

ESCO Market in MENA: Challenges vs Opportunities

Clean Energy Business Council
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Middle East & North Africa
الشرق الأوسط وشمال أفريقيا

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Chair of CEBC

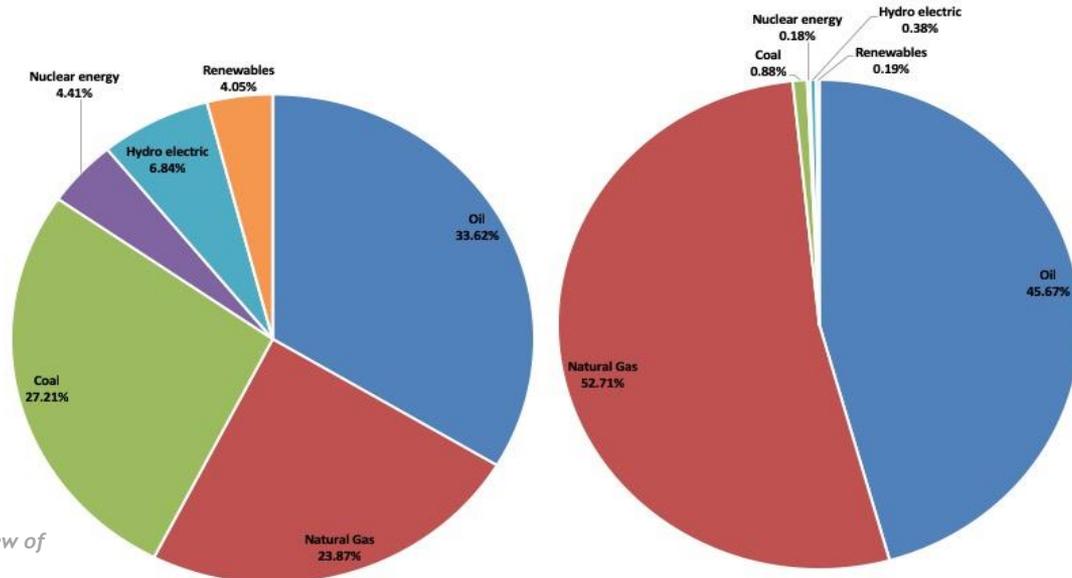
Agenda

- Energy use in MENA Region
- Why Energy Efficiency?
- Regional ESCO Experience
- Role of ESCOs
- Role of the Clean Energy Business Council

Oil & Gas Dominate Energy Consumption in Middle East/GCC

- Oil & Gas account for 98.4% of ME energy consumption
- Energy consumption increased by 2.4% in 2018, below the 10-year average of 3.8%
- Renewables have been growing rapidly (+34% yoy in 2018), but still represent a negligible part of energy demand (0.2%)

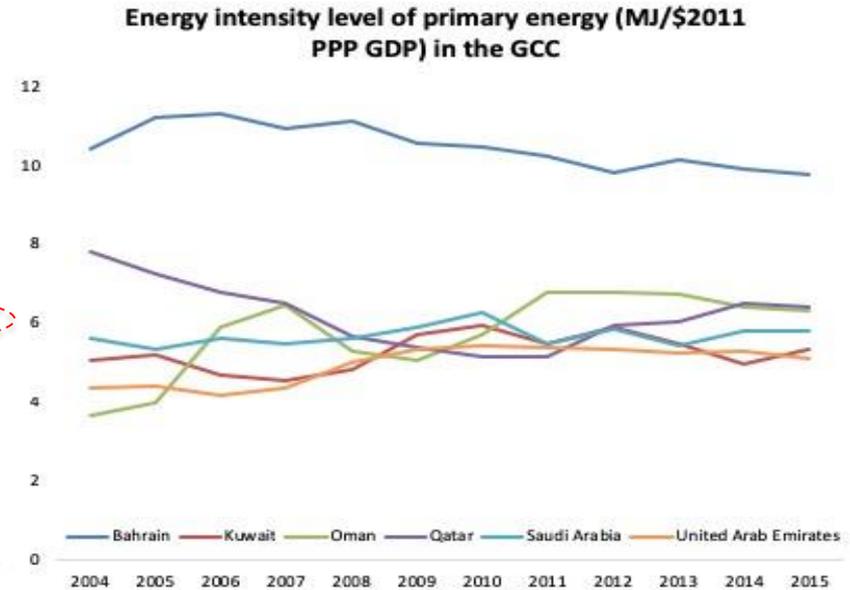
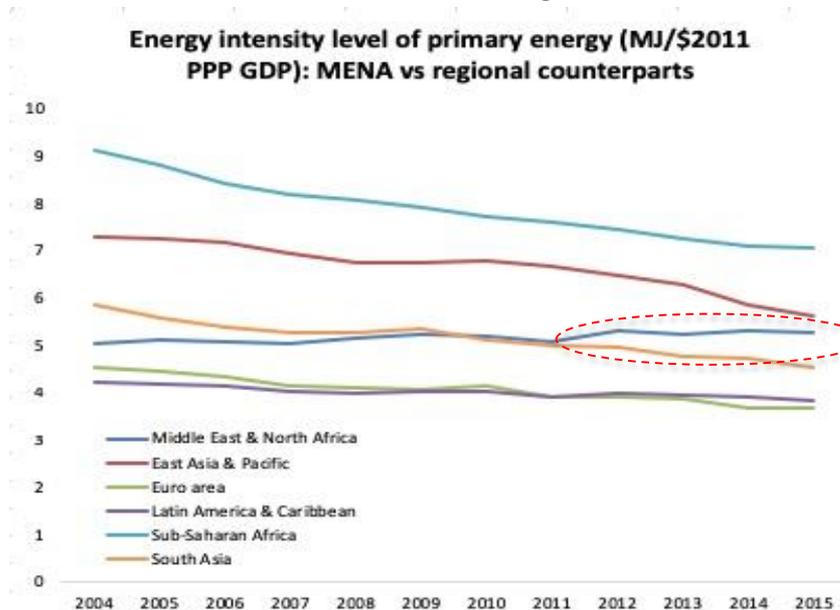
Primary Energy Consumption by Source, Global vs. Middle East



