Energy policy of Uzbekistan: opportunities, problems and prospects

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Area: 447,4 thous. sq. km.
Population: 28,0 mln., (incl. able-bodied population – 16,3 mln.)

Uzbekistan borders on 5 countries with the total population of 60 mln. people.
1. Energy sector of Uzbekistan produces:
   - 27.6% of total output of the industrial sector
   - 86.2% of total carbon emissions

2. Change in energy prices has a significant impact on prices of other commodities in the economy

→ Energy sector is important to ensure economic, political and social stability and sustainable development in the long term
Energy policy of Uzbekistan: retrospective analysis

1- stage (1991-1996) - Energy independence and reorientation of the fuel-energy market to achieve society’s priority social goals.


3 – stage (2003 – present) – Raising energy efficiency and introduction of renewable energy sources
Energy self-sufficiency is provided.

Self-sufficiency index is 1.23 VS EU -0.49, OECD – 0.7

Energy importer ➔ energy exporter

Energy intensity has been decreasing in the recent years
Energy production has been increasing since gaining the independence and reached 60 mln. t.o.e. by 2010.

The demand for primary energy is 50 mln. t.o.e. The structure of energy supplied to economy and population is dominated by natural gas.
Access to energy

- **Gas** transportation system of 13 thous. km
- Developed system of transportation and distribution of **electricity** (0.4-500 kWt)

**Nearly 100% access to gas and electricity ➔ sustainable energy supply**

<table>
<thead>
<tr>
<th>Access</th>
<th>Urban</th>
<th>Rural</th>
<th>General</th>
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<tbody>
<tr>
<td>Electricity</td>
<td>100%</td>
<td>94%</td>
<td>97%</td>
</tr>
<tr>
<td>Gas supply</td>
<td>100%</td>
<td>90%</td>
<td>95%</td>
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Energy rate policy is oriented at raising energy efficiency, ensuring social stability and raising competitiveness of enterprises.
Energy efficiency

Energy intensity (t.o.e. per 1000 USD of GDP)

Despite a sharp decrease, energy intensity is still high

Energy saving policy is essential for Uzbekistan
Uzbekistan is in between OECD and LDC.

Increase in per capita energy supply could contribute and improve human development.

Increase in energy use should be provided without "wasteful use of resources".
Challenges:

- Depletion of gas reserves in 28-30 years, coal reserves – in 50 years
- High energy consumption of the economy

⇒ Economic growth may be constrained by increasing scarcity of traditional energy resources

- Energy saving potential is 18-20 mln t.o.e. (35-40% of EC)
- The potential of renewables = current consumption of hydrocarbons * 3

⇒ Sound justification for energy efficiency on supply and demand side and development of RE
Energy sector of Uzbekistan: key problem

- **Main challenge**: to preserve the achieved results and ensure sustainable economic, social and environmental development in the long term

- **Key problem**: The current “brown” pattern of energy sector will constrain sustainable growth and development in the long-term and present tremendous risks and challenges for future generations

Transition to a new “Green” model of energy sector is important to ensure sustainable development
Uzbekistan: expected benefits from energy saving and introduction of RE

- Total annual benefits from export of saved amount of natural gas - $4,664 bln
- Total annual benefits via carbon market schemes and mechanisms – $625.8 mln

- “Green” jobs
  - renewables: 175 th. jobs by 2020, 270 th. jobs by 2050
  - green buildings: 15 th. jobs by 2020, 120 th. jobs by 2050
  - transportation: 95 th. jobs by 2020, 175 th. jobs by 2050
Key strategies:

- Improving **technologies** to ensure energy saving and introduce renewables;

- Development of the **legal framework** for the new pattern of energy sector;

- **Institutional reformation** of the energy sector and creation of **incentives** for energy efficiency and development of RE
Energy Policy: CER’s Research activities

- Transition to Green Economy in Uzbekistan: conceptual framework
- Alternative energy sources: opportunities and perspectives
- Green buildings in Uzbekistan: technologies, legal framework and incentives
- Draft Law “On renewable energy sources”
- Towards Rio +20: agenda for Uzbekistan
- Transition to Green Economy in Energy Sector: Baseline assessment for Uzbekistan
- “Green” transportation in Uzbekistan
Transition to Green Economy in Energy Sector: Baseline Assessment for Uzbekistan

1. Analysis and assessment of the current situation applying 4 A principle
   - Access
   - Availability
   - Affordability
   - Acceptance

2. Qualitative analysis of greening potential (policies, institutions and capacities)
   Identification of key problems for sustainable “green” development at the following levels:
   - Technologies
   - Management
   - Normative base
   - Incentives

3. Quantitative analysis of “greening” potential: how much resources can be saved and at which costs. Construction of conservation supply curve for energy sector: the costs of saving per unit, resulting saving per technology

4. Development of effective strategy framework and practical recommendations for further progress towards green energy (new policies and programs; financial mechanisms of implementation etc.)
Thank you!

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