

ARAB ENVIRONMENT•6
SUSTAINABLE ENERGY
PROSPECTS, CHALLENGES, OPPORTUNITIES

المنتدى العربي للبيئة والتنمية
ARAB FORUM FOR
ENVIRONMENT AND DEVELOPMENT



ARAB ENVIRONMENT 2013
Annual Conference of the Arab Forum for Environment and Development (AFED) | Sharjah, 28-29 October 2013

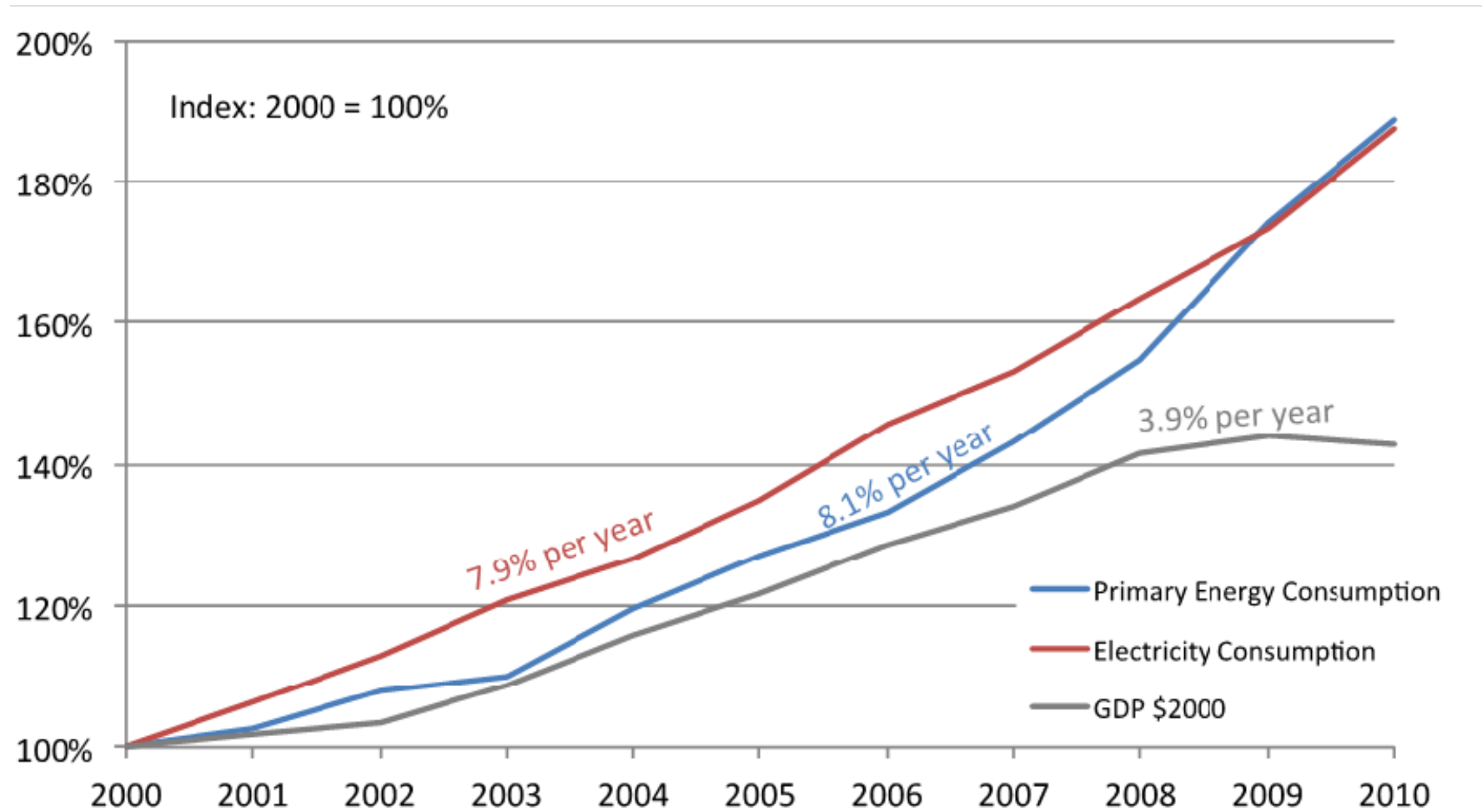
Energy Efficiency

TAREQ EMTAIRAH
FARID CHAABAN

- **Current Trends**
- **Potential and Challenges**
- **Creating Markets**

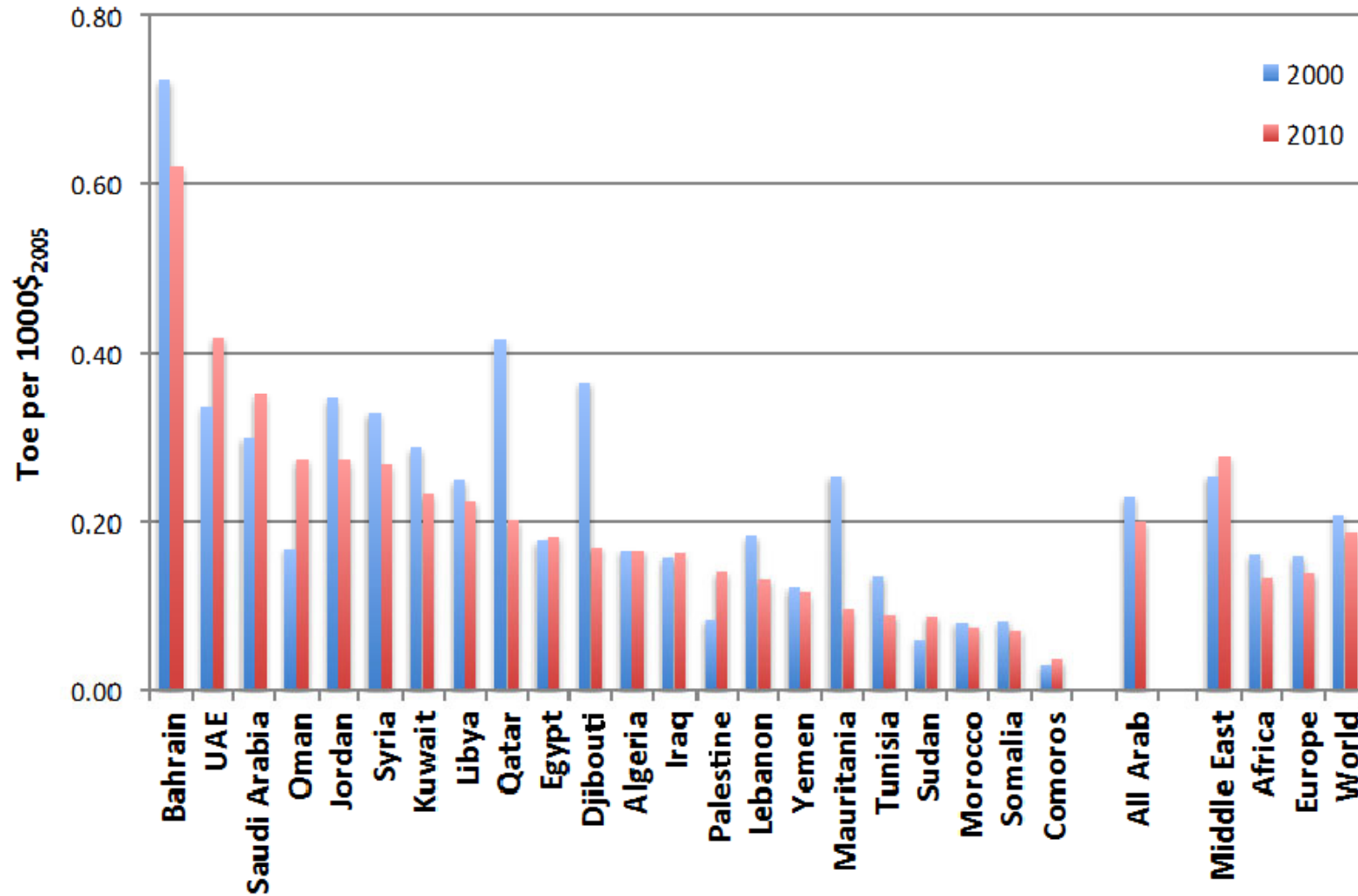
Energy Efficiency

Primary energy consumption, electricity consumption and GDP trends (2000 to 2010)

