

Middle East  
Energy Dubai

Explore. Empower. Energise

# Transitioning the Middle East into the Future Energy Era

An Outlook by

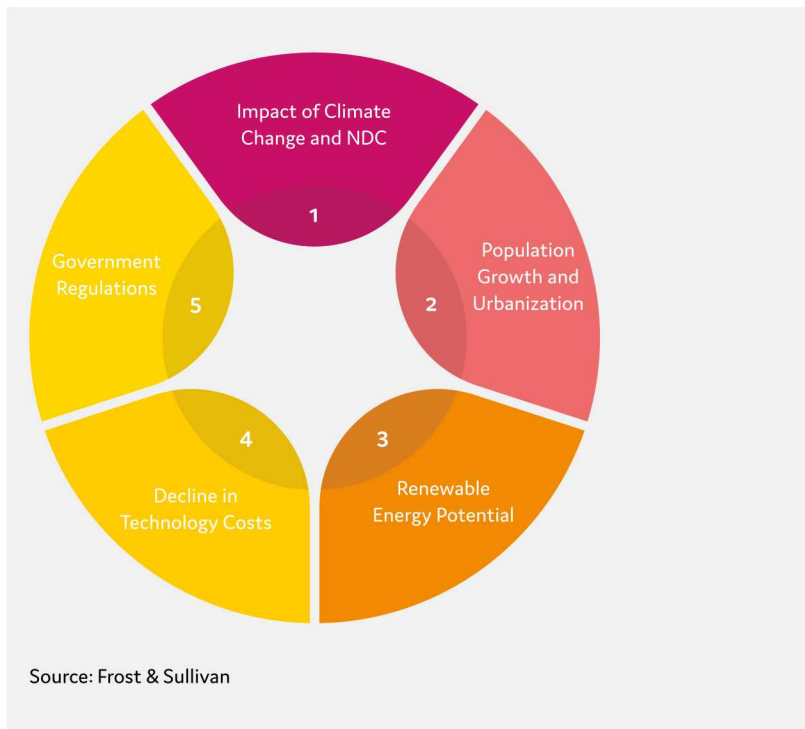
FROST & SULLIVAN



# Introduction

The energy sector is undergoing a major transition toward a decentralized, decarbonized, and digitalized future. This transition is now steadily making its way over to the Middle East, where nations are attempting to improve energy security (by reducing dependence on fossil fuels), reduce emissions, and enhance the future resilience of energy sector-related investments.

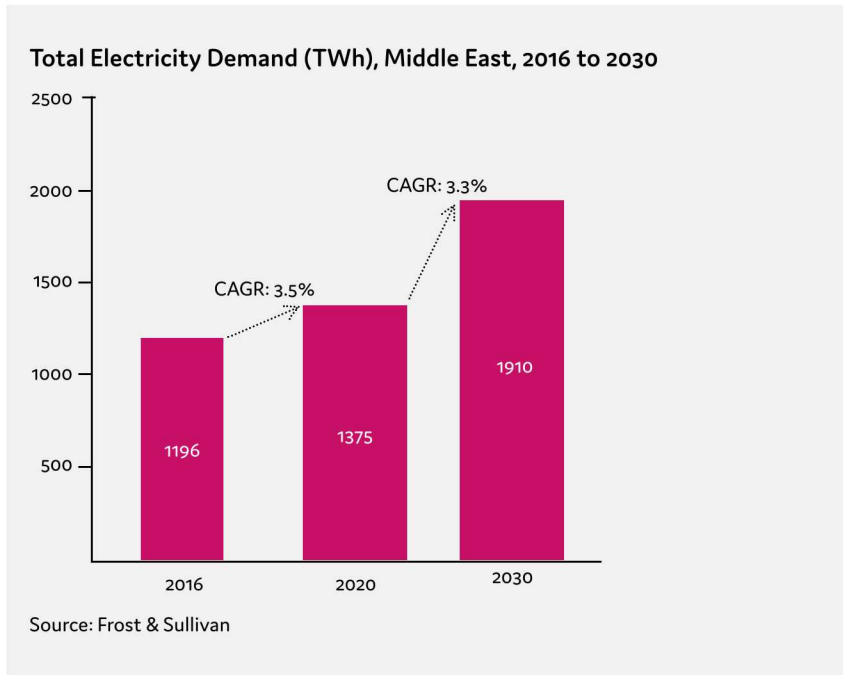
## Exhibit 1: Drivers for energy evolution in the Middle East



The Middle East is expected to invest in installed energy capacity at a CAGR of 4.5% - 4.8%, spurred by large-scale economic diversification and infrastructure development aspirations. However, we are witnessing a fundamental change in the region relating to electricity demand; as energy conservation efforts gain pace, we can expect to see the demand for electricity taper down.

