Energy efficiency - Today’s Imperative

Russian Government’s activity on energy policy implementation targeting the energy efficiency and energy savings

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Energy saving potential is 360-430 million tons, coal equivalent or 39-47% current energy consumption, including:
- 33% in Fuel and Energy complex (third in electric-power industry and in heating);
- 32% in industry;
- 26% in housing maintenance and utilities.
Key objective is a most efficient use of the resources and industrial potential of the energy sector to ensure economic growth and improve the quality of life of the population.

**Strategic goals**

- Energy security
- Energy efficiency of the economy
- Budgetary efficiency of the energy sector
- Environmental security

**Main components of the National Energy Strategy**

- Development of domestic energy markets
- Achieving a rational fuel mix
- Regional energy policy
- Foreign energy policy
- Subsoil use and management of state-owned subsoil resources
- Social policy in the energy sector
- R&D and innovation policy

**Main tools of state regulatory policy**

- Creation of a rational market environment (institutional measures, price, fiscal, customs and antitrust regulations)
- State property management
- Advanced norms, standards, and regulations
- Support of strategic initiatives

**Perspectives of the energy sectors development**

- Natural gas
- Oil
- Coal
- Electricity
- Heating
- Nuclear energy
- Renewables
PUBLIC POLICY PRINCIPLES ON ENERGY EFFICIENCY RAISE:

- **Consistency,**
- **Strategical trend,**
- **Providing necessary legislative support,**
- **PPP mechanism application,**
- **Providing necessary information support.**
### Directions and measures