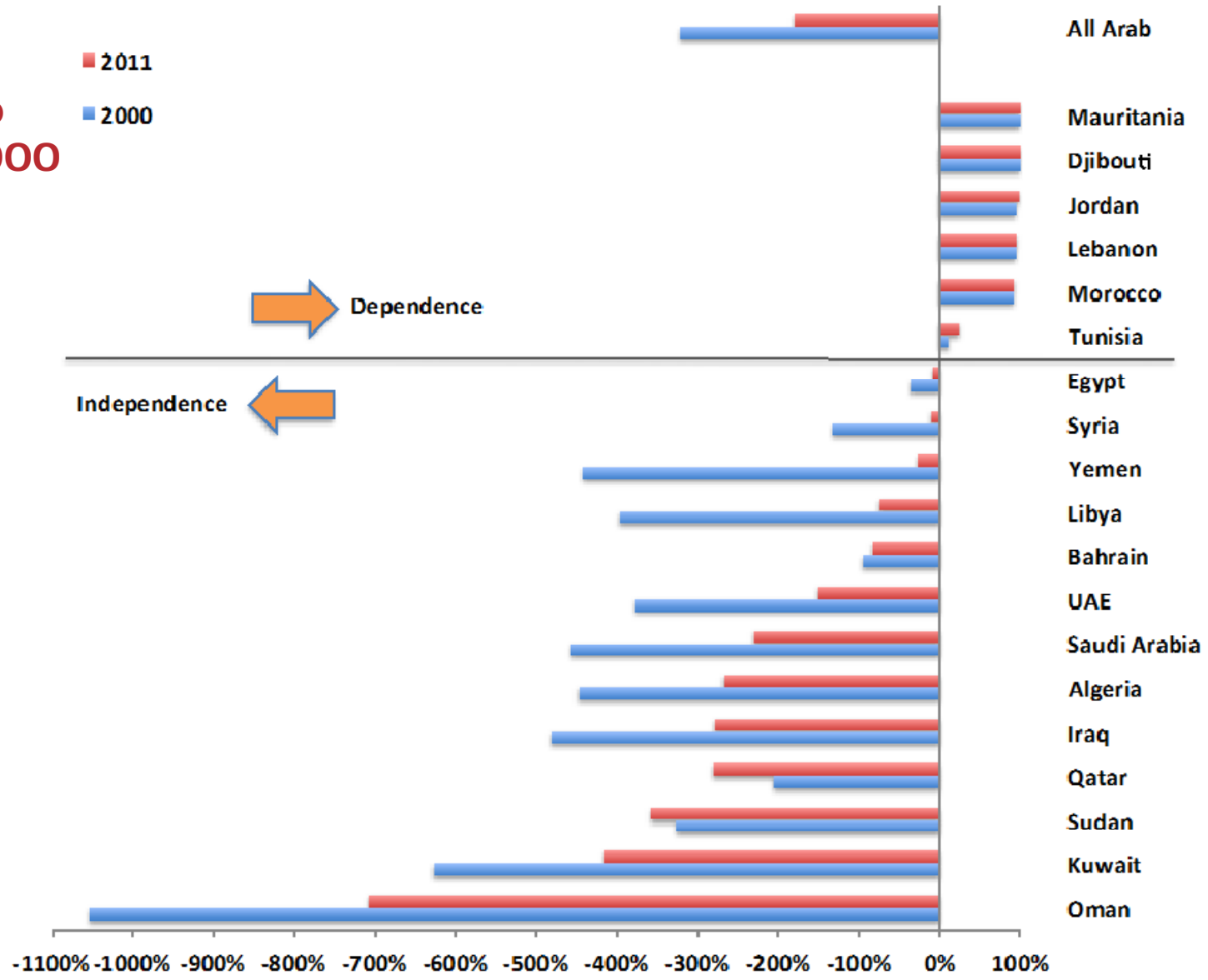


Source: OAPEC (2005, 2007, 2012); EIA (2013); World Bank (2013)

Primary energy intensity (Toe/1000 \$₂₀₀₅) for Arab countries (2000 and 2010)

