

OVERVIEW OF PAN-ARAB REGIONAL ENERGY TRADING PLATFORM (PA- RETP)

Translating the PAEM vision into actions



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World Bank study found significant potential benefits from increased electricity integration and trade in MENA

- Electricity demand in the region is expected to grow by 84% in the 2010-2020 timeframe
- To meet this demand, investments of US\$450 billion to add 135 GW of new capacity is needed
- Fully operational regional network would reduce the need for new capacity by 33 GW – the equivalent system capacity of Jordan, Bahrain, Tunisia, Lebanon, Libya, and Morocco COMBINED
- Investment savings could be US\$17-\$25 billion, depending on technology

Despite the high benefits potential in regional trade among Arab Countries, utilization of existing regional infrastructure is modest (~10%) and generation capacity is under-utilized (~42% CF)

41%
of world gas reserves

20%
of world gas production

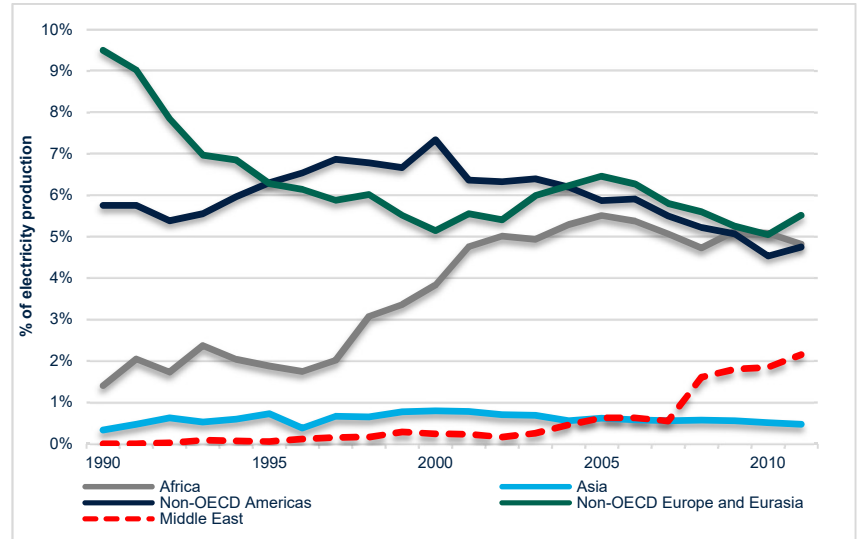
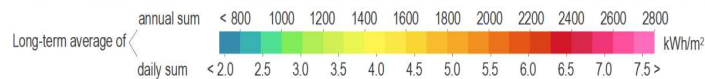
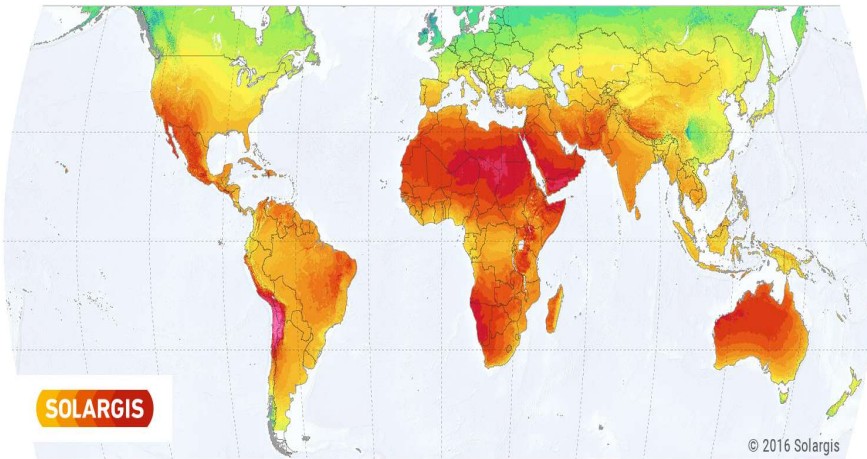
Only 10% of MENA exported gas is traded in the region

