

Jordan Tariff Structure and the Energy Efficiency

Meqdad Qadous

Electricity Regulatory Commission

September 2012

Main Challenges of Energy Sector in Jordan

- Jordan is facing a real challenge in securing its energy supply due to:
 - ❑ Almost no indigenous energy resources .
 - ❑ High dependency on imported energy (97% import in 2011).
 - ❑ High cost (The energy imports accounted for 16% of GDP in 2011).
 - ❑ High growth of primary energy demand.
 - ❑ High growth rate of electricity.

Renewable Energy and Energy Efficiency Law

Main Goals

- Provide a legal mandate for the government and a regulatory framework for RE and EE development.
- Encourage private-sector investment in RE.
- Diversify energy sources in Jordan.
- Reduce greenhouse gases.
- Develop in-country expertise related to RE and EE.

➤ Establishing a Renewable Energy & Energy Efficiency Fund:

- Provide good financial framework to support energy efficiency programs and renewable energy projects, to help achieve the targets set in the Energy Strategy; 10% renewable and 20% energy savings by 2020 .
 - Funding resources are annual Budget allocations and Foreign donation.
- Allows for Bylaws to be issued for EE measures in different sectors.

Energy Strategy (2008-2020)

- **MAIN GOALS :**

- Diversifying the energy resources.
- Increasing the share of local resources in the energy mix.
- Reducing the dependency on imported oil.
- Enhancing environment protection.

