

100% Renewable Morocco

**Proceedings of UNFCCC SB42 Side-Event: Getting Ready for Zero:
An Overview of Who's Working on Zero Carbon Modelling & Tool Kits**

Date: Thursday, 4 June 2015, 16:45-18:15

Place: Berlin Room, World Conference Centre, Bonn, Germany

**The Side Event was organised by
INFORSE – International Network for Sustainable Energy
Nordic Folkecenter for Renewable Energy
Centre for Alternative Technology and Track 0.**

See Full Proceedings also at: www.inforse.org/europe/conf15_PreCOP21-Bonn.htm



100% RENEWABLE ENERGY:
BOOSTING DEVELOPMENT
IN MOROCCO

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UNFCCC – Bonn Climate Change Conference - June 2015

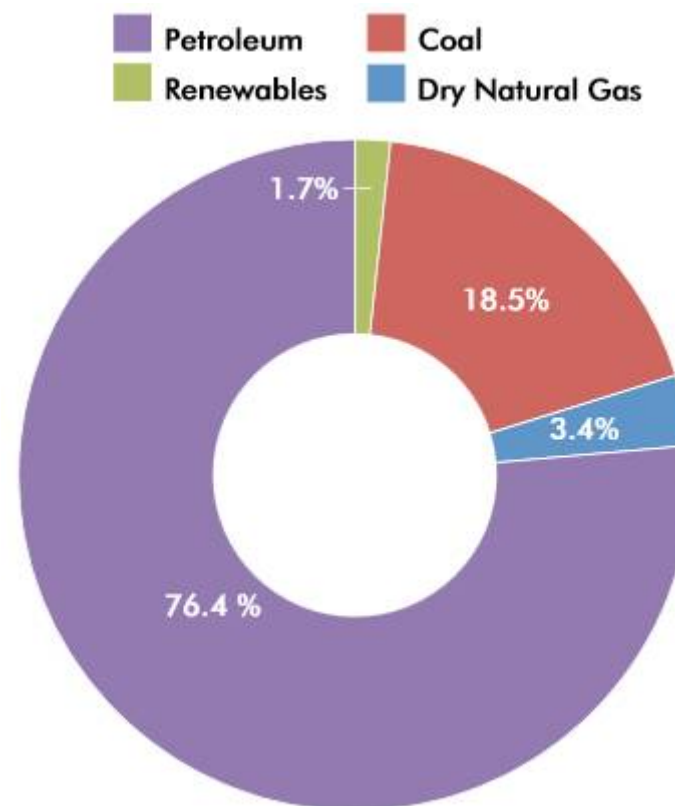
THE CHALLENGES

- Predictions suggest that **precipitation** in North Africa is likely to **decrease between 10 and 20%**, while **temperatures** are likely to **rise between 2 and 3 ° C by 2050**. In North-Western Africa temperatures could rise even up to 6 ° C by the end of the 21st century according to some estimates.
- Regardless of the climate change scenarios, Morocco will suffer from **water scarcity by 2020-2030**.
- **Moroccan agricultural production will drop by 15 to 40%** due to climate change during the 21st century



WHY 100% RENEWABLE ENERGY IN MOROCCO?

