



INDUSTRIAL
ENERGY
ACCELERATOR

MOROCCO

Industrial Energy Accelerator Morocco Diagnostic



About the Industrial Energy Accelerator

In partnership with key government agencies and industry stakeholders, the Industrial Energy Accelerator works on the ground to rally government, industry and finance around solutions that ignite change in industries. We then take our knowledge and experience to the world, sharing what we have learned to inspire a global movement for industrial energy efficiency. We currently operate in Indonesia, China, Mexico, Brazil and Morocco, five major industrial countries responsible for around 26% of the world's energy consumption.

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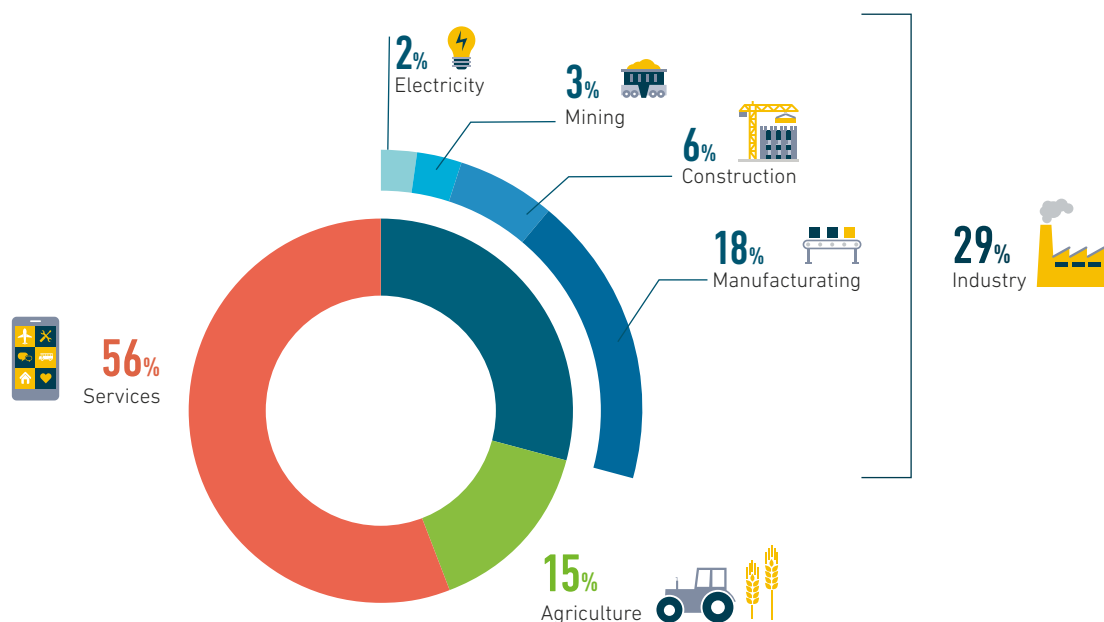
Historically, Morocco's economy has been based on the agricultural sector, which presently accounts for almost 40% of employment but contributes only 15% to the kingdom's GDP.



Getting to know the target market

Morocco's industrial sector profile

Historically, Morocco's economy has been based on the agricultural sector, which presently accounts for almost 40% of employment but contributes only 15% to the Kingdom's GDP (see Figure 1). Today, Morocco's GDP is largely attributed to its service sector, which accounted for 56% of GDP in 2016. Moreover, the industrial sector employs 22% of Morocco's workforce, contributing almost 30% to the country's economy (Castel, 2017).

