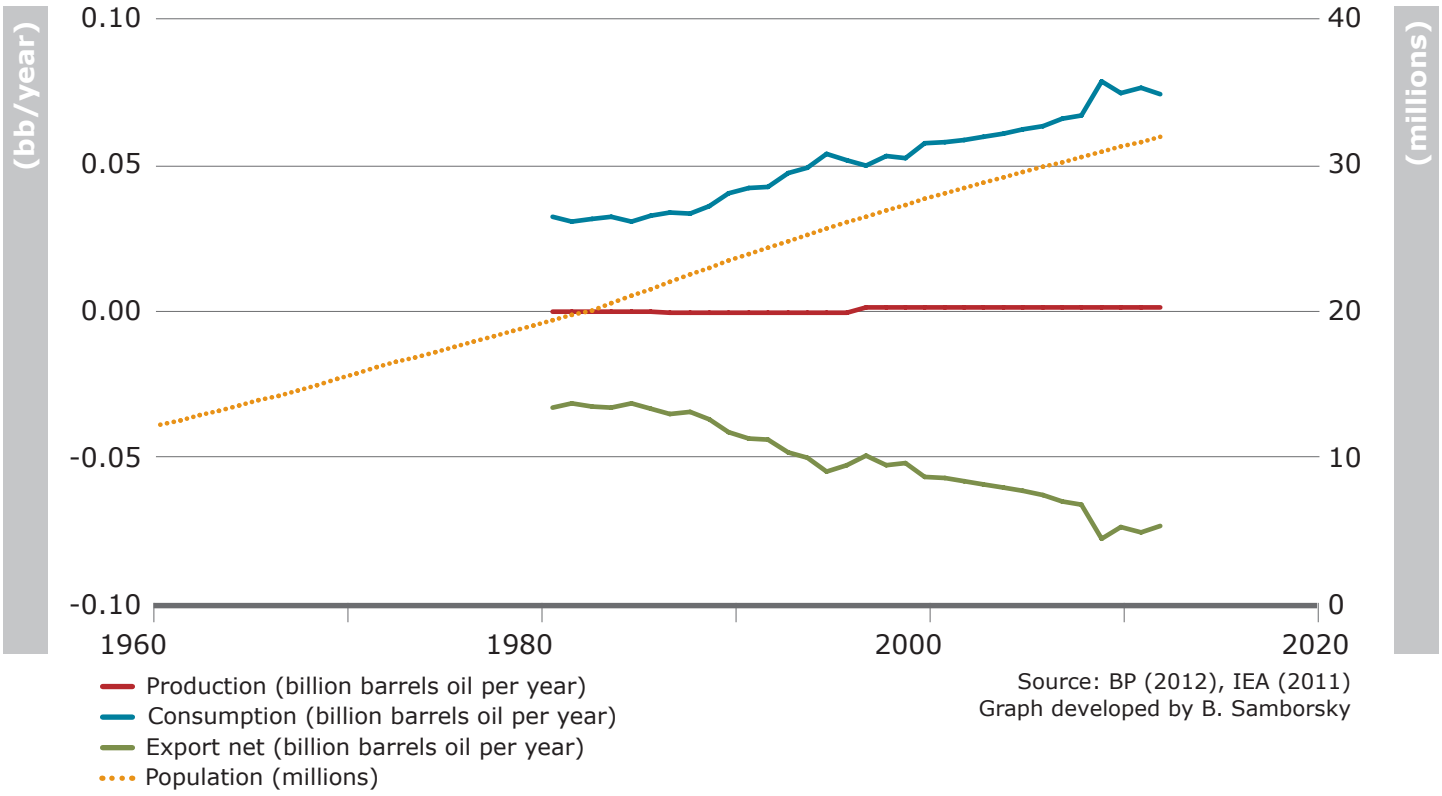
RCREEE
Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