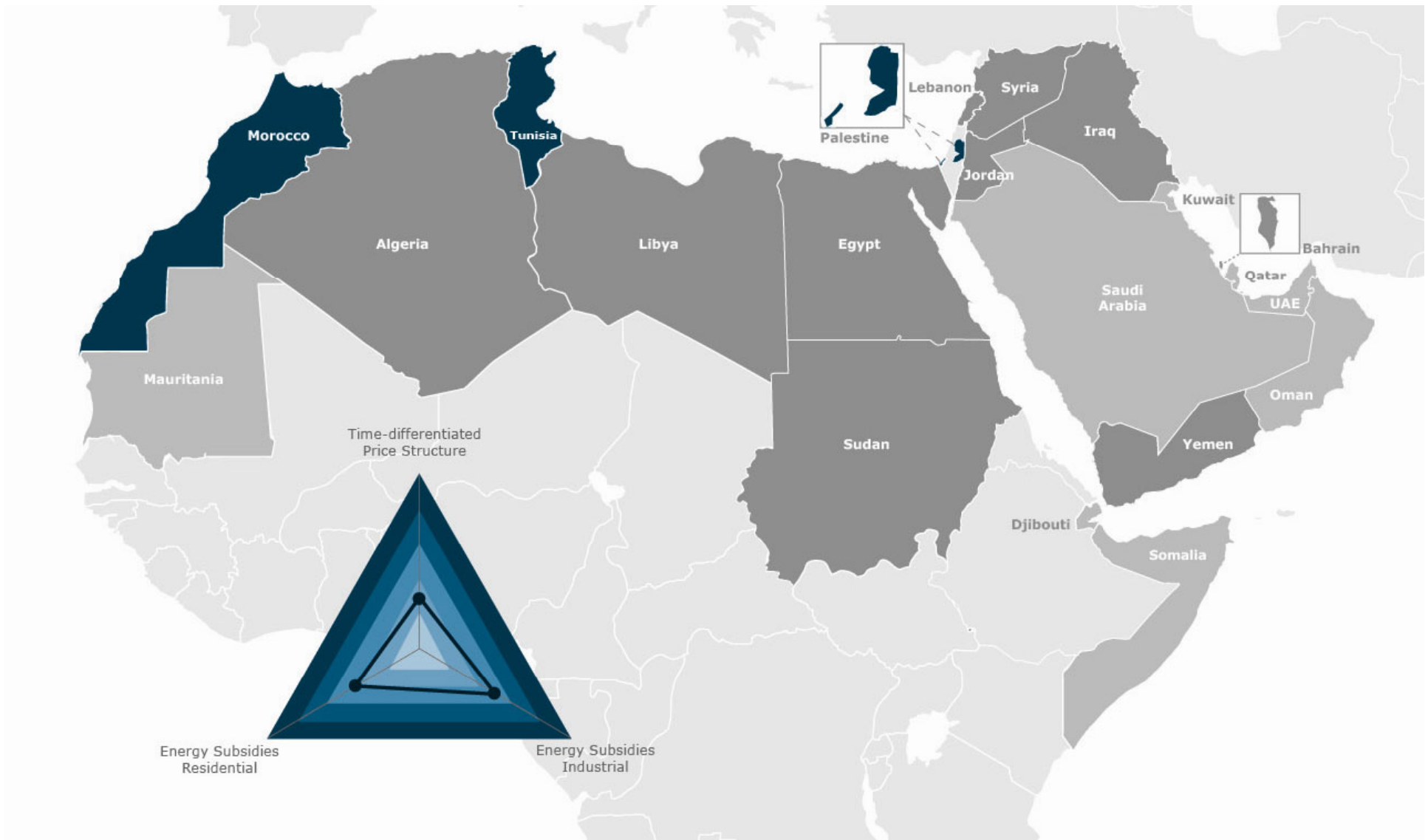


Energy dependency ratio for Arab countries (2000 and 2011)



Source: OAPC Annual Statistical Report (2005, 2012)

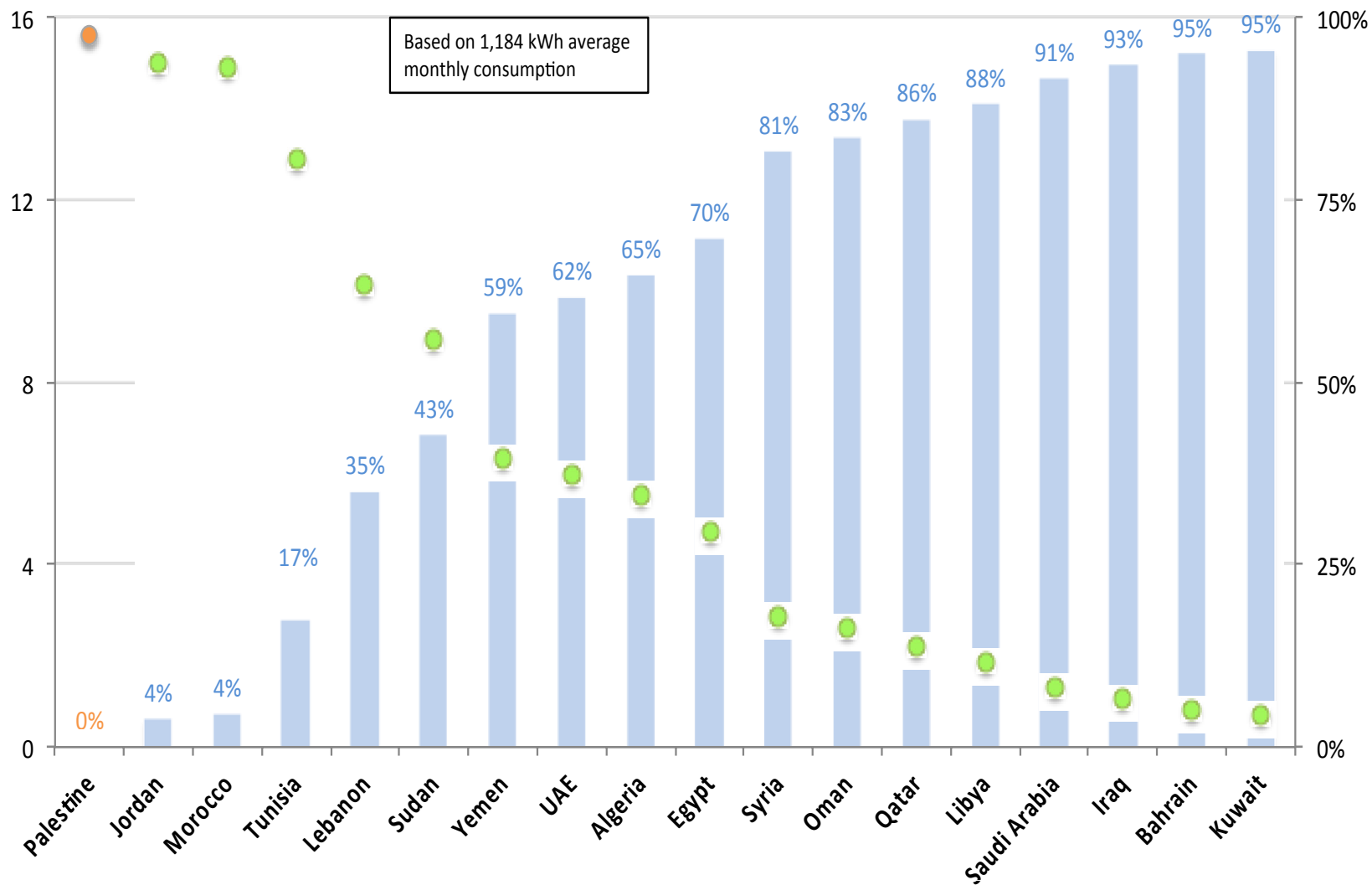
Energy Pricing



Price
(US cents/kWh)