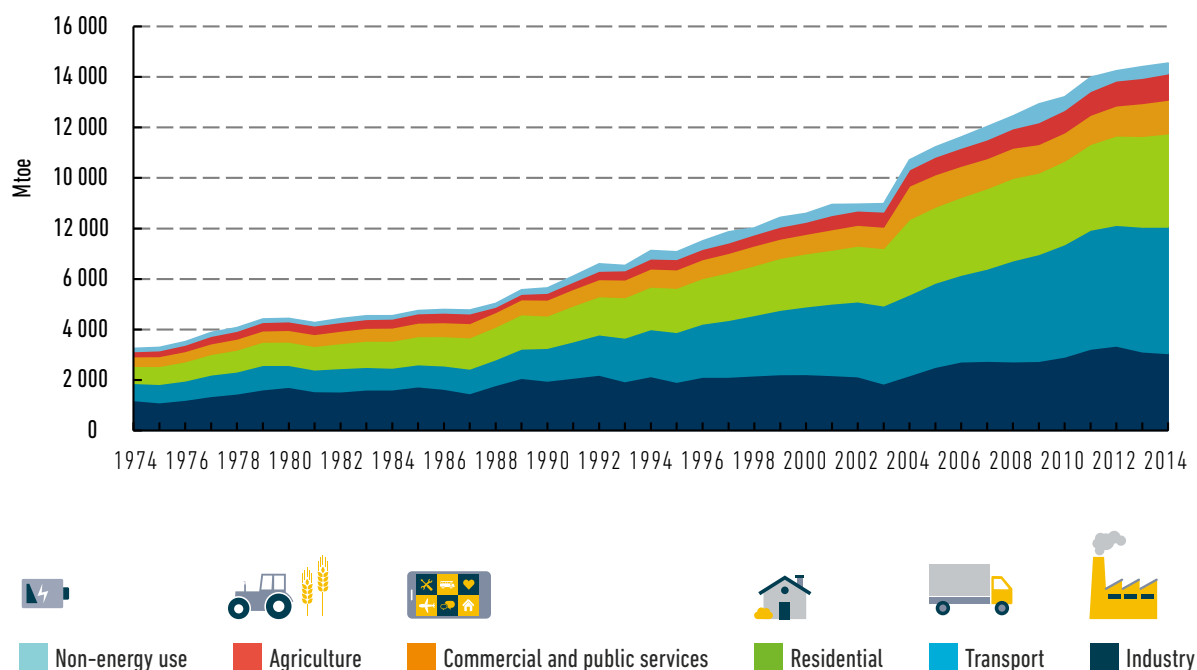


Source: Castel, 2016

Figure 1. Contribution to GDP by sector in 2016 (based on Castel, 2017)

Mining and manufacturing represent two of Morocco's key industrial sectors, both of which hold a strong influence over the country's economic output and energy consumption. In regards to the mining sector, phosphate contributes significantly to this, since around 75% of the world's known phosphate reserves are located in Morocco, including reserves in Western Sahara (GIZ, 2016a). Morocco's textiles and clothing industry mainly exports to the European Union, however, more predominantly to France. The heavy industry supplies primarily to the local market, focusing on fertilizers, construction and building materials (asphalt and cement), and the automotive industry. Furthermore, the manufacturing sector accounts for 18% of GDP, however, its contribution to the economy is rising steadily (Castel, 2017 and Economy Watch, 2010).

In regards to energy consumption, the transport sector is considered Morocco's most energy intense sector, consuming 34% of the country's total energy output, followed by the residential (25%) and industrial sector (21%) (see Figure 2). Additionally, a steady increase in Moroccan energy demand can be observed across all sectors. Industrial energy consumption has grown consistently over the last few years, showing an increase of more than 40% between 2004 and 2014 and has sustained a growth rate on average of 4.38% per year (IEA, 2016). Morocco's energy demand is expected to rise by approximately 5-6% annually, reaching more than 30 Mtoe in 2025 (Ettaik, 2015).



Source: IEA (forthcoming), Energy Balances of Non-OECD Countries, www.iea.org/statistics/

Figure 2. Total final energy consumption in Morocco, 1974-2014 (IEA, 2016)

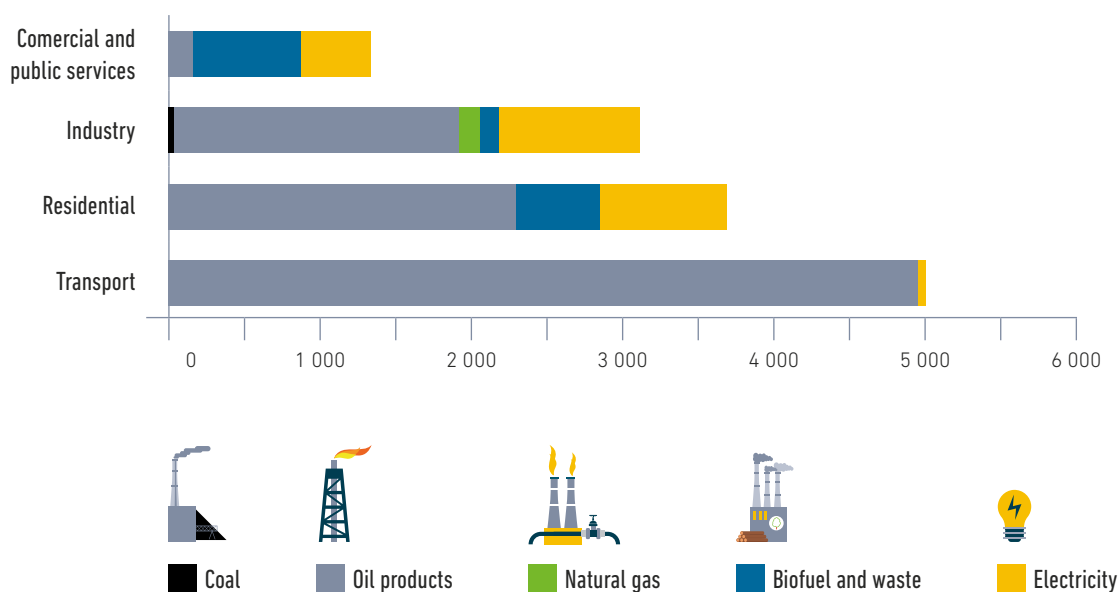


Figure 3. Total final energy consumption by end-use sector and fuel (excluding agriculture and non-energy use) in 2014 (IEA, 2016)

Morocco's industrial sector is strongly dependent on the use of fossil fuels, with oil consumption providing around 65% of the country's total energy output used amongst all Moroccan industries (IEA, 2016).

The largest energy consuming industrial subsector by a substantial margin is the non-metallic minerals manufacturing, which represents 44% of the total industrial energy consumption. The cement industry alone is responsible for nearly 34%, mainly in the form of petroleum coke for clinker production. Production of such cement is concentrated within a small number of firms and facilities (four companies are operating at 18 sites in Morocco (cement, n.d.)), which might make the implementation of targeted energy efficiency measures easier (IEA, 2016). In spite of this, the industry has been highlighted as the most efficient within the region, operating at 0.07toe/tonne cement. However, much more effort is required for the cement sector to achieve further energy consumption reductions (Enerdata, 2014, Fellaou and Bounahmidi, 2017).