Morocco 2012

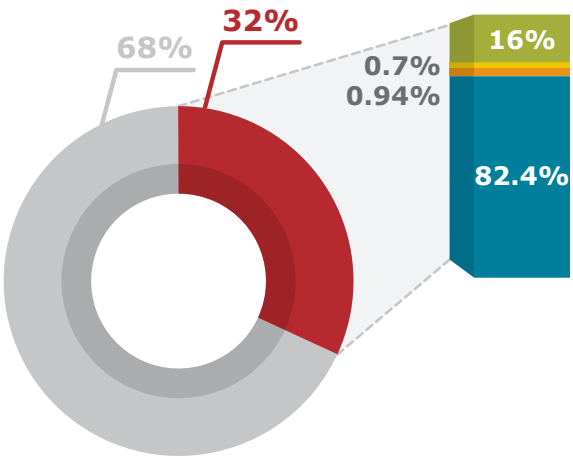
Renewable Energy Country Profile

Energy Supply and Demand – Current Trends

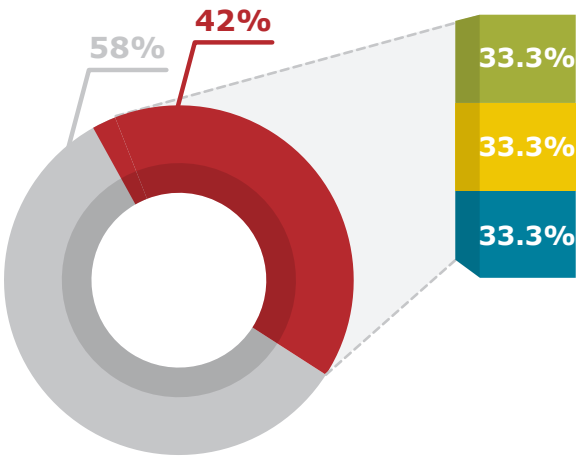


Source: BP (2012), IEA (2011)
Graph developed by B. Samborsky

Current Installed Capacity



RE Targets - Year 2020



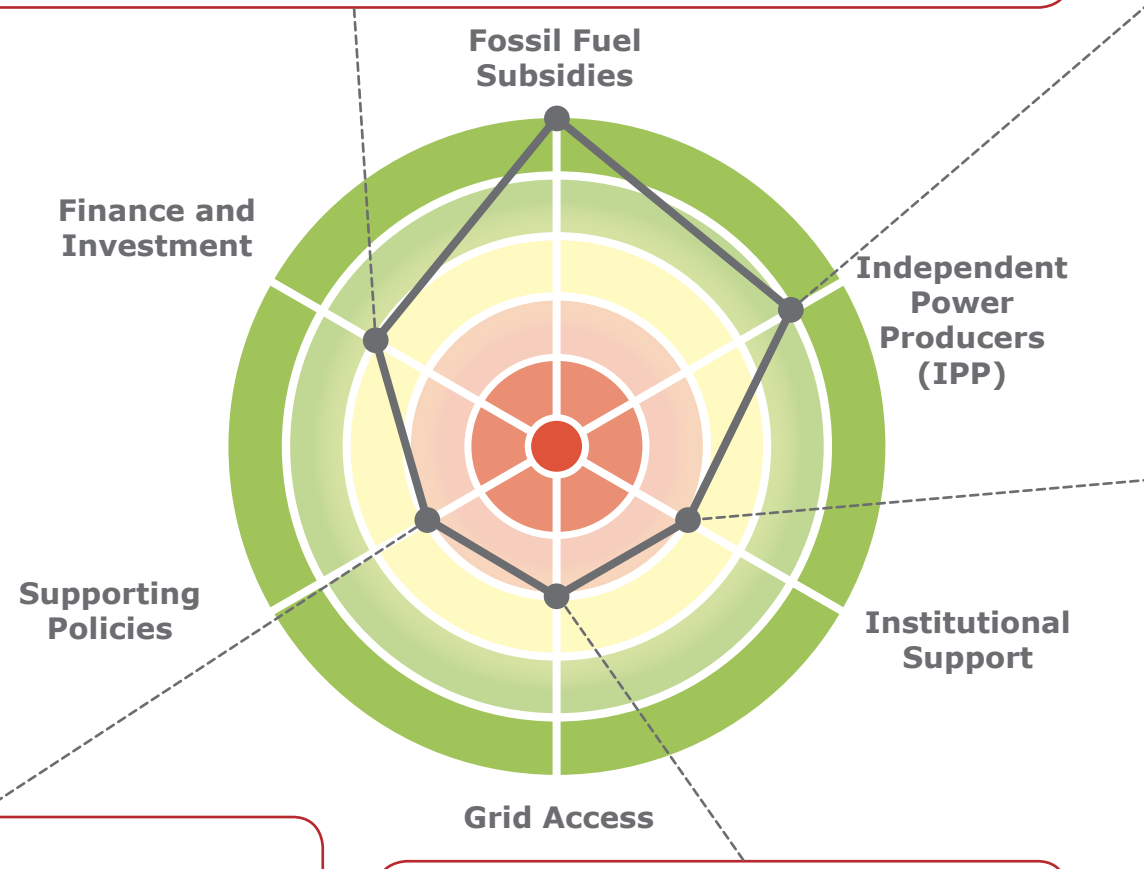
Fossil fuel RE Wind PV CSP Hydro

	Wind	PV	CSP	Hydro	Total RE	Total all Energy
MW	339.4	15	20	1745	2119.4	6723

	Wind	Solar	Hydro	Total	Target Date
MW	2000	2000	2000	6000	2020

Finance and Investment

- Energy Development Fund (FDE) was established in 2010. The fund contains a capital of 1 billion USD: 200 million from Hassan II fund, 300 million from UAE and 500 million from Saudi Arabia.
- An energy investment company for developing renewable energy (SIE) is created by law 40-08 (2008) to support RE development. SIE contains a capital of 1 million Dirhams endorsed by the state (71%), and the Hassan II Fund for Economic and Social Development (29%).
- No policy of providing financial guarantee to private investors to ensure payment under power purchase agreement.
- No customs duty or internal tax benefits for renewable energy projects.



