INDUSTRIAL ENERGY EFFICIENCY & GREEN ELECTRICITY SUPPLY FOR ENERGY INTENSIVE INDUSTRIES

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MAGHREB STEEL

SUPPORTED BY giz

Association of Moroccan Steel makers- ASM

A non-profit association aimed at bringing together members of the profession, and pooling their efforts to accelerate the development of the sector.

7 strategic orientations for a stronger sector

- Upstream integration
- Energy efficiency
- Technology investments
- Human resources development
- Strengthening regulations
- Improving logistics costs
- Diversification of product offering

MOROCCO - MOVING TOWARDS EFFICIENT ENERGY CONSUMPTION AND RENEWABLES DEVELOPMENT

Legal Framework

Law 47-09:

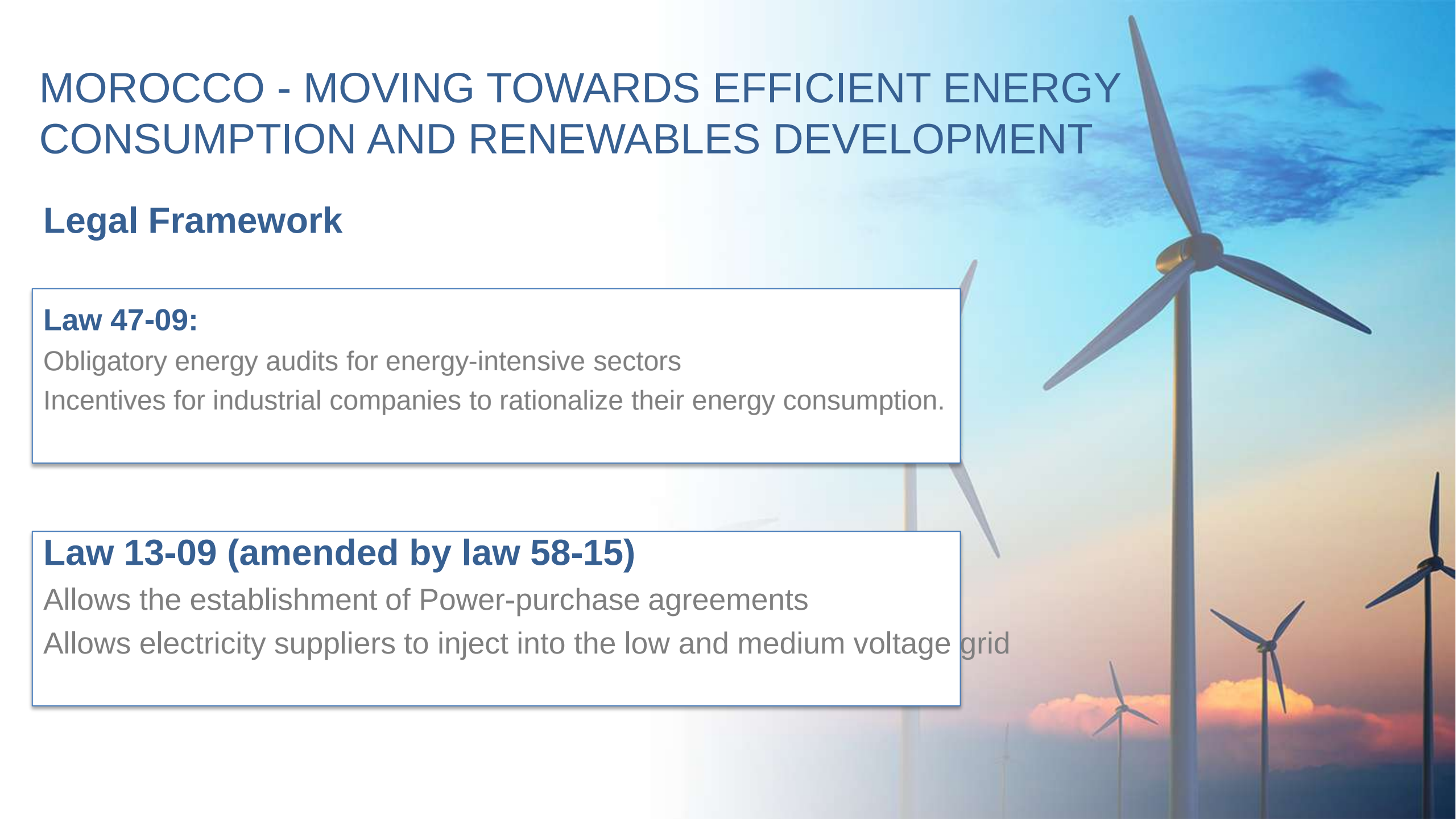
Obligatory energy audits for energy-intensive sectors

Incentives for industrial companies to rationalize their energy consumption.