The mining industry accounts for the second largest share (21%) of the industry's energy consumption. Especially the phosphate-mining sector which presents a significant part of the Moroccan energy spent (IEA, 2016). The state-owned monopoly, OCP Group, manages Morocco's vast reserves of phosphate and is one of the largest exporters of raw phosphate rock, phosphoric acid, and finished fertilizer products (Fabbe et al, 2018).

The third-highest consuming industrial subsector is food and tobacco processing (12%). As part of this subsector, sugar production is by far the largest energy-consuming activity, accounting for 5.5% of the total industrial energy consumption, most of which is fuel oil for boilers. Subsequently, this illustrates that the energy savings potential in the industrial sector varies depending on the specific industry (IEA, 2016).

In 2011, an energy audit programme started targeting the industrial sector with the intention of repeating such energy audits every five years. The results from the first round of energy audits have revealed that only a little bit more than 350 (out of 8,000) audited industrial entities account for more than two thirds of the total industrial energy consumption. This concentration of energy use represents less than 5% of all industrial facilities, meaning that it might be possible to achieve sizeable energy efficiency improvements by targeting only a small number of individual companies. Meanwhile, industry can already take advantage from preferential tariffs (known as 'super-peak') if they decide to avoid using electricity at times with very high demand (IEA, 2016).

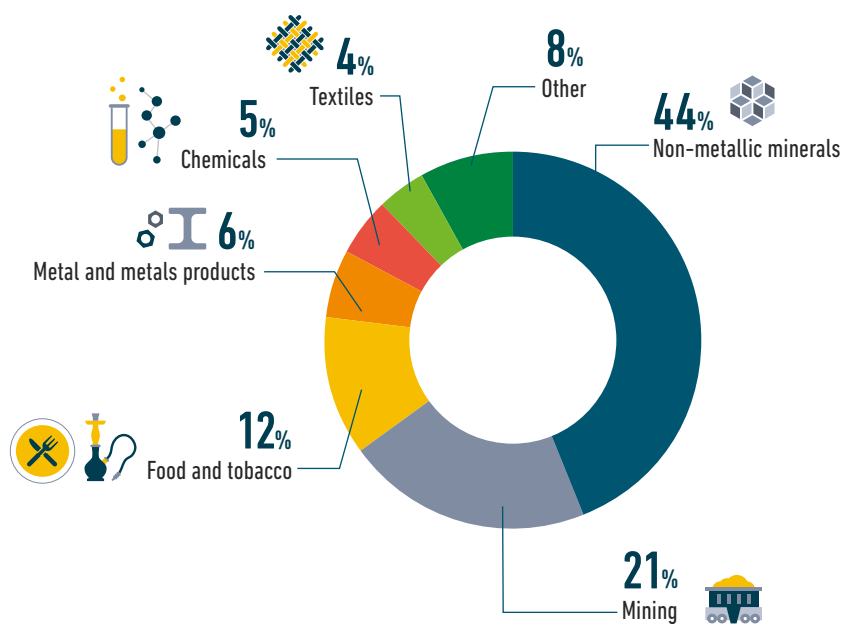


Figure 4. Energy consumption by industrial sub-sectors (2013) (adapted from IEA, 2016)

Drivers for industrial energy efficiency in Morocco

Morocco is the only North African state with no natural oil resources and is thereby characterised by a high dependency on imported energy carriers.

The country imports more than 95% of its primary energy needs as fossil fuels from abroad, of which, the vast majority can be found from Saudi Arabia and Algeria. Additionally, Morocco imports electricity from Spain by means of submarine power cables. Domestic power generation is dominated by fossil energy sources, most of which comes from oil (~70%) but also coal and natural gas; and is all imported (Kousksou et al., 2015). The volatility of fossil fuel prices on international markets, combined with growing energy needs per capita (expected to increase annually by 5%) (Ettaik, 2015), leads to strong pressure on Morocco's national trade balance and public finances (Kousksou et al., 2015).

In response, Morocco has begun addressing these challenges by adopting a number of national regulations and policies on the national level. However, sector specific policies are missing and Morocco's efforts in this regard are still in their early stages (Kousksou et al., 2015).

Confronted with growing energy demand combined with a steady increase in energy and resource prices, the Government of Morocco decided to develop a National Energy Strategy (NES) in 2009 (renewed in 2015 prior to COP21), establishing energy efficiency as a national priority. The National Energy Strategy aspires to improve energy efficiency and promote the uptake of indigenous renewable energy sources, ultimately, securing energy supply, diversifying the electricity mix and decreasing dependency on energy imports. The National Energy Strategy sets out the goal of achieving 12% energy savings by 2020, 15% by 2030 (compared to BAU scenario) and includes different action plans concerning industry, transport, construction and buildings, agriculture and public lighting (Schinke and Klawitter, 2016). Those targets are reaffirmed in Morocco's National Determined Contribution (NDC). The government expects up to 48% of these savings to come from measures taken in the industrial sector (Kingdom of Morocco, 2016).

