

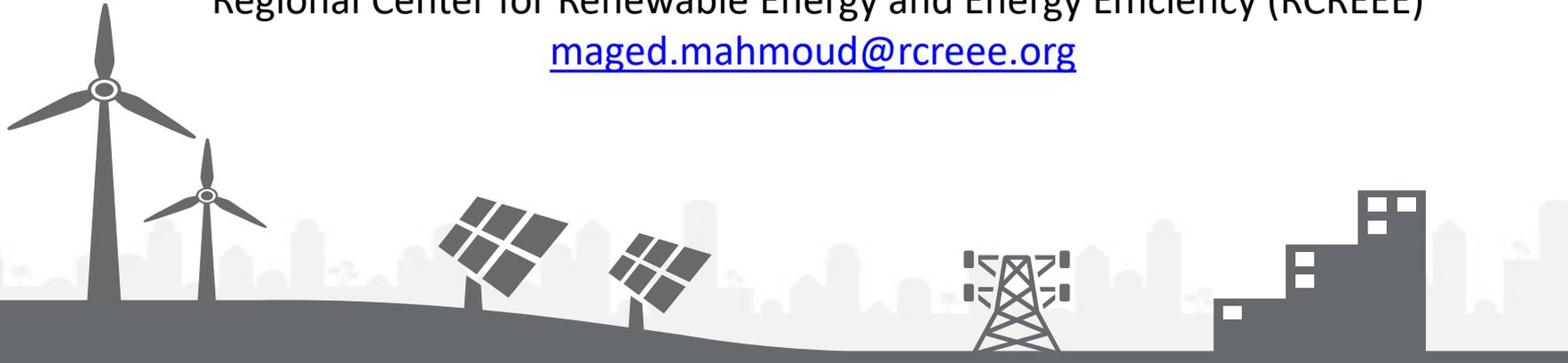
Regional policy spotlights for solar PV development in Africa: The Case of North and Arab African Countries

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RCREEE 

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

Global Solar Council Virtual Forum
28 October 2020

RCREEE – Who we are

“We, the Regional Center for Renewable Energy and Energy Efficiency, are the *strategic partner* for the *Arab countries* driving *energy transition* for the *prosperity of all our people*.”



**Work in the Pan-Arab Region...
know how to navigate your way**



Intergovernmental Organization with 17 Member States



The technical arm of the League of Arab States



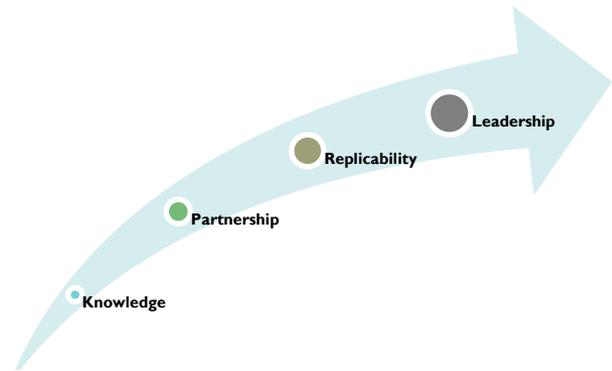
A leader in clean energy policy dialogues, strategies, technologies, investments promotion, and capacity development



The first regional renewable energy and energy efficiency center across the world

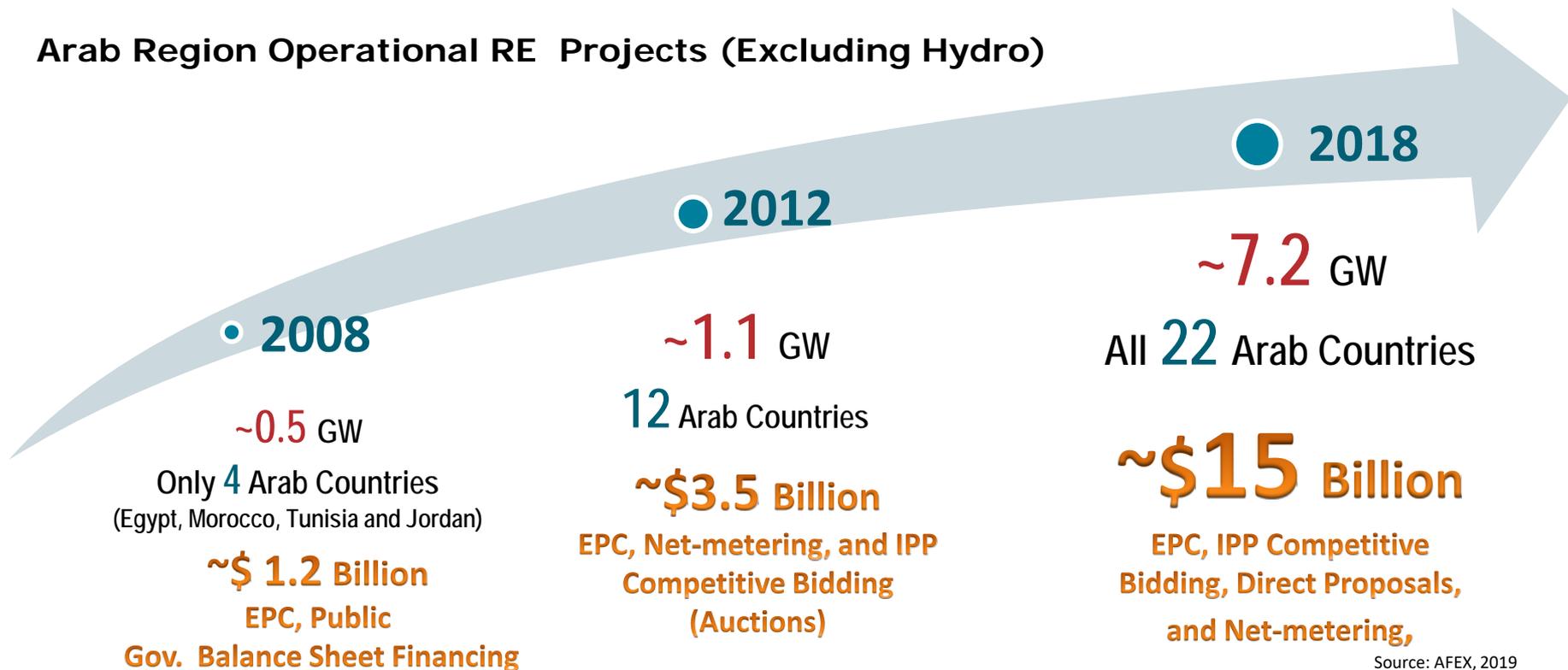


Secretariat in Cairo, Egypt with regional antennas and a pool of short-term experts



