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

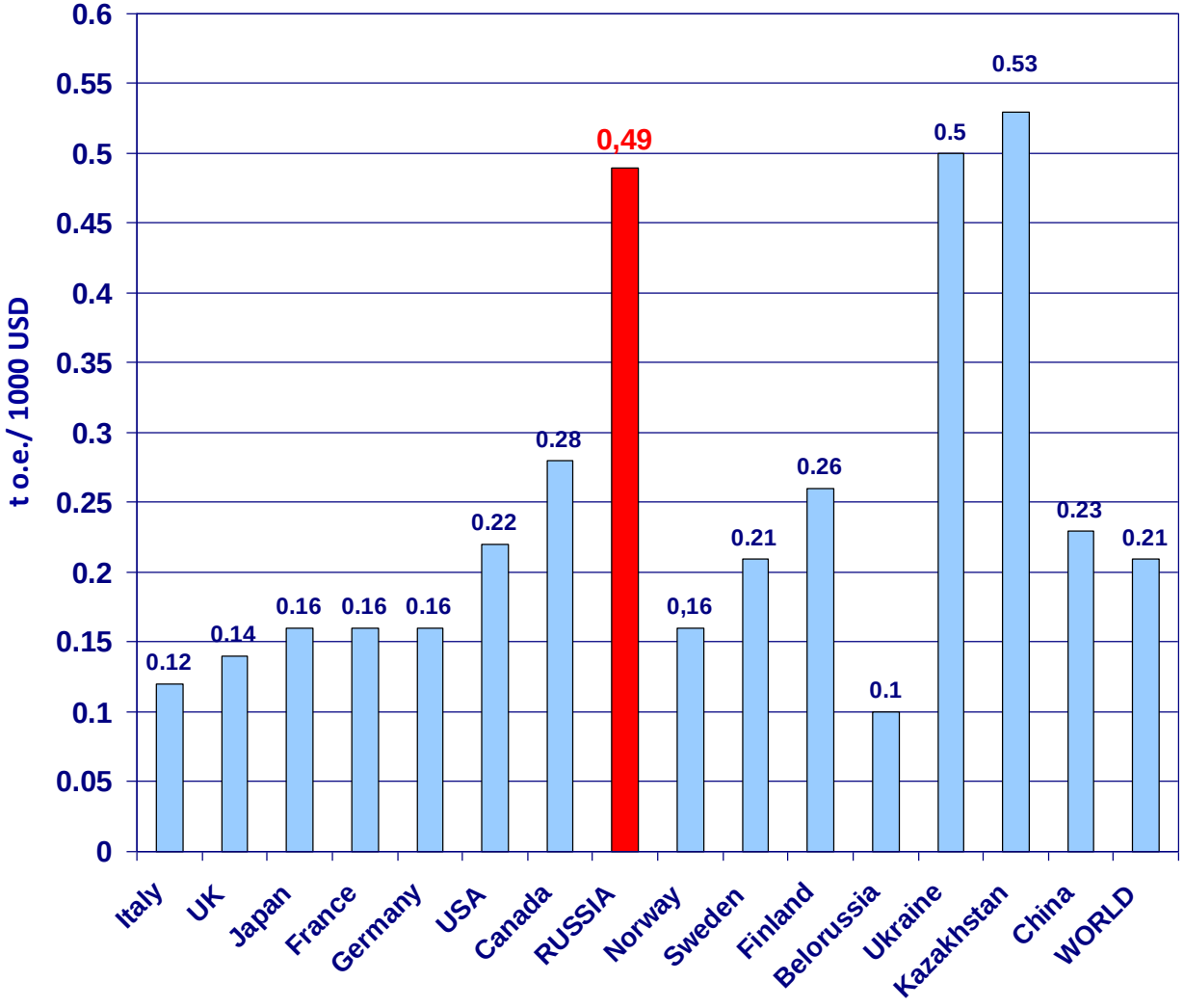
- Security vs. Economy
- 1997 – Partnership and Cooperation Agreement
- Annual Thematic Group on Energy Efficiency
- 2010 - Partnership for Modernization
- 2013 – EU-Russia Energy Roadmap 2050


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”

