



Morocco: green mosques and buildings

Morocco is creating jobs through energy efficiency and renewable energy. Mosques and other buildings are leading the way.

Special initiative MENA region:
promoting economic stability



The challenge

Developing renewable energies and promoting the wider use of energy-efficient technologies are among Morocco's top political priorities. The business and employment potential of these areas is not, however, being fully harnessed. Companies need market opportunities if they are to create jobs in these areas, and one option is the modernisation of the energy use in buildings. Yet many decision-makers and potential customers remain unaware of the advantages of renewable energy and of existing potential to save energy, so the demand for services in these areas is low. Moreover, experts providing services in installation of energy-efficient systems require special skills. With the green mosques and buildings project, the Moroccan Government is seeking to encourage wider use of energy-efficient technologies.

Approach

The project is taking a three-pronged approach.

The first part of the approach is to cut the energy consumption of mosques and other buildings. To achieve this, building managers are receiving support in introducing energy management systems and using them efficiently. In future, their decision-making on priority measures will be based on systematic data collection and analysis. In mosques, the savings result mostly from the installation and use of photovoltaic, solar thermal energy systems and LED lighting. The project is also supporting the introduction of energy efficiency measures in the planning phase for new buildings, for example by integrating energy efficiency

measures into the specifications for public tenders. This, too, is boosting demand.

Project title	Creating jobs by improving energy efficiency (EE) and using renewable energies (RE) in mosques
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Implementing organisation	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project region	Nationwide
Lead executing partner	Ministry of Energy, Mines, and Sustainable Development (MEMDD)
National partners	Ministry of Habous and Islamic Affairs (MHAI); Moroccan Agency for Energy Efficiency (AMEE); Société d'Investissements Energétiques (SIE) (state energy investment fund)
Term	January 2015 to May 2021
Volume	EUR 8.5 million

Second, the project is also raising awareness among the Moroccan population by training multipliers, such as imams and mourchidat (female clerics), and through media campaigns demonstrating the benefits of energy efficiency and renewable energy to the population.



Left: Religious stakeholders debate arguments for environmental protection. Photo: GIZ/Noëlie Vegas

Right: The Moulay Yazid mosque in Marrakesh was equipped in 2016 with LED lighting and photovoltaic and solar thermal energy systems. Photo: GIZ/Adnane Azizi

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The project is part of BMZ's 'Stability and development in the MENA region' special initiative. Through the projects implemented as part of the special initiative, BMZ is helping to create economic and social prospects for people in the region. More than 70 additional development projects are being implemented between 2014 and 2022 as part of the initiative. The focus is on empowering young people and promoting employment, promoting economic stability, fostering democracy, and stabilising neighbouring countries in crisis situations.

Third, the project is advising companies on improving their competitiveness and tapping into new market segments. Job-seekers are also receiving targeted training to enable them to fill existing and future vacancies. The aim is to create new jobs, particularly in energy auditing of public buildings, in maintaining new plants, and in monitoring energy savings. The project is also promoting start-ups on the basis of new legislation in Morocco creating a self-employed status.

Results in figures...

So far, the project has created 175 new jobs and improved the employability of more than 500 individuals. Around 100 mosques now have modernised energy systems, and in the town of Tadmamt, the project has also supported construction of an 'energy plus' mosque – one that generates more energy than it consumes. Almost 1,000 mosques have also undergone energy inventories to prepare for forthcoming tenders. These have been carried out by staff from the Ministry of Habous and Islamic Affairs, more than 150 of whom have been trained for this purpose. Nearly 500 imams and mourchidat have taken part in awareness-raising workshops in these areas and are now passing on their

knowledge of energy efficiency. This is reaching an estimated 15,000 multipliers. A website and social media are also being used to disseminate the ideas more widely.

...and faces

It is more than three years now since Yassine Alj set up his own business in Agadir, specialising in energy services. 'It was difficult at the beginning, but the business is now doing well', he says. His young company has so far carried out inventories in 15 mosques in Agadir and energy audits in ten faculties in the Ibn Zohr University on behalf of the project and, as he explains, 'the experience we have acquired has enabled us to improve our work in enhancing the energy efficiency of public buildings – and to be more internationally competitive. I've recruited a specialist energy efficiency engineer and two technicians, and my goal is to ensure that the jobs I create are sustainable by acquiring new commissions.'



Energy entrepreneur Yassine Alj.
Photo: GIZ/Adnane Azizi

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