



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

# Energy Efficiency Governance in the Arab region

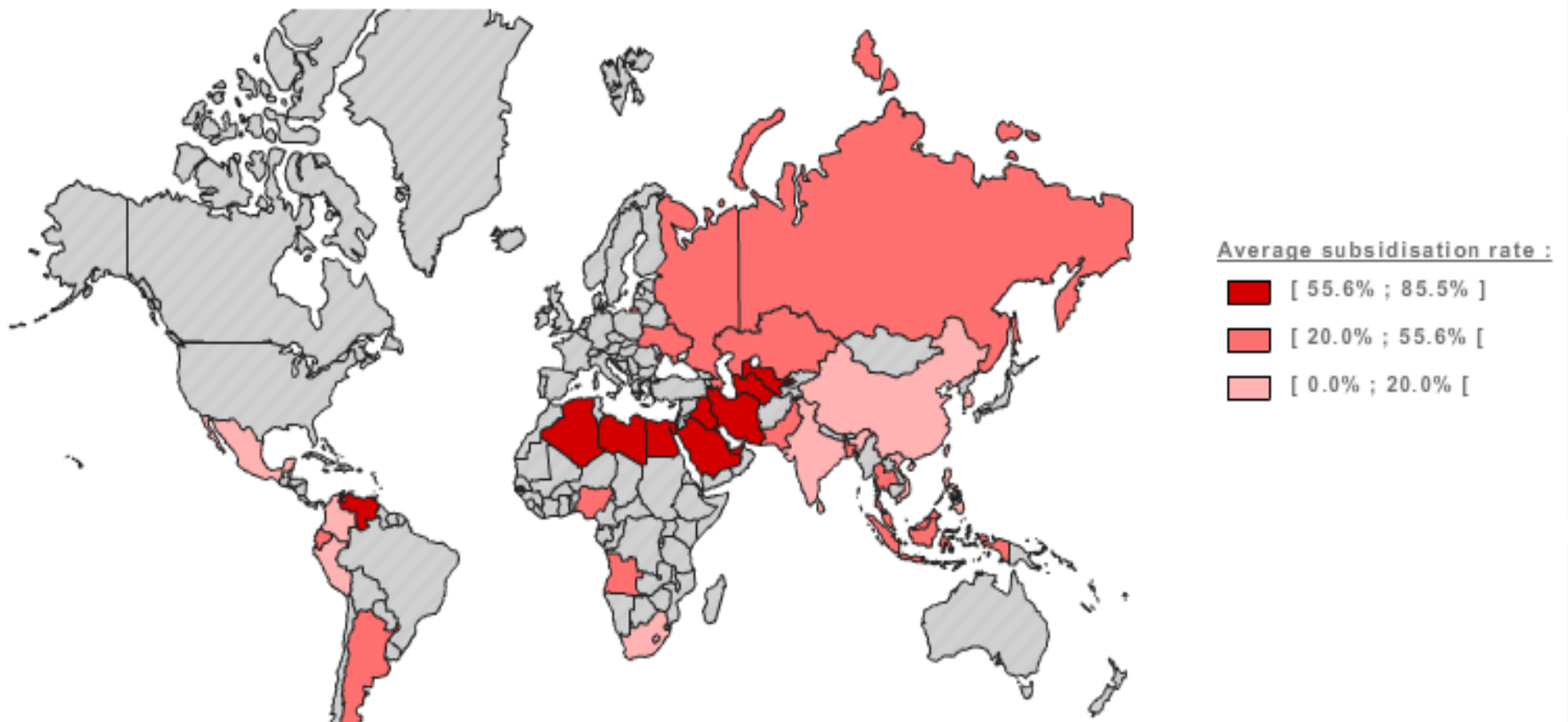
Nurzat Myrsalieva