~10%
utilization of existing regional interconnections capacity

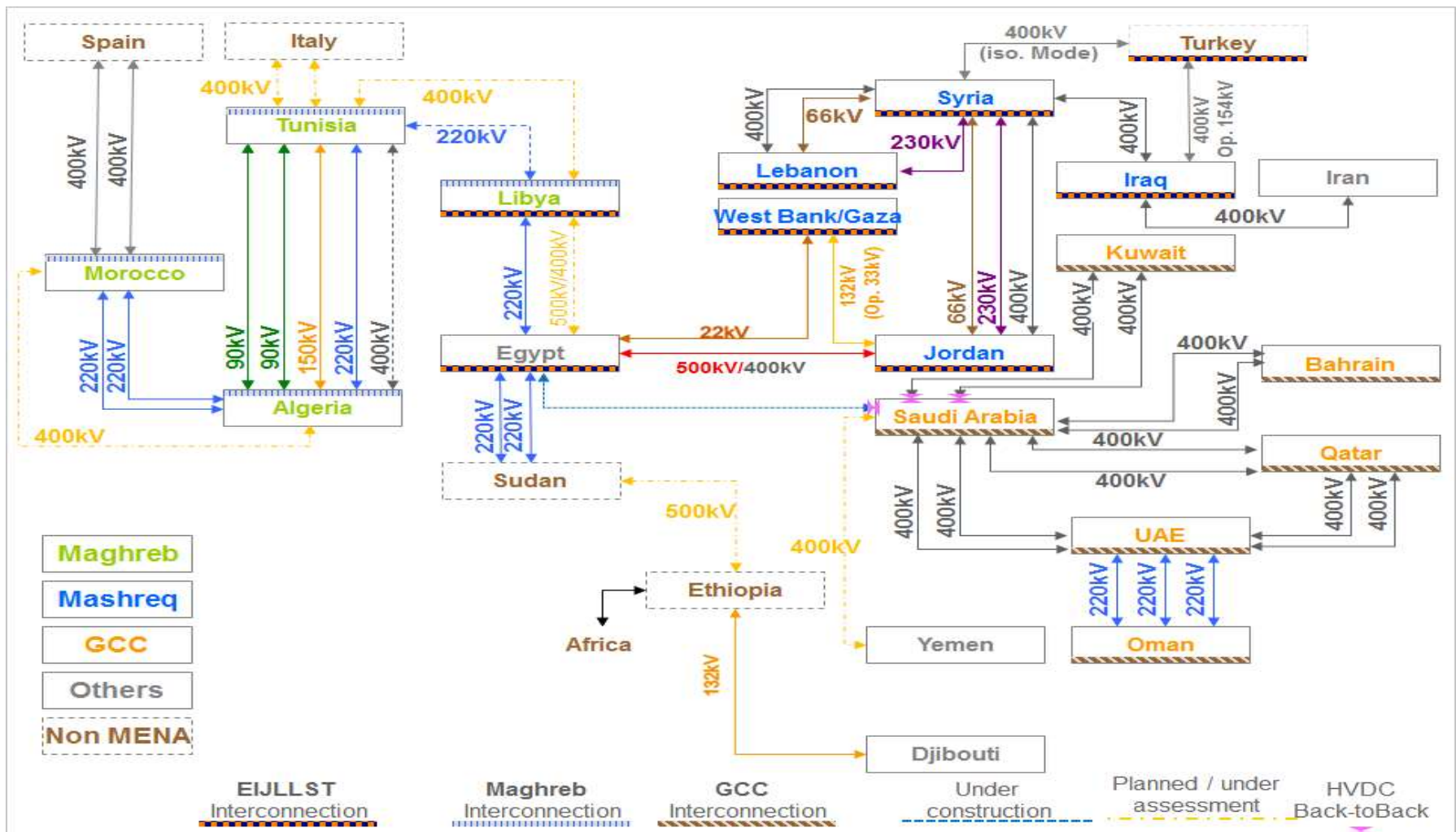
42%
utilization of generation assets

Only 2% of produced electricity was traded in the region in 2010

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There are already a lot of existing and planned interconnections between MENA Countries but they remain underutilized



Multi-dimensional challenges impeding electricity trade

- Despite potential benefits, only Morocco-Spain, Egypt-Gaza, and Jordan-West Bank interconnections reasonably utilized
- Technical and structural challenges:
 - Limited reserve margin
 - Lack of harmonized regulatory framework with clear rules governing electricity trade
 - Lack of consensus on electricity pricing
 - National electricity subsidies
 - Governing bodies lack tools, data, and incentives to promote trade

Guiding principles of the PA-RETP as a launch pad for Arab countries to advance energy trade, and implement and monitor the development of PAEM

Partnerships

- Governments and sector entities in Arab countries, and regional TSOs, e.g. GCCIA
- League of Arab states (LAS)
- IFIs: IsDB, ADB, AFESD, EU, and others
- Private arm of IFIs, e.g. EBRD and IFC, and private sector
- Regional initiatives, e.g. MEDREG, UfM, etc.