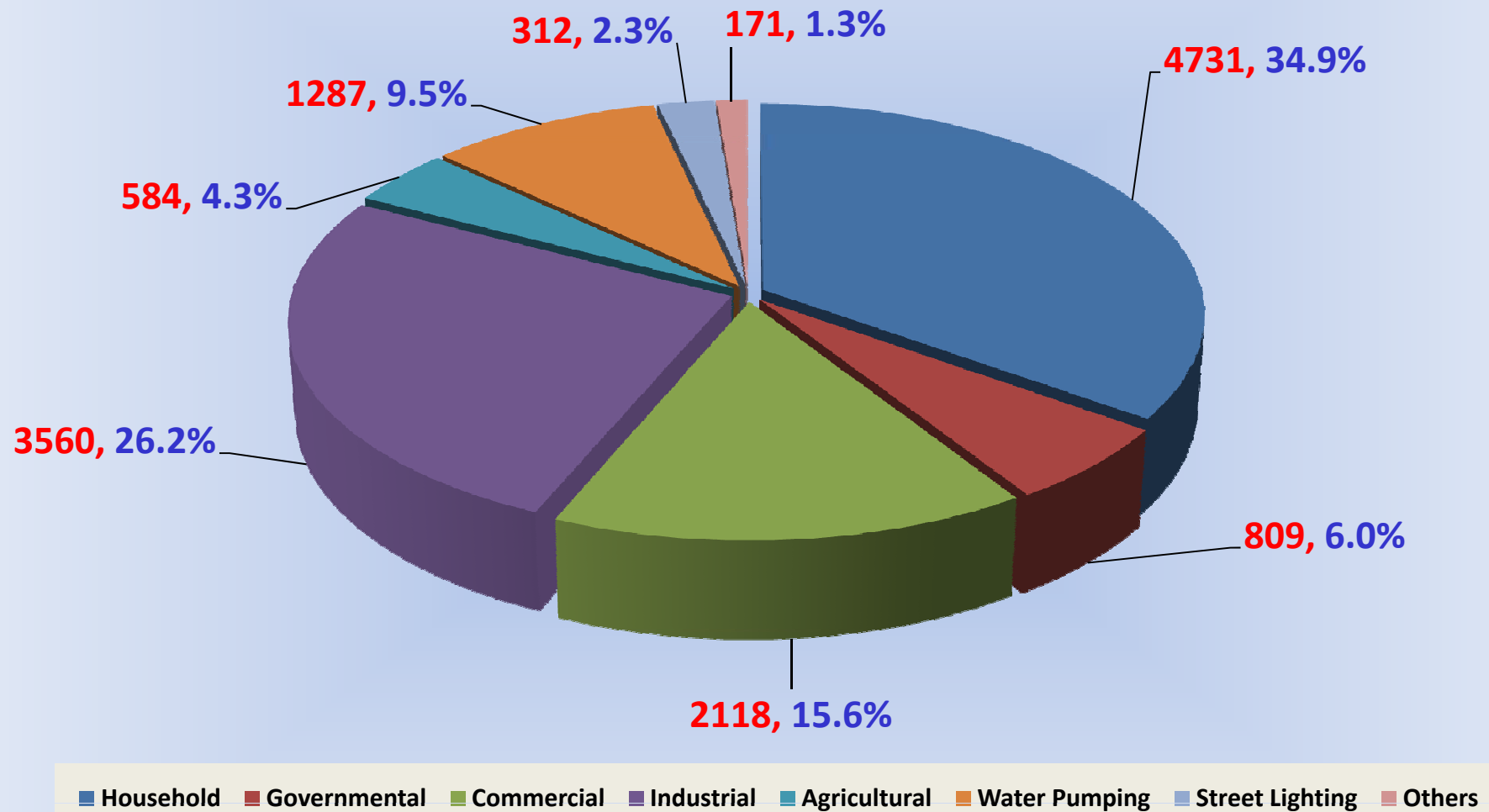
- **This will be achieved through :**

- Expanding the development of renewable energy projects.
- Maximizing the utilization of domestic resources.
- Promoting energy conservation and awareness.
- Generating electricity from nuclear energy.

The new tariff and the EE

- The purpose of the latest tariff increase is to increase the revenue to cover the additional costs in the sector, on the other hand to increase the EE.
- ERC believe that there is a high potential of energy saving in some sectors (Telecommunication, Banking, Mining & Quarry Industries)
- ERC increase the tariff for those sectors to impose them to use energy saving programs and to go forward to use the RE sources.

Electrical Consumption for the Year 2011



EE has a good potential in both household and commercial Sectors

The new blocks Tariff for some sectors will make using RE sources to generate electricity more feasible and attractive Practically after issuing the new RE & EE law and the related Directives.

Domestic Tariff	Current Tariff US \$/kWh	Net Metering price for (PV) Technology US \$/ kWh
600-750 kWh /month	0.199	0.169
751-1000 kWh /month	0.237	0.169
> 1000 kWh /month	0.331	0.169
Telecommunication& Banking Sector Tariff		
1-2000 kWh/month	0.320	0.169
> 2000 kWh/month	0.373	0.169
Commercial Sector Tariff		
1-2000 kWh /month	0.128	0.169
> 2000 kWh /month	0.179	0.169

New Development of Electricity Tariff

		From 16/01/2010 Up to 30/06/2011	From 01/07/2011 Up to 4/6/2012	From 05/06/2012 Up to Now	Changes
a) Domestic					
From 1 - 160 kWh/Month	(US \$/kWh)	0.046	0.046	0.046	0.0%
From 161 - 300 kWh/Month	(US \$/kWh)	0.101	0.101	0.101	0.0%
From 301 - 500 kWh/Month	(US \$/kWh)	0.121	0.121	0.121	0.0%
From 501 - 600 kWh/Month	(US \$/kWh)	0.159	0.161	0.161	0.0%
From 601 - 750 kWh/Month	(US \$/kWh)	0.161	0.161	0.199	23.7%
From 750 - 1000 kWh/Month	(US \$/kWh)	0.161	0.190	0.237	24.4%
More Than 1000 kWh/Month	(US \$/kWh)	0.161	0.245	0.331	35.1%
b) Flat Tariff For T.V and Broadcasting Stations	(US \$/kWh)	0.123	0.138	0.172	24.5%
c) Commercial	(US \$/kWh)				
From 1 - 2000 kWh/Month	(US \$/kWh)	0.123	0.128	0.128	0.0%
More Than 2000 kWh/Month	(US \$/kWh)	0.123	0.149	0.179	19.8%
d) Banks	(US \$/kWh)				
From 1 - 2000 kWh/Month	(US \$/kWh)	0.123	0.320	0.320	0.0%
More Than 2000 kWh/Month	(US \$/kWh)	0.123	0.373	0.373	0.0%
e) Telecommunication	(US \$/kWh)				
From 1 - 2000 kWh/Month	(US \$/kWh)	0.123	0.320	0.320	0.0%
More Than 2000 kWh/Month	(US \$/kWh)	0.123	0.373	0.373	0.0%
f) Small Industries	(US \$/kWh)	0.070	0.080	0.080	0.0%

New Development of Electricity Tariff					
		From 16/01/2010 Up to 30/06/2011	From 01/07/2011 Up to 4/6/2012	From 05/06/2012 Up to Now	Changes
g) Medium Industries					
Peak Demand	(US \$/kW /month)	5.338	5.338	5.338	0.0%
Day Energy	(US \$/kWh)	0.066	0.085	0.089	5.0%
Night Energy	(US \$/kWh)	0.052	0.070	0.075	6.0%
h) Agriculture Flat Tariff	(US \$/kWh)	0.068	0.085	0.085	0.0%
i) Three parts Agriculture Tariff					
Peak Demand	(US \$/kW /month)	5.338	5.338	5.338	0.0%
Day Energy	(US \$/kWh)	0.066	0.083	0.083	0.0%
Night Energy	(US \$/kWh)	0.052	0.069	0.069	0.0%
j) Water Pumping	(US \$/kWh)	0.059	0.093	0.093	0.0%
k) Flat Tariff for Hotels	(US \$/kWh)	0.123	0.179	0.179	0.0%
l) Three part Tariff for Hotels					
Peak Demand	(US \$/kW /month)	5.338	5.338	5.338	0.0%
Day Energy	(US \$/kWh)	0.115	0.163	0.163	0.0%
Night Energy	(US \$/kWh)	0.100	0.144	0.144	0.0%
m) Streets Lighting	(US \$/kWh)	0.073	0.113	0.113	0.0%
n) Armed Forces	(US \$/kWh)	0.115	0.132	0.145	9.6%
o) Port Corporation	(US \$/kWh)	0.083	0.158	0.158	0.0%
p) Mixed Tariff (Commercial / Agriculture)	(US \$/kWh)	0.104	0.114	0.114	0.0%