The largest single step towards reaching those goals was the decision to remove certain fuel subsidies. Subsidies for gasoline, diesel, fuel used for electricity generation and industrial fuel oil effectively ended between 2013 and 2015, leaving only high subsidies for butane cooking gas still in place (GIZ, 2016b).

In 2011, Morocco adopted Law 47-09, also known as the law on energy efficiency, whose main purpose is to increase energy efficiency in the key economic sectors. Consequently, this will reduce energy costs and help lessen the fiscal burden on the national budget (Kousksou et al., 2015). The Law 47-09 introduces among others criteria of minimum energy performance, rational use of energy and compulsory energy audits for industrial facilities exceeding a certain consumption threshold (LSE, n.d.). Apart from providing a definition for ESCOs, the law does not include other legal provisions concerning energy performance contracting, third party finance schemes or other ESCO related matters (EC, 2014).

NATIONAL ENERGY STRATEGY TARGET

52%

of the installed electrical power
from **RENEWABLE**

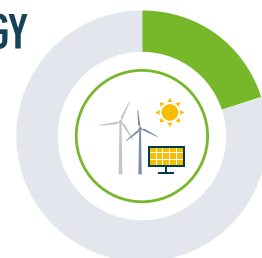


TABLE 1. Overview about Morocco's energy efficiency legislation

NAME OF LEGISLATION	KEY TARGETS/ SUMMARY
National Energy Strategy	<p>Optimising and diversify the electricity generation capacity mix (target: 52% of the installed electrical power from renewable sources with a focus on solar and wind energy)</p> <p>Reduce energy consumption in the building, industry and transport sectors by 12 % by 2020 and 15% by 2030 (compared to BAU scenario). The different sectors are expected to contribute to these savings as follows: 48% industry, 23% transport, 19% residential and 10% the services sector</p> <p>Increasing awareness of energy efficiency issues</p> <p>Supply major industries with imported and regasified natural gas</p> <p>Improve the regional integration of electricity transmission networks</p>
AMEE Energy Efficiency Strategy	<p>Completing a current census of the energy consumption in the main sectors of activity at national level</p> <p>Benchmarking energy efficiency strategies at an international level</p> <p>Organising workshops aimed at identifying concrete and innovative measures to improve energy efficiency</p> <p>Developing national energy efficiency strategy and refining its respective action plans</p> <p>Improving communication and awareness through the organization of a national energy efficiency day</p>
Law 47-09 (Law on Energy Efficiency)	<p>Introduction of criteria regarding minimum energy performance for appliances and electrical equipment</p> <p>Compulsory energy impact assessments for big constructions and urban projects</p> <p>Implementation of mandatory energy audits for energy intensive industries</p> <p>Definition of energy services and facilities</p>
National Determined Contribution	<p>Reaffirms the targets set out in the National Energy Strategy</p> <p>Commits to the implementation of energy-efficiency actions in industrial firms (Moroccan NDC, Action No 11)</p> <p>Commits to the creation of an Implementation Program of an Energy and Output Management System (EOMS), and of the ISO 50001 standard in industry (Moroccan NDC, Action No 35)</p>
Draft decree on mandatory energy audit and auditing bodies (No: 2.17.746)	<p>Requires mandatory energy audits for high energy consuming enterprises and promotes the implementation of an energy management system</p>

Source: Schinke and Klawitter, 2016, GIZ, 2016a and AMEE, n.d.

Is there a supply chain for industrial energy efficiency in Morocco?

Supply chain and energy efficiency market

Energy efficiency is an emerging market and presents a key element of Morocco's energy policies. This enabled opportunities to create an energy service market and have impacts on incorporating energy service companies (ESCOs) within the country. Responsibilities of ESCOs include the preparation, implementation, management and financing of energy saving projects. Until now, the ESCO market in Morocco has been very small but at the same time, it has a lot of potential for further development in the near future. However, there are still many barriers to the growth of energy performance contracting in Morocco. The absence of appropriate legislation concerning ESCOs, insufficient awareness and knowledge of ESCOs, a prevailing lack of trust in the ESCOs and the consequential difficulties in accessing finance are the main challenges the ESCO industry is facing and thereby constrains the growth of the Moroccan ESCO market (EC, 2014).

According to the European Commission's ESCO Market Report (2014), there are only 3-4 companies in Morocco that can provide such energy services. Those are typically utility companies and offer financing, maintenance and the management of public lighting.

There is considerable potential for the improvement of energy efficiency throughout the Moroccan industries. According to the results from energy audits, more than 15% of the baseline energy use could be saved by implementing energy efficiency measures. Even though the completed energy audits in the industry indicate large potential for energy savings, the implementation rate seems to be quite low, which leaves the potential for energy savings untapped. Only a low number of the recommended actions coming out from the energy audits have been implemented, leaving many actions still outstanding. Despite this, the return on investment of such actions is estimated to be less than 2 years for the majority of the projects (EC, 2014).

Financing mechanisms

The Moroccan government has benefited from foreign investment largely, as well as by concessional financing from international development agencies, such as the European Investment Bank or the African Development Bank. In addition to this, low-cost financing from international institutions as well as from friendly Arab states have assisted the country in the past. From which, the United Arab Emirates together with Saudi Arabia can be considered the two main contributors to the Moroccan Energy Development Fund (GIZ, 2016).