Ownerships

- LAS
- Country and sub-regional TSOs
- Countries that approved the PAEM MOU
- Nominated country officials for the PAEM's ISO
- Champions from the regional gas trade vision

Leveraging WB comparative advantage

- Convening power to build political momentum
- Project design skills
- Financial solutions options (financing and credit enhancements)
- Crowd in international resources using innovative financing mechanisms

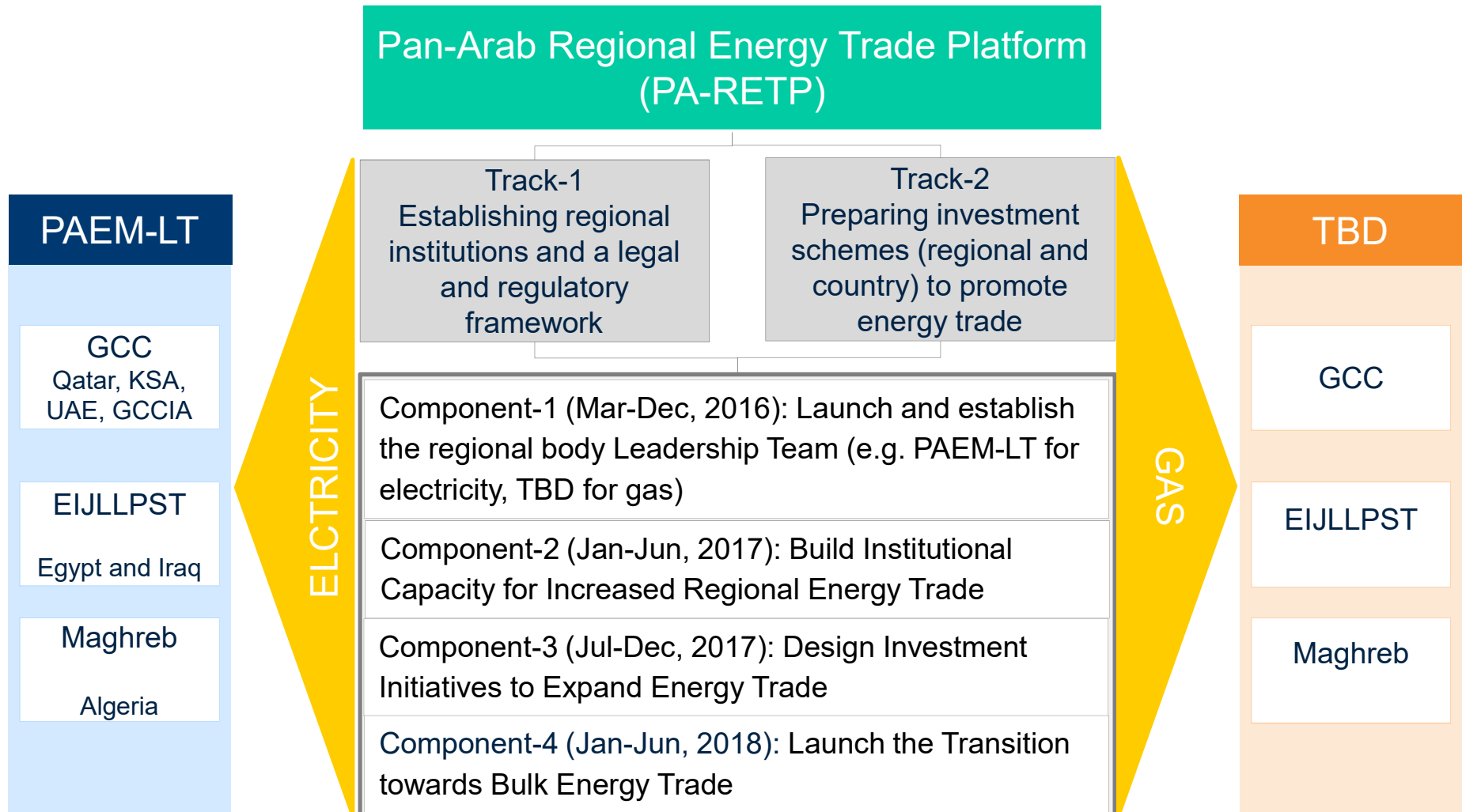
In order to Realize the Benefits of Regional Trade:

- The World Bank and its partners have embarked on the Pan – Arab Regional Energy Trade Platform (PA-RETP) initiative to help the Arab countries realize the benefits of regional trade
- Benefits of regional trade can be realized now in advance of market reform, but there is a need to put in place the enablers for regional trade:
 - Pricing mechanism
 - Regional institutions
 - Investments

PA-RETP is a continuation of previous projects implemented with the League of Arab States (LAS) and member countries

- Previous projects identified the significant benefits of regional energy trade and established a shared vision for regional cooperation on electricity and the transition towards the Pan-Arab Electricity Market (PAEM)
- This included development of a number of governance documents, and identification of a number of priority projects to support regional energy trade
- Key among the governance documents is the MOU to create the PAEM, which was signed and ratified in 2016