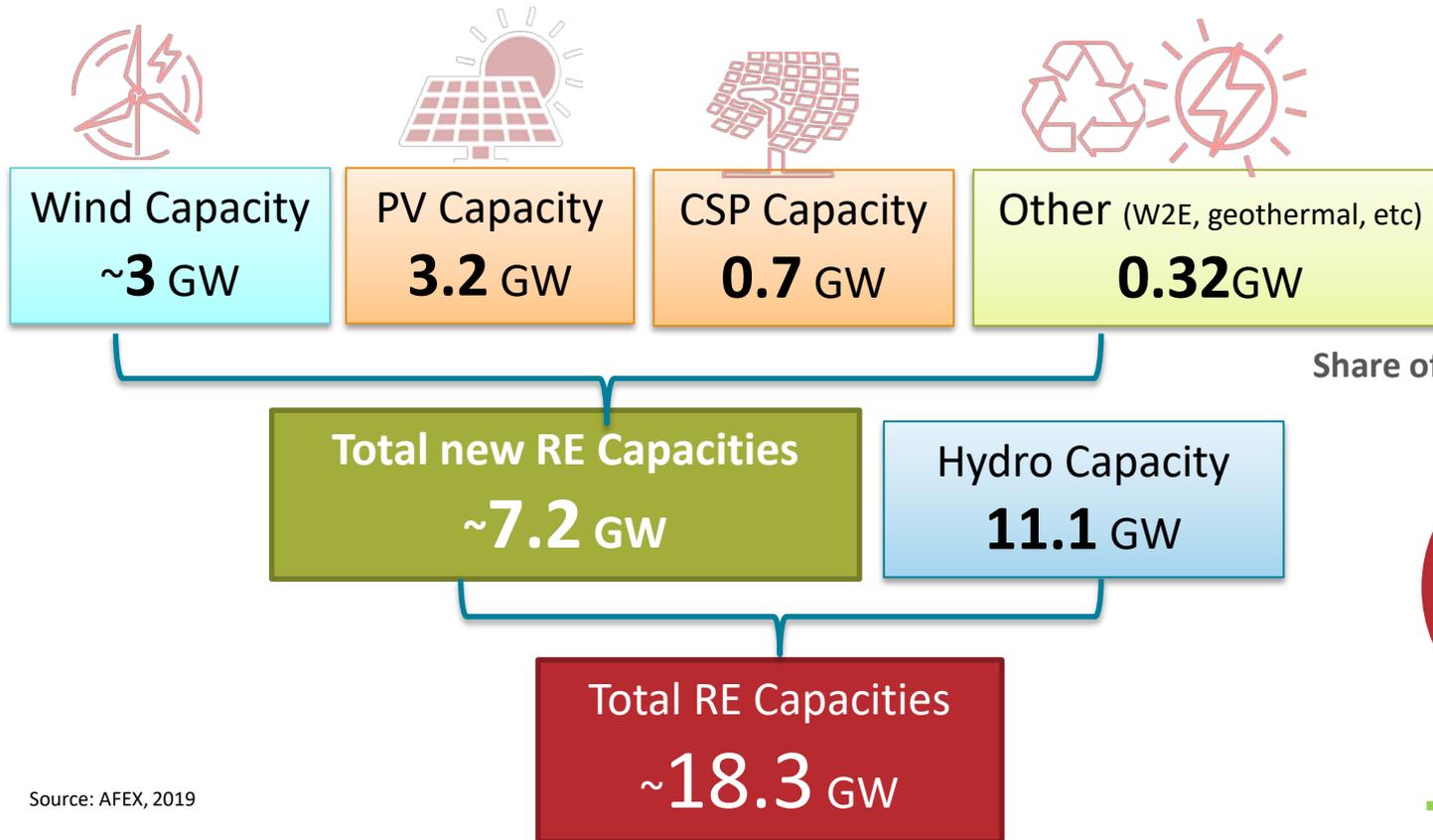
Arab Region RE Progress (2008 - 2018)

Arab Region Operational RE Projects (Excluding Hydro)

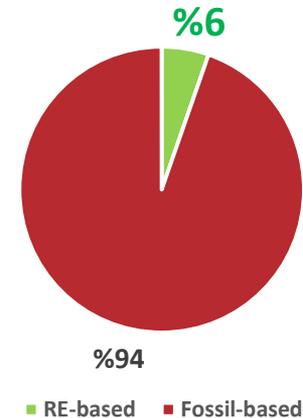


Source: AFEX, 2019

RE in the Arab Region: Operational Capacities (Dec. 2018)

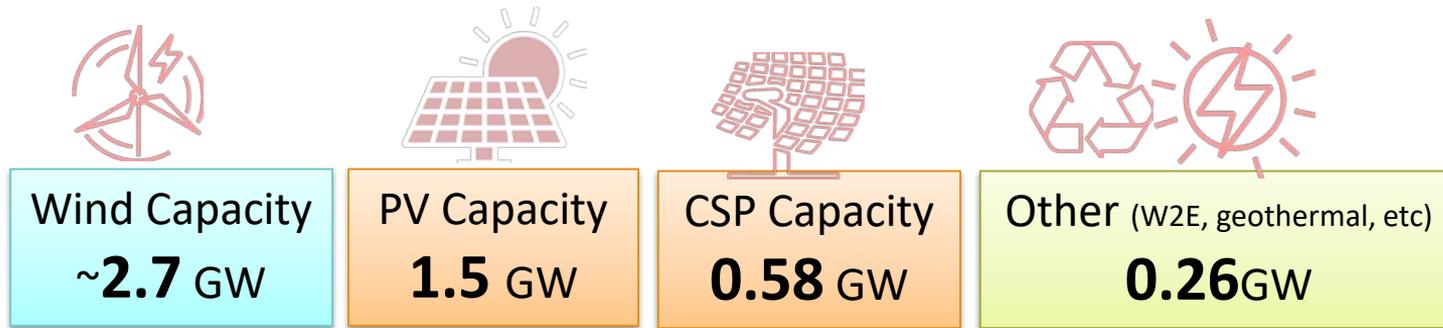


Share of RE in Installed Capacity



Source: AFEX, 2019

Operational Capacities – African Arab Countries (Dec. 2018)

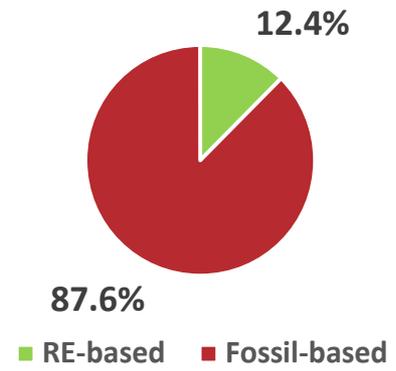


Total new RE Capacities
~ 5 GW

Hydro Capacity
6.9 GW

Total RE Capacities
~11.9 GW
65% of total Arab Region RE Capacities

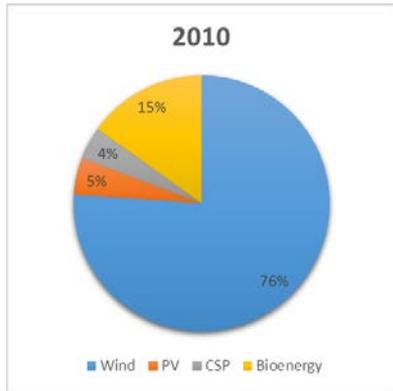
Share of RE in Installed Capacity



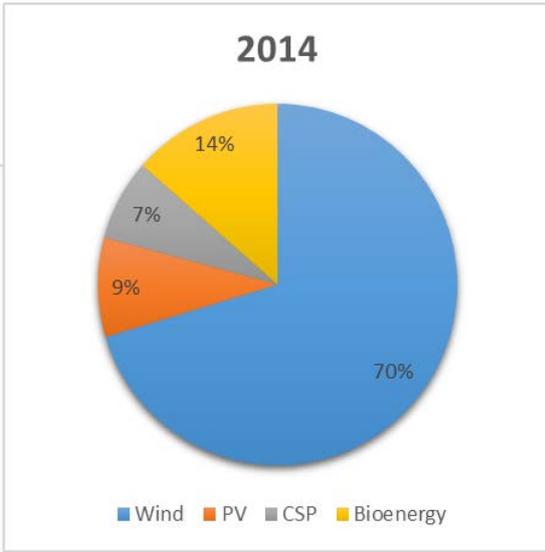
Source: AFEX, 2019

Arab Region Progress Highlights (2010 - 2018)