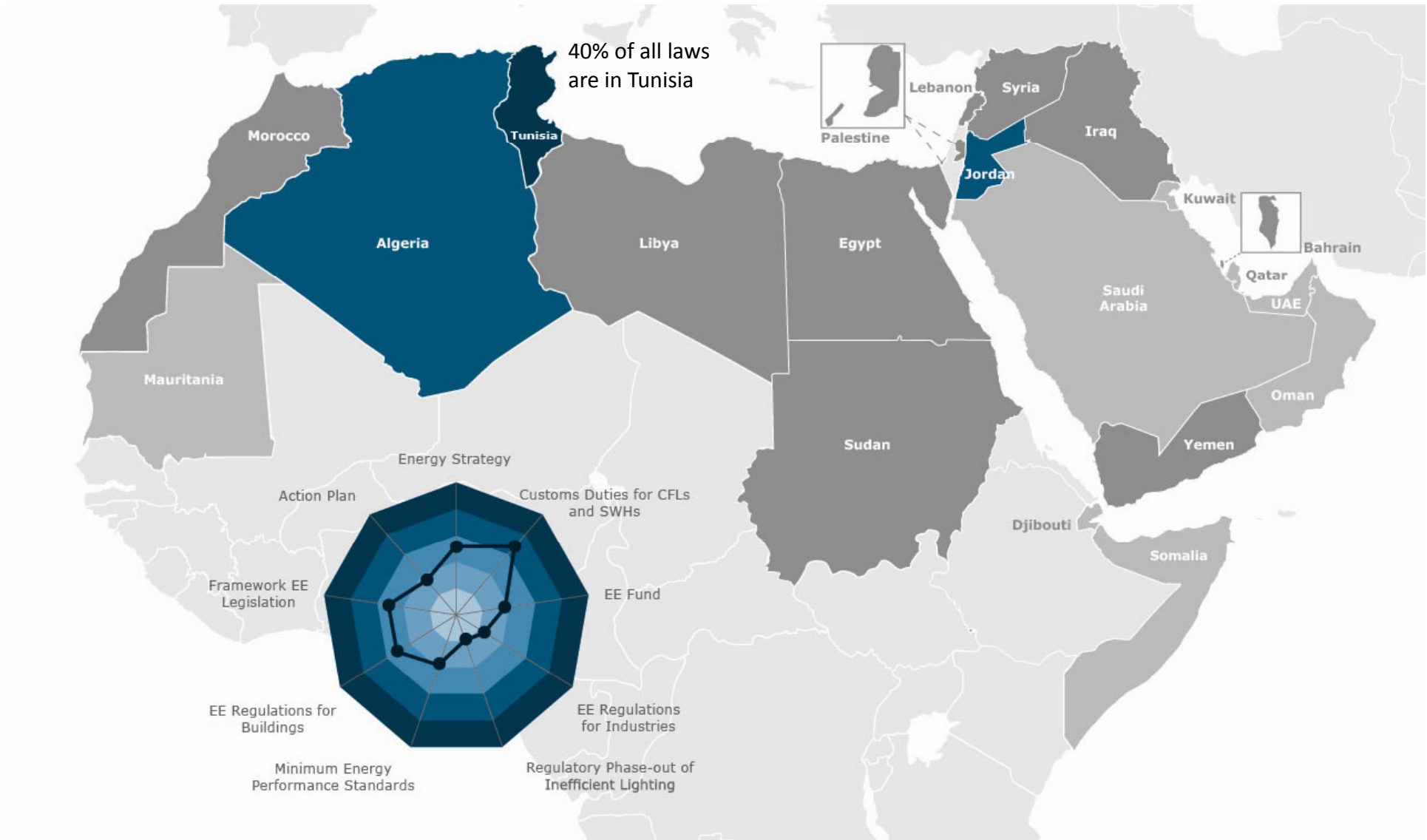
Residential electricity prices and subsidies benchmarked to Palestine, 2011

Implied
subsidy



Source: Arab Union of Electricity (2012a, 2012b)

