



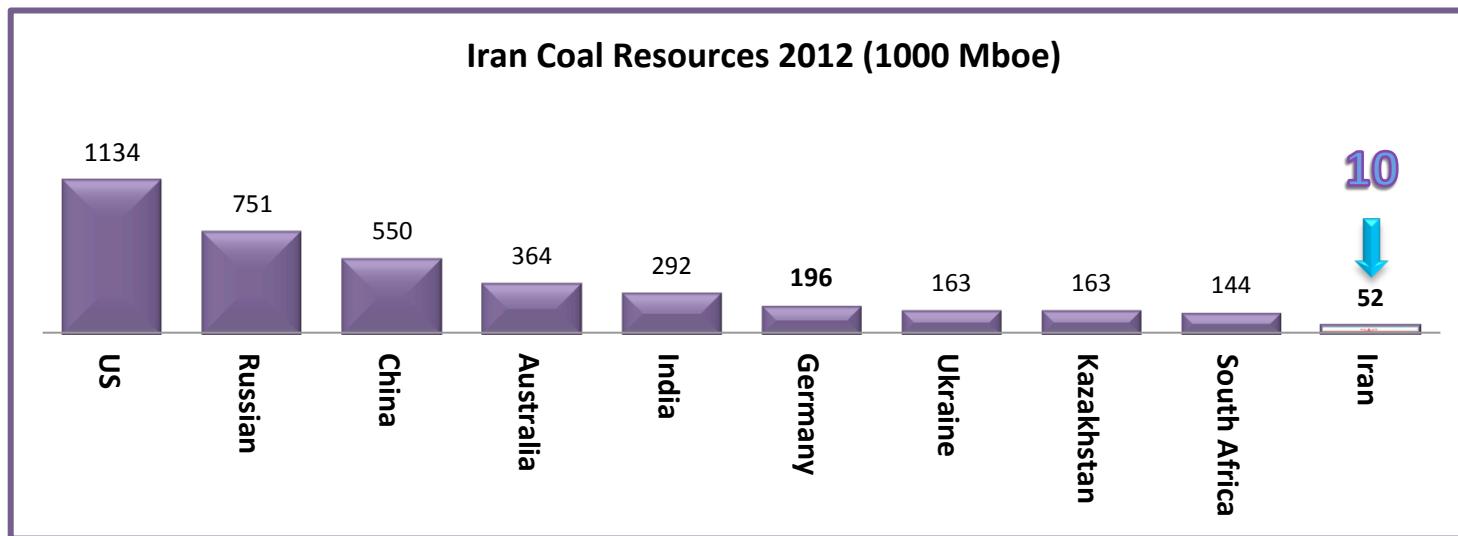
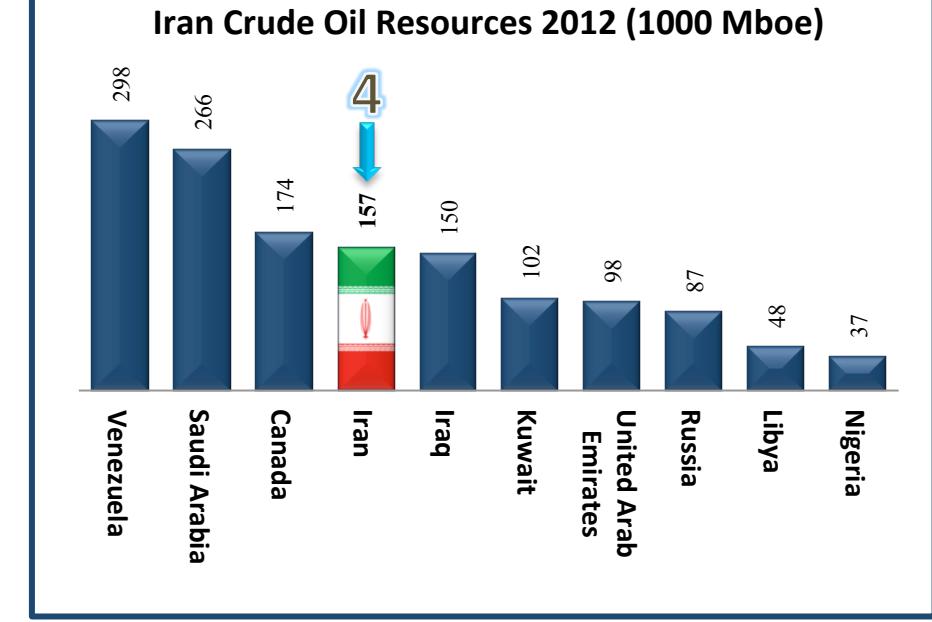