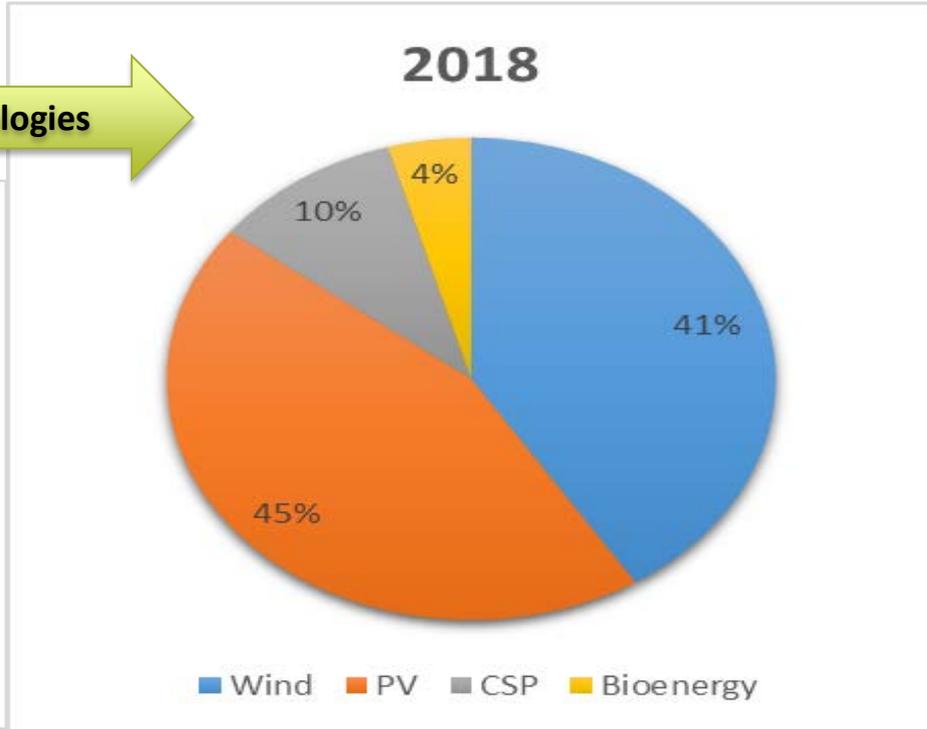
Market transformation from wind to PV technologies



~1.1 GW



~2.3 GW



~7.2 GW

Source: AFEX, 2019

Financing Instruments

- Solar PV projects in the Arab region have been financed using a **variety of instruments**, from grants to concessional debt and equity to purely commercial debt and equity.
- Various financing instruments can be distinguished by both:
 - the **level of risk** assumed by the entity funding the instrument concerned,
 - The **level of leverage** (the extent to which public funding mobilizes private finance) involved.



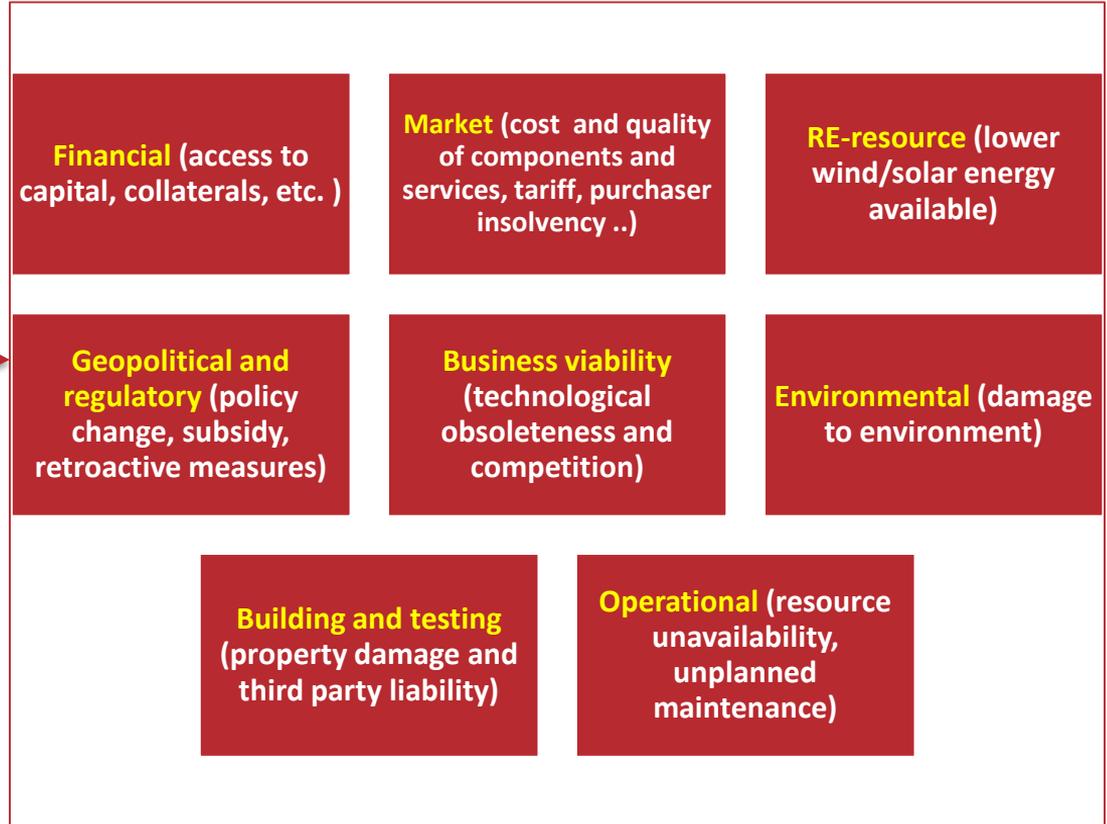
Financing Instruments

- Financing instruments to support scaling up PV can be broadly grouped into those used to:

- **overcome financing barriers** (e.g. as for underdeveloped financial markets)
- to **address the specific risks of PV investments**,
- address **both simultaneously** (e.g. When financial markets are not offering risk management instruments suitable for RE).



The cost of PV electricity is highly sensitive to financing terms.



