between 2014 and 2016. The total number of social rented apartments without roof insulation was reduced by 1,467 units (down from 8,203 to 6,736 apartments). The number of social rented apartments with single glazing fell from 12% to 9%, with 1,742 fewer units (down from 8,934 to 7,192 apartments). The number of social rented apartments with an outdated (inefficient) heating system decreased from 15% to 13% (down from 8,021 to 6,906 apartments). When compared to the data compiled by the first VMSW survey in 2010, the ERP2020 had achieved:

• 38% reduction in the number of social rented apartments that lacked roof insulation, down from 10,886 in 2010 to 6,736 in 2016;

• 39% reduction in the number of social rented apartments with single glazed windows, down from 11,834 in 2010 to 7,192 in 2016;

• 31% reduction in the number of social rented apartments with an outdated (inefficient) heating system, down from 9,991 in 2010 to 6,906 in 2016.

Given that the ERP2020 aims to make all Flemish homes energy efficient by 2020, the VMSW surveys indicate that the ERP2020 has managed to reduce the overall number of energy inefficient social rented homes (houses and apartments) by nearly 50% between 2010 and 2016. The overall number of social rented homes that are still in need of one or more of the priority renovations that are supported by the ERP2020 fell from almost half of the social rental housing portfolio (48%) in 2010 to just over a quarter (27%) in 2016.

Although the progress made by the social housing sector has been good, it is clear that the renovation rate will have to increase if the remaining 27% of the social housing sector is to meet the target of 0% energy inefficient homes by 2020. One of the key challenges will be to address the different levels of progress being made at regional level, as shown by the VMSW surveys. In the Antwerp area, for example, it is estimated that 15.7% of social rented homes currently still have single (or mixed) glazing, compared to just 5% in Flemish Brabant. In East Flanders, 19.7% of social rented homes lack adequate roof insulation, compared to just 2% in Limburg. In West Flanders, 21.4% still use an outdated (inefficient) heating system, compared to just 6.5% in Limburg.

Interesting data is also provided by the Rational Energy Use (Rationeel EnergieGebruik – REG) Survey. The latest survey (June 2017) of 1020 Flemish households showed that 93% considered energy saving to be either important or very important. However, the survey also shows that only 60% of Flemish households consider themselves to be energy efficient, and the other 40% are either partially efficient or not at all efficient. Recognition of the importance of energy saving does not therefore necessarily translate into energy efficient behaviour or investment.

3
Perspectives and lessons learned

From an implementation perspective, the scheme has been broadly successful, having attracted a significant number of grant applications. However, the implementation experience has also highlighted a number of weaknesses that one can argue may have inhibited the scheme from being more successful.

The first point is that there was a large disparity between demand for measures that carried a lower investment cost than those that carried a higher investment cost. The installation of building insulation and solar thermal systems were less cost intensive and were in much higher demand than more cost intensive measures, such as cogeneration and geothermal pumps. This suggests that it may be more effective in future grant schemes to offer an alternative financial support method for more expensive improvement measures to encourage potential beneficiaries to invest in them.

The second point is that the scheme focused its support on specific measures rather than providing support for deeper and more comprehensive energy saving building renovations. One can argue that this was a missed opportunity, as more comprehensive renovations can deliver much greater energy savings.

The third point is that although the scheme has potentially benefitted close to 10% of the residential building stock, assuming that most applications were for unique properties, it only appears to have been of limited benefit to the non-residential building stock. The number of applications from the non-residential sector was relatively low and the reasons for that result are not sufficiently clear. It may be the case that the funding model was not appropriate for many non-residential building owners, due to financial constraints or investment risk aversion. It would be worthwhile exploring alternative support mechanisms to attract and encourage greater investment in energy saving measures by this sector.

The fourth point is that the scheme has not been the subject of an impact assessment, which makes it very difficult to properly evaluate the scheme's results from an implementation perspective, from the perspective of beneficiaries (e.g. energy/cost savings, enhanced living conditions), and in terms of any broader societal impact on employment, growth, etc.

The fifth and final point is that the scheme does not appear to have had any significant impact on vulnerable groups, low income households, SMEs or multi-family buildings. It also had no impact on residential buildings that provide rental housing, as these types of buildings were not eligible for funding under the terms of the scheme. One can argue that the scheme could potentially have achieved greater success and impact had it promoted the participation of these types of target groups, and had it offered funding mechanisms commensurate with their means.

In conclusion, it is recommended that the issues highlighted serve as lessons learned which can be used to inform the design and evolution of future energy saving grant schemes, such as the current 'I Save – I Upgrade' Grant Scheme, which is running from 2014 to 2020 and is the successor to the Grant Scheme for the Promotion of Renewable Energy and Energy Conservation 2004-2013.

Endnotes

1 Welcome address of the Minister of Commerce, Industry and Tourism, Mr. George Lillikas, at the 1st Energy Savings Exhibition Cyprus, 4 March 2005: http://www.moi.gov.cy/moi/pio/pio.nsf/All/A5745EB2E0A24C4CC2256FBA004ED120?OpenDocument

2 Law on Encouraging and Promoting the Use of Renewable Energy Sources and Energy Saving (Law 33(I)/2003): http://www.cylaw.org/nomoi/arith/2003_1_033.pdf

3 M. Economidou, P. Zangheri, D. Paci, Final Report: Long-term strategy for mobilizing investments for renovating Cyprus national building stock (D1.8), JRC Technical Report, 2017: http://www.mcit.gov.cy/mcit/EnergySe.nsf/All/7E8188C6CD612FB5C22581C4002CD533/$file/Study%20Results%20Final%20Report%20Long%20trem%20strategy%20for%20mobilizing%20investments%20for%20renovating%20Cyprus%20national%20building%20stock.pdf

4 Ibid

5 Ibid

6 Ibid

7 Ibid

8 Ibid

9 Ibid

10 Ibid