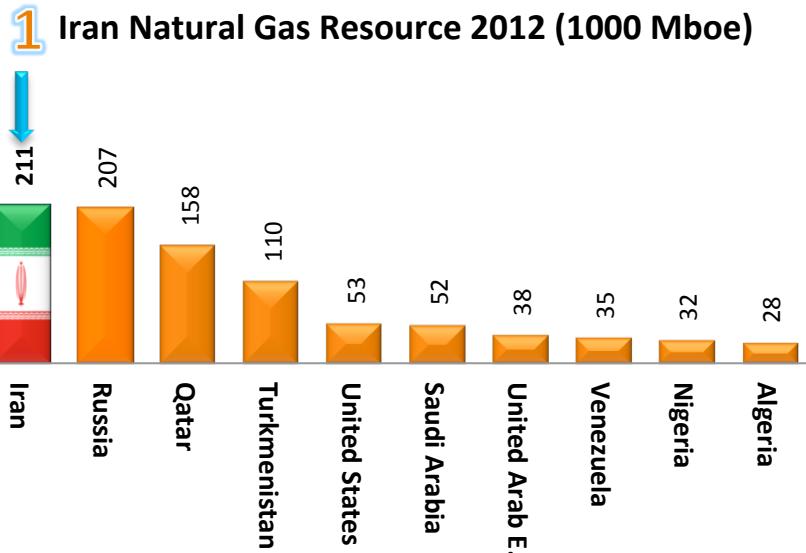
# Potentials of Energy Conservation in Industry Sector of Iran