Enabling Frameworks



Legal Framework:

- Defines supporting policy, development schemes and responsibilities



Regulatory Framework:

- Details the parties commitments and technical and contractual requirements



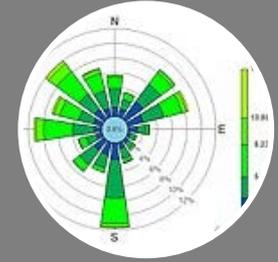
Tariff Framework:

- Defines both tariff structure and values



Contractual Framework:

- Provides standard templates for contracts

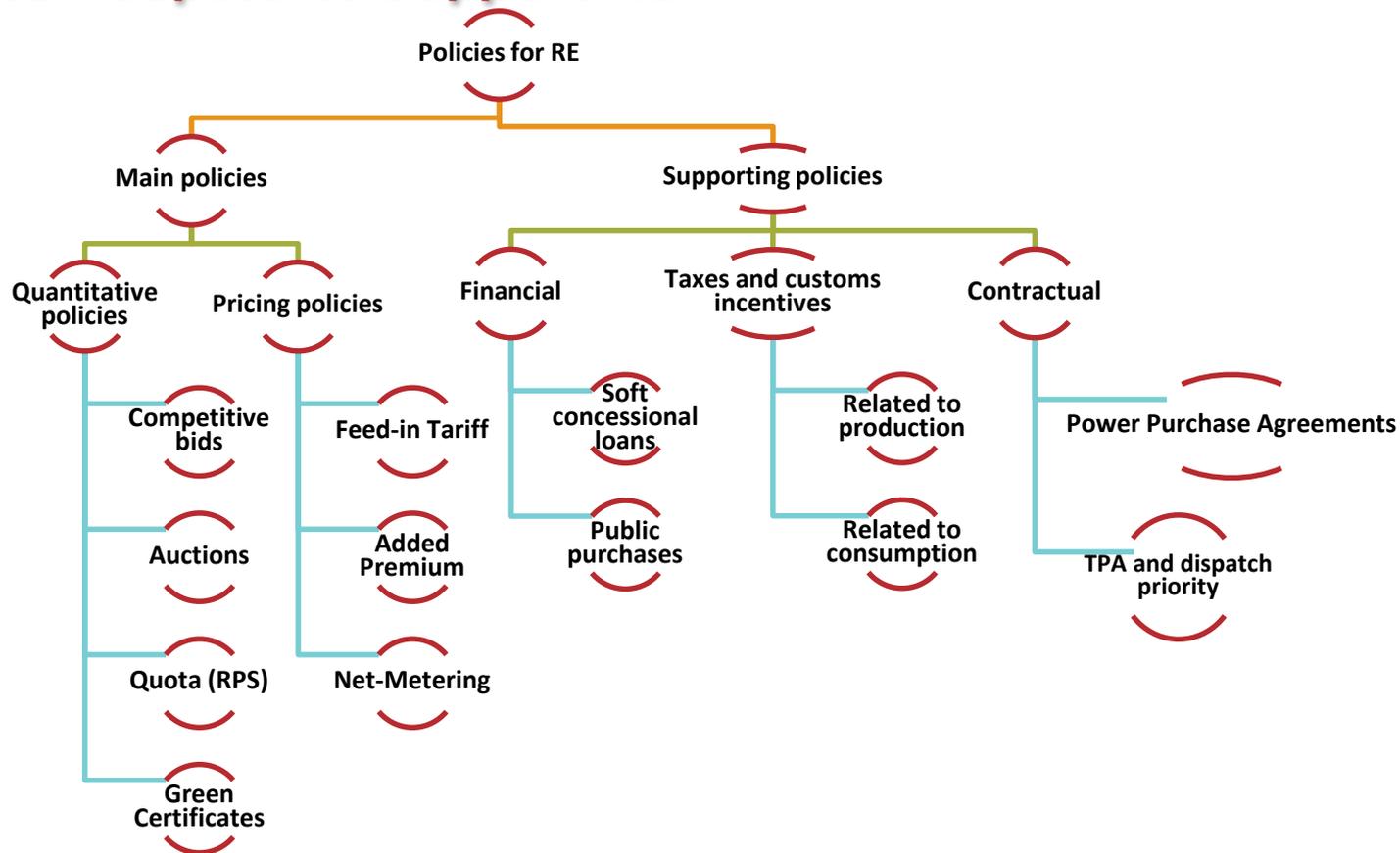


Supplementary Frameworks:

- Contains supporting mechanisms including; resource assessment, technology transfer, soft finance funds,...etc.



Policies Adopted to Support RE



Policies for Mobilizing Private RE Investments in Arab Countries

- The preferred policy option for **utility scale projects** in the region is the public **competitive bidding** and lately the process is adapted towards **“Auctions”** in many countries.
- **Feed-in tariffs are phasing out** for utility scale projects towards auctioning and bidding
- The adoption of **direct proposal submission** proved to be successful for the development of large-scale RE projects in some countries.
- **FiT and net metering** are emerging for **decentralized RE systems**.