Supporting Policies

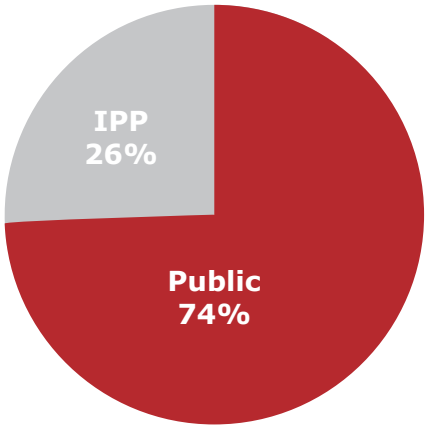
- Public competitive bidding is available for large-scale private RE projects.
- No obligation to conclude long-term power purchase agreements with private producers of RE
- No feed-in Tariffs adopted for RE.
- No net-metering policy for small-scale RE projects.

Grid Access

- No priority access to RE is granted by law.
- Renewable energy grid code is under preparation.
- No detailed grid map for designated renewable energy sites.
- RE is not authorized to access low and medium voltage lines.

Independent Power Producers (IPP)

- Private generation of electricity was authorized by decree No 2-94-503 (1994). Today, total generation capacity of conventional electricity by IPPs constitutes 1704 MW.
- Law 13-09 (2009) on renewable energies specifically authorizes private generation of power from renewable sources of energy. Total capacity of IPPs producing RE is 124 MW.
- Self-production (auto-producers) of power from RE is permitted by the same law; excess electricity can be injected to the grid. However, ONE does not guarantee the purchase of excess power.
- Total generation capacity of RE auto-producers is 32 MW.