F. Sojdei - N. Sayfi - M. Eslami

Dana Energy Services

ecee 2014 Industrial Summer Study

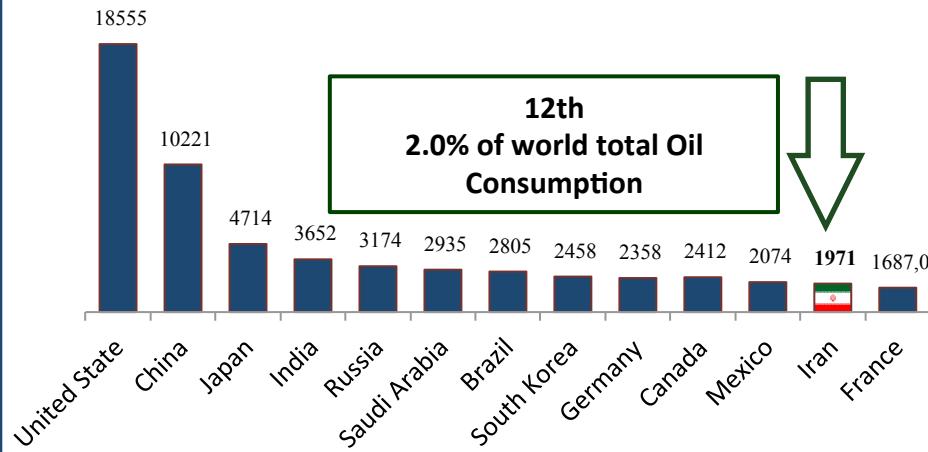
# Fossil Energy Resources



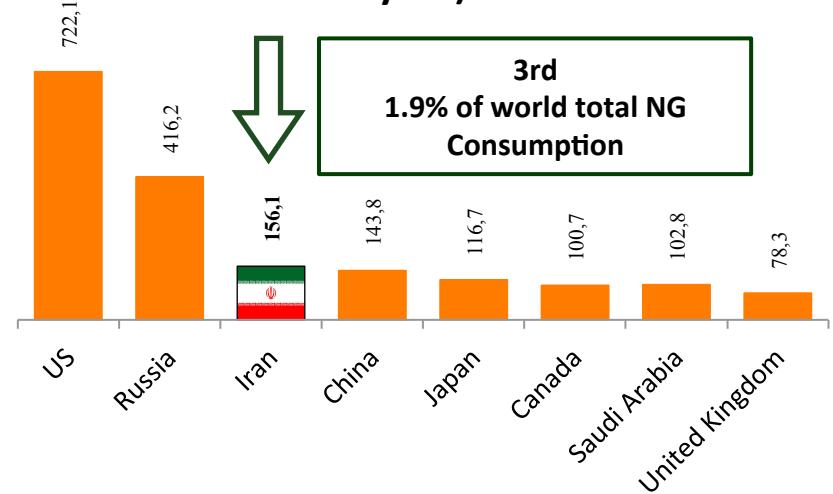
Source: BP Statistical Review of World Energy. June 2013

# Energy Consumption

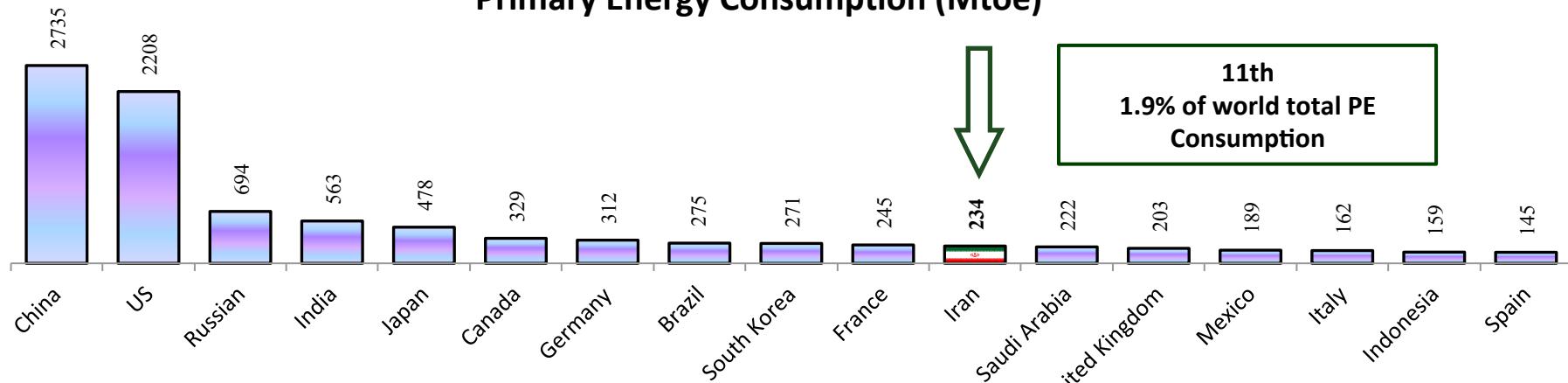
**Iran Crude Oil Consumption  
(bbl/day)**



