



# 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 sectors, 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 those kind of services is low. Moreover, experts providing services in installation of energy-efficient systems require special skills that are still not sufficiently provided in the current market supply. With the green mosques and buildings project, the Moroccan Government is seeking to encourage wider use of energy-efficient technologies.

## Approach

The project creates new jobs and business opportunities for Moroccans in the energy efficiency and renewable energy sectors. The first part of the approach is to cut the energy consumption of mosques and other buildings - such as student residences and administration 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. They finally implement them, for example through the contracting of a local firm. In mosques,

the savings result mostly from the installation and use of solar thermal energy systems and LED lighting. The project is also advising building owners in the planning phase for new buildings, to integrate energy efficiency measures as in the construction as in equipment of those new buildings. This, too, is boosting demand.

Project title	Creating jobs by improving energy efficiency (EE) and using renewable energies (RE) in mosque
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; Moroccan Energy Efficiency Agency (AMEE); Society for Investments in Energy (SIE)
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 mouchidat (female clerics), and through media campaigns demonstrating the benefits of energy efficiency and renewable energy to the population.



Left: Solar PV system installation for a hotel.

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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Third, the project is advising companies on improving their competitiveness and tapping into new market segments. New jobs are created especially in the following work areas: in energy auditing of buildings, in installing new solar plants, and in the marketing of energy services. The project is also promoting start-ups on the basis of new legislation in Morocco creating a self-employed status.

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.

## Results in figures...

So far, the project supported its partners creating 262 new jobs and improving the employability of 756 individuals. More than 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. More than 600 imams and mourchidat are passing on their knowledge of energy efficiency after having taken part

in awareness raising workshops. A website and a Facebook page with around 20 000 followers are also being used to disseminate the ideas more widely. Four further institutions (the national Post Office, the national agency managing student residences, the Energy Ministry as well as the Finance Ministry) have started to implement energy management systems with the support of the project. The national Post Office could already achieve energy savings.

## ...and faces

It is a few 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 energy inventories in 15 mosques in Agadir and energy audits in ten faculties in the Ibn Zohr Uni-versity 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 could create a few jobs, that I now want to sustain by acquiring new commissions.'



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