Amman, 2013

# EE policies

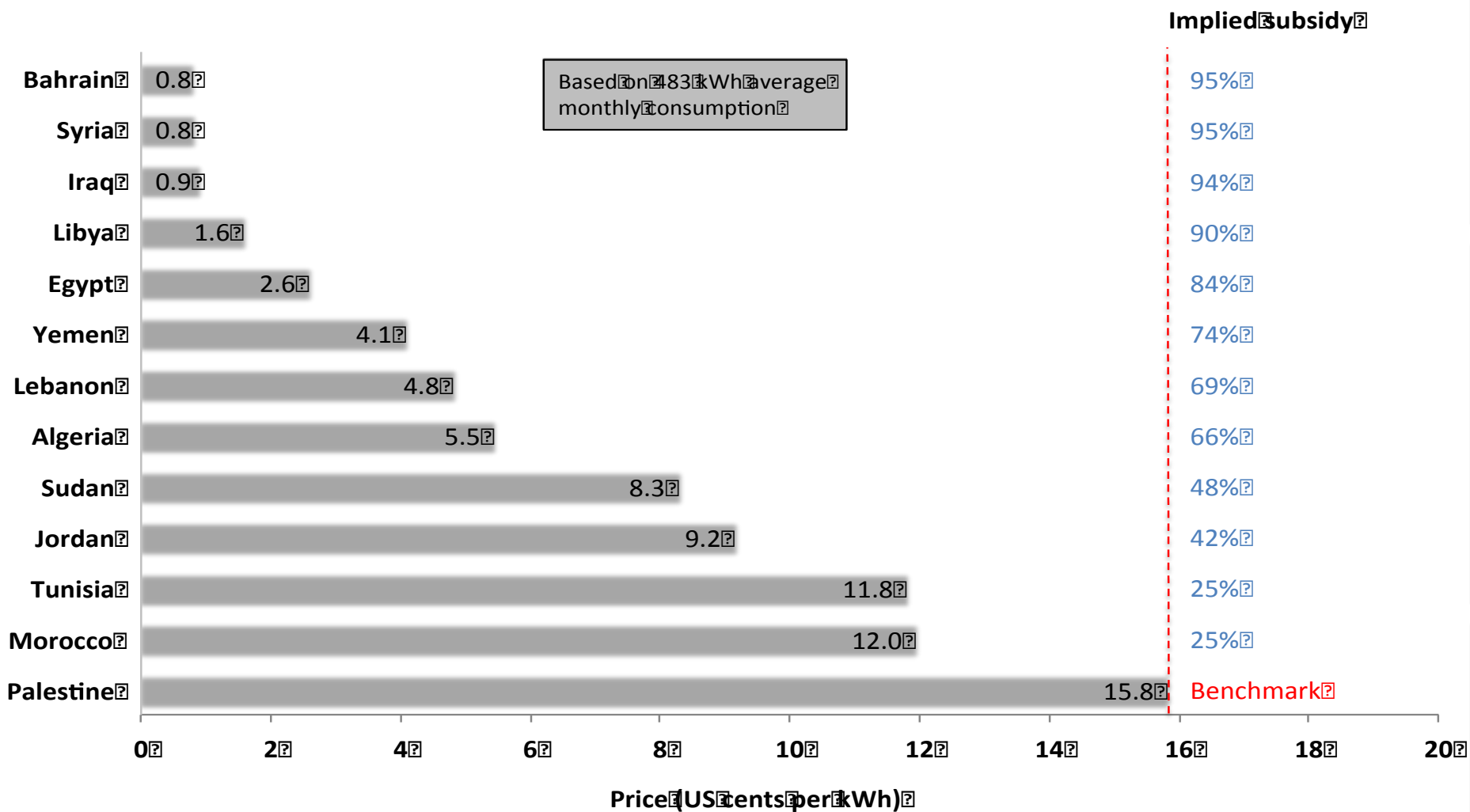
- Energy pricing policy
- Demand Side Management
- EE Regulations
- Financial incentives