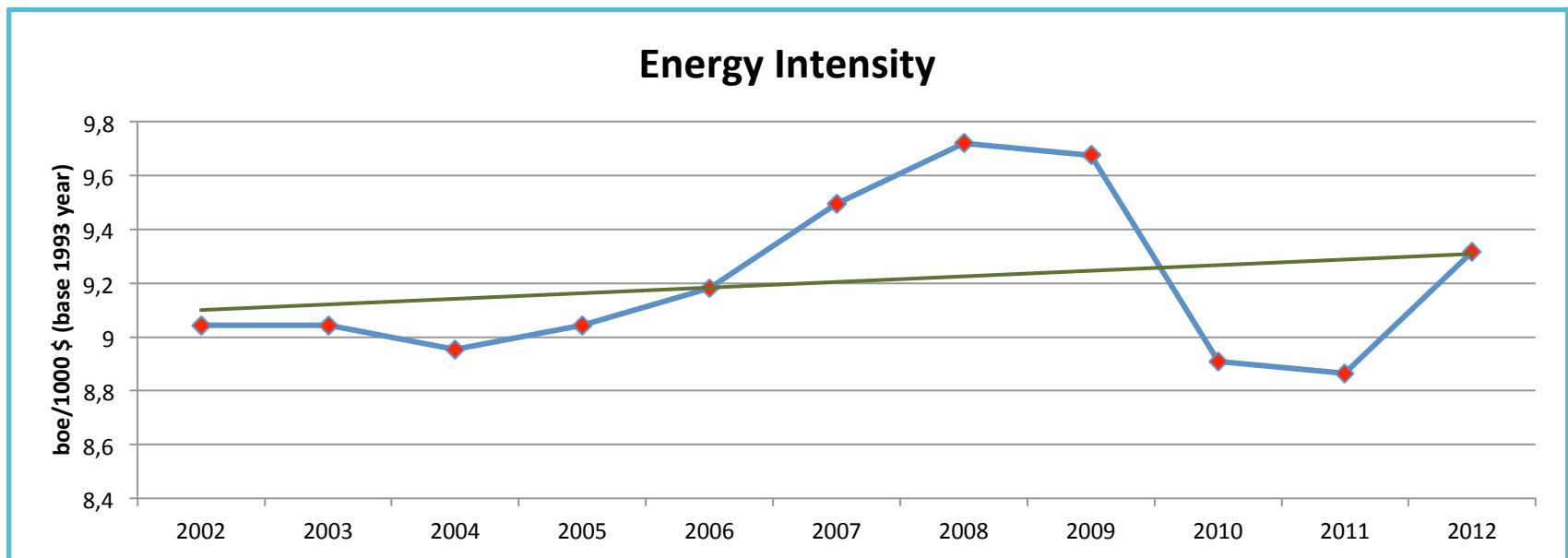
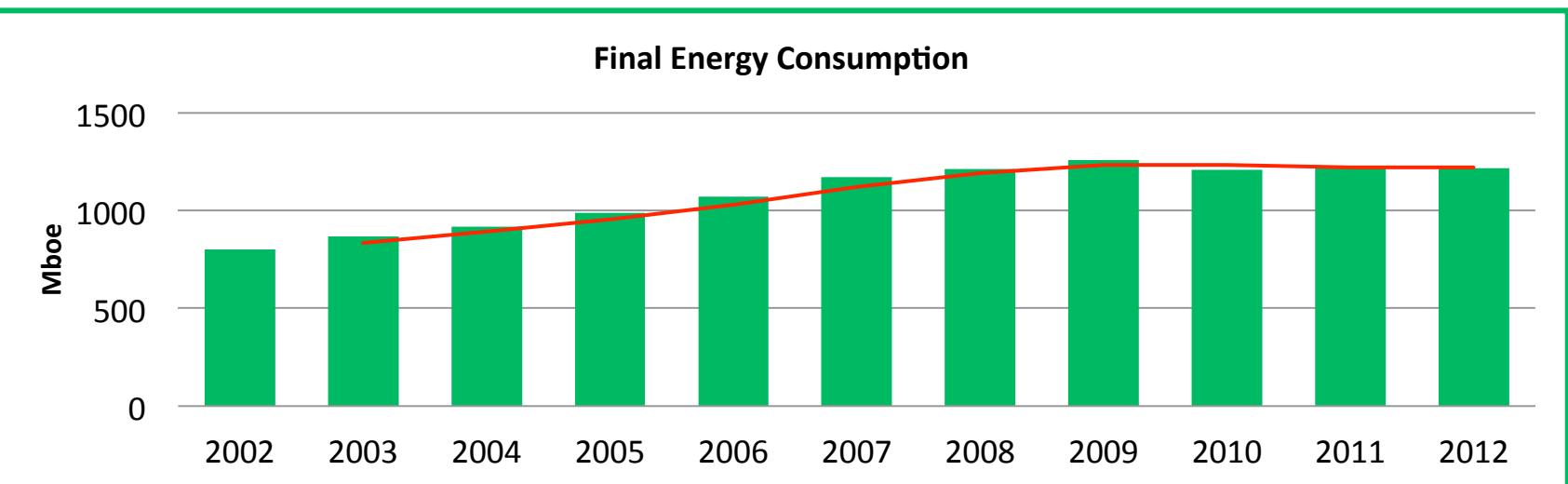
**Iran Natural Gas Consumption (bcm/year)**