Source: BP Statistical Review of World Energy 2019

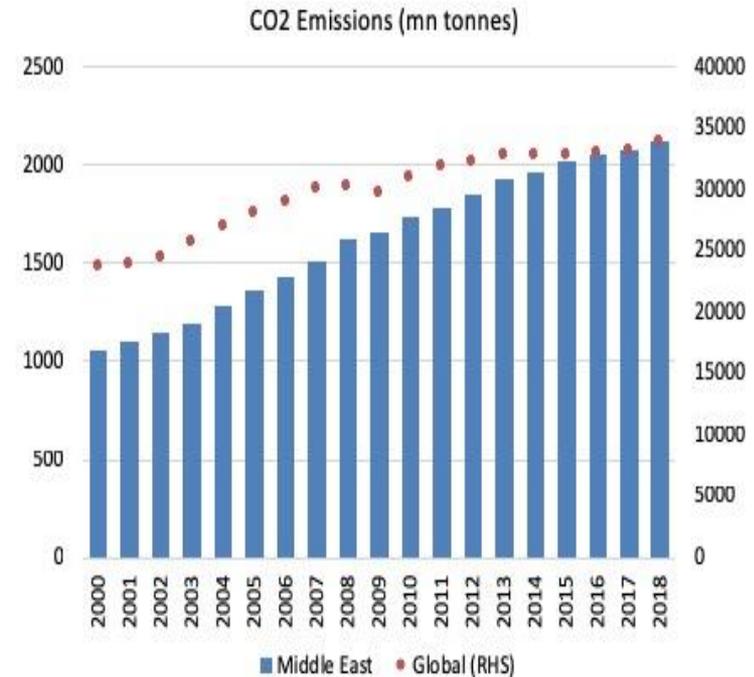
Energy Intensity in MENA continues rising, defying downward global trend

- Energy intensity (energy used per unit of GDP) in MENA exhibits highest growth since 2009, while declining in all other regions
- GCC countries have some of the highest per capita energy intensities in the world: subsidies distort incentives & encourage waste



Why Focus on Energy Efficiency? Decouple Energy Consumption from GDP Growth

- Middle East's share of global emissions reached a record 6.3% in 2018, while share of global GDP is 3.3%
- Energy Reducing GHG emissions requires deploying low-carbon energy + improving the efficiency of energy consumption
- Energy efficiency measures are low-hanging fruit: moderate adoption could reduce energy demand by 25-50% by 2030
- Demand-side EE measures: significant & most cost-effective
- Buildings are the major energy consumers with 60% of electricity consumption



Source: World Development Indicators, World Bank

Energy Efficiency Measures: Benefits & Challenges

- Reforming energy pricing structures;
- Introducing standards for the efficiency of buildings, vehicles and appliances;
- Raising consumers' awareness of energy-efficient practices;
- Boosting EE in government owned assets by direct action to set the example; and
- Introducing technologies such as smart meters, light-emitting diode (LED) lighting, reverse osmosis desalination and district cooling