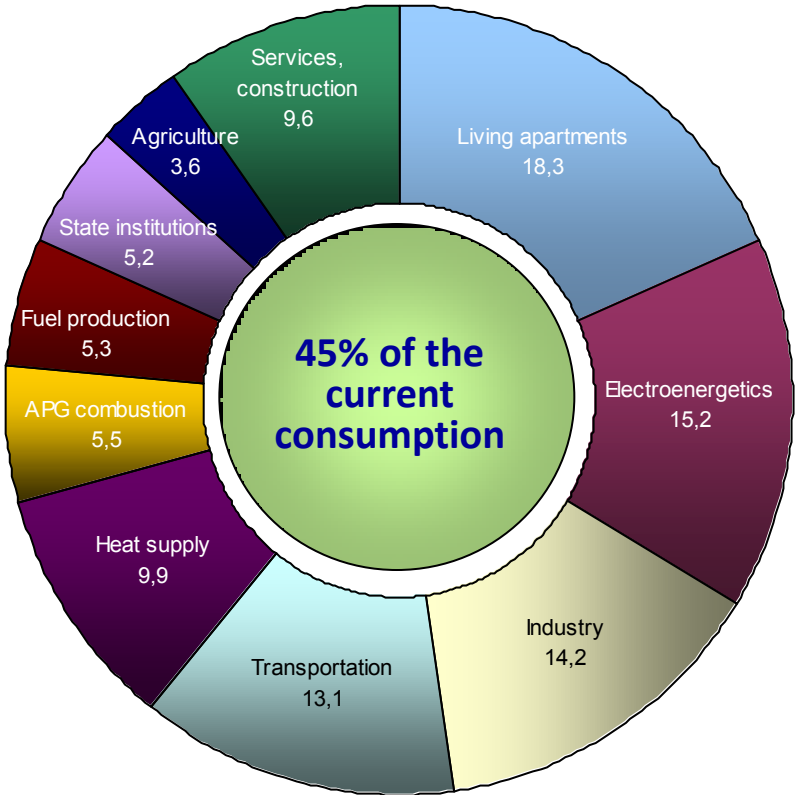
Energy intensity of GDP in the world



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)