# Fossil fuel subsidies



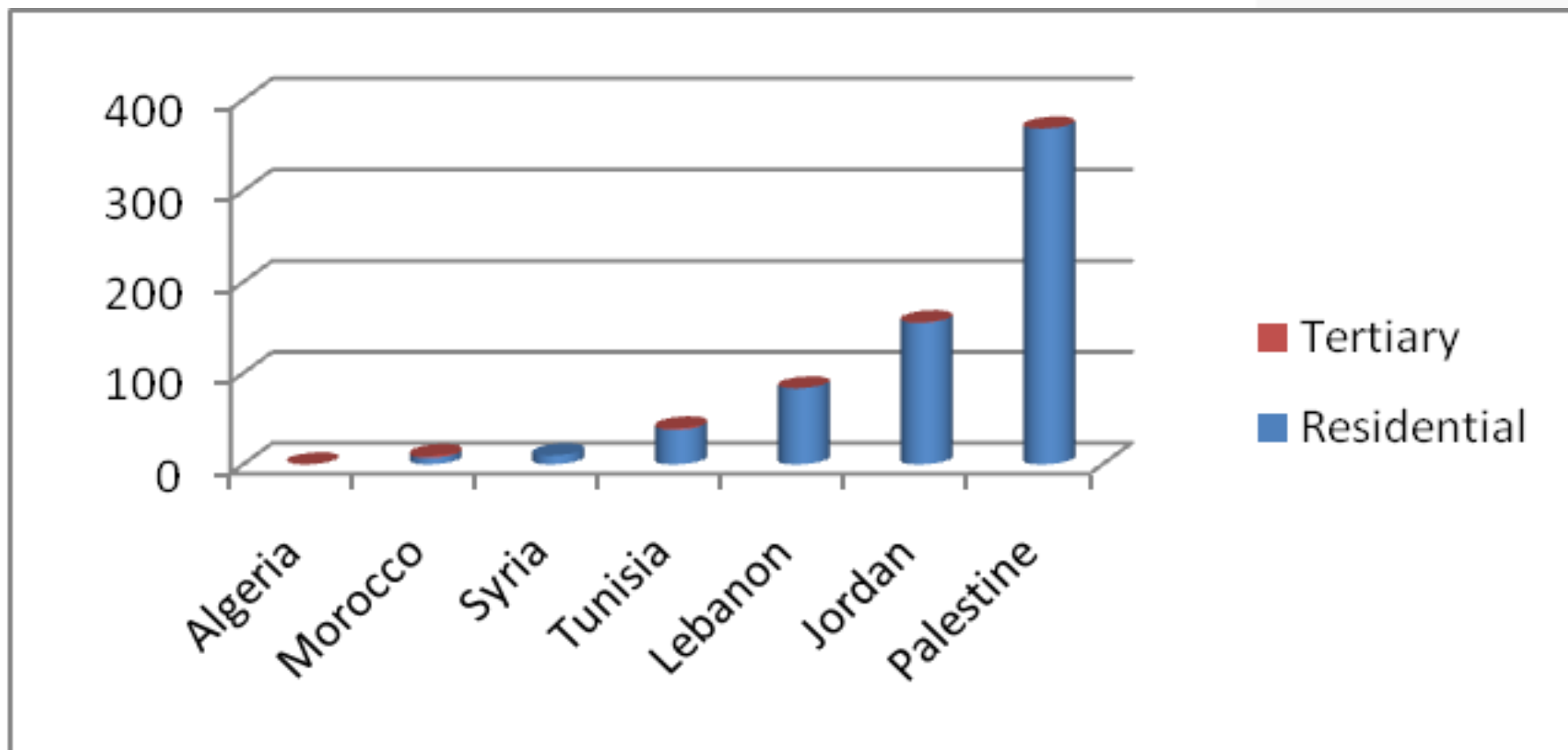
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# Fossil-fuel subsidies: residential