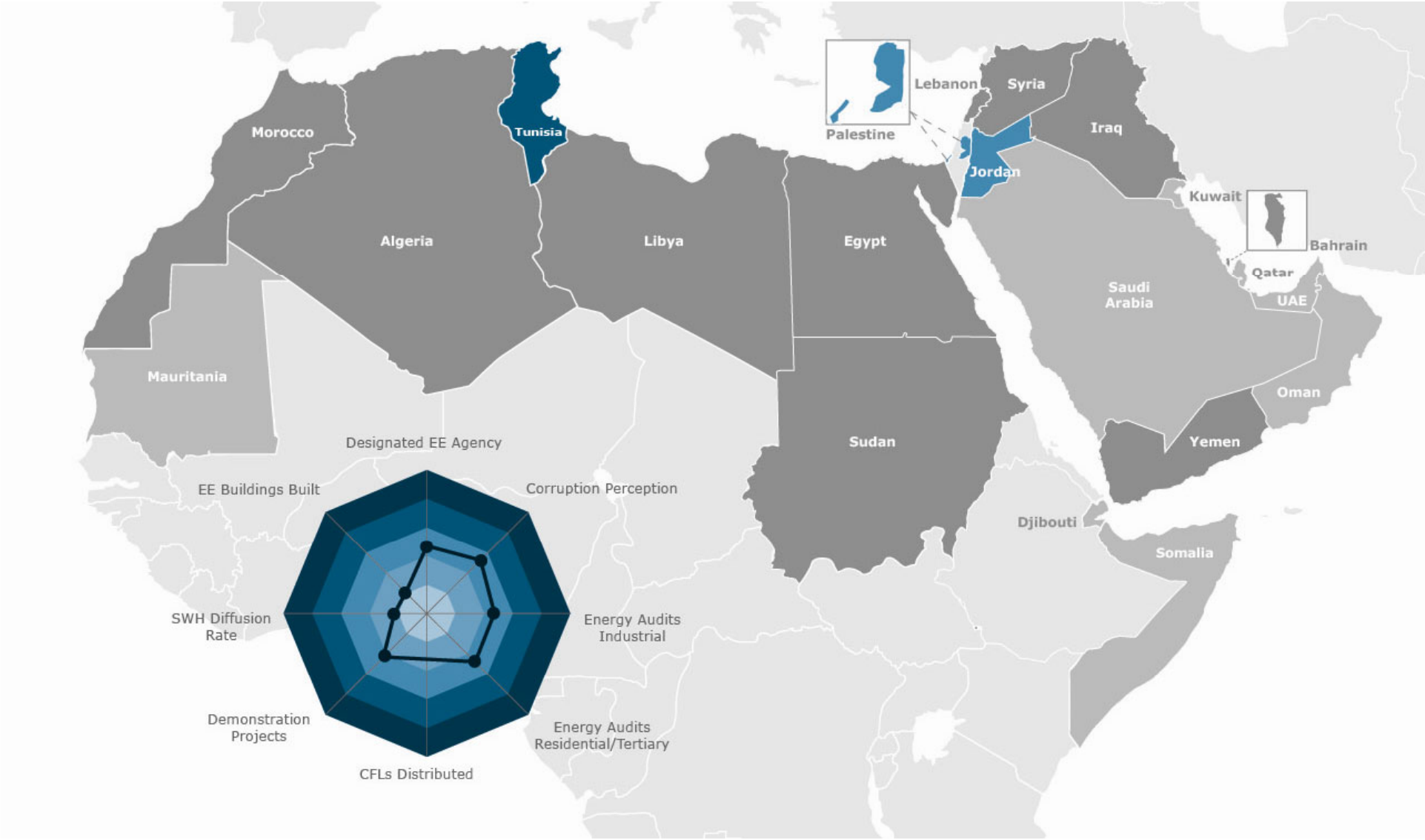
Policy Framework



Regulated Sectors

	Buildings	Appliances	Lighting	Industry
Algeria	●	● R; AC		●
Bahrain	●			
Egypt	●	● R;AC W		
Iraq	●			
Jordan	●	●		
Lebanon	●	●		
Libya				
Morocco	●			
Palestine				
Sudan	●	● R		●
Tunisia				
Yemen	●	● R; AC	● 100 W	●