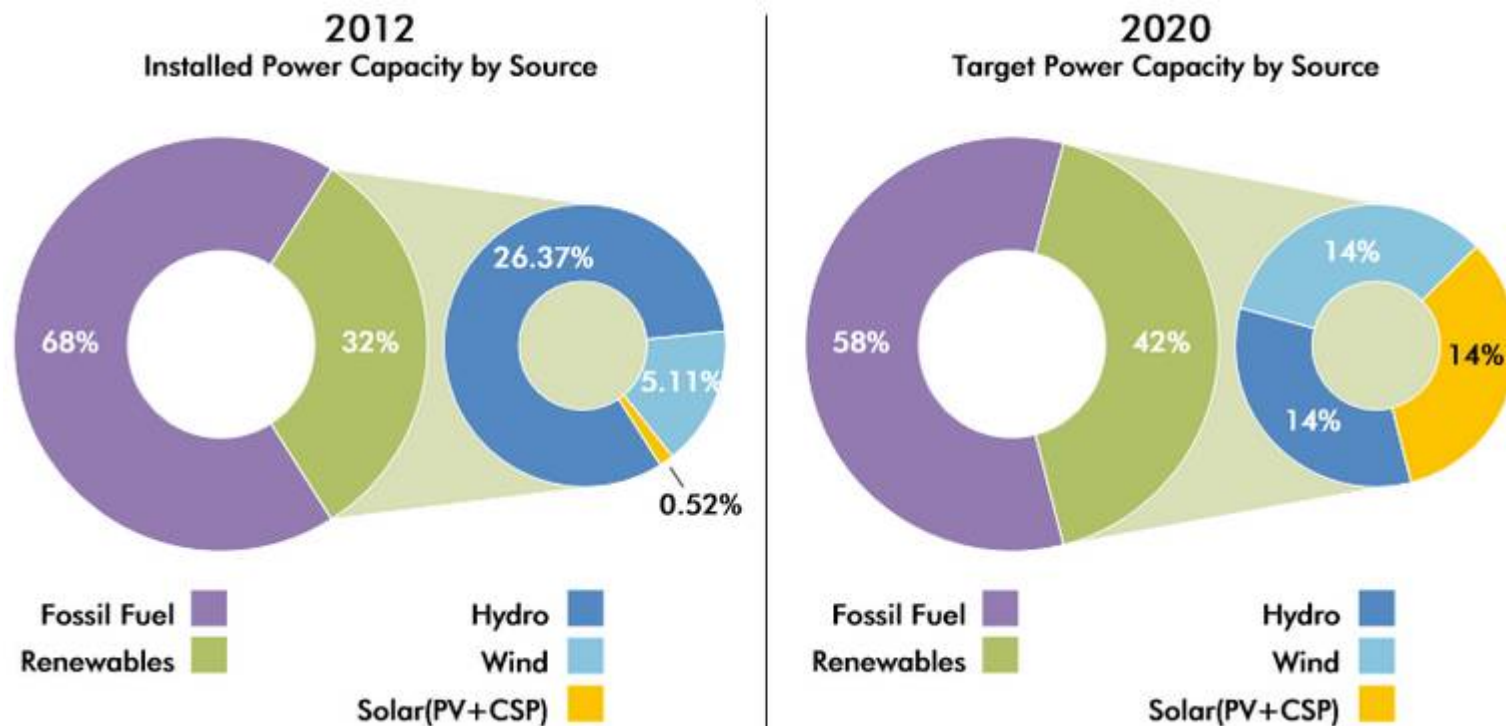
- **Morocco imports 96% of its energy demand**
- **Petroleum imports** account for 20% of total imports and **50% of the current trade deficit**.
- **Imports of electricity in 2012** were close to **5,000 GWh**, compared with 1,000 GWh in 2005.
- Morocco spends approximately **US\$3 billion a year on fuel and electricity import**.



Energy consumption by source in Morocco in 2009. Source: *International Energy Statistics 2012*

MOROCCO'S ENERGY SCENARIO

- Morocco aims to achieve **42% of installed power capacity** from renewable energy by **2020**.



Source: Rcreee, 2013

BARRIERS TO 100% RE IN MOROCCO

#1. Economic and financial barriers

- Lack of access to capital and credit
- High up-front capital costs and high perceived risk
- Low return on investment, long payback time and short-termism

#2. Market failures and imperfections

- Heavily subsidized fossil fuels
- Low market penetration, lack of entrepreneurs, skilled workers and RE specialized industry
- Externalities non considered

#3. Political, institutional/governance and regulatory barriers

- Current legal and regulatory framework does not facilitate the necessary transformation process
- Lack of clear economic strategy
- Lack of involvement, cross-party cooperation and communication
- Lobbyism
- Lack of transparency, information and data

#4. Cultural, behavioral and educational barriers

- Lack of knowledge and understanding of the potential of RE
- Lack of acceptance, sensitivity and public apathy

#5. Technical barriers

- General technical challenges related to intermittent nature of most RE
- Lack of integration of different sectors
- Lack of skilled personnel and maintenance capacity

POLICY RECOMMENDATIONS

#1. Agree on a joined vision and set a 100% RE target

#2. Embed a strategy for 100% RE into a national economic development plan

#3. Increase cooperation across sectors and governance levels

#4. Design a coherent and comprehensive 100% RE policy framework

