EE in KSA; Pillars for success: Overcoming Inter-agency Barriers and Public Private Partnership.

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• El showing an increasing trend since 1985
• El in KSA has shown an overall growth ~ 50%
• El ~ twice the world average in 2010
• Electricity consumption per capita is 3X world average
KSA Energy Efficiency journey started almost a decade ago, and lead to the creation of SEEC and the start of the EEP.

- **2003**: Launch of a national effort (NEEP) to enhance demand-side energy efficiency (focused on electricity) in collaboration with public and state-owned enterprises.
- **2007 - 10**: Initiative by the Ministry of Petroleum to transfer the National Energy Efficiency Program to a permanent entity: the Saudi Energy Efficiency Center, established in October 2010 by the Council of Minister.
- **2012**: Inter-agency effort to launch the Energy Efficiency Program (EEP).
National Energy Efficiency Program; NEEP

- Governed by a steering committee composed of representatives from stakeholders.
- Hosted and managed by KACST.

Ministry of Petroleum and Minerals
Ministry of Water & Electricity
Ministry of Municipal & Rural Affairs
Saudi Standards and Quality Organization
Electricity & Co-generation Regulatory Authority
SEEC is the custodian of the Energy Efficiency in the Kingdom

Institutionalizing & Governance

- Established through Council of Ministers’ decision.
- Supervised by Board of Directors chaired by KACST president with representations from all related stakeholders (9 ministries, 8 regulatory authorities, major companies and private sector)
- Tasked to coordinate EE activities between governmental and non-governmental stakeholders

Mission

Reduce energy consumption and improve EE to achieve the lowest possible levels of EI.

Key Tasks

- Develop EE plan (policies and regulations, initiatives)
- Monitor its implementation.
- Promote EE awareness & Support Building capacity.
- Promote EE industry.
The Saudi EE Program framework is organized around 3 sectors and 5 enablers.

<table>
<thead>
<tr>
<th>Sectors</th>
<th>EE Savings goals</th>
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<tbody>
<tr>
<td>Buildings</td>
<td>New buildings</td>
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<tr>
<td>Transport</td>
<td>Existing buildings</td>
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<tr>
<td>Industry</td>
<td>New fleet</td>
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<td>Existing fleet</td>
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<td></td>
<td>New plants</td>
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<td>Existing plants</td>
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- **Initiatives to achieve the EE savings goals**
  - New buildings
  - Existing buildings
  - New fleet
  - Existing fleet
  - New plants
  - Existing plants

- **Enablers to implement initiatives**
  - Regulations (specific to initiatives)
  - ESCO’s (Energy Service Companies)
  - Funding
  - Governance
  - Awareness

6 EE sub-sectors with EE savings goals
With the updated AC MEPS, KSA will progressively catch up with the rest of the world.

**SAUDI ARABIA MEPS RAMP-UP...**
Minimum Energy Performance Standard for small capacity air-conditioners (Energy Efficiency Ratings)

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2015</th>
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<td>7.8</td>
<td>8.0</td>
<td>8.5</td>
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<tr>
<td>9.5</td>
<td>10.1</td>
<td>11.5</td>
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</tr>
<tr>
<td>11.5</td>
<td>15.0</td>
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... RESULTING IN SIGNIFICANT ENERGY SAVINGS
Typical 1.5 ton capacity air conditioner unit operating 2,700 hours per year (Energy consumption in BoE)

- **7.5 EER air conditioner**
  - Primary energy consumption (wellhead): 15.9
  - Upstream losses: 2.1
  - Power generation and T&D losses: 9.8
  - Final energy consumption: 6.4

- **11.5 EER air conditioner**
  - Primary energy consumption (wellhead): 10.4
  - Upstream losses: 1.4
  - Power generation and T&D losses: 6.4
  - Final energy consumption: 2.6
Conclusions

• Energy intensity of the Kingdom has grown significantly over the last 25 years.

• SEEC has been tasked to reduce Saudi Arabia’s energy consumption and improve its energy efficiency capitalizing on its strongest asset “the integrated inter-agency cooperation”.

• SEEC is developing SEEP, a necessary and ambitious program where all stakeholders partake in the making and delivery.

• Best practices and international experiences have been an important element for SEEP’s development
THANK YOU