Institutional Capacity



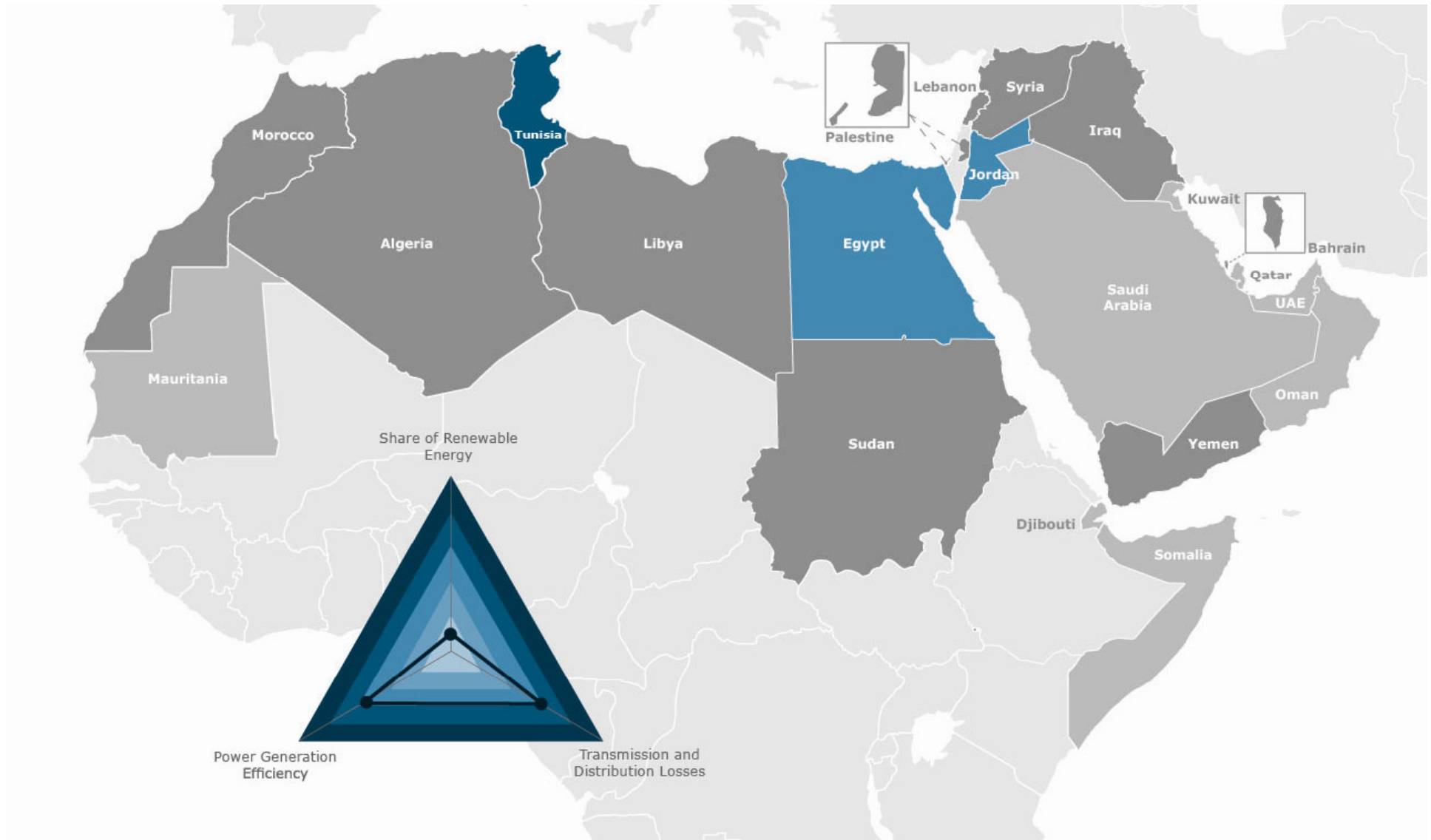
EE Buildings

	New buildings built every year	Number of buildings built according to EE building code	Number of demonstration projects
Algeria	80,000	-	600 housing units under
Bahrain	6,000	81	-
Egypt	69,030	-	-
Iraq	22,000	-	-
Jordan	20,000	-	11
Lebanon	-	-	5
Libya	50,000	-	-
Morocco	170,000	-	9 under construction
Syria	30,000	-	4
Sudan	-	-	-
Tunisia	60,000	4,681 (administrative) 14,724 (residential)	43
Palestine	-	-	1
Yemen	-	-	-