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<th>Price policy and development of energy resources trade institutions:</th>
<th>Legislature</th>
<th>Outcome</th>
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<td>- step-by-step increase of the electric power share, sold by unregulated prices</td>
<td>Decree of the Government of the RF, 02.09.2006 № 534 «To carry the experiment on gas e-trade”</td>
<td>- increase of gas market and electrical and heat power market predictability</td>
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<td>- auction gas trade by means of exchange technologies</td>
<td>Draft Decree of the Government of the RF on the oil products exchange trade set up</td>
<td>- transfer from regulated market to the market of long-term gas supply contracts and achievement of equally profitability of domestic and external markets by 2011 year</td>
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<td>- oil products exchange trade</td>
<td>Draft Decree of the Government of the RF on the elimination of the cross subsidizing</td>
<td>- transfer to 100% electric power selling by non-regulated prices by 2011 year</td>
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<td>- abolition of cross funding in the power industry</td>
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<td>- perspective expansion of gas exchange trade from 10 billion c m to 40-45 billion c m a year</td>
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<th>Development of competitive relations in the power industry:</th>
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<td>- formation of generation companies and main infrastructural organizations in the power industry</td>
<td>Federal Law “On electro energy”, 2002</td>
<td>- use of reserves to increase energy efficiency and reduce losses in production and delivery of electric and heat power to consumers</td>
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<td>- development of the energy wholesale market</td>
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<td>- reform of the energy retail market</td>
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<th>Development institutions of the resource and energy saving:</th>
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<td>- establishment of the management companies to provide public utilities including energy, gas, heat and water supply</td>
<td>Housing Code of the RF, 2005 Town Planning Code of the RF, 2004 Draft Federal Law «On heat supply» Law on “Amendments to the Federal Law “On energy saving”.</td>
<td>- use of reserves of resource and energy saving in housing and communal services, budget sphere, industry</td>
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<td>- establishment of the energy service and energy audit companies</td>
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<td>- increase of the efficiency of measures in resource and energy saving on the base of the competitive market of respective services</td>
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| **System of power consumption and energy efficiency rate setting:** | - Tax Code  
- Draft Law on “Amendments to the Federal Law “On energy saving””.  
- Draft Law «On alternative motor fuels»  
- Amendments to the Forest and Water Codes in parts related to the Renewable energy promotion  
- Decree of the Government of the RF on “Approval of the Regulations of the Minpromenergo of Russia» 16.06.2004, №284: functions on approval of the heat and power resources losses and norms of the natural losses of the hydrocarbons.  
- Amendments into the legislative and technical documents on the organisation of the efficient use of associated (oil) gas. | - stimulation of energy saving of the consumers and energy resources producers  
- preparation of energy passports for more than 5000 enterprises  
- system of energy saving management on the regional and sectoral levels  
- decrease of losses in hydrocarbon extraction on 15%  
- decrease of the losses in electric and heat power transportation on 3-5%  
- Increase of the utilization rate of the associated gas from 73% to 85% by 2010 year  
- Decrease of automobile transport specific charges of fuels |
| **System of standardization:** | - Federal Law «On Technical Regulation» 2002  
- Programme on elaboration of technical regulations (Order of the Government of the RF 29.05.06 № 781-p)  
- Draft Programme on National Standards elaboration | -Decrease of the energy intencity rate of the national equipment and technologies  
- Projects of 7 basic national standards on energy efficiency  
- 9 standards on energy efficiency and alternative energy issues |
| **Accounting System and control of energy consumption:** | - Federal Law «On energy saving», 1996  
- Draft Law on “Amendments to the Federal Law “On energy saving””.  
- Elaboration of National standards on the accounting and control of energy consumption – Draft Order of the Minpromenergo of the RF on “Approval of the rules on gas records”.  
- Town Planning Code of the RF, 2004 | Up to 2007 there have been rigged with equipment of coolant and gas expenditure records 10-13% of housing stock in the country, energy resources saving – 10-15% |
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<td><strong>Field programs and projects:</strong> - <strong>Russia’s energy strategy till 2020</strong> -Strategy on metallurgical complex development till 2015 -Strategy on chemical and petrochemical industry development till 2015 -Programs and general schemes of fuel and energy complex development -Complex of measures to increase competitiveness of the timber industry -- programs of energy saving and investment programs of “Gazprom”, “Lukoil”, “Nornikel”, “Severstal”</td>
<td>- Draft Law on renewable energy resources use” - Draft Law «On alternative motor fuels» - Rules on financing of electric energy production units in order to prevent deficit in electricity power capacity (Approved by the Decree of the Government of the RF 07.12.2005, №738). Orders to the Holding companies of Fuel Energy Complex</td>
<td>- putting into operation till 2020 capacities of 129 Gwatt (including 37 Gwatt of PGU), reduction of specific fuel consumption as a result of gas-steam cycle implementation of 100-110 g/kw h. compared to steam-power cycle -according to results of 2005 energy resources saving RAO “EES Russia” and “Gazprom” is 4,6 million tons of coal equivalent -increase of a renewables and alternative fuels share in fuel and energy mix of the country to 5% by 2020 - 1,5 times reduction of specific energy intensity of production in chemical and petrochemical industry, 1,2 times - specific raw charges, 2,8 – specific heat charges, 1,6 – specific fuel charges and 2,5 – rejected materials.</td>
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<td><strong>Regional programs and projects:</strong> - regional programs on energy saving - regional projects on development</td>
<td>Regional Laws “On energy savings” (approved in 45 subjects of the RF) Decree of the Government of the RF, 23.11.2005 r. № 694 «On Investment Fund of the RF»</td>
<td>On the territory of 47 subjects of the Russian Federation there realize more then 600 programs, there function 80 centers, agencies, non-profit organizations and 24 funds of energy saving Implementation of project on energy and industrial complex establishment in Nizhnee Priangarje (construction of Boguchanskaya hydroelectric power station of 3 000 Mwatt and Boguchanskii aluminium plant of 600 000 tons aluminium a year)</td>
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## Federal Programme Indicators
*Efficiency Increase in Energy Consumption in the Russian Federation*

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<td><strong>Volume of saved energy resources resulted from application of energy saving measures, ml toe</strong></td>
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<td>17 5 12 83 100</td>
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<td><strong>Volume of renewable and alternative energy resources in billion tons' fuel energy balance, toe</strong></td>
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<td>1,7 0,1 1,6 43,8 45,5</td>
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<td><strong>Ratio of volume of fuel energy resources savings to the annual potential of energy savings resulted from organisational and technological measures</strong></td>
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<td>5-6 2,9-3,5 7,0-8,3 9,8-11,9 8,4-10,2</td>
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Continuity of the ES-2020 related to the:

- Basic principles of State Energy Policy;
- Consolidated structure of State Energy Policy, that sets the main strategic guidelines, main politics and implementation mechanisms;

Differences from the ES-2020:

- Main working principle – controlled and consecutive decrease of uncertainty in the long term energy sector development;
- Clear differentiation of state administrative role in the energy sector and market behavior of private companies;
- Presentation of the mapped out measures, steps, preliminary and final results of State Energy Policy in a form of “Road Map”;
- Building of advancing monitor system of Strategy implementation (evaluation of the forthcoming period – with regular updating of prognostic scenarios and measures specification of the ES-2030).
Dynamics of GDP’s specific energy intensity of Russia %

As a result of present policy GDP’s specific energy intensity decline rate exceeds the guidelines of Russia’s energy strategy of 2000-2006 (GDP energy intensity decreased by 23.5%).
Thank you for your attention