In Morocco, the large majority of energy efficiency measures are financed either by the Energy Development Fund, the SIE (public energy investment company), or co-financed by international funds, such as the Global Environment Facility or by other development banks. Most of these funds aim to finance the development and promotion of both renewable energy and energy efficiency projects. However, renewable energy seems to be able to draw more financing than energy efficiency.

ACCORDING TO ENERGY AUDITS

MORE THAN

15%

of the baseline energy
USE COULD BE SAVED
by **IMPLEMENTING**
ENERGY EFFICIENCY MEASURES

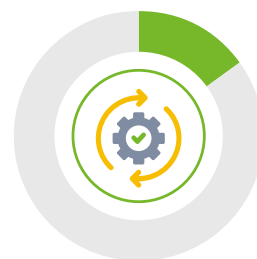


TABLE 2. Overview of Morocco's energy efficiency financing mechanisms

NAME OF LEGISLATION	KEY TARGETS/ SUMMARY
Energy Investment Company (SIE)	<p>State funded energy investment company, created in 2010</p> <p>Provides guidance and financial support to implement Morocco's National Energy Strategy</p> <p>Focuses on large-scale projects and pioneering investments</p>
Energy Development Fund (FDE)	<p>USD 1 billion grants from Saudi Arabia, UAE and the Hassan II Fund</p> <p>Managed by the SIE</p>
Morocco Sustainable Energy Financing Facility (MorSEFF)	<p>Set up by EBRD, AFD, EIB, and KfW in 2015</p> <p>EUR 110 million credit facility</p> <p>Focuses on small-scale RE and EE projects</p> <p>Distribution through participating local banks</p> <p>Offers financing of up to 100% of investment amount, and 10-15% subsidies under certain conditions</p>

Source: Schinke and Klawitter, 2016 and MorSEFF, n.d.

SIE Energy Investment Company

In 2010, the Moroccan government set up the Energy Investment Company (SIE) to provide guidance and financial support to achieve the targets mandated by the National Energy Strategy. The Government of Morocco (71%) and the Hassan II Fund for Economic and Social Development (29%) own this investment company (Redouane et al., 2018). It manages MAD 1 billion in total assets made available by the Energy Development Fund (FDE). SIE offers services in both investment and development of renewable energy and energy efficiency projects, whereas one-quarter is earmarked to investment in energy efficiency and three-quarters to renewable energy projects. SIE

provides funding and wants to mobilise both national and international investors to cover project costs, aimed primarily at medium-sized to big projects over EUR 250,000 (GIZ, 2016a and SIE, n.d.). It focuses thereby on supporting pioneering investments in new or yet untapped market segments that companies might not be able to develop on their own. Ultimately, the aim is to enhance its financial capacities by investing into energy initiatives and projects that help establish new business models and increase SIE's portfolio of bankable projects. In order to achieve this goal, SIE collaborates with national and international investors, project developers and the private industry sector (SIE, n.d.).

FDE

Energy Development Fund

King Mohammed VI created the Energy Development Fund (FDE) in 2009, as a central pillar to assist Morocco in accelerating its energy transition, enhance energy security, and pursue low carbon

growth. The FDE is managed by the SIE and includes USD 1 billion of financing with funding originating from the Kingdom of Saudi Arabia, the United Arab Emirates and Hassan II Fund (Schinke and Klawitter, 2016 and IEA, 2014).



MorSEFF

Morocco Sustainable Energy Financing Facility

MorSEFF is the Moroccan branch of the EBRD founded Sustainable Energy Finance Facilities. The European Bank for Reconstruction and Development first launched these facilities in 2004 to increase investment into energy efficiency in by now 22 countries in Eastern Europe and North Africa (Retallack, et al., 2017).

In 2015, the EBRD in cooperation with the French Agency for Development (AFD), the European Investment Bank (EIB), and the German KfW Development Bank set up MorSEFF as a EUR 110 million-credit facility, dedicated to support facilitating the financing of energy efficiency and small-scale renewable energy projects of private companies in Morocco. The funds are being made available to participating financial institutions (local banks: BMCE Bank and Banque Centrale Populaire) for on lending to eligible private sector sub-borrowers for investments into sustainable energy projects. The main objective of this programme is to combine bank financing, technical assistance and investment incentives to stimulate demand and raise awareness about the benefits of investing in such clean energy technologies (MorSEFF, n.d. and GIZ, 2016a).

Through MorSEFF, financing of the complete investment amount can be made available limited to certain conditions and different limits depending on the complexity and extent of the planned activity, the technology being deployed and the applied finance method. An example of such energy efficiency projects under MorSEFF can be identified through purchasing of new equipment, modernisation, retrofit, and capacity increasing. Requirement for a successful loan or lease application, is among others, the use of pre-qualified equipment which is included in MorSEFF's List of Eligible Materials and Equipment (LEME), and using a qualified supplier (manufacturer, distributor or installer) from the List of Eligible Suppliers and Installers (LESI) (MorSEFF, n.d.).

MorSEFF also offers subsidies of 10-15% of the needed funding amount under the framework of the European Neighbourhood Policy. Additional to all those funding opportunities, MorSEFF gives free advice on projects (including but not limited to analysis of energy savings, implementation, and evaluation) by specialist consultants (MorSEFF, n.d. and GIZ, 2016a).