**Primary Energy Consumption (Mtoe)**

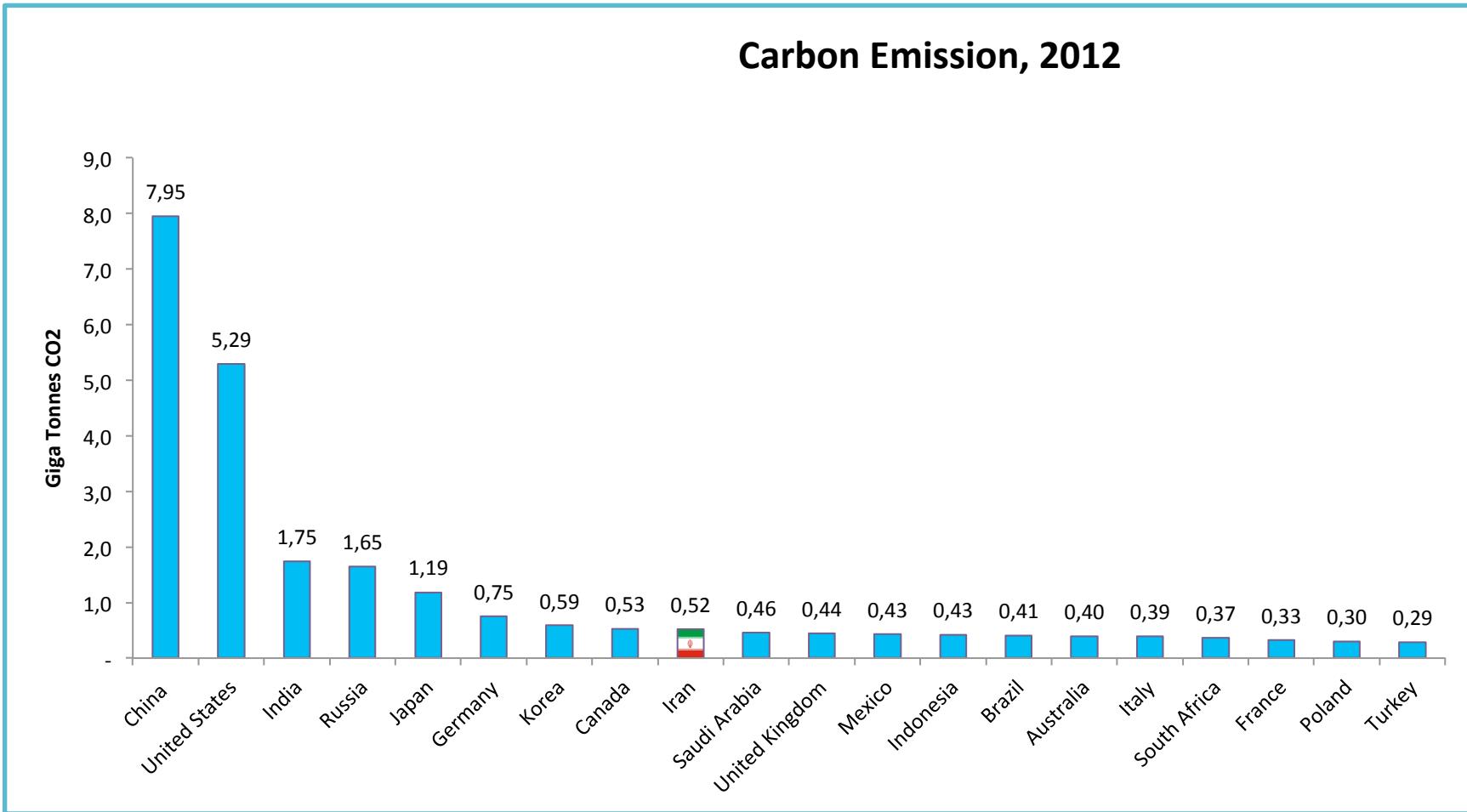


# What is the trends?



Source: Islamic Republic of Iran's Hydrocarbon Balance, 2011

# Carbon Emission is a problem?

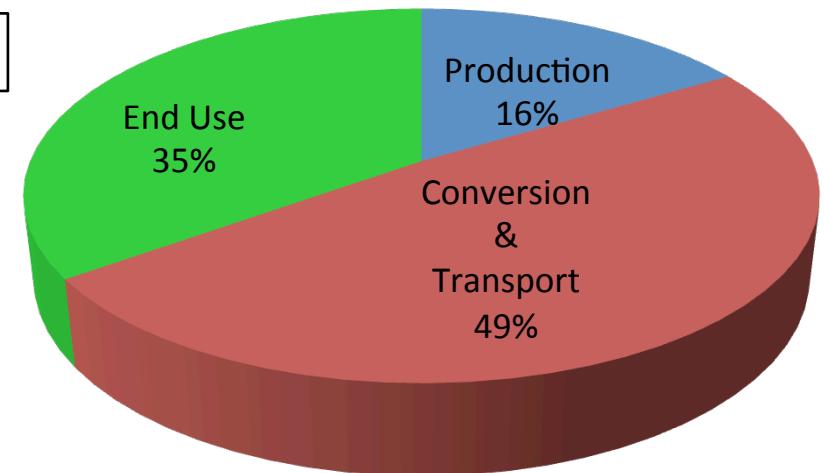


Source: CO2 Emissions From Fuel Combustion Highlights 2013

# Losses in Iran energy system

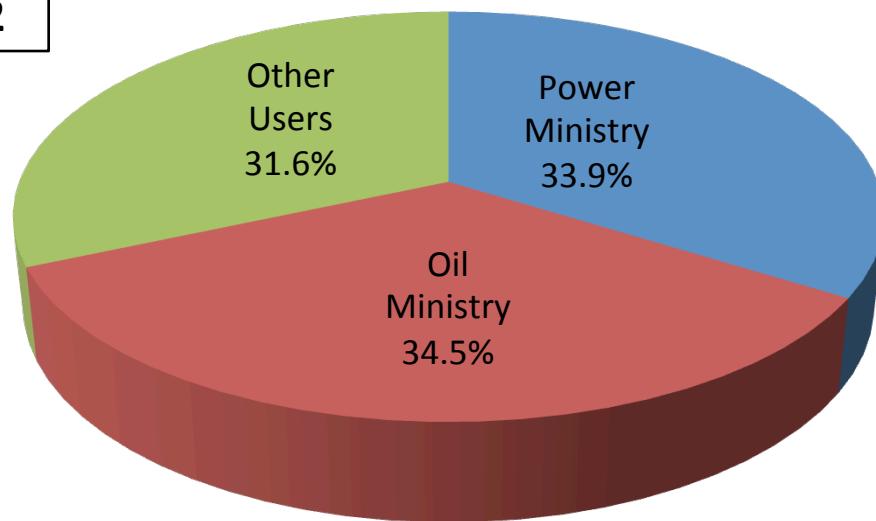
1

Losses Share in each section



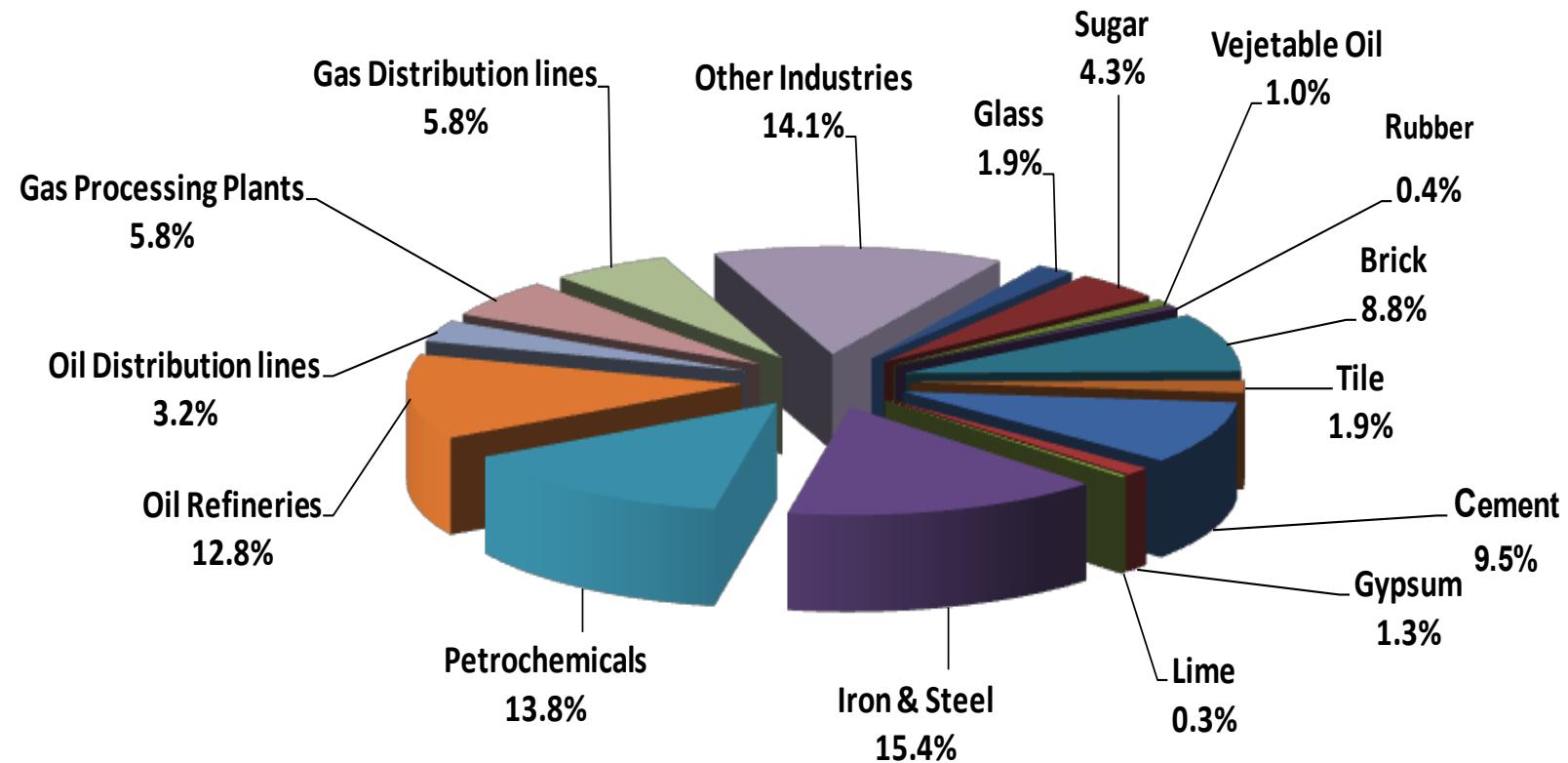
2

Losses Share in each organization



Source: Islamic Republic of Iran's Hydrocarbon Balance, 2007

# Share of each industry in Iran energy use



Power Plants are excluded

