



BUILDING SECTOR BRIEF: MOROCCO

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Morocco has a well-developed institutional and legal framework and an agile private sector. This is the basis for energy efficiency in buildings projects, especially in the residential and tertiary sector. Enforcement and development of further regulations and of financial mechanisms for residential housing finance is needed to support the overall NDC targets.

CURRENT CLIMATE TARGETS

Morocco has committed to reducing GHG emissions by 42% below BAU by 2030. The building sector plays an important role in reaching this target. Its share of total final energy consumption was 34% in 2016. To reach national reduction targets, energy use must be reduced by 19% in the residential sector, and by 10% in the services sector. However, energy use in buildings, and electricity consumption in particular, is on the rise. Between 2014 and 2017 only, electricity consumption in the residential sector increased by 7%, and by 12% in the services sector.

BUILDINGS SECTOR GROWTH

Morocco's building sector is expanding rapidly. From 600 million m² in 2017, the building stock will need to grow by an additional 250 million m² by 2030 to fulfill the rising demand. This means adding 20 million m² per year.

Already today, 50% of all investments in Morocco are made in the buildings sector. Middle-income housing in the form of apartments is the fastest

growing market segment. The largest market is for modern Moroccan housing, a specific type of housing combining residential and commercial activities. Morocco has a large share of houses built by their owners. While 67% of Moroccans own their home, only 12% buy it from private and 2% from a public real estate developer. In particular the most popular type of housing (modern Moroccan housing) is mostly self-built.

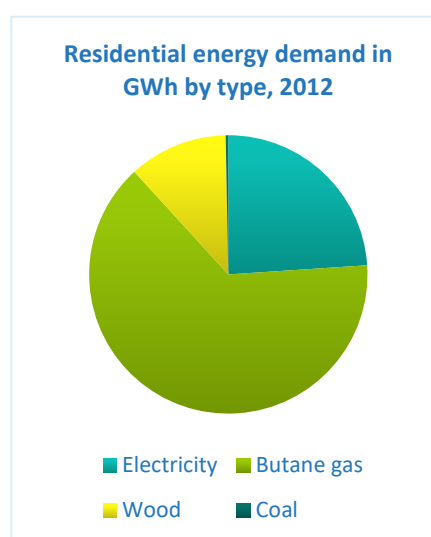
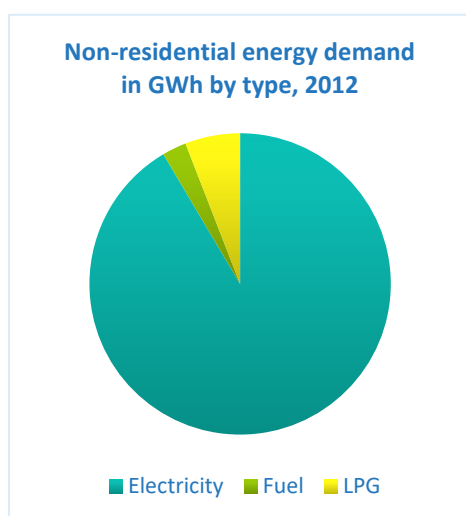
Non-residential buildings are growing equally fast. Tourism, education and office buildings see estimated annual additions of 200 000 m² for each of those categories¹.

BUILDINGS SECTOR ENERGY DEMAND

In residential buildings, energy demand is dominated by butane gas, which is mostly used for cooking (75%) and water heating (25%). Electricity is used for refrigeration (45%), lighting (20%), and television/IT (18%). Heating and cooling only account for 5% of electricity demand (and 2% of LPG demand). Given that the calculated demand for heating and cooling is much higher, investing in energy efficiency also first and foremost means improving comfort levels.

Energy demand in non-residential buildings is almost entirely electric. While consumption patterns vary for different building types, the highest shares of overall consumption are for IT and office equipment (29%), lighting (23%), and cooling (17%)

¹¹ World Bank Market Readiness Partnership. Strategies for implementing EE in NDCs in Morocco: how to align perspectives of investors with the objectives of energy efficiency in the buildings sector, 2017.



OPPORTUNITIES

The following areas present opportunities for climate change mitigation in the building sector:

Refining a well-developed institutional and legal framework that sets the ground for the implementation of the ambitious national strategy.

In an important milestone, Moroccan parliament ratified the *Règlement Thermique de Construction au Maroc* (Thermal Regulation Construction Code, RTCM) in 2015. The present challenges lie in the application of the RTCM and the further development of announced decrees that will both stimulate and regulate the market for energy efficiency in buildings.

Providing easy access to information on energy efficiency in buildings from a technological and financial perspective to an agile private sector as well as consumers looking to invest in energy efficient buildings. With an otherwise qualified work force of engineers and increasingly well-trained technicians, improved access to information for buildings and construction sector professionals is key to leverage stimulate market growth.

Developing financing products specifically targeting energy efficiency in buildings at a commercial scale could significantly increase the uptake of energy efficiency measures. The opportunity, especially in middle class residential buildings such as collective housing, is there. Research by the World Bank has **shown** that the transaction cost for making investments in energy efficiency is lowest at the point of sale for residential buildings. In the services sector, transaction costs for EE investments are among the lowest observed in the market.

Investing in energy efficiency in public sector buildings: The role of the public sector as first mover is tainted by a low pace of renovation of existing buildings and the incomplete application and verification of the RTCM in new buildings. Public buildings are high electricity consumers with often insufficient levels of comfort and inefficient heating and ventilation modes. A (publicized) effort from the side of the public administration could greatly contribute to more energy efficient buildings.



On behalf of:



Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

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