Technical assistance and awareness raising initiatives

There are few technical assistance initiatives being implemented in regards to increasing Morocco's energy efficiency capabilities.

GIZ has been commissioned by the German Government (mostly on behalf of the German Ministry for Economic Cooperation and Development) to support Morocco in developing a sustainable energy production system and supply. Thereby, it represents the most involved developing agency

providing capacity building for energy efficiency and advisory support to Moroccan government officials as well as personalised support of the private sector. An overview about identified assistance projects and programmes is provided in the table below.

TABLE 3. Overview of technical assistance programmes

NAME OF INITIATIVE/ PROGRAMME	IMPLEMENTING PARTNERS AND FUNDERS	OBJECTIVES
Developing Energy Efficiency Standards and Labelling for Morocco	Implemented by Econoler, commissioned by EBRD Funded by Korean Fund	Establish best-practice energy efficiency standards and labelling policies for Morocco Raising awareness of the importance of energy efficiency standards and labelling
SwitchMED (including a Morocco country hub)	Implemented by UNIDO and UN Environment in close coordination with the Directorate-General for Neighbourhood and Enlargement (DG NEAR), funded by the EU	Supporting and connecting stakeholders to scale-up social and eco-innovations in the Mediterranean
German-Moroccan Energy Partnership (PAREMA)	Implemented by GIZ Funded by the German Federal Ministry for Economic Affairs and Energy (BMWi)	PAREMA supports Morocco in building up a sustainable energy supply using renewable energy sources and efficient energy technologies
Promoting employment through renewable energy and energy efficiency in the MENA region (RE-ACTIVE)	Implemented by GIZ Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ)	Supporting Morocco in making targeted use of the socio-economic effects of sustainable energies. The project focuses on applications that require an above-average volume of labour: – Energy efficiency measures in buildings, industry and agriculture – Decentralised energy generation - photovoltaics, solar thermal and wind energy

NAME OF INITIATIVE/ PROGRAMME	IMPLEMENTING PARTNERS AND FUNDERS	OBJECTIVES
Support for Morocco's energy policy (PAPEM)	Implemented by the GIZ in cooperation with MEMDD Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ)	Advising the Moroccan Ministry of Energy Mining and Sustainable Development (MEMDD) on improving the existing legislative framework for renewable energies and energy efficiency and on developing the accompanying sub-statutory regulations
Promotion of Renewable Energy and Energy Efficiency (PEREN)	Implemented by the GIZ in cooperation with MEMDD Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ)	Supporting Morocco through advisory activities and capacity transfer in four distinguish areas: – A coherent legal framework for renewable energy and energy efficiency – Stronger institutions (in particular MEMDD and AMEE) – Know-how and regional implementation – University network for education and applied research

Institutional framework

The key institutional stakeholders involved in industrial energy efficiency in Morocco are outlined in the figure below. The Ministry of Energy, Mining and Sustainable Development (MEMDD) is the key ministry in this respect. It is in charge of designing and implementing the legal framework relevant to energy efficiency services, establishing the strategic directions for the country's energy and environment, and it ensures the practical implementation of the National Energy Strategy. Its main tasks include the managing and developing of energy and mining assets, creating energy access and coordinating the operations of the energy markets, diversifying energy resources, increasing the share of renewable energy, improving energy efficiency, and ensuring the security of energy supply (Schinke and Klawitter, 2016).

MEMDD also has the oversight of ONEE, the National Agency for Electricity and Water. ONEE owns a large share of generation capacities, the entire transmission network, and the greatest share of the distribution network (GIZ, 2016a).

Another important agent concerning industrial energy efficiency is the Moroccan Agency for Energy Efficiency (AMEE), previously ADEREE. It is now solely responsible for all projects, which fall under the energy efficiency umbrella, whereas, before ADEREE was more invested into its renewable energy responsibilities. AMEE's responsibilities cover the development of the regulatory framework for energy efficiency in the form of national, regional, and sectoral plans (GIZ, 2016a, Schinke and Klawitter, 2016).

