Challenges and Reforms in the Electricity sector relating to unsustainable price Subsidies and public communication

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Introduction & Organization

Background of the regional Petroleum country, with very high unsustainable Subsidies for:

- Fossil Fuel (FF), Food, Medicines, Education, Drinking water & others.

High subsidies namely for FF has negative impact on:

  - Economy, Environment, High consumption, unfair...

Low taxation in general, but after new oil prices crises in 2014, taxation and some subsidies has readjusted.

Why Electricity?: in Iraq 95% of Electricity production is from Fossil Fuel, Commercial & industries energy tariffs subsidies reduction already implemented.

Electricity losses Reduction by Smart Meters & AMI system project on going.
ECONOMIC & ENERGY Demand Growth in KRG

In the last years the Kurdistan Region has undergone a remarkable economic transformation despite of different challenges, political, Economical, budget embargo etc

• GDP per capita jumped from $375 in 2002 to $6,000 in 2014;

• Government revenues increased from US$100 m. to US$10 bln.;

• Economy is expected to grow by around 12% in 2012-2013;

Key sectors for ensuring these strong growth projections and targeted economic diversification are mainly Energy and Fossil Fuel (Oil, Gas and Electricity)
Fossil Fuel Subsidy Reforms and public Approach to Strategic Communication to:

• Change people’s behaviour by changing their perception through strategic communication
• We are asking people to do something different—they should know why and feel a responsibility to comply
• Trust in Government to deliver on its promises is absolutely key. Government can evoke trust by communicating consistently.
Two objectives – two communication strategies for reform acceptable:

**Loss Reduction**
- Improve collection rates & payment of electricity bills

**Subsidies Reduction**
- Communication needed to make price increases acceptable

Preparation of two inter-linked communication strategies
Main Goal of the survey is to inform the KRG about public acknowledge, perception, preference and different opinions about Electricity efficiency and electricity tariff reform to achieve:

- Losses reduction
- Demand efficiency
- How to communicate paying Electricity bills and reducing demand

- Tariff increase: how to communicate that increasing electricity tariffs is in the interest of householders by improving infrastructure and reliability of service
- To develop other different communication strategy
- There is a general concern about energy conservation, 2/3rd of public already taking measures.
88% of Iraqi Kurds also trusts television the most to receive information, with the remainder mainly filled between websites and facebook. This is good news, as it means that the most used source of information and the most trusted source of information are the same. It is clear that a communication strategy will mainly focus on television, complemented by predominantly websites (and to a lesser extent, facebook, which in itself often refers to websites).

More than 3/4th of Iraqi Kurds choose Rudaw (aligned with KDP & Barzani) and NRT (independent though sympathetic to the constituency of Gorran) as their television station to regularly receive news. This is followed by about 1/3rd also regularly using Kurdistan 24 (aligned with KDP) and KNN (Official station of Gorran) to receive news. Other stations receive less than 13% coverage. Most people from Erbil, Sulaymaniyah and Duhok use Rudaw and NRT, which makes these two channels particularly important to target messaging. KNN is considered more partisan. While about 2/3rds from Sulaymaniyah use this TV channels, far less people from Erbil and Duhok watch the news.
Prospects Population & FF Subsidies Challenges
(JICA Survey on Business environment, Iraq-July 2013)

According to an estimate of the United Nations (UN)\(^1\), the population of Iraq was about 32 million in 2010 and the yearly population growth rate was around 3%. Investors are interested in the Iraqi market potential as a large middle income class of consumers is expected in the near future concomitant with recovery of the economy. The UN forecasted that the population would reach 50 million in 2030 and would be 100 million in around 2060.