Law 13-09 (amended by law 58-15)

Allows the establishment of Power-purchase agreements

Allows electricity suppliers to inject into the low and medium voltage grid



ENERGY INTENSIVE INDUSTRIES: INCREASE YOUR COMPETITIVENESS THROUGH ENERGY EFFICIENCY AND SUSTAINABLE ENERGY

Energy efficiency and green energy supply measures:

- Decrease energy costs
- Reduce exposure to energy price fluctuations and availability
- Allow for higher productivity and better product quality
- Reduce noise emissions, water consumption, and green- house gases emissions (GHG).
- Help prevent risks associated with future stricter climate and environmental policies

ADDING SIGNIFICANT VALUE TO BUSINESSES AND BRINGING COMPANIES CLOSER TO THE “TRIPLE BOTTOM LINE”: COMBINING ECONOMIC, SOCIAL, AND ENVIRONMENTAL CONCERNS

MAGHREB STEEL : FACTS AND FIGURES

Founded in **1975**, Maghreb Steel is the **only producer** of flat steel products on the national level.

1500 employees

80% domestic market share

20 to **30%** of the production exported worldwide

Strong production capacities: Steel output of **600.000** tonnes per year

Energy consumption in 2014: **322 GWh**, **15.147 tonnes** of heavy fuel oil & **12.658** tonnes of gas.

MAGHREB STEEL : PROJECT CONTEXT

Maghreb Steel's recent transformation programme

Reshaping the company's processes has put the spotlight on **cost-optimisation** and **competitiveness enhancement**: finding creative ways to reduce costs and especially energy expenditure, the second cost object for the company, is a matter of survival.

Maghreb Steel's Energy Audit

Main finding: Substantial savings potentials

Decision: Implementing a programme aimed at increasing energy efficiency and total electricity cost, through a partnership with SIE, supported by GIZ

MAGHREB STEEL: PROJECT SCOPE

Programme objectives:

- To achieve substantial improvements of MS's energy efficiency, through comprehensive industrial energy efficiency services.
- To reduce Maghreb Steel's total electricity cost.

Programme service package:

- Design, implementation, commissioning, operation & maintenance, monitoring & verification and optimization of energy savings.
- Co-financing at least 50% of the Energy Efficiency investments, the rest being co-financed by MS and SIE.
- Development of an electricity supply strategy: Strategic portfolio management advice & proposals and price indications for alternative
electricity supply scenarios.

PROJECT FLOWCHART

STEP 1

PROJECT IDENTIFICATION & DEVELOPMENT

- Definition of project goals, establishment of dedicated project team, and development of relevant decision making criteria for later go/no go decision
- Pre-Feasibility study with results being management focused and covering organisational, legal, economical, technical and financial aspects
- Go or No Go decision

STEP 2

PROCUREMENT OF ENERGY SERVICES

- Launch of Call for Interest and submission of qualifications by Energy Service Companies (ESCos)
- Invitation of pre-selected ESCos based on competency and references
- Development of project related offer based on functional specifications and on-site inspection by pre-selected ESCOs
- Evaluation of binding offers and award negotiation
- Award and contract signing

STEP 3

IMPLEMENTATION OF MEASURES *

- Detailed planning, obtainment of permits, procurement of equipment and material by ESCo
- Construction of energy saving measures and technical review of installed measures by ESCo
- Controlling and quality assurance by the company throughout this step

STEP 4

ENERGY SERVICE DELIVERY **

- After successful implementation of measures, following International Performance Measurement and Verification Protocol, performance-based payments to the ESCO start, considering Operations & Maintenance requirements, Measurement & Verification criteria, and energy savings

STEP 5

TERMINATION OF CONTRACT, HANDOVER OR REMOVAL OF MEASURES

STEP 6

CLIENT OPERATION

* In the case of a PPA, establish monitoring and verification procedures by the company throughout this step to provide for later accountancy and bookkeeping,

** In the case of a PPA, payments to the ESP are based on M&V criteria and MWh of electricity delivered.

PROJECT BENEFITS AND CO-BENEFITS

- Significant cost savings
- Better availability of energy
- Better visibility on the evolution of energy costs
- Better visibility on the company’s future competitiveness
- Improved environmental footprint (90% of electrical energy is green)
- The image of an environmentally responsible company: Recycling scrap metal and using renewable energy, MS is an example of circular economy.

LESSONS FOR SUCCESS

Define precise and clear goals for your project

LESSONS FOR SUCCESS

Show top management buy-in to fully support the project

LESSONS FOR SUCCESS

Have your data ready and well organised for the pre-audit study

LESSONS FOR SUCCESS

Assess the need for an organizational and individual change process

LESSONS FOR SUCCESS

Establish an interdepartmental project team

LESSONS FOR SUCCESS

Make the tender documents as clear, thorough and precise as possible

LESSONS FOR SUCCESS

Request a decision- making oriented pre-feasibility

LESSONS FOR SUCCESS

Make sure to discuss and negotiate improvements to the first-round offers submitted by preselected ESCos

THANK YOU FOR YOUR ATTENTION

ANY QUESTIONS ?

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