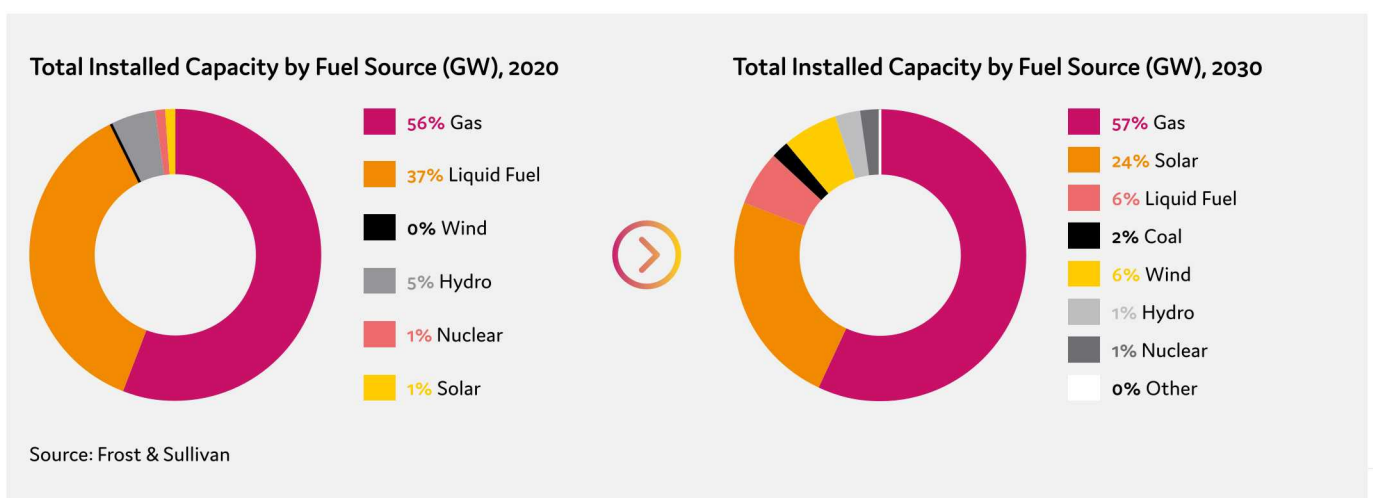


### Exhibit 2: Evolution of electricity demand in the Middle East









These conservation efforts are seen as part of a broader aspiration to overhaul the energy sector, which will result in a major change in the energy mix across the region—a change that is being accelerated by the increasing commitments from countries to decarbonize. Gas is expected to continue to play a critical role in power generation in the region. Given the abundance of this fuel, there is a clear business case to continue its use, though we can expect to see an increase in the adoption of technologies that could reduce emissions further for these plants.

### Exhibit 3: Outlook for energy transition in the Middle East



Regions and countries globally are focusing on adopting technologies that can yield the highest cost-benefit outcome specific to their requirements while assuring future resilience. This trend is also expected to be seen in the Middle East, and future investments in the energy sector would be directed toward a range of technologies that will differ vastly from what transpired previously.

## Exhibit 4: Outlook—Energy-related technologies to watch in the Middle East

Trends/Influencers	Technologies in Focus
 <p data-bbox="134 546 316 573"><b>Decentralization</b></p>	 <p data-bbox="517 394 879 573">Combined heat and power units (CHP), rooftop solar photovoltaic (PV), distributed solar and hybrid systems (diesel/gas and solar), battery storage</p>
<hr/>	
 <p data-bbox="134 826 316 853"><b>Decarbonization</b></p>	 <p data-bbox="517 712 879 853">Grid scale renewable energy, energy efficiency, electric mobility, hydrogen and fuel cells</p>
<hr/>	
 <p data-bbox="134 1106 316 1133"><b>Digitalization</b></p>	 <p data-bbox="517 969 879 1133">Smart meters, Demand management, Asset Integrity and Optimization, Digital Grids &amp; Automation</p>

Source: Frost & Sullivan

This is expected to create a wide range of opportunities for economic progression, human capital development, and job creation in the region that will result in significant multi-fold growth for the small-medium enterprises across the Middle East. The private sector and governments have critical roles to play for this opportunity to reach its true potential. A collaborative approach that facilitates the inflow and adoption of new technologies will be a determining factor for the energy mix to evolve appropriately. The size of the pie for these emerging technologies is sizeable enough to incentivize involvement and efforts, leading to a significant improvement in the energy mix and security across the region.

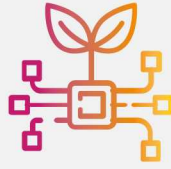


## Exhibit 5: Illustration of potential for emerging technologies in the Middle East energy sector



### Distributed Solar PV

US\$ 530 million to US\$ 550 million (cumulative opportunity until 2025)



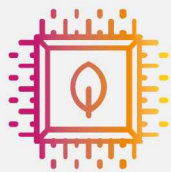
### Hybrid Systems

US\$ 400 million to US\$ 430 million (cumulative opportunity until 2025)



### Energy Efficiency and Management

US\$ 7.5 billion to US\$ 8.0 billion (cumulative CAPEX opportunity for energy efficiency improvement over 10- to 12-year period)



### Digital Grids and Smart Networks

US\$ 50 billion to US\$ 55 billion (cumulative opportunity until 2030)

Source: Frost & Sullivan



## Disclaimer

Frost & Sullivan is not responsible for any incorrect information supplied by companies or users. Quantitative market information is based primarily on interviews and therefore is subject to fluctuation. Frost & Sullivan research services are limited publications containing valuable market information provided to a select group of customers. Customers acknowledge, when ordering or downloading, that Frost & Sullivan research services are for internal use and not for general publication or disclosure to third parties. No part of this research service may be given, lent, resold, or disclosed to noncustomers without written permission. Furthermore, no part may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the publisher.

### For information regarding permission, write to:

Frost & Sullivan  
7550 IH 10 West, Suite 400  
San Antonio, TX 78229



# GROWTH PIPELINE ENGINE™



**Frost & Sullivan's Growth Pipeline Engine™ supports clients through all phases of growth –**

Developing, evaluating and prioritizing opportunities, building and implementing go-to-market strategies, and optimizing opportunities. The objective is to be a client's first step on their growth journey.

**For More Information E-mail:**  
[meenquiries@frost.com](mailto:meenquiries@frost.com)