Energy Efficiency in Russia: Scope for EU-Russia Cooperation

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Overview

• Legal Bases
• Top-Down Approach
• Energy Auditors’ Qualification
• Motivation
• Electricity Prices Increase
• EU Experiences
EU-Russia Discussions

➢ Security vs. Economy

• 1997 – Partnership and Cooperation Agreement
• Annual Thematic Group on Energy Efficiency
• 2010 - Partnership for Modernization
• 2013 – EU-Russia Energy Roadmap 2050
1. Legal Bases
Legal Bases Evolvement

1996
• 1st Federal law on Energy Efficiency

2008
• Presidential Decree N 889

2009
• Federal Law N 261 on Energy Efficiency

2010
• State Program “Energy saving and energy efficiency until 2020”
Energy intensity of GDP in the world

Reasons of high energy intensity of Russian economy

- Severe climatic conditions
- Specific allocation of population and industry; necessity for extensive transport communications
- Prevalence of “heavy” energy-intensive industries in national economy
- Technological backwardness of some industries
- Underestimated price of energy resources in home market, which doesn’t stimulate energy saving
Potential for energy saving in Russia

Consumption of energy resources can be reduced by:

- 20% in heat supply
- 30% in electroenergetics
- 40% in transportation and industry
- 50% in living apartments

Strategic targets in energy saving and energy efficiency in Russia

**President D.A. Medvedev:** reduction of energy intensity of Russian GDP by **40%** by the year of 2020 (compared with the level of 2007)

**Energy Strategy 2030:** reduction of energy intensity of Russian GDP by **2.5-3 times** by the year of 2030 (compared with the level of 2007)
- Incomplete regulation
- Lack of economic stimuli
- Lack of financial sources
Opinion Polls

Legislation score: 2.23/5
Current law: 1.69/5
EU law relevance: 1.45/5
Comparison to IEA Recommendations

• Buildings: energy audit, energy passports, metering devices, mandatory labeling, Eurocodes

• Industry: energy audit, energy passports, ISO 50001

• Transport: shift to gas, Euro-3 fuel standard, Euro-4 emissions standard for cars

• Lighting: ban on 100 Watt incandescent bulbs

• Appliances: labeling, energy classes

• Result: 47 out of 89
2. Top-Down Approach
Examples

Energy audit
Energy Passports
3. Energy Auditors’ Qualification
Motivation
- Long pay-back periods
- Short-term credits
- High supplementary costs
5. Electricity Prices Increase
Rise in Gas Prices

Large Investment Programs
Electricity Prices for Industry 2010 €/ kWh

- Russia
- USA
- Bulgaria
- Estonia
- France
- Norway
- Germany
- Italy
EU Experience

• Solutions and know-how
• Technologies and equipment
• Power and heating plants
• Decentralized generation
• RUSTEC
• Gas-fired power generation
Strategy for the Development of power grid complex in Russia (April 2013)

• “The cost of electricity for final consumers is approaching the cost of autonomous generation and creates a risk of consumers’ separation from centralized generation and collapse of the unified system.”
Decentralized Generation

- Exchange of experiences in the regulation of greed companies and network operators;
- Development of standards and equipment requirements for decentralized generation;
- In particular: Experience of CIGRE (working group SC C6 Distribution Systems and Dispersed Generation);
- Export of small, medium and large-scale generation technologies from the EU countries: China, Germany, France, Switzerland, Great Britain, Hungary, the Czech Republic and Austria.
RUSTEC

- Land transmission lines vs. underwater network infrastructure
- Scarcely populated area
- Potential for hydro use
- Electricity supplies via Finland, Estonia and Latvia
- New law on Renewables: serious obstacles for European companies
presents