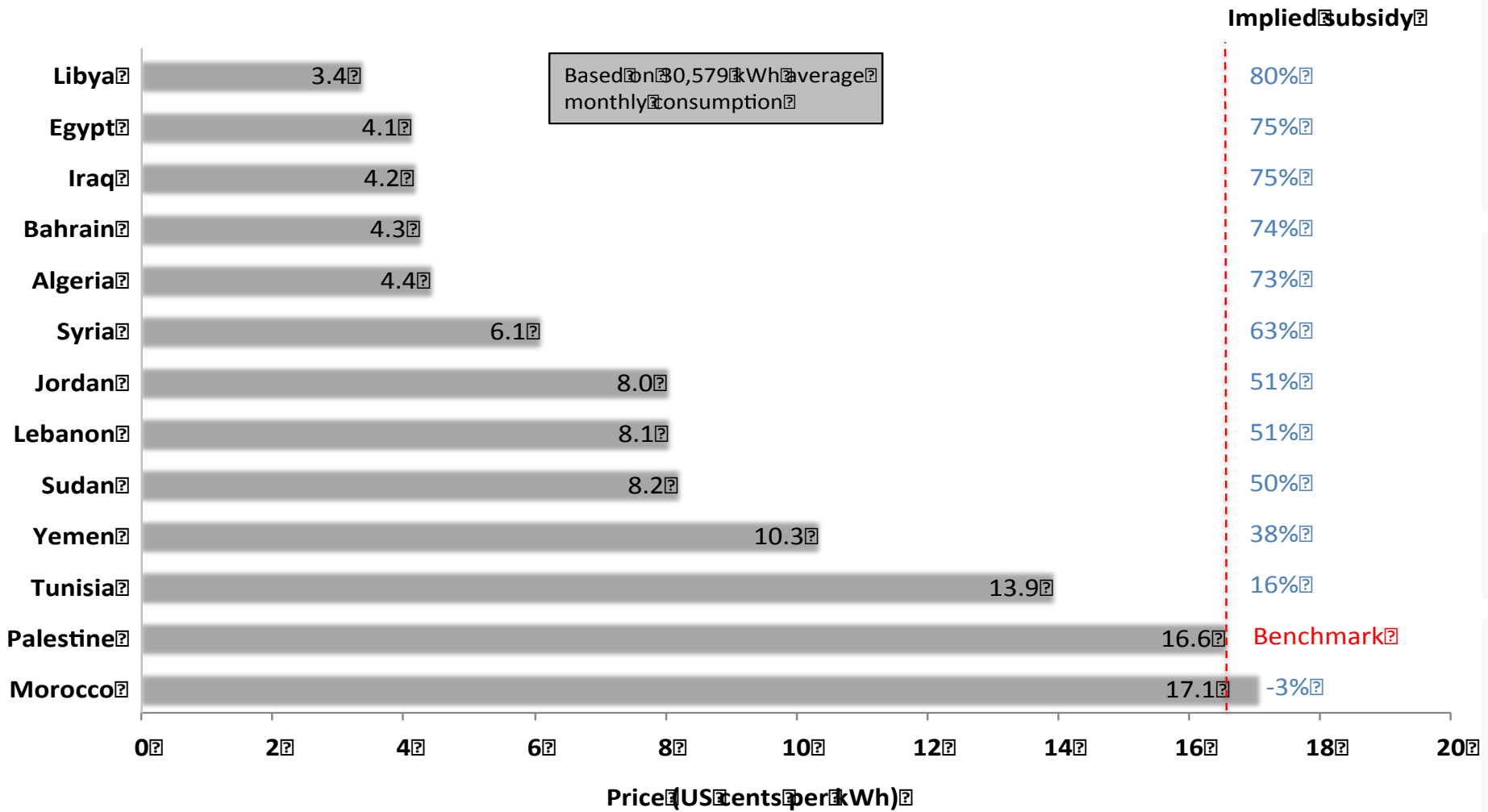
Source: Arab Union of Electricity (2011)