Competitive Bidding and Auctioning

• At least 12 countries

Direct Proposal Submission

• 3 countries

Feed-in Tariffs

• 2 countries

Net Metering

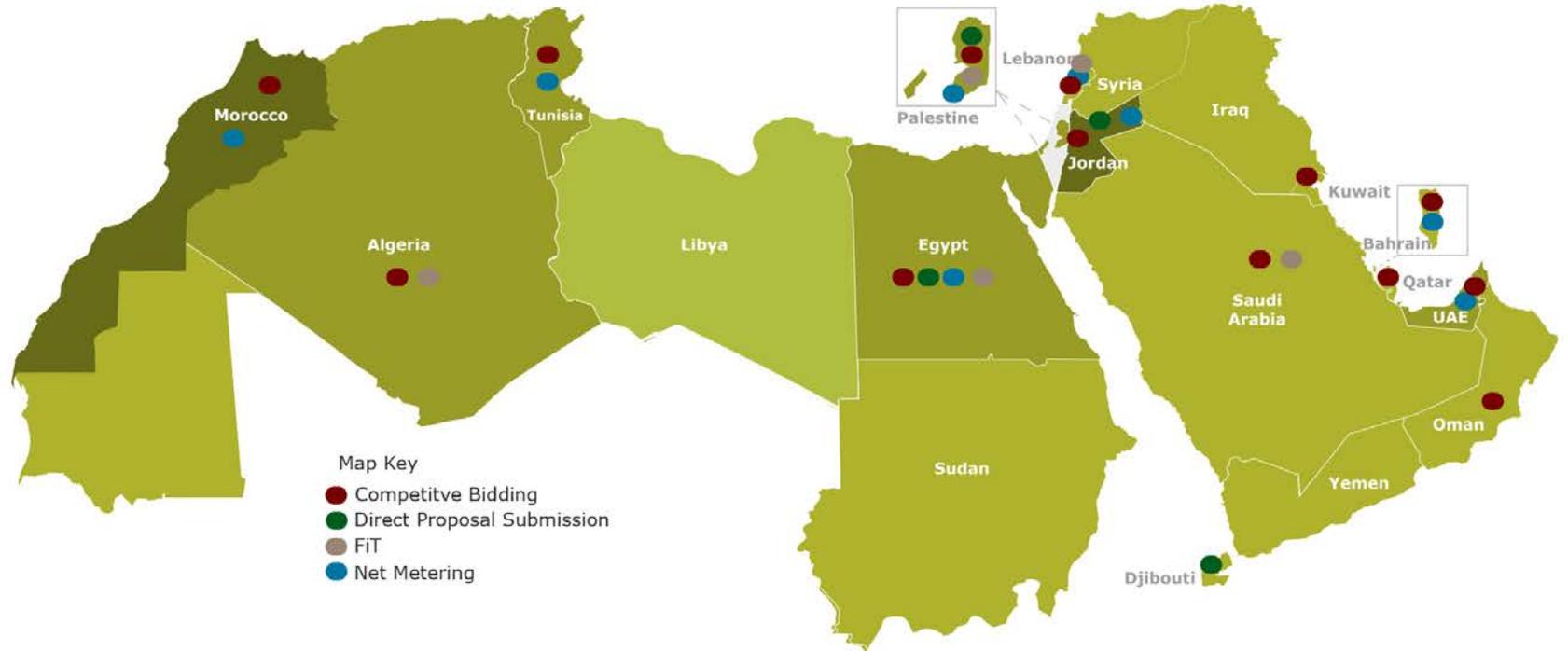
• 9 countries

EPC Contracting

• More than 17 countries

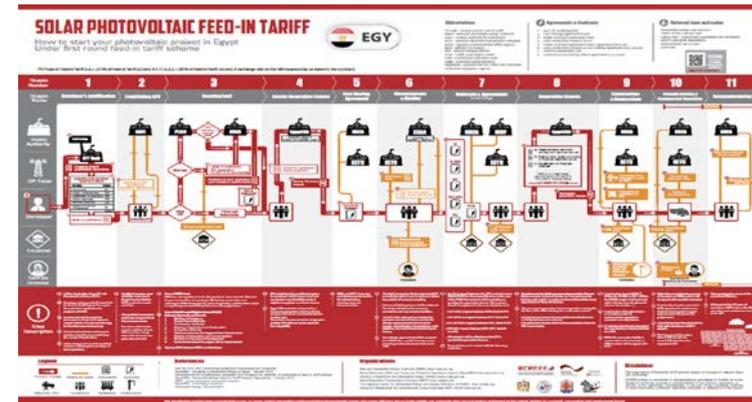
Policies for Mobilizing Private RE Investments in Arab Countries

RE Supporting Policies in Arab Region



IPP FiTs and Bids

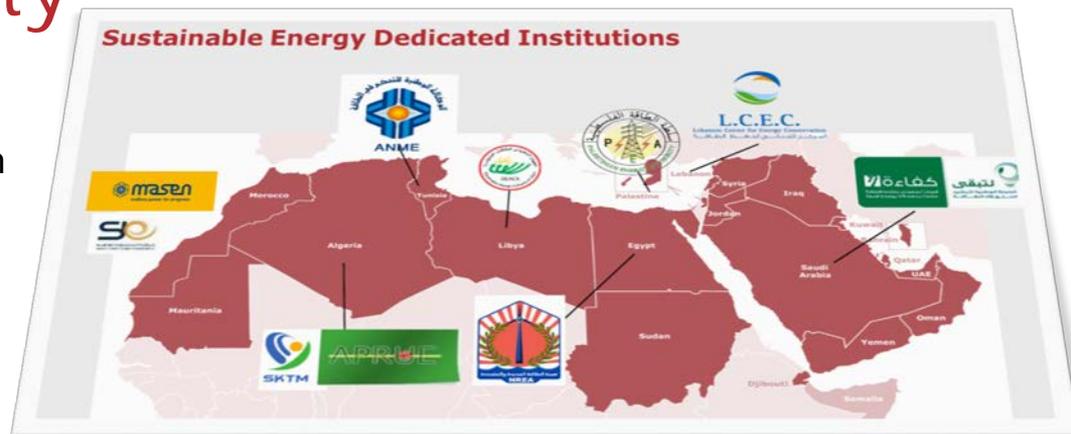
- Pre-defined FiT rates were adopted in many countries including North-Africa (Egypt, Algeria)
- In some cases projects faced difficulties to reach the financial closure under FiTs/Bids due to a host of reasons:
 - **Readiness of associated documents** such as the PPA, Grid Connection Agreement, Land Usufruct Agreement, Direct Agreement, etc.
 - Clarity of the **administrative process** and the large number of entities involved
 - Securing **foreign currency lending and arbitration** have been reported as subject of long discussion



Institutional Capacity

National institutional frameworks for RE deployment varies widely based mostly on

- **Political commitment** to RE
- Power sector **structure**
- Mandate and **relative influence** of different actors (ministry of energy, regulators, RE agency, utilities)

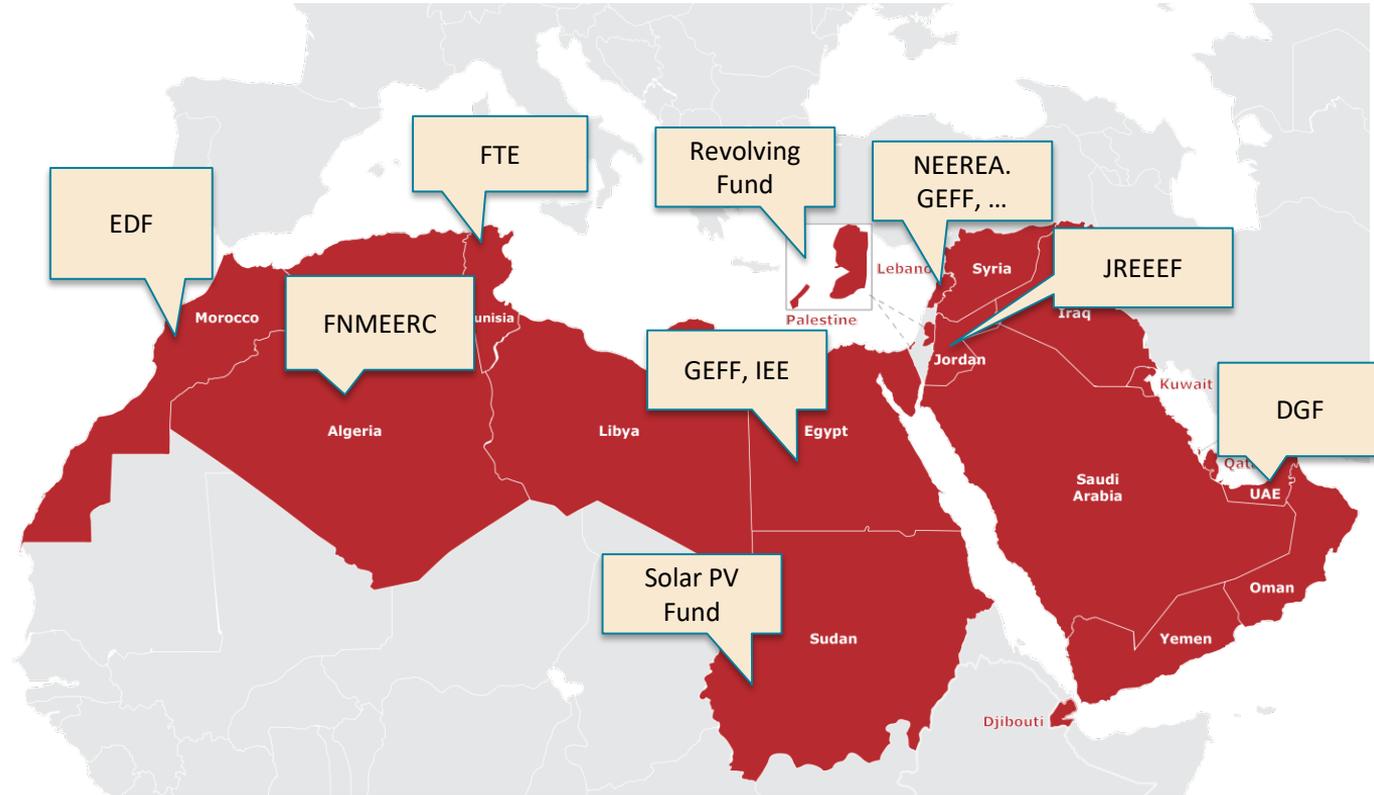


Main focus of existing RE related institutions:

- Barriers removal/ risks mitigation (investors confidence) → Resources assessment, zoning and land allocation, permits, etc.
- Quality assurance and certification
- Financial mechanisms and incentives
- Competitiveness of markets
- Technological advancements
- Socio-economic / environmental problems related to energy

