

ARAB ENVIRONMENT•6
SUSTAINABLE ENERGY
PROSPECTS, CHALLENGES, OPPORTUNITIES

المنتدى العربي للبيئة والتنمية
ARAB FORUM FOR
ENVIRONMENT AND DEVELOPMENT



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Financing Energy Supply

The Role of the Private Sector

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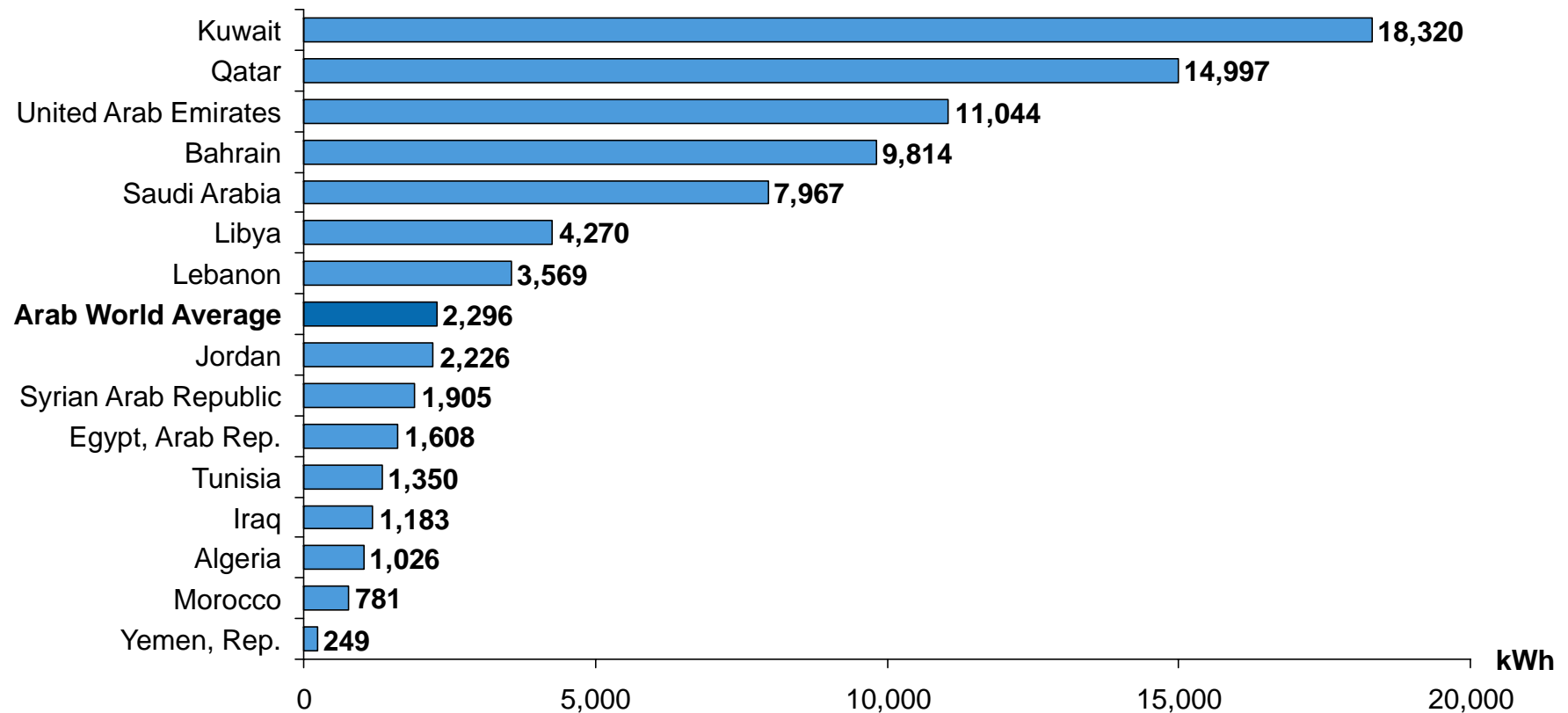
Introduction

Key Questions:

- What form do Public Private Partnerships in power supply infrastructure investments take in Arab region and what are the common themes and variations across countries?
- What challenges and barriers arise under current private sector financing models?
- What measures should be deployed to overcome current challenges and barriers?