# Solar Water Heaters



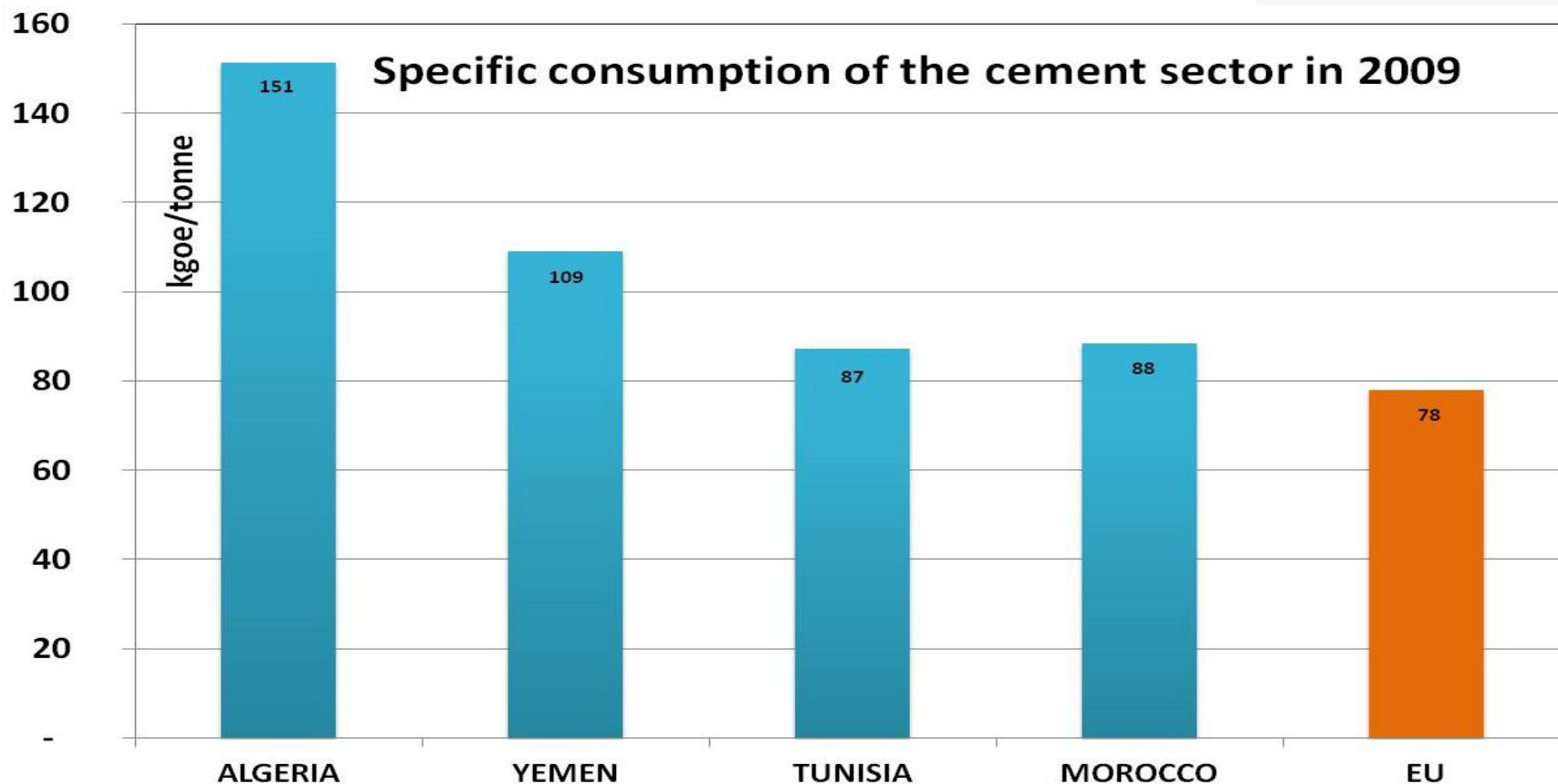
Palestine: 368.4 m<sub>2</sub> /1000 inhabitants

# Fossil-fuel subsidies: industrial



Source: Arab Union of Electricity (2011)

# Specific consumption of cement sector



Source : countries and Odyssee (2008)

## 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



## Other Demand Side Management initiatives: Residential

“-20/-20” tariff in Morocco

Impact: savings of 1770 GWh (by Dec. 2011)

Total number of customers: 17,586

# EE Regulations: buildings

Mandatory			
<i>Algeria</i>	Thermal regulations for new buildings (2005)	<i>Syria</i>	Building thermal insulation code (2007), effective since 2009
<i>Bahrain</i>	Thermal insulation implementation (TII) for buildings above 4 stores (2000)		
<i>Egypt</i>	EE code for residential buildings (2006); EE code for commercial buildings (2009); EE code for governmental buildings (2011)	<i>Tunisia</i>	Minimum EE specifications for administrative buildings (2008); Minimum EE specifications for residential buildings (2009)
Voluntary			
<i>Iraq</i>	Voluntary reference EE specifications for buildings (2012)	<i>Palestine</i>	Voluntary EE building code (2004)
<i>Jordan</i>	EE building code (2009)	<i>Morocco</i>	Technical specifications for thermal regulations in building (2010);
Under preparation			
<i>Lebanon</i>	EE building code	<i>Tunisia</i>	Minimum EE performance specifications for hospitals and hotels
<i>Morocco</i>	Technical specifications for building's passive and active components		

