

American University of Beirut (AUB)

The Munib and Angela Masri Institute of Energy and Natural Resources

Energy Finance in the Middle East: Uncertainties and Opportunities

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Economic And Social Commission For Western Asia



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CURRENT TRENDS IN FINANCING RENEWABLE ENERGY PROJECTS IN THE ARAB REGION

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A comprehensive favorable Regulatory framework Context

5 main axis to promote renewable energy (RE) :

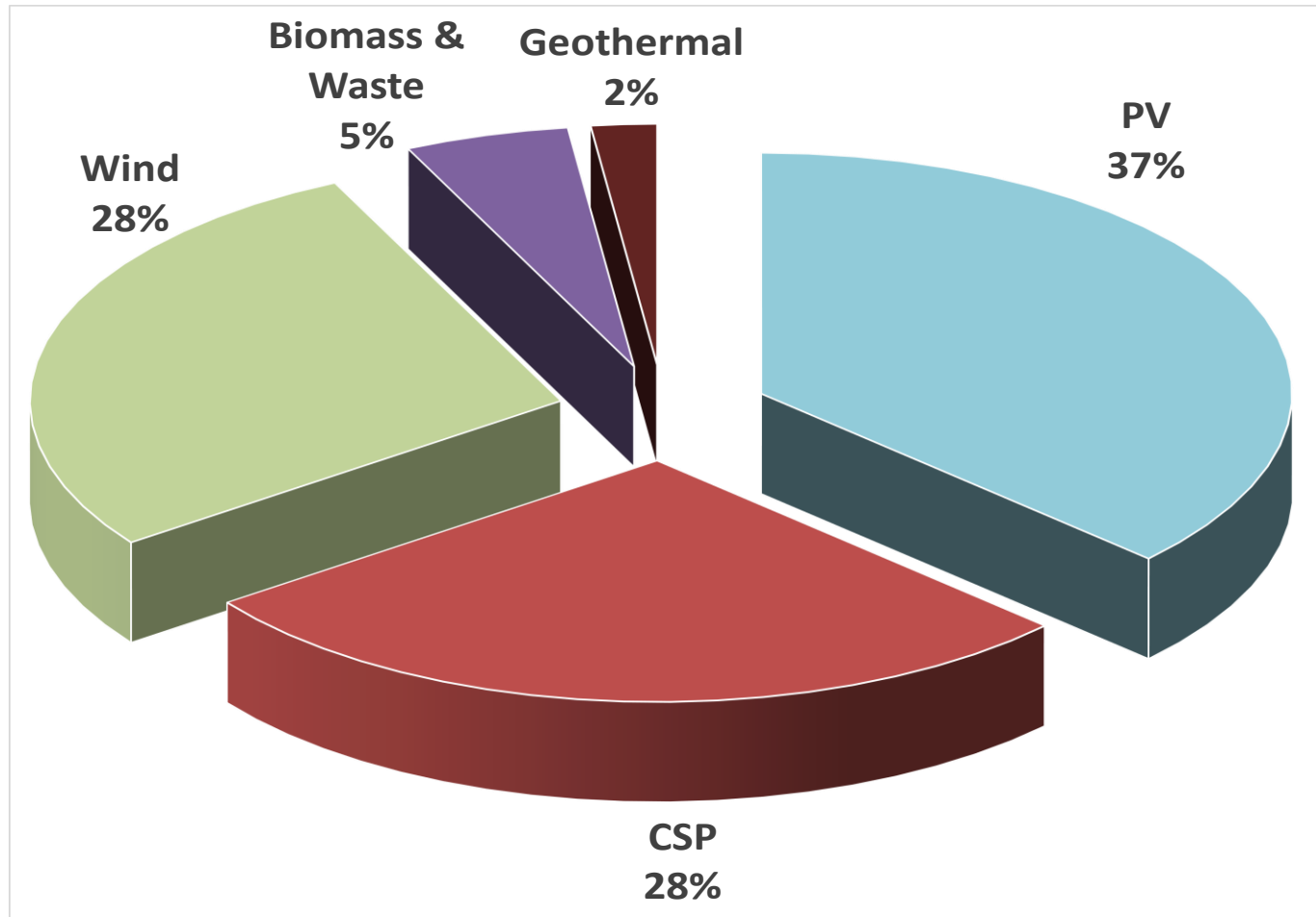
- **Clear and well defined RE Targets**
- **Guarantee of access of RE to the grid**
- **Attractive Tariffs for electricity from RE**
- **Promotion of direct and decentralized use of RE applications for providing energy services**
- **Financial incentives and schemes for RE projects**

RE targets in the Arab region

Current targets for 2030 in the Arab Region indicate an increase of RE contribution by 117 GW of installed capacity of RE sources (excluding hydropower)

- **19 Arab states have announced RE targets**
- **RE share of electricity generation in Arab countries ranging from 5 to 42%, by 2030**
- **11 Arab states included RE as quantitative mitigation targets in their Intended Nationally Determined Contributions (INDCs) – COP21**

Share of technologies in future Arab RE installed capacity (Total of 116 900 MW, by 2040)



Guarantee of access of RE to the grid

Only few countries in the region have specified grid access details to renewable energy in their policies and regulations

- Algeria & Jordan have most preferential grid access conditions / UAE (Abu Dhabi and Dubai) developed regulations to allow feed-in at household levels
- Egypt, Morocco & Palestine have committed to grant grid access to RE
- Tunisia has restrictive grid access regulations / in the process of being reviewed
- Most other countries need to develop national policies to guarantee grid access to RE

Attractive tariffs for electricity from RE

(Most common: Feed-in-Tariff / IPP public competitive bidding / Net Metering)