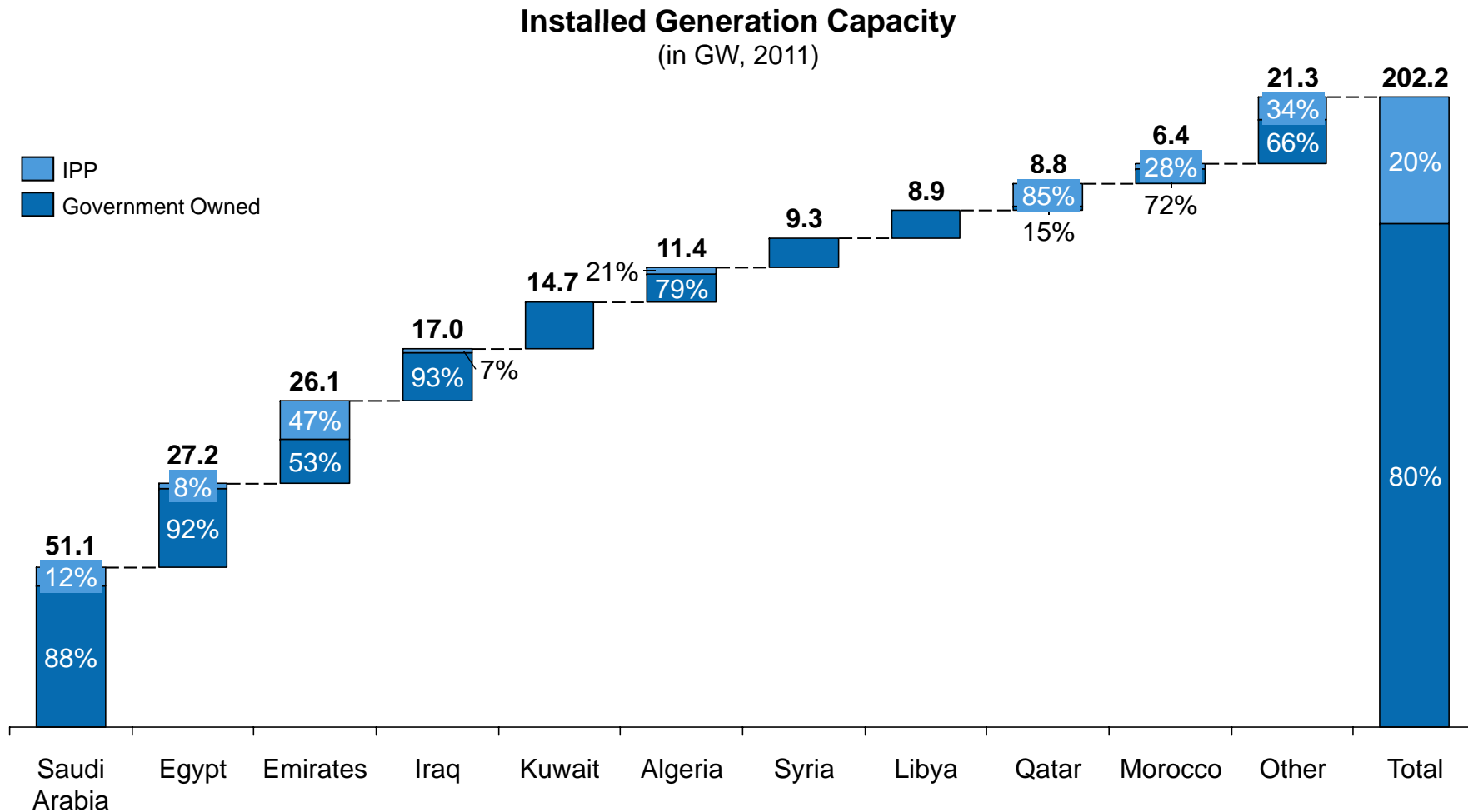
Per Capita Electricity Consumption

Per Capita Electricity Consumption of Selected Arab Countries
(kWh – 2008)