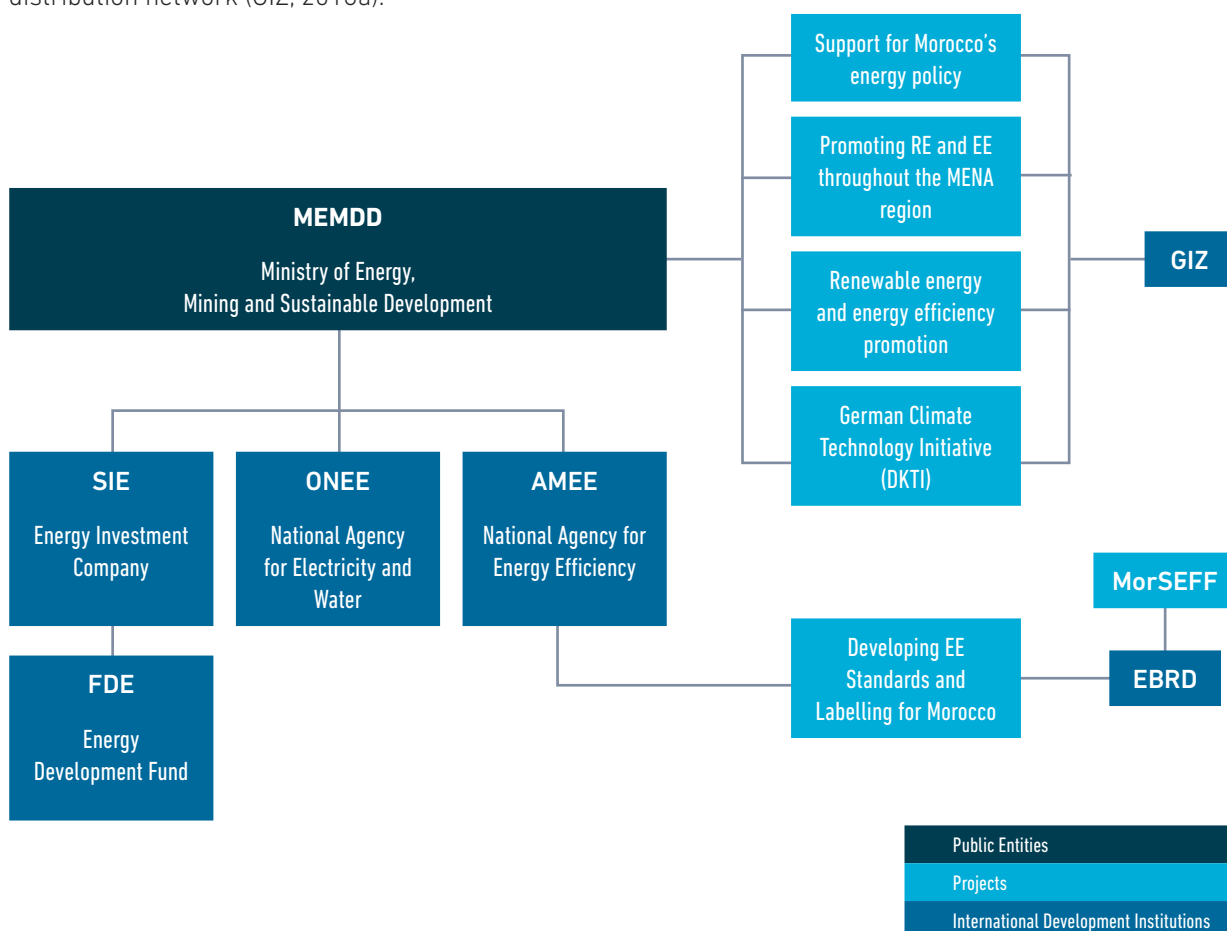


Figure 5. Stakeholder Overview (own elaboration)

What are the barriers limiting industrial energy efficiency in Morocco?

Morocco is facing many different challenges in regard to enhancing industrial energy efficiency. Those challenges can be divided broadly into the following categories:

LACK OF AWARENESS	ORGANIZATIONAL AND BEHAVIOURAL ASPECTS	ABSENT REGULATIONS
SUPPLY CHAIN	FUNDING MECHANISM	ESCO RELATED BARRIERS

Such barriers were identified by conducting an extensive literature review and stakeholder interviews. Publications by GIZ, GermanWatch, and the Netherland Enterprise Agency provided important inputs for classifying the challenges Morocco is facing about increasing energy efficiency in the industry. Additionally, expert interviews with representative from BMCI, Credit Agricole, Islamic Development Bank, CGEM, MorSEFF/ Africa Climate Solutions, Maroc PME, and IMANOR were conducted during fieldwork in Morocco. Each category includes a different spectrum of barriers, which are important to take into consideration when trying to implement energy efficiency projects in Morocco.

Lack of awareness

- Working in the field of renewable energy and energy efficiency is still a quite new topic in Morocco. Hence, local knowledge and experience is lacking and substantial groundwork continues to be completed.
- Companies that might have a certain potential for energy savings through energy efficiency measures can find it hard to identify such measures. Most business are poorly informed about the energy issue and possible solutions. No assistance is being offered to companies for identifying possible energy savings opportunities.
- Companies that have identified energy savings opportunities through, e.g. an energy audit, find challenges in how to implement those audit recommendations, as overviews are missing regarding best available technologies/equipment, businesses offering such services, and concerning financial support.
- Often a certain company culture is prevailing which through established routines and procedures can easily neglect the energy issue.

Organizational and behavioural aspects

- Energy managers or persons responsible for energy in industrial operations are often not in a decision-making position of the companies. Consequently, top management can easily neglect the energy issue.
- These companies often observe a high turnover of executives. This pattern in combination with incentives for immediate profits leads to focus on a short-term vision. As a result, energy efficiency often receives no consideration in such short-term action plans, as usually savings from energy efficiency measures do not become evident over a brief span.
- Manufacturers are generally reluctant to deploy new equipment into their processes.

Absent regulation

- The statutory framework and institutional infrastructure is lacking in regard to promoting industrial energy efficiency. However, great strides have been made in establishing a dedicating agency for energy efficiency (AMEE) and passing of the energy efficiency law 47-09 in 2011.
- Only large companies have the capabilities to comply with regulations concerning energy savings. However, there are no penalty mechanism in place punishing non-compliance.
- Financial, tax, or other kind of incentives for consumer to invest in energy efficiency measures are missing.