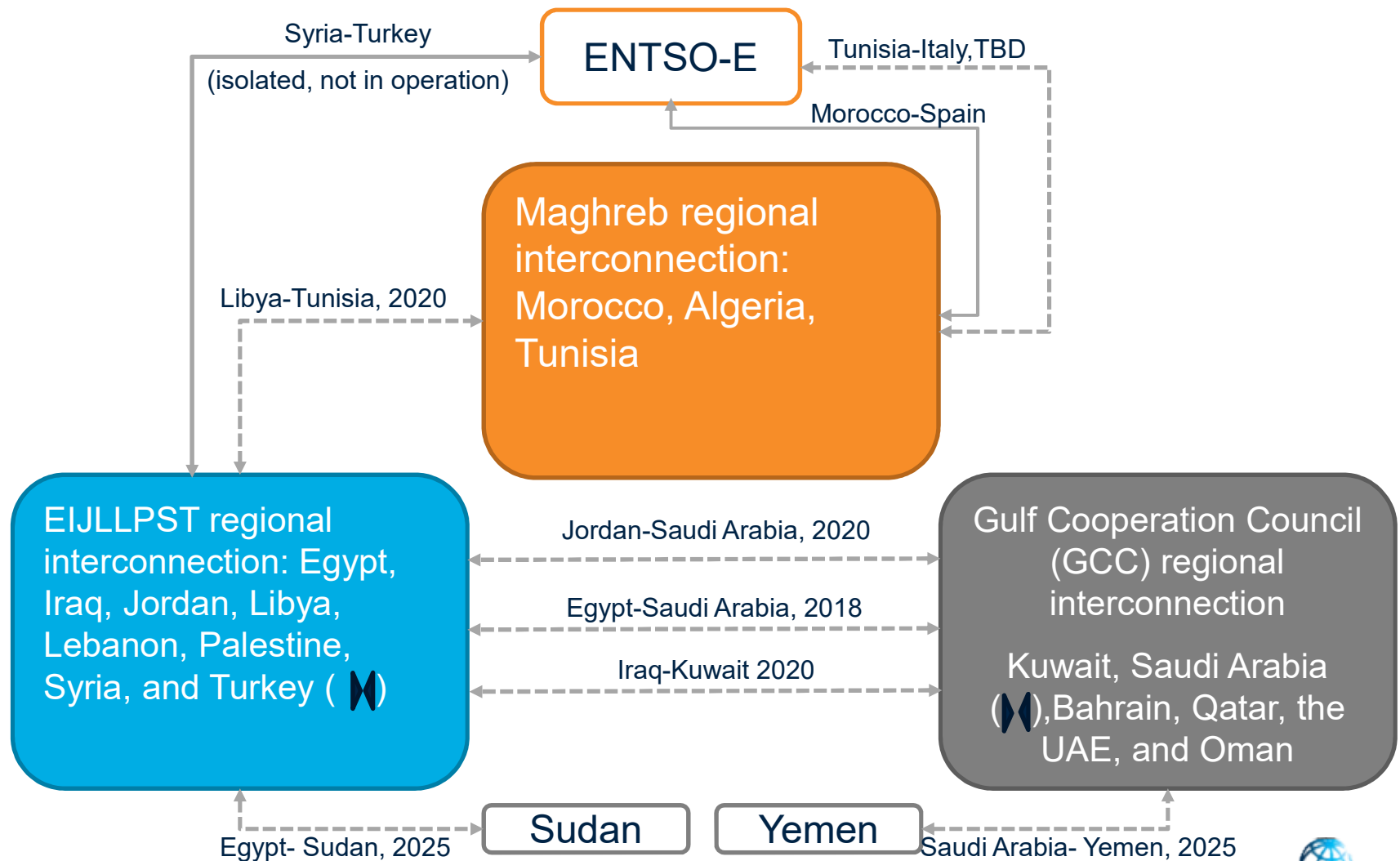
PA-RETP's scope: two parallel tracks implemented through four components to support electricity and gas trade



Scope supporting the PA-EISO and PA-ARC development

- The first component is expected to include development of the institutional framework of the regional electricity independent system operator and the regional regulatory authority, including:
 - Structure
 - Mandate
 - Bylaws
 - Business plan and budget
- The second component is expected to include expanding role of the PAEM-LT and LAS to become a formal Pan-Arab Electricity ISO (PA-EISO) and Pan-Arab Advisory and Regulatory Committee (PA-ARC)
- The third component anticipates development of documentation governing commercial and technical transactions in the regional electricity market
- The fourth component anticipates the WBG and its partners providing support to the PA-ETSO and designated regional bodies and the development of financing mechanisms for infrastructure projects to support regional trade

PAEM's regional strategic investment requirements are defined— alignment with national grids' investment plans is now timely to pave the way for a resilient and reliable PAEM's grid for high RE share



THANK YOU