Financial Resources/Instruments

Examples of Sustainable Energy Funds



Sustainable Energy Finance and Investment

- **Morocco, Egypt**, leads North Africa RE competitive markets, other countries are following with sizable project calls such as **Tunisia and Algeria**.
- The region has worldwide flagship solar and wind projects, with very competitive electricity prices, especially in **Morocco and Egypt**.
- Such prices are possible because of the excellent solar and wind energy **resources**, backed by **some concessional finance** coupled with policy **measures** to reduce the various **risks** and encourage investment.
- **Tunisia** leverages decentralized investments with pioneering financial solutions.
- International funding institutions are active in the region (WB, KfW, AFDB, EIB, IFC, EBRD, JICA, etc.)
- **Three** countries created state-backed private sector companies to invest in RE projects Masen/SIE in **Morocco**, SKTM in **Algeria**, and lately **Libya**.
- **Public private partnerships** and **corporate sourcing** of RE (captive markets) are getting increasing interest.
- **Most** countries directed **national oil companies** to launch investment programmes in RE.

Several factors are not typically considered in the “announced” project costs:

- Network upgrade, transmission, congestion or other integration-related costs;
- Significant permitting or other development costs, unless otherwise noted;
- Costs of complying with various environmental regulations (e.g. carbon emissions offsets or emissions control systems);
- Potential social and environmental externalities
- Import tariffs;
- Capacity value vs. energy value

Financial Resources/ Instruments

UNION OF ARAB BANKS RECOMMENDS TRANSITION TO GREEN BANKING

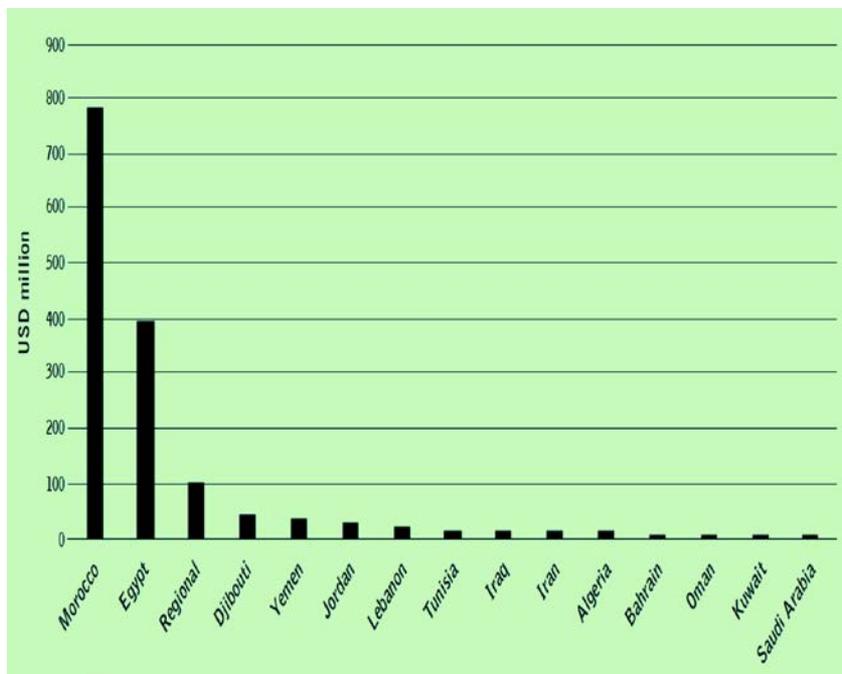


Arab bankers and representatives of central banks pledged at their forum on **26-29 July 2018**, Egypt, to work together to **develop a regulatory framework to encourage the Arab financial sector to actively contribute to financing sustainable development projects**. The meeting, organized by Union of Arab Banks (UAB), in cooperation with the Central Bank of Egypt, was held under the topic: Green Banking- the Road to Sustainable Development.

Lebanon and Morocco issued green bonds to help to finance the country's development of clean technologies. **Egypt** is developing also a green bond targeting several sectors.

The Arab's first corporate **green Sukuk** was launched in **UAE**

MENA Region: Climate Finance



Amount approved for MENA recipient countries (2003-2018)

Fund	Amount approved (USD millions)	Projects approved
Clean Technology Fund (CTF)	864.8	10
Green Climate Fund (GCF)	287.8	6
Global Environment Facility (GEF4, 5, 6)	108.6	47
Adaptation Fund	48.7	10
Special Climate Change Fund (SCCF)	43.6	8
Least Developed Countries Fund (LDCF)	35.1	8
Adaptation for Smallholder Agriculture Programme (ASAP)	23.0	4
Global Energy Efficiency and Renewable Energy Fund (GEEREF)	16.6	1
Partnership for Market Readiness	11.0	6
MDG Achievement Fund	7.6	2
Global Climate Change Alliance (GCCA)	3.4	1

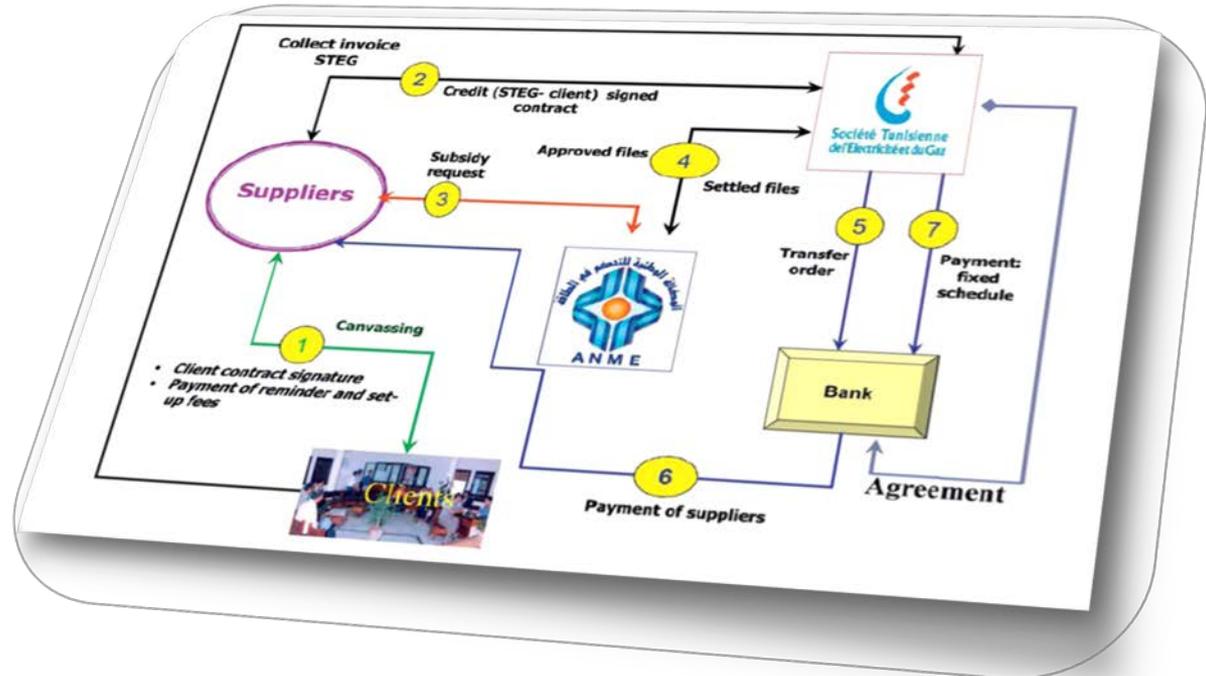
Examples of Funds supporting MENA region (2003-2018)

Source: Climate Finance Regional Briefing update : MENA
Charlene Watson, ODI and Liane Schalatek, HBS, Feb 2019

Engagement of Local Banks is a must ...