Tariffs have been used to encourage private investment in RE and induce the development of this sector

- Feed-in-Tariffs (FIT): offers long-term electricity purchasing contracts to RE electricity producers / provides a price certainty and long-term agreements
 - ✓ **7 countries in the Arab region adopted/proposed FIT as a key mechanism for meeting their RE targets**
 - ✓ **In many cases tariff rates per kWh are technology-specific**
 - ✓ **Feed-in tariffs can introduce significant market distortions & offer investors abnormal returns on investment that are denied other contributors to the energy market**

Attractive tariffs for electricity from RE

(Most common: Feed-in-Tariff / IPP public competitive bidding / Net Metering)

- Independent Power Producer (IPP) public competitive bidding: A tendering process used to select RE developer / Power Purchase Agreement (PPA) is then signed with the successful bidder
 - ✓ One of the most important instruments to promote large-scale RE projects in the region
 - ✓ requires a high level of transparency in terms of governments' future development plans of large-scale RE markets, as well as the competitive bidding process
 - ✓ Egypt, Morocco, and Saudi Arabia are the only 3 countries in the region that have set clear targets for the total installed capacity of RE to be developed through a competitive bidding process

Attractive tariffs for electricity from RE

(Most common: Feed-in-Tariff / IPP public competitive bidding / Net Metering)

- Net Metering: A mechanism to allow individual entities to produce electricity from RE for their own needs & sell excess production to the power distribution system
 - ✓ Net contribution is evaluated based on the balance between the power obtained from the grid and the power delivered through it
 - ✓ 7 Arab countries: Egypt, Jordan, Lebanon, Palestine, Syria, Tunisia and UAE (Dubai) have developed net metering arrangements.
 - ✓ Only several of them have actually implemented these schemes.
 - ✓ Schemes differ from one country to another

Financial incentives and schemes for RE projects (Public funding / fiscal privileges)

- 2 categories of policy instruments are proposed to overcome financial barriers, when needed:
 - ✓ **The allocation of fiscal privileges or tax credits to RE projects**
 - ✓ **The creation of special sustainable and dedicated energy public funds to, partially, subsidize RE projects, either directly, and/or through the use of special credit lines with reduced or zero interest rates,**

Financial incentives and schemes for RE projects (Public funding / fiscal privileges)

- Need for financial incentives for RE projects depends on their size, and type
 - ✓ Large-scale RE projects would obey to same financial rules as other infrastructure projects
 - developers usually rely on international financing mechanisms & schemes (international green Funding)
 - May benefit from fiscal privileges to alleviate the local costs of the projects
 - ✓ Medium and small-scale RE projects, and RE programmes based on large dissemination of small RE systems, need financial support and incentives

Financial incentives and schemes for RE projects (Public funding / fiscal privileges)

- ***Dedicated Public Funds for promoting RE:***
 - ✓ 7 countries in the region: Algeria, Egypt, Jordan, Lebanon, Morocco, Tunisia and UAE, have established/in the process of establishing, renewable energy funds,
 - often within a common dedicated sustainable energy programme “basket” including energy efficiency (EE), to promote sustainable energy solutions
 - At least 4 of these countries (Algeria, Jordan, Lebanon and Tunisia) have these funds dedicated to support both RE and EE in an integrated way

Financial incentives and schemes for RE projects (Public funding / fiscal privileges)

- ***Fiscal incentives for promoting RE:*** Based on providing fiscal privileges to RE projects: tax credits, VAT and Custom duties weavers, or reductions
 - ✓ 8 Arab countries; Algeria, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, and Tunisia, offer such incentives
 - ✓ Fiscal privileges are used to encourage RE investments by reducing the overall costs of RE projects, thus supporting a wider deployment of RE projects

Example of a financing scheme for large scale dissemination of small RE systems - Tunisia

- 2 nation-wide dissemination programmes for solar water heaters (Prosol) and for grid-connected PV solar systems (Prosol-Elec)
 - ✓ **The national fund is used, in conjunction with international funding, to provide :**
 - **a grant covering 30% of the cost of the system, when purchased from accredited suppliers & installers**
 - **loans with preferential interest rates to cover the remaining 70percent of the cost of the system**
 - **Loans are recovered by the public utility company through the electricity bills,**

Example of financing engineering based on Public Private Partnerships (PPP) for large scale RE projects - Morocco

- Creation, in 2010, of a specialized public financing company, the Energy Investment Company (SIE)
 - ✓ Mandated to operate in both the investment and development of RE projects and EE: Operates as an investor, financial leverage and project co-developer
- For RE, another company was created, MASEN, the Moroccan Agency for Solar Energy
 - ✓ Is 25% owned by the Government of Morocco, ONE (the national utility company), the Hassan II Fund for economic and social development, and the Energy Investment Company (SIE)

Example of financing engineering based on Public Private Partnerships (PPP) for large scale RE projects - Morocco

- ✓ **MASEN is responsible for “feasibility assessment, design, development, and financing of solar projects in Morocco, along with contributing to expertise and research in the solar industry**
- ✓ **An innovative financing architecture allows MASEN to play the role of contract holder in the power purchase agreements with ONE and the role of an equity partner in the Solar Power Company (SPC), along with the winning bidders**
- ✓ **MASEN also acts as a consolidator of concessional loans provided by the Clean Technology Fund (CTF), African Development Bank (AfDB), the World Bank (WB), and the European Investment Bank (EIB)**
- ✓ **This set up reduces the cost of capital for the SPC, and lower the overall cost of energy generated from RE**

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THANK YOU FOR YOUR ATTENTION

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