

NATIONAL

Grants proposed for hot water solar heaters



Solar water heaters can provide a substantial reduction in CO₂ emissions. Inset: Charles Yousif, a solar energy pioneer in Malta since 1993, is hopeful that the proposals will be considered seriously.

A rescue plan is needed for solar heating systems if Malta is to reach its targets for buildings with low energy consumption and near-zero CO₂ emissions. By **Anne Zammit**

A new set of guidelines on how to achieve EU energy targets for buildings proposes that the government provide grants for hot water solar heaters, as well as heat-pump versions for dwellings with no rooftop access.

Investment in new solar heating systems has seen a constant decline over the past few years. So far there have been no major interventions planned to rescue this technology from dying out.

Although much attention has been given to photovoltaic panels, solar water heaters use less space to produce the same amount of energy and can provide a substantial reduction in CO₂ emissions.

The proposal emerges from a recent workshop with stakeholders held by the university's Institute for Sustainable Energy as part of the ZeroCO₂ Interreg-Europe project to promote reduction of CO₂ emissions from buildings.

Malta should have already made a head start in policy making to bring buildings as near to zero-energy as possible. A near-zero-energy building is one that has very low energy consumption, most of which comes from renewable energy generated on site. The first priority is reducing energy demand and increasing the energy efficiency of equipment used in buildings.

However, while solar heaters can reduce CO₂ emissions substantially if they are properly sized and maintained, inferior products are competing with the more reliable brands on the market.

Also, one-size-fits-all solutions are likely to reduce efficiency. A 2015 planning design policy dictating that solar installations cannot be higher than one metre (or must be laid horizontally) has jeopardised the use of the popular and cheaper thermo-siphon solar heating systems.

With targets looming, policy makers must look wisely at how they intend to

come in line with energy obligations for buildings within the next three years. Each Member State is free to decide exactly how its near-zero-energy buildings are to be achieved and has taken on its own binding national target.

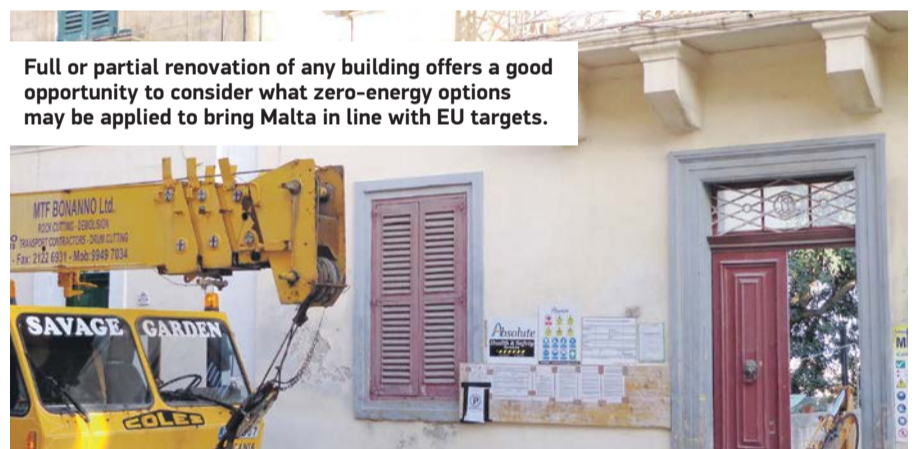
A national plan for zero-energy buildings, in place since 2015, outlines strategies for compliance by the end of 2018 for buildings occupied by public authorities and by the end of 2020 for all buildings.

“Unless everyone works together to achieve Malta’s obligations as an EU Member State, they will all bear the consequences of slipping backwards from the targets”

Another proposal is energy from future communal solar farms set up by the government could be extended to households which cannot install PVs due to shade.

For indoor thermal comfort, insulation retrofitted to buildings shows more benefits than PVs, according to the institute's report. Yet roof insulation will only provide an energy savings benefit to the top floor of an apartment block.

Studies have also shown that double glazing should not be the first choice for energy savings in Malta, because the weather is mild and subsequent energy savings are relatively low. Other interven-



Full or partial renovation of any building offers a good opportunity to consider what zero-energy options may be applied to bring Malta in line with EU targets.

tions such as shading and insulation of single walls have proven more effective and should be incentivised.

The report says a long-term strategy with clear targets 2030 and 2050 is preferable to merely having stop-go measures tied to annual national budgets.

A final recommendation is for a one-stop shop for policy application and technical advice accessible by the general public. The building stock should be well studied, with incentives for an effective package of measures for different building types rather than isolated measures.

The ISE workshop was the third in a series of consultations with stakeholders for the Interreg-Europe project aimed at promoting carbon neutral buildings. How the Maltese islands will face EU near-zero-energy targets is, however, still vague.

A target for new and renovated sections of government buildings to make the required adaptations as from January 1, 2019, is fast approaching.

A technical document for minimum energy requirements of buildings has been updated and a near-zero-energy plan for Malta published. Despite these initiatives, poor implementation of energy regulations in the construction market remains a matter of great concern to ISE lecturer Charles Yousif, who has been coordinating Malta's participation in the ZeroCO₂ project since 2015.

The project has engaged in constant dialogue with key stakeholders in policy making and others directly linked to energy performance of buildings.

Engineer Dr Yousif, a solar energy pioneer in Malta since 1993 and secretary

general of the Malta Energy Efficiency and Renewable Energy Association, is determined to get the message across to anyone who can help make a difference:

“It has been very difficult to attract contractors, engineers and architects to the meetings so that we hear and understand their position and find ways of successfully implementing the EU directives in the local building industry,” he said.

“Unless everyone works together to achieve Malta's obligations as an EU Member State, they will all bear the consequences of slipping backwards from the targets.” According to Dr Yousif, the ball is now in the policy makers' court to make changes in the few years left until 2020 and ensure that the obligations are clearly understood and accepted by all stakeholders, even if there is some added cost.

After extensive discussions and gathering best-practice case studies over the past 18 months, the project is in its final phase. An energy policy action plan will now be put before the policy makers.

Dr Yousif is hopeful the proposals will be considered seriously and more effective energy policies for Malta will stick.

“We now look forward to having one-to-one meetings with all policy makers to keep track of outcomes over the next two years up to 2020, as required by all Interreg-Europe projects.”

A new incentive offering support to SMEs to carry out energy audits is imminent under the Energy Efficiency Directive. This measure should help small businesses understand where they are on the near-zero-energy scale and decide what improvements to make to their premises.