## Potential energy saving based on industrial standard development

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Non- polymeric petrochemical complexes	<b>9.02</b>	<b>3.12</b>
petrochemical complexes (new plants)	<b>33.22</b>	<b>11.5</b>
Gas distribution line	<b>6.16</b>	<b>2.1</b>

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Cement (existing)	<b>2.2</b>	<b>0.8</b>
Cement (new)	<b>2.25</b>	<b>0.8</b>
Brick	<b>3.24</b>	<b>1.1</b>

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Power plants (new plants)	<b>49.13</b>	<b>17</b>
CCHP	<b>6.42</b>	<b>2.23</b>

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Iron & Steel (existing)	<b>6.77</b>	<b>2.3</b>
Iron & Steel (new)	<b>6.33</b>	<b>2.2</b>

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Total	<b>158.92</b>	<b>55.07</b>

Industry	Potential energy saving (MBOE/Year)	CO2 Reduction MT/ Year
Oil refineries (9 existing)	<b>10.92</b>	<b>3.8</b>
Oil refineries (new)	<b>9.12</b>	<b>3.2</b>
Gas refineries (12 existing)	<b>6.16</b>	<b>2.1</b>

Source: Iran Fuel Conservation Organization (IFCO)

159 million barrels of crude oil equivalent  
per year

(about 0.44 MBOE per day)

# Conclusion

With very low investment in comparison  
to most countries.

But...