Institutional Support

- Moroccan Agency for Solar Energy (MASEN), established by law 57-09 (2009) is responsible for the implementation of the Solar Plan and for supporting the development of solar energy in Morocco.
- The Moroccan Association of Solar Industries and Windmills (Amisola) was created to promote the interests of industries and professionals working in the renewable energy sector.
- The Ministry of Energy, Mines, Water and Environment is responsible for the development of energy policy. Agency for the Development of Renewable Energy and Energy Efficiency (ADEREE) is responsible for facilitating the implementation of RE policies.
- Société d'Investissements Energetiques (SIE) is a state-owned investment company which is responsible for supporting the Moroccan government in achieving RE targets.
- A detailed wind atlas is published.
- Land for large-scale wind projects is not allocated yet for private development.
- A detailed solar atlas was published in 2013. Based on this atlas, the following areas have been identified for the deployment of large-scale solar projects: Ouarzazate (a DNI of 2635kwh/m2/yr), Ain Beni Mathar (a DNI of 2290 kwh /m2/yr), Foum Al Ouad Laâyoune(a DNI of 2628kwh/m2/yr), Boujdour(a DNI of 2642kwh/m2/yr), and Sebkhat Tah/ Tarfaya, (a DNI of 2140kWh/m2/yr).
- Land for large-scale solar projects is not allocated yet for private development.

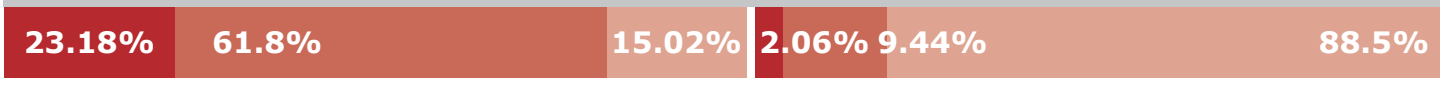
Grid Interconnections

Country	Length (km)	Voltage (KV)	Capacity (MW)	Status
Algeria	49	225	235	In operation
	67	225	235	In operation
	230	400	2400	In operation
Spain	61	400	700	In operation
	61	400	700	In operation

Projects

Wind	CSP	PV
In Operation		
Project: Tanger 1 Capacity: 140 MW Developer: Public (ONE) In operation since: 2010 Project: Koudia Al Baida - phase 2 Capacity: 53.5 Developer: Private (CED) In operation since: 2000, 2001 Project: Tétouan Wind Farm Project for Lafarge Cement Plant Capacity: 32 Developer: Private-public partnership (auto-producer) In operation since: 10 MW in 2006 and 22 MW in 2011 Project: Parc de AbdelkhalaK Torres Capacity: 50.4 Developer: Private (CED) In operation since: 2000 Project: Parc ESSAOUIRA Capacity: 60 Developer: Public (ONE) In operation since: 2007 Project: Experimental Wind Farm Capacity: 3.5 Developer: Public (ONE) In operation since: 2000	Project: Ain Beni Mathar Capacity: 20 MW Developer: Private In operation since: 2009	Project: Tit Mellil Capacity: 50 kWp Project: Assa Capacity: 1 MW Project: ENIM Capacity: 5 kWp Project: Water pumping Capacity: 3 MW Project: Rural electrification Capacity: 7-8 MW Project: Administrative application Capacity: 2-3 MW
Under Construction		
Project: Koudia Al Baida phase 1 Capacity: 100 MW Developer: Private-public partnership Status: Under repowering Project: Tarfaya Capacity: 300 MW Developer: Private Project: Akhfenir Capacity: 200 MW Developer: Private Project: Tanger 2 Capacity: 150 MW Developer: Private Project: Taza Capacity: 150 MW Developer: Private Project: Cimenterie de Laâyoune Capacity: 5 MW Developer: Private (auto-producer)	Project: Ouarzazate Capacity: 160 MW Developer: Private-public partnership	
In Pipeline		
Project: Ain Beni Mathar Capacity: 400 MW Project: Foum Al Ouad Capacity: 500 MW Project: Boujdour Capacity: 100 MW Project: Sebkhat Tah Capacity: 500 MW	Project: Ain Beni Mathar Capacity: 400 MW Project: Foum Al Ouad Capacity: 500 MW Project: Boujdour Capacity: 100 MW Project: Sebkhat Tah Capacity: 500 MW	

Projects Percentage of Total Capacity



Featured Partner

Dii
Renewable energy bridging continents

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