Supply chain

- Suppliers are reluctant to introduce new products in the market without evidence indicating significant demand for the new product.
- The energy service market is seen as novel and insufficiently structured. The quality of services among different service providers can vary significantly, making it difficult for consumers to ensure their requests are being fulfilled to the best available standards.
- The energy market has the tendency to fluctuate significantly (especially concerning liquid fuels) and creates, thereby, high uncertainties concerning the development of the energy price.

Funding mechanism

- The availability of financing options and mechanisms for investing in energy efficiency are not clearly communicated to its respective target audience. Businesses are lacking information about available funding and the organisation, and procedures seem often unclear to them.
- Companies see themselves often confronted with complex, numerous, and demanding procedures to secure the needed funding.
- The sustainability of financial aid programmes is not always guaranteed. Funding is being made available for a limited amount of time and once this support is no longer available, the demand for it declines as well.
- SMEs are critical for creating demand as they make up most of the Moroccan economy. However, SMEs often cannot access conventional debt financing as they lack certain prerequisites, such as providing collateral. Funding does not always seem to be suitable in terms of timing and repayment.

ESCO related barriers

- Services an ESCO can provide are mostly unknown to Moroccan enterprises. Therefore, the demand for ESCO energy services is only limited.
- Due to lack of awareness about the services and associated benefits that ESCOs can offer, commercial banks have low trust in them and see investing in them as high risk. Therefore, other forms of financing for ESCO activities are needed, e.g. the creation of a revolving energy efficiency fund, state financial and fiscal incentives, or other measures to decrease the perceived risk.
- A regulatory framework around ESCOs and their service offers is missing. Law 47-09 offers a first definition of what an ESCO is but does not go any further.

What solutions can address these barriers?

This document outlined Morocco's large potential for enhancing industrial energy efficiency. The Industrial Energy Accelerator established under the auspices of the SEforAll can support Morocco to increase speed to, ultimately, tap the full potential of energy efficiency in the industry. Possible solutions to before mentioned barriers are being presented according to the four pillar approach of the Accelerator.



PILLAR NUMBER 1

Develop country specific industrial energy efficiency policy measures

Establishing new ESCO legislation

BARRIER	SOLUTION	DESCRIPTION
ESCO related barriers	ESCOs can provide a broad range of energy solutions can support companies to achieve energy savings	Identifying and raising awareness about how ESCOs can support the uptake of energy efficiency measures
		Assessing relevant ESCO activities
		Understand best practice and outline policy options for ESCO legislation
		Assisting the Government to create and implement new ESCO policy
		Marketing and educational campaign to support energy efficiency in SMEs and growth of ESCOs



PILLAR NUMBER 2

Analysis of supply chain skills gaps and delivery of capacity building training programmes

Certification and national standards for auditors, service providers, and/or industrial energy efficiency technologies

BARRIER	SOLUTION	DESCRIPTION
Supply chain related barriers	Creating national standards for audits and industrial energy efficiency technologies to create more understanding and confidence in implementing energy saving measures	Launching a national campaign recognizing efforts of enterprises implementing energy efficiency measures and spreading knowledge on equipment energy performance, training initiatives, audits, etc.
		Standardising provided industrial energy efficiency services
		Initial technical assistance on standards targeted to enterprises as well as consultants
		Bringing service providers and companies together
		Certifying auditors and industrial energy efficiency service providers



PILLAR NUMBER 2

Analysis of supply chain skills gaps and delivery of capacity building training programmes

Technical assistance to support with the rollout of Energy Management Systems (ISO 50001)

BARRIER	SOLUTION	DESCRIPTION
Lack of awareness	Increase the uptake of Energy Management Systems to identify energy and cost saving measures	Raising awareness about ISO 50001 among government officials and within the private sector
Organizational and behavioural aspects		Initial technical assistance on Energy Management Systems targeted to enterprises as well as consultants
Supply chain related barriers		Technical assistance on industrial energy system optimization for enterprises, energy auditors and industrial energy efficiency service providers
		Investigate options to make Energy Management Systems policy mandatory and put supporting mechanism in place



PILLAR NUMBER 3

Pipeline appraisal and development of investment case studies

Implementing case studies to demonstrate energy efficiency benefits)

BARRIER	SOLUTION	DESCRIPTION
Lack of awareness Supply chain	Support the implementation and dissemination of demonstration projects to convince businesses that energy efficiency works	Conduct production process analysis
		Implement small-scale interventions to demonstrate energy-saving opportunities
		Disseminate these case studies through events and publications
		Scaling up of demonstration projects across the whole country
		Nationwide marketing campaign to boost awareness
		Project-specific technical assistance to industrial enterprises for transfer of state-of-the-art low carbon technologies



PILLAR NUMBER 4

Generate financing solutions to unlock energy efficiency deployment

Technical assistance to financial institutions to provide better services in the energy efficiency services market

BARRIER	SOLUTION	DESCRIPTION
Lack of awareness Funding mechanism	Adapting financing options for energy efficiency projects to better suit SMEs	Provide clarity and information about already available funding mechanisms
		Assisting financial institutions to enhance their capabilities in advising and selling energy efficiency relevant products for SMEs
		Collaboration with private financial institutions to develop products that facilitate energy efficiency financing
		Putting in place targeted financial incentives, e.g. rebates for industrial energy efficiency investments (in particular in SMEs)
		Fostering private finance through risk-sharing or loan guarantees with private financial institutions

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