New Development of Electricity Tariff

		From 16/01/2010 Up to 30/06/2011	From 01/07/2011 Up to 4/6/2012	From 05/06/2012 Up to Now	Changes
Large Industries (Quarring & mining industries)					
Peak Demand	(US \$/kW /month)	4.197	4.197	4.197	0.0%
Day Energy	(US \$/kWh)	0.093	0.115	0.310	168.3%
Night Energy	(US \$/kWh)	0.070	0.093	0.231	148.5%
Large Industries (Others industries)					
Peak Demand	(US \$/kW /month)	4.197	4.197	4.197	0.0%
Day Energy	(US \$/kWh)	0.093	0.115	0.132	14.6%
Night Energy	(US \$/kWh)	0.070	0.093	0.107	15.2%

Sector	Statistics for the year 2012 (Expected)					
	Consumers			Sold Energy		
	Num.	Percentage	ACC. Percentage	Qua. (kWh)	Percentage	ACC. Percentage
Household						
1-160	309,553	25.4%	25.4%	313,956,256	6.7%	6.7%
161-300	418,271	34.3%	59.7%	1,154,657,286	24.7%	31.4%
301-500	279,534	22.9%	82.7%	1,348,144,141	28.8%	60.2%
501-600	106,394	8.7%	91.4%	751,330,744	16.0%	76.2%
601-750	39,376	3.2%	94.6%	328,487,986	7.0%	83.2%
751-1000	39,322	3.2%	97.9%	395,807,187	8.5%	91.7%
>1000	26,055	2.1%	100.0%	389,498,822	8.3%	100.0%
Total	1,218,504	100.0%		4,681,882,424	100.0%	
Government						
1-160	3,539	23.4%	23.4%	3,050,321	0.5%	0.5%
161-300	1,962	13.0%	36.4%	6,536,764	1.0%	1.5%
301-500	1,873	12.4%	48.8%	11,357,641	1.7%	3.2%
501-600	775	5.1%	53.9%	6,845,053	1.0%	4.2%
601-750	842	5.6%	59.5%	8,821,731	1.3%	5.6%
751-1000	1,062	7.0%	66.5%	13,732,691	2.1%	7.7%
>1000	5,064	33.5%	100.0%	606,356,365	92.3%	100.0%
Total	15,117	100.0%		656,700,566	100.0%	
Grand Total	1,233,621			5,338,582,989		

Statistics for the year 2012 (Expected)

	Num.	Percentage	Qua. (kWh)	Percentage
Commercial Sector				
1-2000	268,352	91.9%	995,732,263	51.2%
> 2000	23,529	8.1%	948,292,965	48.8%
Total	291,881	100.0%	1,944,025,228	100.0%
Banking Sector				
1-2000	291	29.0%	17,744,160	18.3%
> 2000	712	71.0%	79,030,457	81.7%
Total	1,004	100.0%	96,774,617	100.0%
Telecommunication Sector				
1-2000	1,820	57.4%	53,261,190	35.9%
> 2000	1,348	42.6%	95,113,352	64.1%
Total	3,168	100.0%	148,374,542	100.0%

Other EE procedures

- New Time of use tariff will be introduced
 - ERC is working to issue a new directives to all distribution companies in order to replace all old meters.
 - The new meters will able the distribution companies to record the consumption and the peak for 3 periods of time during the day.
 - Introducing the multi tasks meters will help ERC to design a new time of use (Tou) Tariff for the Household sector.
 - The expected time to replace all of old meters is 7 years.

- The system operator { NEPCO} asks ERC to change the period of peak load in order to enable the large industries to manage their load.
 - The old peak period in the summer was from 20:00 pm to 23:00 pm and the new peak period become from 12:30 pm to 16 pm from Saturday to Thursday.
 - On Friday no peak period .
- ERC & the distribution companies will conduct an international consultancy services to study the fact of losses, this will help to increase the EE and solve the problem of the high percentage of losses rate in the distribution system.

Thank You