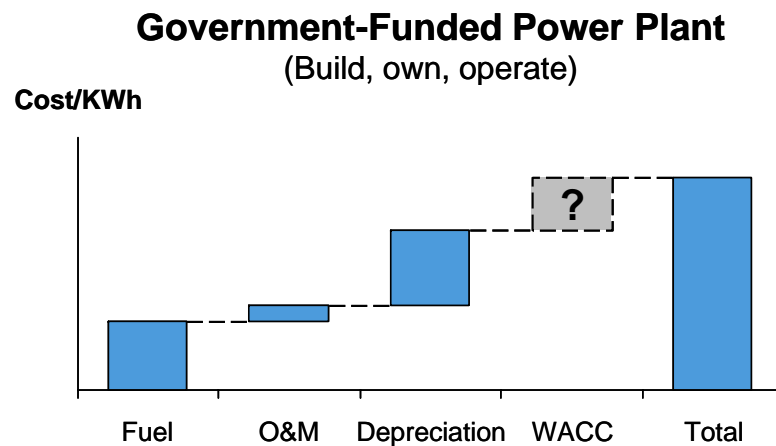
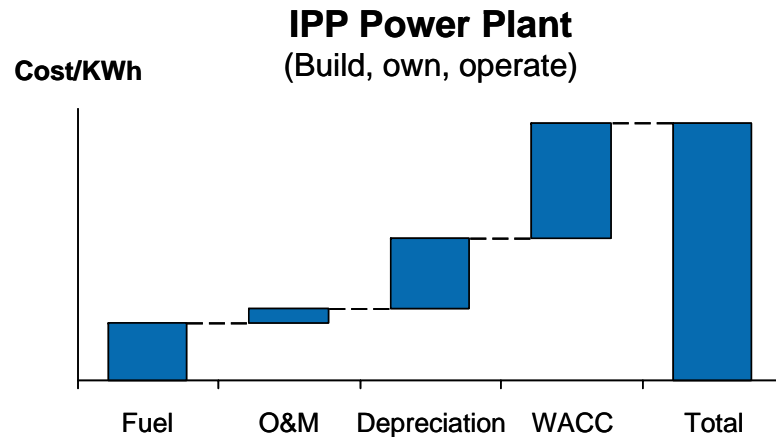
Source: World Development Indicators 2011

Installed Generation Capacity



Components of Power Cost

ILLUSTRATIVE



Differences in cost Components: IPPS vs. Government-funded Plants	
Fuel	<ul style="list-style-type: none"> IPPS tend to control their heat rate degradation better
O&M	<ul style="list-style-type: none"> IPPS show slight advantages as a result of lower manpower, more qualified staff, and better procurement practices, which are partially offset by lower salaries in government-funded plants
Depreciation	<ul style="list-style-type: none"> IPPs have tighter control over capital expenditures, with specifications designed to serve the life cycle of the IPP. Comparisons are often difficult due to the increased cost components of IPP tender packages (e.g. jetty and transmission substations)
WACC (Weighted Average Cost of Capital)	<ul style="list-style-type: none"> IPPs have higher financing costs, but benchmarking government-funded plants is difficult
Other	<ul style="list-style-type: none"> Indirect benefits to the economy are typically not factored into analyses. In the case of an eventual sale, a plant's terminal value would lower the costs of the IPP