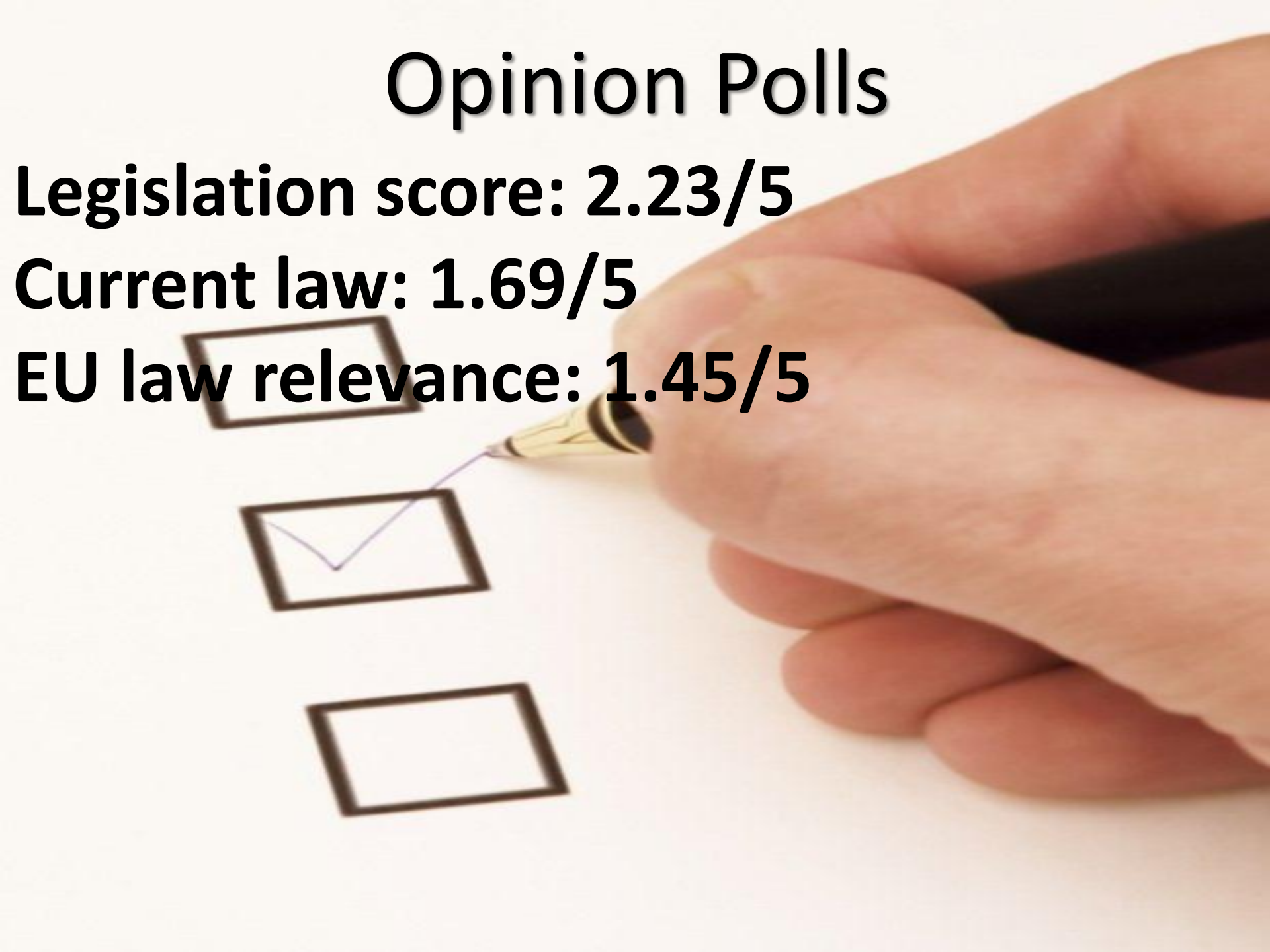

- Incomplete regulation
- Lack of economic stimuli
- Lack of financial sources

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

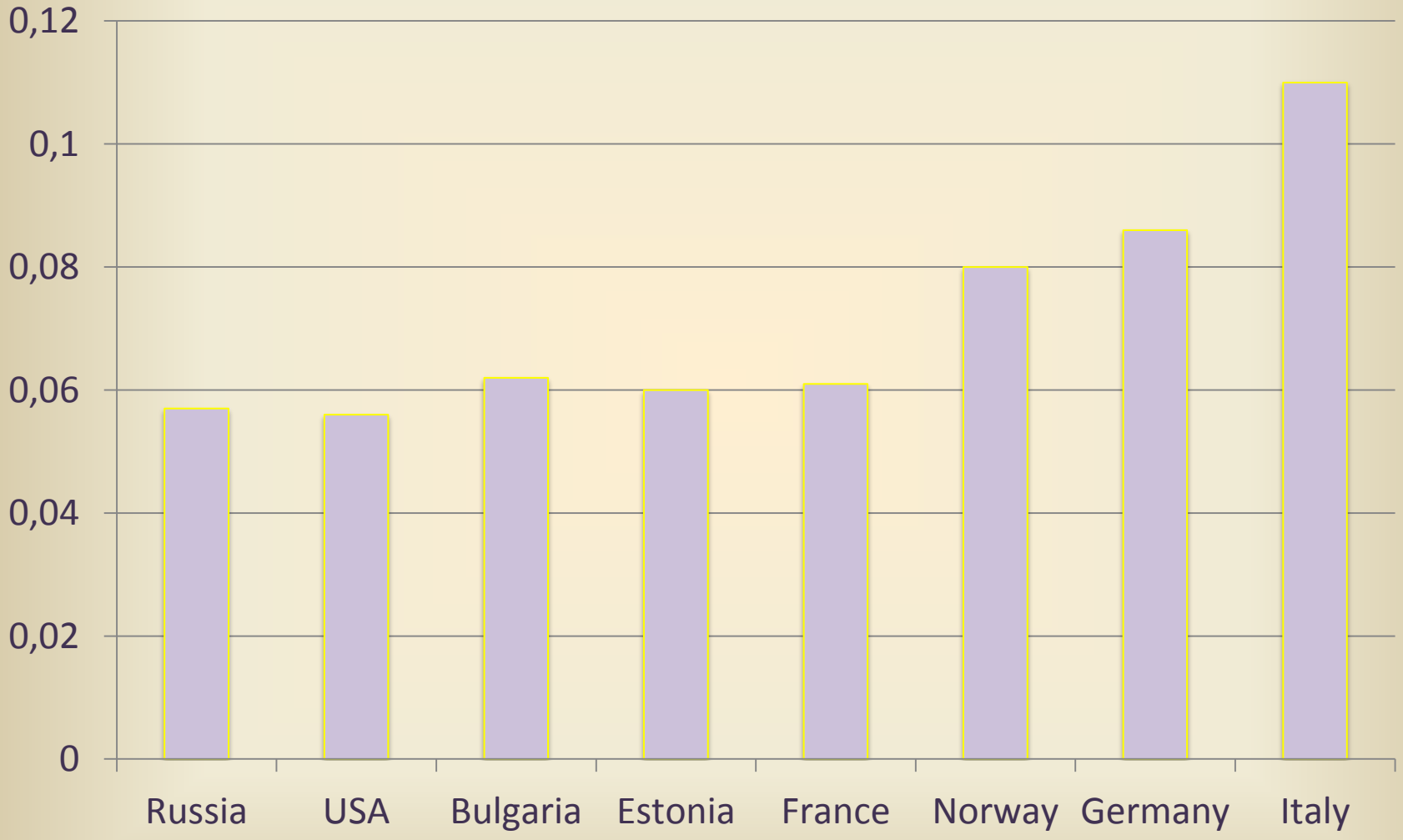

4th
Motivation


Long pay-back periods
Short-term credits
High supplementary costs
www.hve.narod.ru