# barriers

low energy prices

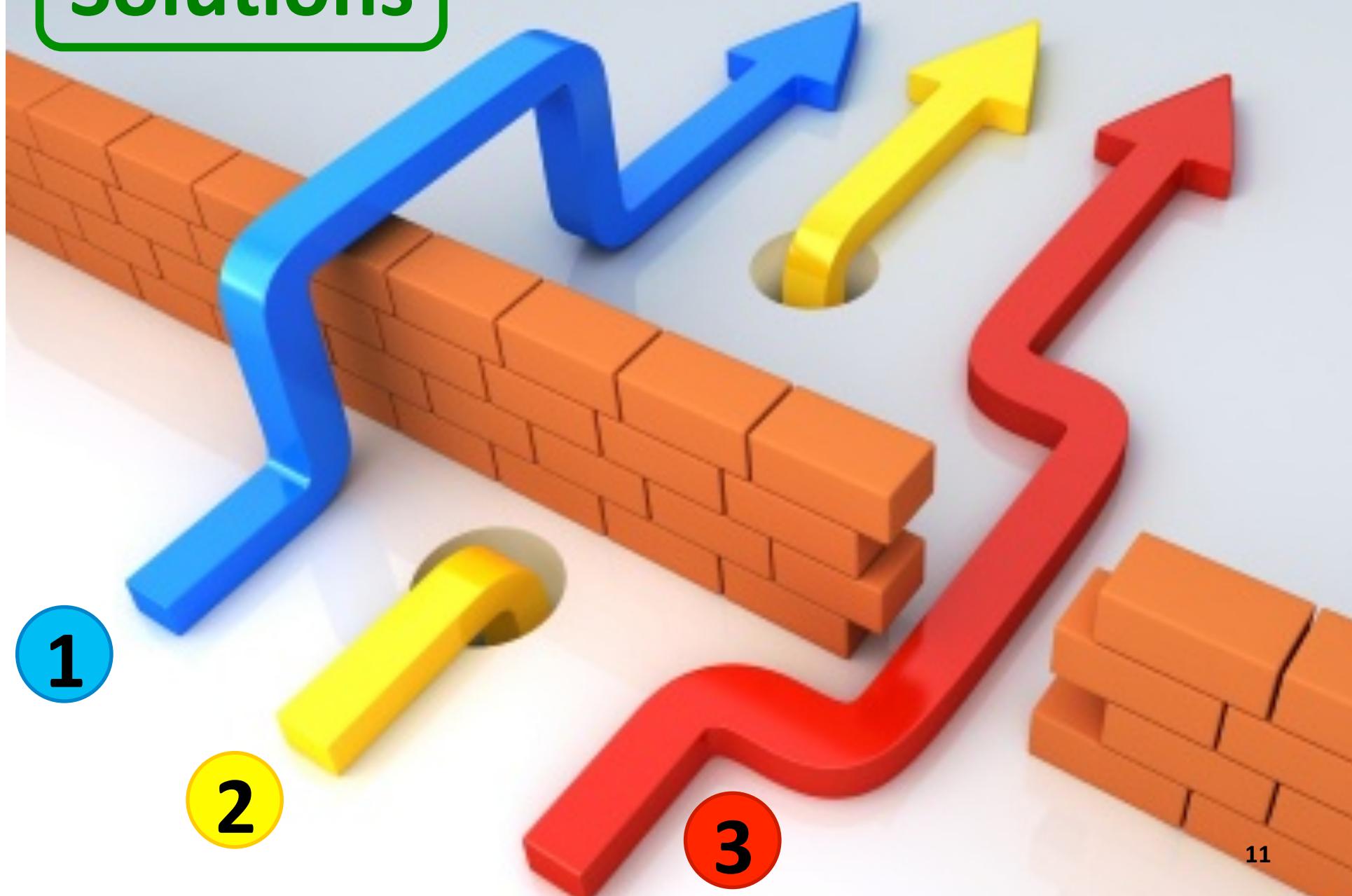
financial constraints

Lack of EE Technologies

Need Capacity building



# Solutions



**Iran  
Energy  
Efficiency  
Business**

A 3D rendering of two anthropomorphic lightbulbs. Each bulb has a grey cylindrical base with arms and legs, resembling a small robot. They are positioned on top of the letters 'B', 'U', 'S', 'I', 'N', 'E', and 'S' of the word 'Business'. The 'B' is a large blue block letter, while the other letters are grey. The lightbulb robots have simple, metallic-looking mechanical components for joints and hands. They appear to be interacting with each other or their environment.

# Contacts

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