Benefits

- Reduced spending on power generation and transmission
- Improved competitiveness of industrial firms
- Reduced costs for residents and businesses the possibility of increased hydrocarbon exports
- Reduced stress on government budgets
- Environmental benefits (reductions in air pollution + lower GHG emissions)

Barriers

- Lack of awareness
- Up-front costs
- High costs of retrofits
- Low organisational priority
- Mismatched incentives (e.g. Short-term tenant pay the bills)
- Fragmented ownership (e.g. Many offices/ apartments in one building)
- Lack of appropriate finance and technologies

ESCO Experience in the region

- ESCOs are a major tool for EE, a valuable way of introducing new tech, reducing waste and delivering energy savings
- Initiatives mostly driven by government; need greater private sector involvement
- Distinctive feature of ESCOs is “performance contracting”: risk sharing for the delivery of the energy saving measures they propose to a client
- Dubai first in region to formalise energy management through a **demand side management (DSM) strategy** resulting in the formation of the **Etihad Master ESCO**
- In 2017, Saudi Arabia’s PIF set up a **Super ESCO**, designed to promote energy efficiency in government and public buildings

GCC’s Energy Efficiency Targets

Country	Target	Year
 Bahrain	Reduce electricity consumption by 6%	2025
 Kuwait	Improve generation efficiency by 5%	2020
	Improve generation efficiency by 15% and reduce energy consumption by 30%	2030
 Oman	Reduce greenhouse gas emissions by 2%	2030
 Qatar	Reduce per capita electricity and water consumption by 8% and 15% , respectively	2022
 Saudi Arabia	Reduce electricity consumption and peak demand by 8% and 14% , respectively	2021
 United Arab Emirates	Reduce power consumption by 30% (in Dubai) below business as usual	2030
	Reduce carbon footprint of power generation by 70%	2050
	Increase energy consumption efficiency for corporates and individuals by 40%	2050

The Way Forward for EE reforms

- **Energy efficiency** is first step in climate risk mitigation and decarbonisation; it needs to be coupled with **renewable energy policies** to change a country's energy usage pattern
- **Current basis of EE policy:** mandatory policies including minimum energy performance standards, fuel-economy standards, building energy codes & industry targets
- **EE quantitative policy measures need to be complemented by fiscal and financial incentives:** carbon taxes, removal of oil subsidies, tax relief on building renovations and electric vehicle purchases, public financing and the use of market-based instruments
- **Increasing energy efficiency can also support advancement of renewable energy via:**
 - reducing energy demand => easier to achieve a given renewables target share;
 - shaping energy demand using measures such as peak sharing, demand response & real-time pricing can support the integration of variable RE technologies into grid;
 - reforms in energy pricing can level the playing field for renewable energy technologies;
 - introduction of electric vehicles can help pave the way for integration of renewable electricity in the transport sector;
 - the ongoing shift towards energy-efficient reverse osmosis creates an opportunity for powering the desalination sector through renewable electricity.

Clean Energy Business Council

- **What Is the CEBC?** The CEBC is an NPO, NGO, membership association bringing together leading local, regional and international businesses, organizations, government entities and individuals in the MENA clean energy & clean tech sector
- **Our Purpose:** CEBC seeks to be the leading regional forum focused on raising awareness and supporting the development, investment and deployment of clean energy & tech in the MENA region
- **Our Focus Areas**
 - Energy & Water Efficiency
 - Renewable Energy Investment
 - Implementation of CE & CT - Financing, Legal, & Structural Mechanisms
 - Social Impacts of CE and CT Development

CEBC Activities & Working Groups

- **CEBC Working Groups** - Future Mobility, Energy Efficiency, Climate Finance and Women in Clean Energy (WICE)
- **Advocacy** - Endorse adoption of CE & CT policies by public authorities
- **Research** - Conduct & partner on research efforts to drive CE & CT solutions
- **Leadership Series** - Provide forum events for dialogue between policy makers and industry leaders
- **Collaborations** - IRENA, UNEP, WB/IFC, DEWA, EU-GCC CE Network
- **Maintain geographic database of 100+ renewable energy projects** from throughout MENA
- **Country Missions** - Initiate discourse on CE & CT policy frameworks with government stakeholders in MENA countries
- **Outreach events** - Host workshops and seminars throughout the year on a range of CE and CT topics

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Thank you for joining us!

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<http://www.cleanenergybusinesscouncil.com>