Challenges

Long-Term Implications of Existing Financing Model

- Contingent liabilities
- Base-load Bias / Regulatory Capture

Infrastructure Investment Risk Landscape in Arab Countries

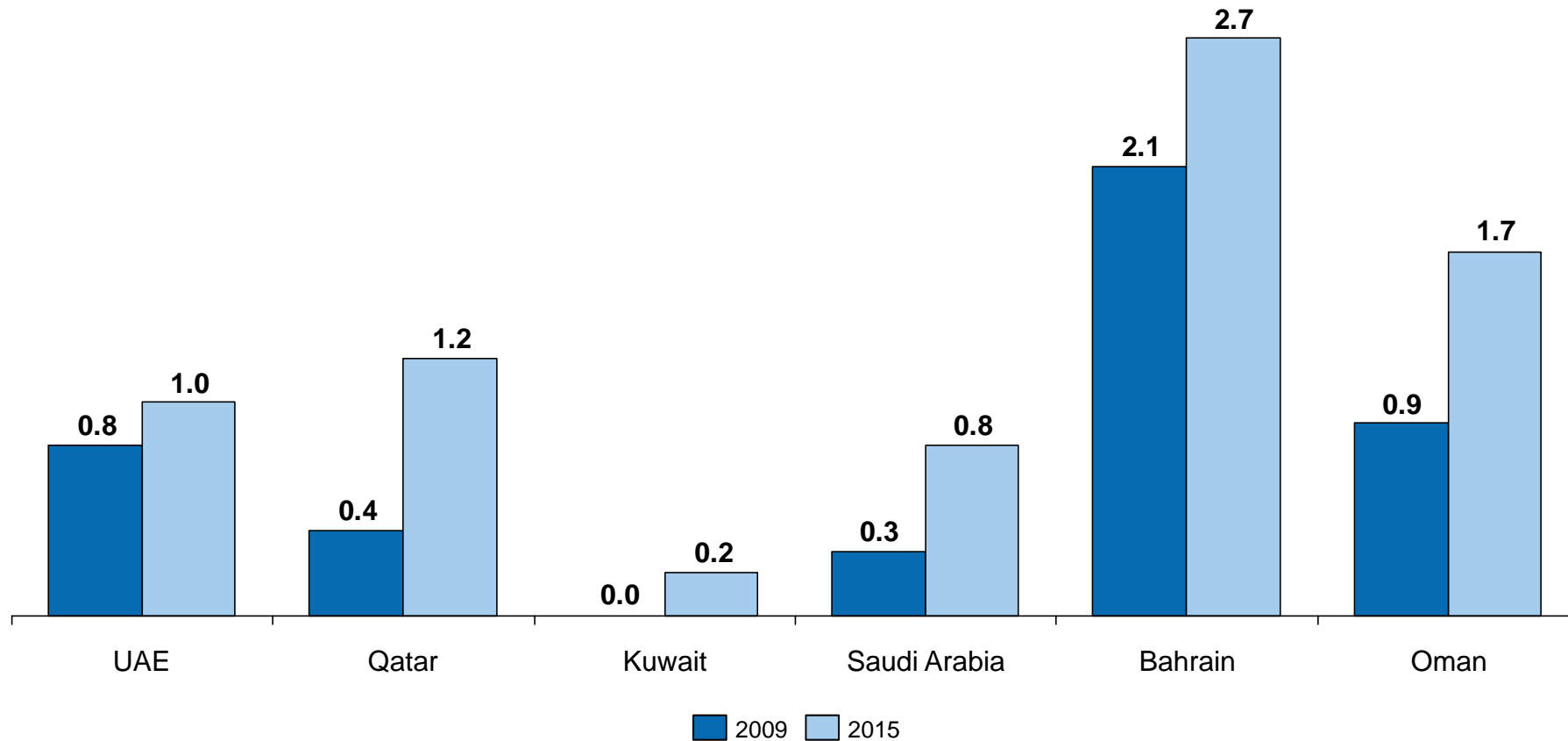
- Country / Political Risk
- Fuel Risk

Renewable energy supply challenges

- Fuel subsidies
- Political commitment

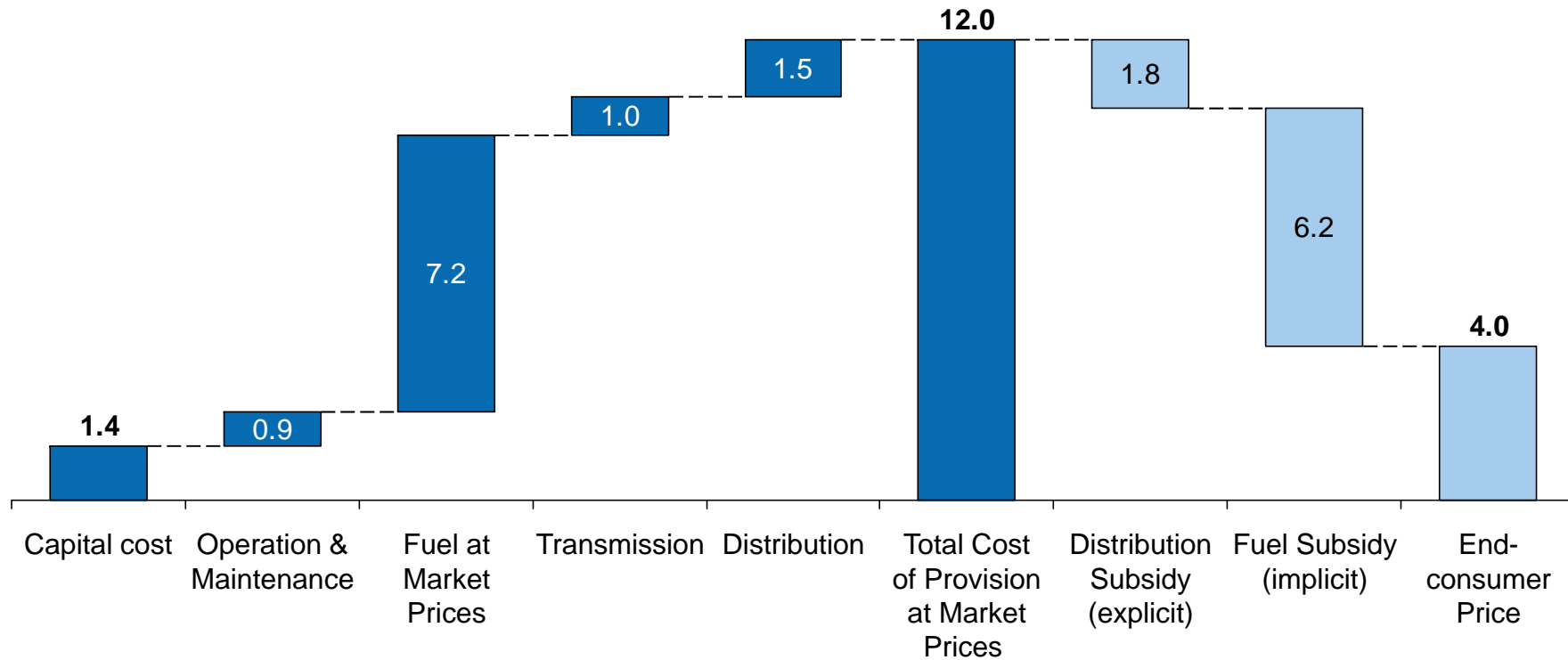
Outstanding IPP/IWPP Liabilities

Outstanding IPP/IWPP Liabilities
(% of GDP)



Cost and Income Structure

Cost and Income Structure of a Typical GCC Utility
(in US cents per kilowatt-hour)



Note: Analysis based on a newly built natural gas combined cycle (NGCC) plant, a fuel price paid by the utility of \$1 per MMBtu, a market fuel price of \$7 per MMBtu, plant life of 25 years, overnight cost of \$700 per kilowatt, and a real cost of capital of 4.5 percent

Source: Booz & Company analysis

What is next?

Improving the regulatory environment

- Long-Term Liability Management
- Integrated Infrastructure Planning
- Project Tendering Process
- Increasing transparency and comparability across projects

Facilitating Equity and Debt Financing Conditions

Promoting Renewable Energy Supply Investments

Building the capabilities of regulatory authorities

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Thank You