

Moroccan Agency for Sustainable Energy



November 23, 2017



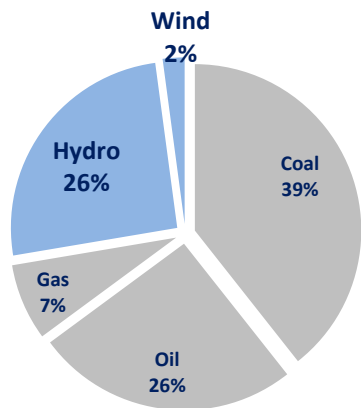
masen

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RENEWABLE ENERGIES, AT THE HEART OF MOROCCO'S ENERGY STRATEGY

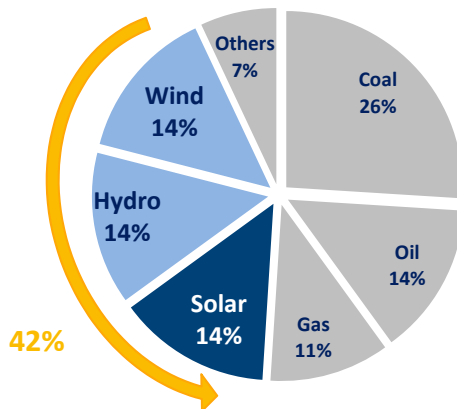
Strong will of increasing renewable energy share within the national mix by 2020 and 2030, through a roadmap of deployment based on an optimal technological mix

2009



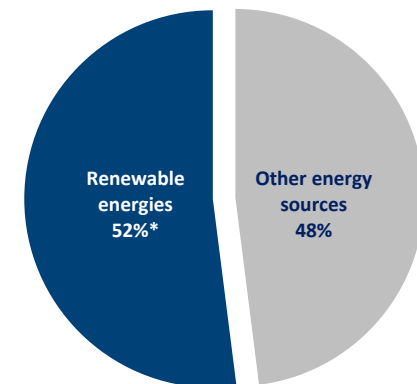
Renewable energy represented 28% of installed capacity

2020



Renewable energy will represent 42% of installed capacity

2030



Renewable energy will represent 52% of installed capacity

Morocco launched the NOOR Plan (the Moroccan solar plan), to be implemented by masen



Development of 2 000 MW by 2020

Masen will implement 6 000 MW of renewable energy by 2030

Conventional energy

Renewable energy

Projects developed/to be developed by masen

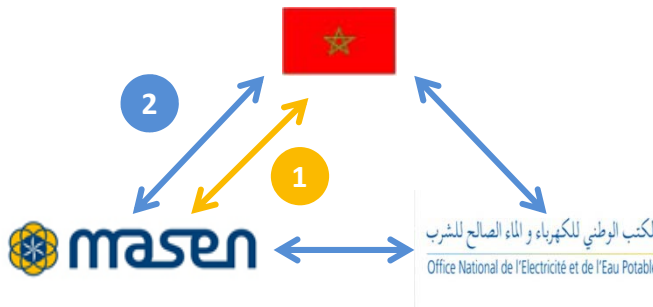


MASEN : A DEDICATED ACTOR RELYING ON A STRONG LEGAL AND INSTITUTIONAL FRAMEWORK...

Legal framework



Institutional framework



1 **State-Masen Agreement (decree):** Conditions, technical requirements and guarantee of the financial equilibrium of Masen's projects o

2 **State-ONEE-Masen Agreement:** Take or pay including terms and conditions for the purchase, supply, transport and commercialization of electricity produced

ONEE: Office National de l'Électricité et de l'Eau, the national utility
 Hassan II Fund for Economic and Social Development
 Société d'Investissements Énergétiques
 Except the assets dedicated to the stabilization of the grid

... DEVELOPING PROJECTS THROUGH AN "INTEGRATED" APPROACH



In charge of the Integrated Renewable Energy Deployment

Valorizing natural resources for Morocco

ELECTRICITY PRODUCTION

Min 52% of installed capacity by 2030



INDUSTRIAL INTEGRATION

For a competitive industry



LOCAL DEVELOPMENT

For an inclusive development



RESEARCH & DEVELOPMENT AND TRAINING

For technology improvement and qualified resources



Relying on a multi-technology approach combining technologies to provide the best answer to identified needs while optimizing the overall cost of kilowatt hour and maximizing synergies



MORE THAN 1500 MW OF SOLAR CAPACITY HAVE BEEN LAUNCHED IN ORDER TO ACHIEVE THE 2020 TARGET (2/2)

 <p>NOORo I</p>	 <p>NOORo II</p>	 <p>NOORo III</p>	 <p>NOOR PV I</p>	 <p>NOOR Midelt</p>
<p>In operation</p>	<p>Under construction</p>	<p>Under construction</p>	<p>Under construction</p>	<p>Under development</p>
<p>CSP Parabolic Through</p>	<p>CSP Parabolic Through</p>	<p>CSP Tower</p>	<p>Photovoltaic</p>	<p>Hybrid PV and CSP</p>
<p>160 MW, 3h Storage</p>	<p>200 MW, >7h Storage</p>	<p>150 MW, >7h Storage</p>	<p>177 MW</p>	<p>Between 150 MW and 190 MW of CSP for each project*</p>

INTERNATIONAL SELECTION PROCESS TO FOSTER COMPETITION

A tender process with multiple stages, to allow the selection of a developer able to achieve the highest international plants standards, while meeting Masen's requirements, with an optimized price of kWh

Adopted selection process

To sound the market

To pre-select

To select and award

Call for expression of interest

Pre-qualification

Request for Proposals

Stage 1

- Technical offer

Stage 2

- Amended technical offer
- Financial offer

- *A multi-step process to refine the choices and check their market feasibility*
- *A clear approach with specific objective criteria and precise documentation, leaving little or no room for interpretation*

RULES APPLICABLE FOR THE PROCUREMENT PROCESS

Masen's projects have been financed by International Financial Institutions with very stringent and straightforward guidelines (such as World Bank, EIF, KfW, AFD and AfDB). Example of applicable requirements are :

1

A clear approach with specific objective criteria and precise documentation, leaving little or no room for interpretation

2

Very close monitoring and approval (No-Objection) to be delivered by all IFIs and the evaluation commission at the beginning and end each phase of the procurement process (RfQ documents, RfQ reports, RfP documents, RfP reports, contracts...)

3

Due diligences on the identities of the companies involved in the procurement process (sanction lists...)

RULES APPLICABLE FOR THE PROCUREMENT PROCESS – FRAUD AND CORRUPTION

The procurement process includes very stringent requirements with respect to fraud and corruption:

1

Clear and straightforward definition of corruption and fraud acts

2

Clear sanction mechanism covering all the parties involved in the projects (contactors, subcontractors, consultants...).

3

Frequent audit missions covering also the procurement aspects.



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