Note: Estimates start after 2010.
Source: UN
Almost the Electricity sector in Iraq has the highest unsustainable subsidies

Fossil Fuel usage 96% in Iraq 2017


<table>
<thead>
<tr>
<th>Year</th>
<th>Iran Import</th>
<th>ECCPP&amp;SCCPP</th>
<th>Iraq Incom</th>
<th>kurdistan Gen.(HPS)</th>
<th>kurdistan Gen.(Gpp+HFO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>190</td>
<td>41</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
<td>0</td>
<td>116</td>
<td>195</td>
<td>32</td>
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<tr>
<td>2006</td>
<td>0</td>
<td>0</td>
<td>134</td>
<td>187</td>
<td>11</td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
<td>193</td>
<td>136</td>
<td>13</td>
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<td>2008</td>
<td>0</td>
<td>0</td>
<td>165</td>
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<td>0</td>
<td>0</td>
<td>133</td>
<td>84</td>
<td>13</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>0</td>
<td>-92</td>
<td>-248</td>
<td>-305</td>
</tr>
<tr>
<td>2012</td>
<td>0</td>
<td>0</td>
<td>-112</td>
<td>-2214</td>
<td>-267</td>
</tr>
<tr>
<td>2013</td>
<td>0</td>
<td>0</td>
<td>126</td>
<td>-2425</td>
<td>-240</td>
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<tr>
<td>2014</td>
<td>0</td>
<td>0</td>
<td>92</td>
<td>2214</td>
<td>220</td>
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<tr>
<td>2015</td>
<td>0</td>
<td>0</td>
<td>162</td>
<td>1775</td>
<td>128</td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
<td>0</td>
<td>83</td>
<td>500</td>
<td>128</td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
<td>0</td>
<td>198</td>
<td>514</td>
<td>1863</td>
</tr>
</tbody>
</table>

Hang 7/1/2018

Combined Cycle

MW

## Current Residential Consumption & Subsidies for tariff blocks

<table>
<thead>
<tr>
<th>Subsidies percentage</th>
<th>Average Tariff (USc/kWh)</th>
<th>Average consumption per month (kWh)</th>
<th>Percentage of consumers</th>
<th>Percentage of contribution payments</th>
<th>kWh Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>91%</td>
<td>1.25</td>
<td>231</td>
<td>32.4%</td>
<td>23.1%</td>
<td>1 - 450</td>
</tr>
<tr>
<td>88%</td>
<td>1.67</td>
<td>658</td>
<td>38.3%</td>
<td>40.1%</td>
<td>451 - 900</td>
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<tr>
<td>69%</td>
<td>2.92</td>
<td>1,135</td>
<td>21.8%</td>
<td>30.3%</td>
<td>901 - 1500</td>
</tr>
<tr>
<td>58%</td>
<td>5.00</td>
<td>1,743</td>
<td>5.2%</td>
<td>5.06%</td>
<td>1501 - 2100</td>
</tr>
<tr>
<td>53%</td>
<td>6.25</td>
<td>2,447</td>
<td>1.7%</td>
<td>1.24%</td>
<td>2101 - 3000</td>
</tr>
<tr>
<td>21%</td>
<td>12.50</td>
<td>3,647</td>
<td>0.5%</td>
<td>0.15%</td>
<td>3001 – 5000</td>
</tr>
<tr>
<td>1.3%</td>
<td>16.67</td>
<td>13,758</td>
<td>0.1%</td>
<td>0.05%</td>
<td>Above 5000</td>
</tr>
<tr>
<td>39%</td>
<td>10</td>
<td>Industrial &amp; Commercial</td>
<td>100.0%</td>
<td>100.00%</td>
<td>unlimited</td>
</tr>
<tr>
<td>19%</td>
<td>12.5</td>
<td>Government</td>
<td>12</td>
<td>---</td>
<td>unlimited</td>
</tr>
</tbody>
</table>
Kurdistan Total Energy Generation 95% by Fossil Fuel (2571MW@22.2TWh) in - 2017

Power Generation Based on Fuel type in 2017 MOE-KRG

- Simple Cycle Gas Turbine (NG) 66%
- Combined Cycle 20%
- Hydropower 5%
- Diesel 3%
- HFO Combustion Engine 6%

2012 Power Generation:
- Hydro 25%
- Gas 64%
- Diesel 5%
- HFO 6%
Thank you for attention

Bekhal Spring 1.2 MW SHPP (Tourist area)

Erbil - Kurdistan

DERBANDIKHAN DAM
In Sulaimaniya Governorate, on Sirwan river.
Total Storage: 4040 MCM
Dam Height: 127 m
Electricity Generation: 240 MW

WE CAN DO IT