# EE Regulations: appliances

Appliance	Algeria	Bahrain	Egypt	Iraq	Jordan	Lebanon	Libya	Morocco	Sudan	Tunisia	Palestine	Yemen
Refrigerators	X		X			X				X		
Washing machines			X									
Air conditioners	X		X			X				X		

Tunisia: Refrigerators: Mandatory: 1 to 3

*Classes 7 and 8 forbidden in 2006; Classes 5 and 6 forbidden in 2007*

*Class 4 forbidden in 2009*

AC: Mandatory 1 to 3

*Classes 6,7 and 8 forbidden in 2010*

*Class 4 forbidden in 2012*

*Market share: 100%*

# EE Regulations: Industry

- No special regulations to promote EE in the industrial sector
- Mandatory Energy Audits
- Tunisia: “Contract Performance”
  - *Incentives*: 70% for auditing and immaterial investments; 20% of material investment
  - *Sanctions*: Restitution of subsidies

# Maturity of ESCO business

Country	Approximate number of ESCOs	Maturity of ESCO business	Description
Algeria	0	non existent	<i>Sufficiently mature:</i> ESCOs are driven by demand for energy efficiency services, activities are mostly financed by clients.
Bahrain	0	non existent	
Egypt	10	nearly non existent	
Iraq	0	non existent	
Jordan	1	nearly non existent	<i>Immature:</i> ESCOs exist mostly due to support of donor institutions.
Lebanon	15	immature	
Libya	0	non existent	<i>Nearly non-existent:</i> ESCOs exist mostly due to support of donor institutions and compared to the size of the market are almost non-existent
Morocco	0	non existent	
Palestine	0	non existent	
Syria	1	nearly non existent	
Sudan	0	non existent	<i>Non-existent:</i> No real ESCO business is present
Tunisia	10	immature	
Yemen	0	non existent	
Italy	1847 with turnover of EUR 520 mill in 2010	mature	

# Energy Efficiency Funds

Country	EE fund	Source of financing
<b>Algeria</b>	National Fund for Energy Side Management (FNME) established by Decree 2000-116 with annual capital of EUR 57 million.	<ul style="list-style-type: none"> <li>- Taxes on natural gas (AD 0.00015/btu) and electricity (AD 0.02/kWh)</li> <li>- Initial government contribution of AD 100 million (€1.15 million)</li> </ul>
<b>Bahrain</b>	None	
<b>Egypt</b>	None	
<b>Iraq</b>	None	
<b>Jordan</b>	Jordanian Renewable Energy and Energy Efficiency Fund (JREEEF).	<ul style="list-style-type: none"> <li>- Annual budget allocations</li> <li>- Foreign donations</li> </ul>
<b>Lebanon</b>	National Energy Efficiency and Renewable Energy Account (NEEREA) established by Central Bank of Lebanon.	<ul style="list-style-type: none"> <li>- 12 million EUR from EU grant for RE projects</li> <li>- Central Bank of Lebanon (low interest soft loans)</li> </ul>
<b>Libya</b>	None	
<b>Morocco</b>	Energy Development Fund (EDF) with a total capital of one billion USD.	<ul style="list-style-type: none"> <li>- 200 million from Hassan II fund</li> <li>- 300 million from UAE</li> <li>- 500 million from Saudi Arabia</li> </ul>
<b>Palestine</b>	Revolving Fund for EE projects (ESCO model)	<ul style="list-style-type: none"> <li>- Start-up capital from donor institutions</li> <li>- Funds saved through EE projects</li> </ul>
<b>Syria</b>	None	
<b>Sudan</b>	None	
<b>Tunisia</b>	National Fund for Energy Management (FNME) established by Law 2005-82 (2005) and Law 2005-106 (2005).	
<b>Yemen</b>	None	

# Customs duties

Appliance	Algeria	Bahrain	Egypt	Iraq	Jordan	Lebanon	Libya	Morocco	Syria	Sudan	Tunisia	Palestine	Yemen
CFL (%)	30	5	17	15	0	5	5	2.5	5	n/a	15	8	5
SWH (%)	30	5	2.5	15	5	5	5	2.5	30	n/a	27	0	5

Thank you!