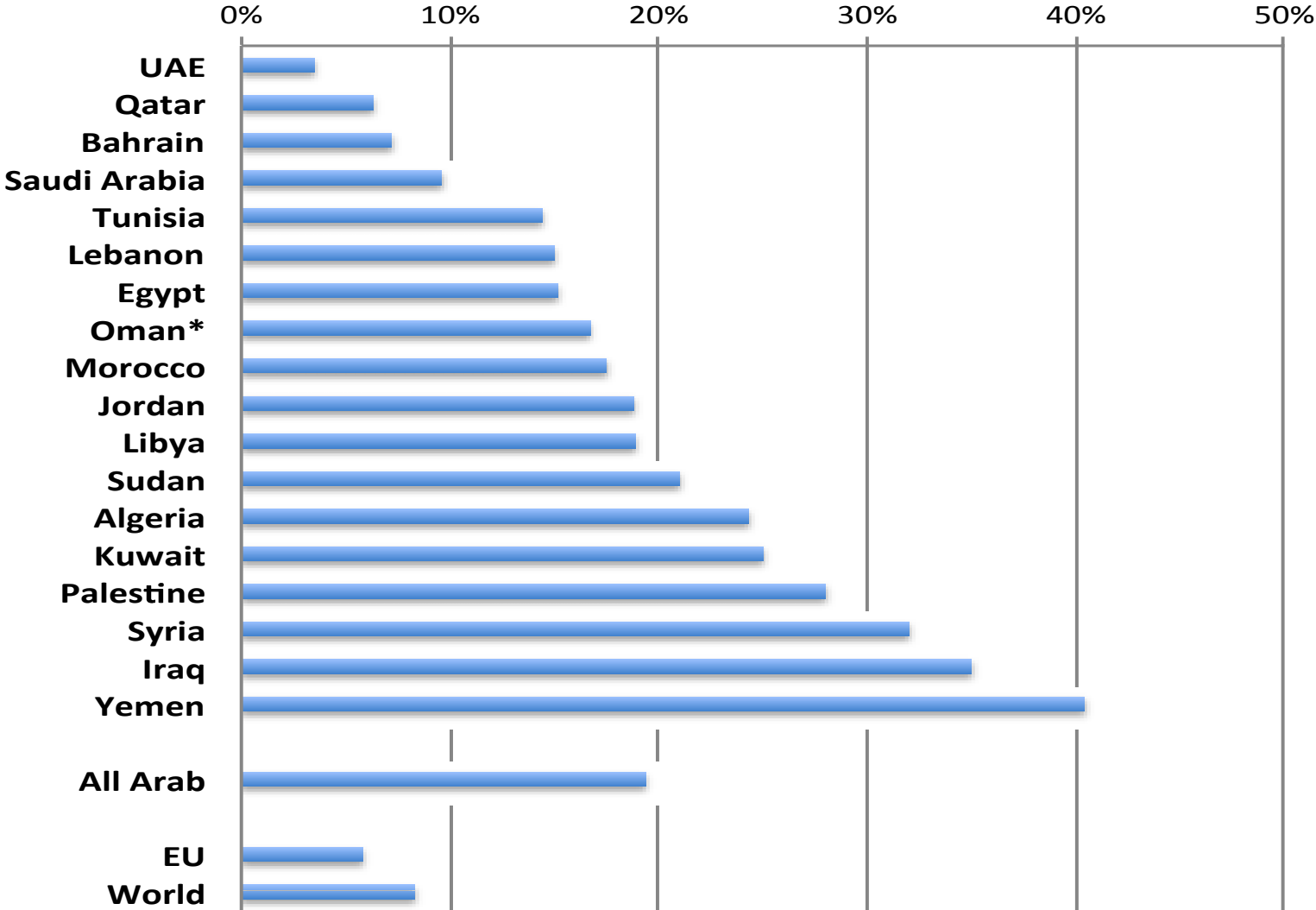
■ EE Designated Agencies

Dedicated EE Agency	
Algeria (APRUE)	Lebanon (LCEC)
Palestine (PEA)	Syria (NERC)
Morocco (ADEREE)	Tunisia (ANME)
Dedicated EE Department within Ministry	
Jordan	Bahrain
	Egypt
EE as an Auxiliary Function of another Department	
Libya	Sudan
Iraq	Yemen

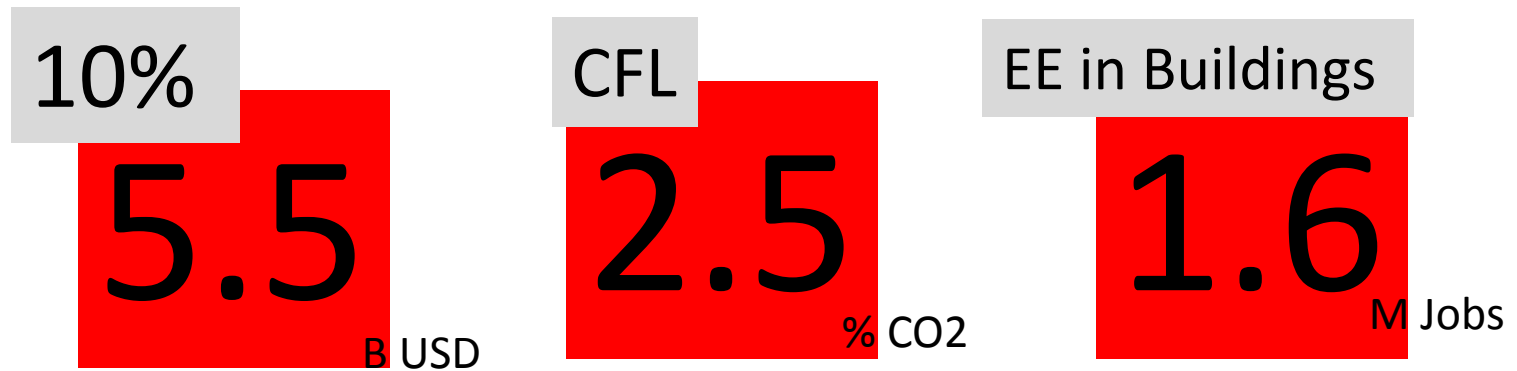
Utility



Electric energy losses in generation, transmission and distribution (2011)



■ Costs and Benefits



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Thank You