

# Designing industry specific Energy Efficiency initiatives:

Experience of the Middle East and North Africa  
(MENA)



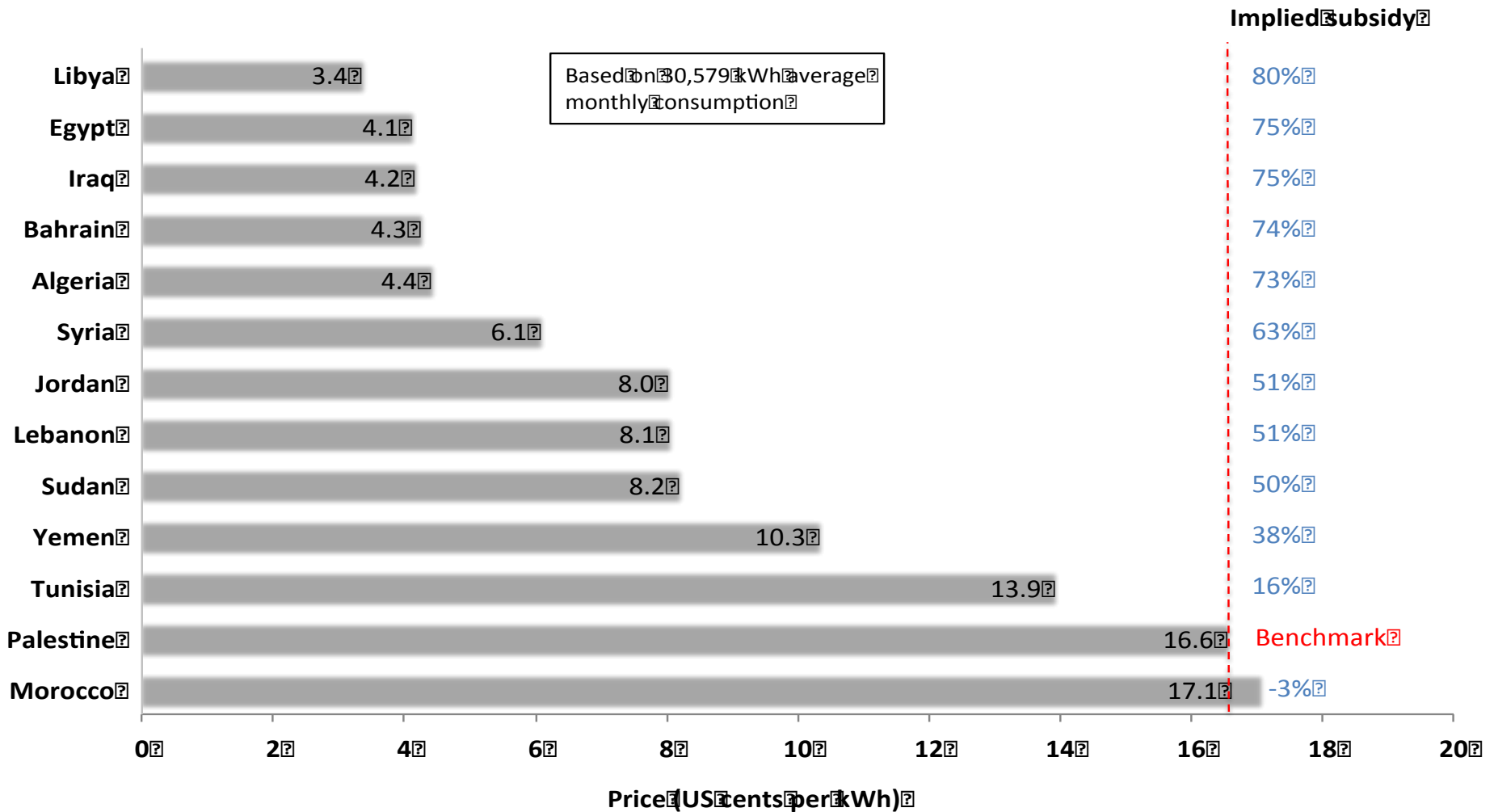
**RCREEE** 

Regional Center for Renewable Energy and Energy Efficiency  
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

# Energy Efficiency Policies for the Industrial Sector

- Energy Prices
- Price-based policy instruments
- Mandatory energy efficiency regulations
- Financial incentives

# Energy Prices: subsidies industrial



Source: Arab Union of Electricity (2011)

# Energy Planning

	Energy Strategy	NEEAPs	EE Law
Algeria	●	●	●
Bahrain	●		
Egypt		●	
Iraq			
Jordan	●	●	●
Lebanon	●	●	
Libya		●	
Morocco	●	●	●
Palestine	●	●	
Syria		●	●
Sudan		●	
Tunisia	●	●	●
Yemen	●		



## Demand Side Management – TOU price structure

Country	Customers	Time-differentiated rates				
<b>Lebanon</b>	<i>High voltage</i>	Night 00:00 – 7:00	Day 7:00-18:30	Peak 18:30-21:30	Day 21:30-23:00	Night 23:00-00.00
<b>Tunisia</b>	<i>High and medium voltage</i>	Day	Peak	Evening	Night	
<b>Morocco</b>	<i>Extra high and high voltage</i>	Full hours	Peak	Off-peak		
<b>Syria</b>	<i>Extra high, high and medium voltage</i>	Day	Night	Evening		
<b>Jordan</b>	<i>High and medium voltage</i>	Day	Night			
<b>Algeria</b>		Full hours	Peak	Night		
<b>Egypt</b>	<i>Extra high voltage and high voltage</i>	Peak	Off-peak			

**Morocco:** two cement producers HOLCIM Settat and HOLCIM Oujda, and by steel producing industry SONASID resulted in total reduction of **76 MW** of peak hours

# Regulatory Framework

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

# Industrial EE Policies: Tunisia

Decree No 2004-2144 (2004) as amended by decree No 2269-2009 of 31 July 2009

- Industries with annual energy consumption exceeding 800 toe/year (320 companies):
    - Mandatory Periodic **Energy Audits**
    - Mandatory **Energy Reporting** (annual)
    - Mandatory **Energy Management System**
  - New large industrial projects
    - Mandatory prior consultation with ANME
- New industrial projects/expansion of existing facilities (7,000 toe)
- Prior authorization from the ministry of energy

# Tunisia: Framework Program (CP)

- **Framework Program** – three year framework bilateral agreement between government and industry group
- Between 2000-2012:
  - 490 agreements in the industrial sector
  - 148 agreement in the tertiary sector
- **Financial incentives** to support achieving EE targets
- **Sanctions:** restitution of subsidies



# These policies allowed:

- Careful monitoring of energy consumption
- **Benchmarking** and identifying front runners
- **Continuous** and systematic improvement of energy efficiency

# Incentives Program

To assist in achieving EE targets specified in contract programs, the following support schemes are available for EE projects (Decree No 2205-2234 (2005) as amended by the Decree No 2009-362 (2009)):

- 70% of energy audit costs with a ceiling of TND 30,000
- 70% for immaterial investments with a ceiling of TND 70,000
- 20% for material investments with a ceiling of TND 100,000 for facilities whose annual total average energy consumption does not exceed 4,000 toe; TND 200,000 for facilities whose annual total average energy consumption runs from 4,000 to 7,000 toe; TND 250,000 for facilities whose annual total average energy consumption exceeds 7,000 toe.

# EE Designated Agencies

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