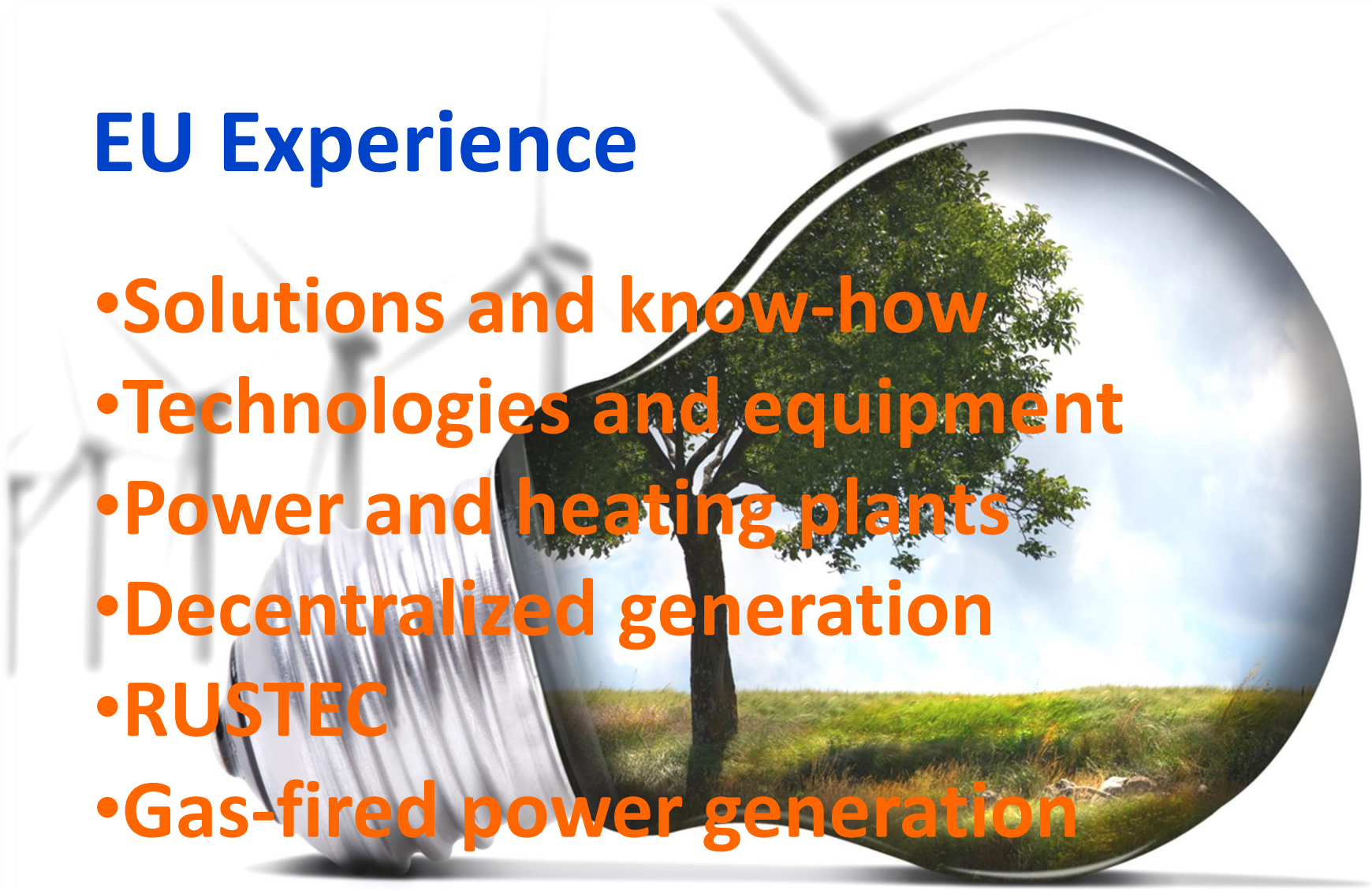

5. Electricity Prices Increase


Rise in Gas Prices
Large Investment Programs

Electricity Prices for Industry 2010 €/ kWh



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

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