Additional measures for funds operations

1. Provision of (free) technical support to banks and clients through different initiatives
2. Using **web-based tools** to support decision making process
 - "Eligible"/"Qualified" solutions
 - Supplier's info
 - Service providers
 - Financial tracks (fast-normal!)



Tunisian Prosol-elec Success story (ANME, 2018)

System	Technology	Sub Technology	Manufacturer / Supplier	Model	Website	Phone Num.	E-mail
Building systems	Windows	Double-glazing type window	ARAUCO Egypt		202402222	saito@arabcoopt	
Building systems	Windows	Double-glazing type window	ECO House		0020 12 11 900 191		
Building systems	Windows	Double-glazing type window	ENTRA		122142400		

RE Targets in the Arab Countries



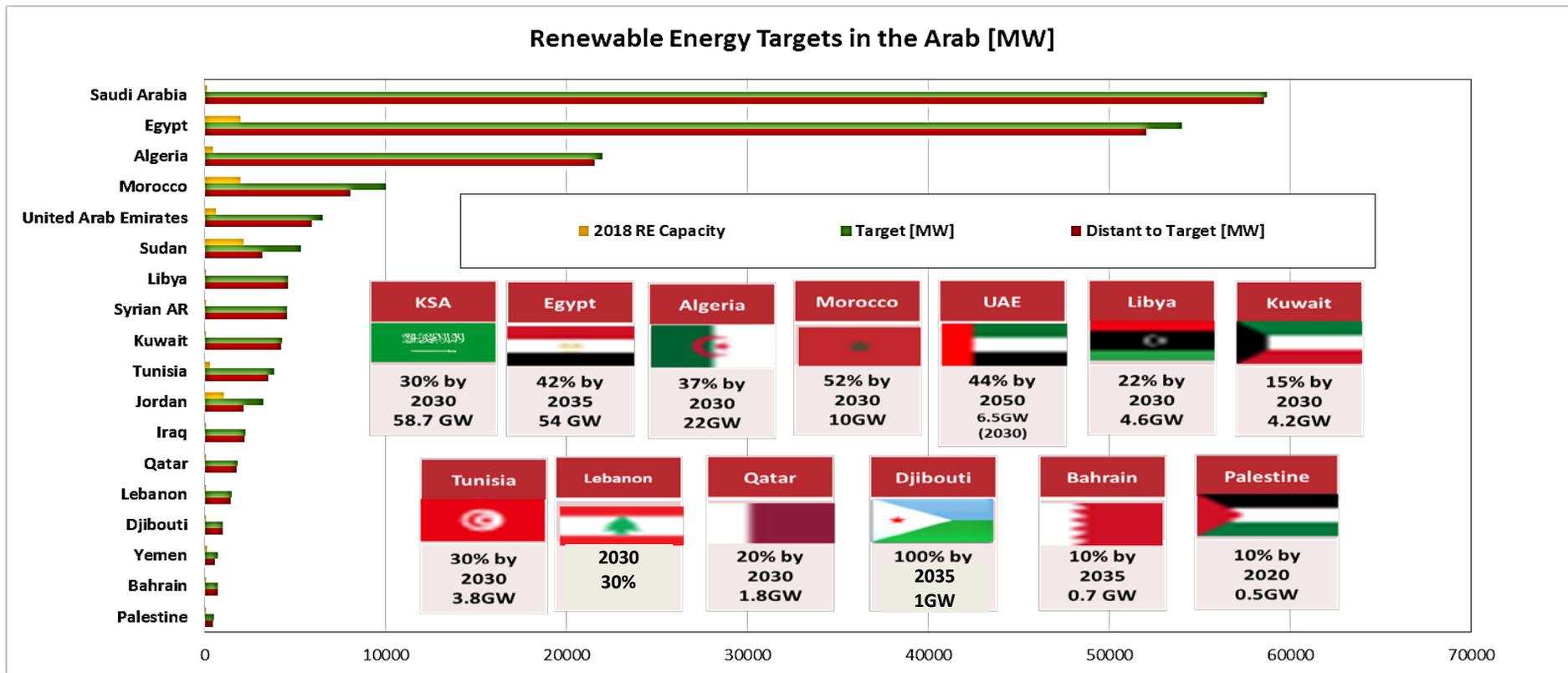
> 190 GW

Announced targets by 2035

Renewable energy business opportunities throughout the Arab region... estimated at over 30% of the global solar and wind growth!

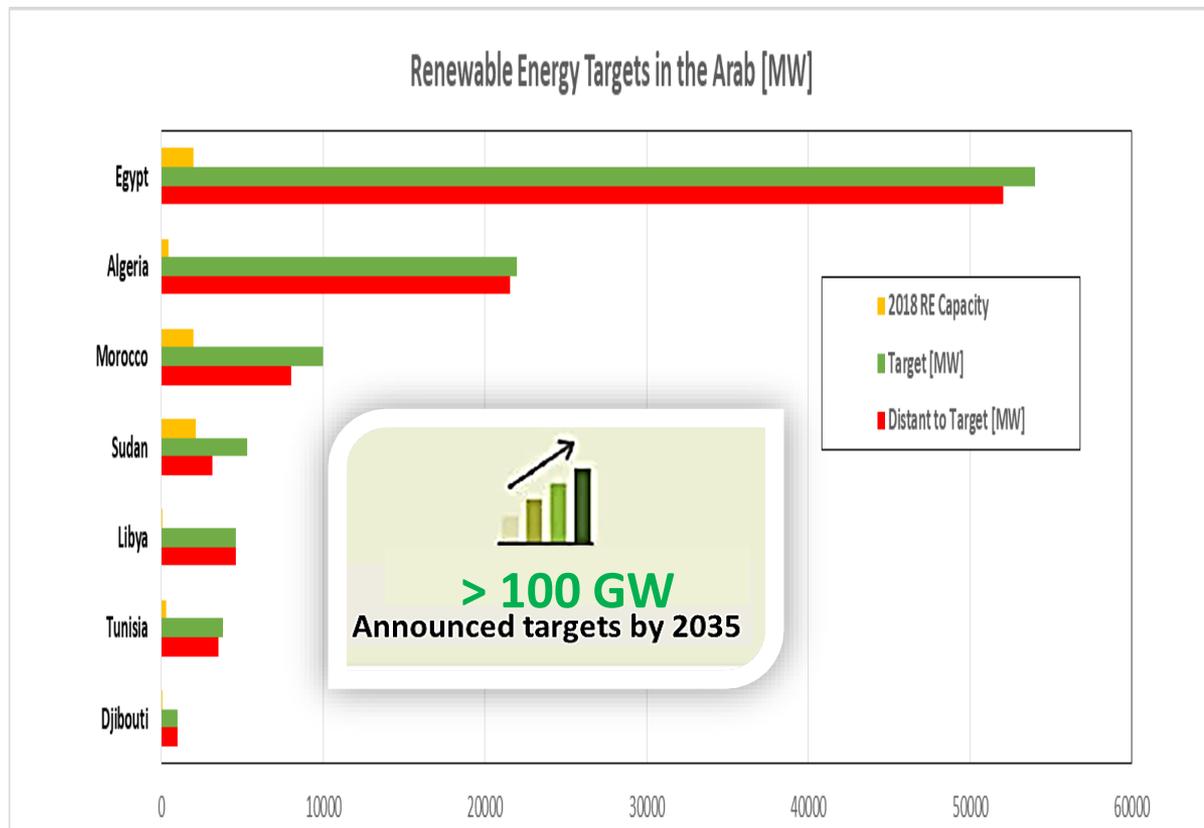


RE Targets in the Arab Region



Source: RCREEE- AFEX , 2019

RE Targets in 7 African Arab Countries



Source: RCREEE- AFEX , 2019

AREI

Africa Renewable Energy Initiative



Source: <http://www.arei.org/>

Requirements for RE Business Conducive Environment

Key factors for a compelling RE business in the Arab region are:

- Political commitment. Investors' **confidence** in the national market.
- Effective engagement (**partnership**) of utilities and state-backed private RE companies (equity)
- Clear set of bankable project **contractual documents** and efficient **administrative and licensing processes**.
- **PPA** in foreign and/or local currency (actual and deemed). **Tenor** (20-25 years)
- Project support (**grid connection**, zoning/allocation of land, fiscal **incentives**, **concessional finance**)
- **Securities** (senior creditor claims are covered in all termination events)
- **Credit support** through the government for off-takers

Market size and profitability

Developed and transparent legal and regulatory system

Developed infrastructure

Stability and strength of local currency

Political and economic stability

Ease of setting up a business / local licensing

Allowance for foreign ownership of property / business

Country's foreign investment track record

Presence and readiness of solid financial institutions

Presence of high quality partners

Capital Markets history – level of maturity

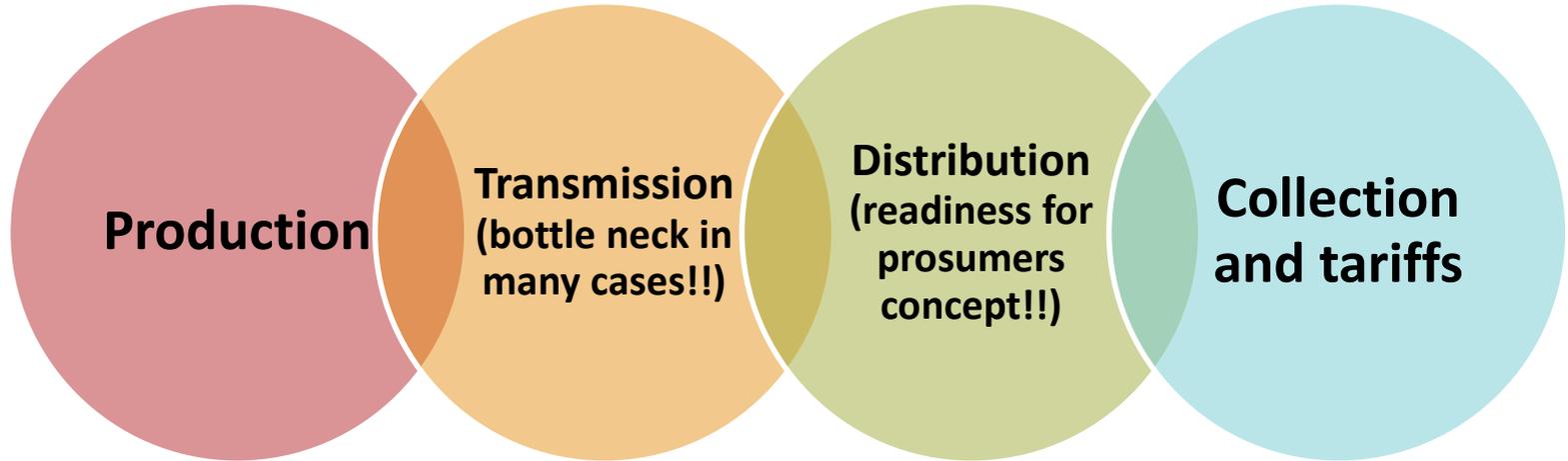
Bi/multilateral investment treaties in place

Available and competitively priced fuel /subsidy reforms

Clear safety and environmental standards and labor laws

Liquidity/exit strategy

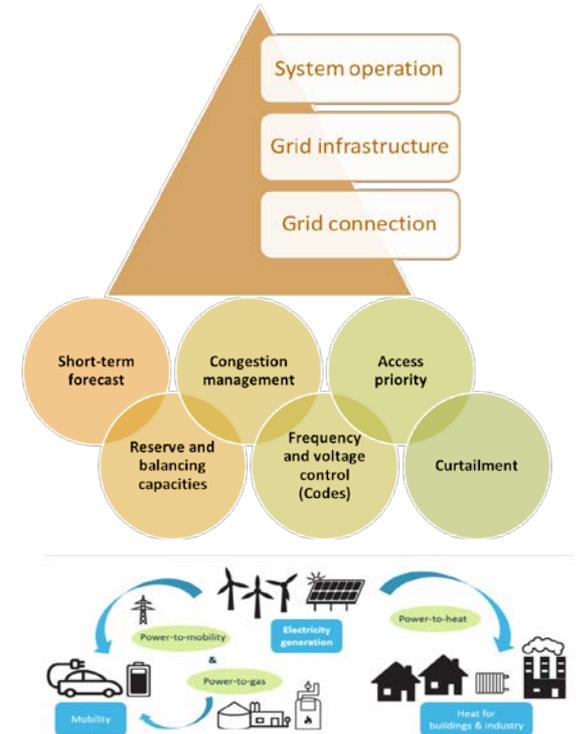
Mobilizing RE Finance: Linkages



Mobilizing RE Finance: Linkages

- Although many RE technologies have reached reasonable degree of maturity however adequate **finance is still needed** to:
 - improve its **integration** with the current power systems
 - improve its **reliability**
 - reduce the need for **balancing energy**
 - improve energy **storage techniques**
 - transition to wider deployment of green **“power to X”** solutions.

thus support is needed for **boosting different solutions** as well as to ensure the necessary cash flow for development.



<https://www.cleanenergywire.org/factsheets/sector-coupling-shaping-integrated-renewable-power-system>

Conclusions

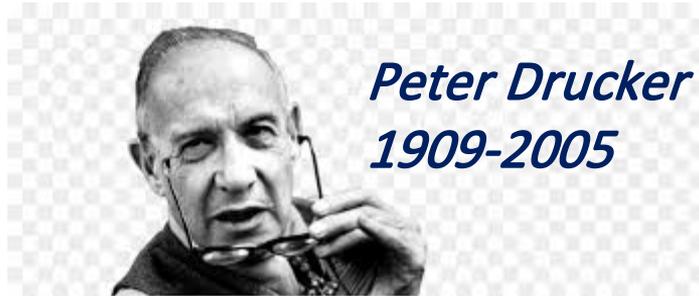
There is clear commitment to **embrace strong forward thinking policies** and capture the immense **value of the RE business**.

RE development depends on establishing a conducive investment environment. Accordingly, it is the role of the government is to establish **the conducive investment environment more than investing public money in RE**.

The **market response** to the RE business has been **overwhelmingly positive**, demonstrating **market confidence** in the vast RE potential and **investment environment**.



“The best way to predict your future ...
is to create it.”



Thank You



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