

RUSSIAN FEDERATION

INTRODUCTION

Russia has the highest energy intensity among the G-8 economies.¹ According to the 2007 report “Russian Federation: Regular Review of Energy Efficiency Policies” published by the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (hereafter the “PEEREA report”), the Russian economy’s energy intensity (adjusted by purchasing power parity) is 2.3 times higher than world average, twice that of the United States, and 2.3 times higher than that of the European Union and Japan. Nonetheless, according to the IEA report “Progress with Implementing Energy Efficiency Policies in the G8” (2009), Russia’s energy intensity has reduced dramatically in the past decade. From 1990 to 2007, Russia led G8 economies in energy intensity decline with an average improvement of 2.5% per year.² This decrease, however, did not reflect any actual improvement in energy efficiency and was attributed largely to the growth in GDP due to high energy prices.

1. GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

According to the World Bank, about 45% of Russia’s total primary energy consumption and as much as USD 120-150 billion per annum could be saved by Russia achieving its full energy efficiency potential.³

The Russian government is developing an effective legal base and policy framework to facilitate the achievement of its objectives of improved energy savings and energy efficiency. However, due to Russia’s geography (climate, territory size and so on), low domestic energy prices (especially gas and electricity), inadequate and outdated energy infrastructure, as well as lack of transparent auditing, the Russian Government’s efforts for the effective improvement of energy efficiency and encouragement of energy saving will continue to be hindered.

On 4 June 2008, President Medvedev issued Presidential Decree N. 889 titled “Concerning some measures for improving the energy and ecological efficiency of the Russian economy”, which established a more ambitious energy efficiency goal of a minimum 40% reduction in the energy intensity of the Russian economy (defined as energy use, or total final energy consumption, per unit of GDP) by 2020 compared to 2007. The decree also identified several target areas, such as the introduction of measures for technical regulation in the power generation, construction, residential and transportation sectors in 2008–09, and called for the finalising of the drafts of the laws and regulations, federal targeted programs, and other relevant legislative acts in the field of energy efficiency and ecological improvement.

In addition, energy efficiency has been identified as one of the key priority areas for the Russian government in the recently published ‘Energy Strategy of the Russian Federation up to the year of 2030’ (hereafter ES2030), which was approved and adopted on 13 November 2009, in accordance with the Government Decree No.1715-p. Specifically, the ES2030, which will be put into effect in three stages, stressed that during the second stage (between 2015 and 2022), the goal will be to improve overall energy efficiency on the basis of innovative development of the fuel and energy industry. During the final stage of 2022–2030, the focus will shift to the efficient use of energy resources across the economy, paving the way for the transition to non-fuel types of energy. In addition, as the primary goal for the improvement of

¹ Energy Charter Secretariat (2007), p. 3.

² IEA report “Progress with Implementing Energy Efficiency Policies in the G8: Energy Efficiency Progress Report–Russia,” (2009, p. 58).

³ World Bank Group report “Energy Efficiency in Russia: Untapped Reserves” (2008, p. 5); the same estimate is given in the PEEREA report, p. 3.

energy efficiency, the ES2030 identified a 50% reduction in energy intensity as well as a minimum 1.6 times reduction of electrical intensity in the Russian economy by 2030 compared to 2005. For this purpose, the strategy included a number of detailed policy recommendations and measures for the improvement of energy efficiency and conservation. In addition, it set forth the indexes of energy efficiency of the Russian economy (measured as the energy intensity of GDP) as a maximum 78% for the first stage (2010–2015), maximum 57% for the second stage (2015–2022), and 44% for the third stage (2022–2030).⁴ Furthermore, in order to boost energy conservation, the strategy envisioned the USD 244–259 billion total budget for the period 2009–30, constituting about 10% of the overall ES2030 budget during the same period.⁵

1.2. Sectoral Energy Efficiency Improvement Goals

Russia has no clearly-established sectoral goals. However, a number of measures and targets (both quantitative and qualitative) for energy efficiency improvement have been introduced in several sectors of the Russian economy upon the adoption of “Federal Targeted Program for an Energy Efficient Economy for the period 2002-2005 with an outlook to 2010” (hereafter FTP EEE) in November 2001.⁶ The FTP EEE envisioned the following sectoral potential saving targets.

Commercial and Residential

It is important to note that there is no clear distinction between the commercial and residential sectors in Russia, especially concerning the assessment of energy and heat efficiency of buildings, light fixtures, and appliances.

The Russian government has developed an economy-wide building code for energy efficiency that features various requirements for existing and new buildings in both commercial and residential sectors. Special emphasis is placed on refurbishing and upgrades of the existing buildings through the introduction of higher buildings standards, phasing out of inefficient lighting, water and heat systems. According to FTP EEE, following the successful implementation of the measures to improve energy saving and energy efficiency in this sector would lead to about 38 million tonnes fuel equivalent (hereafter “tfe”) in energy savings during 2006–10.⁷

In addition, Russia has recently announced a plan to phase out incandescent lighting by 2012 and has been developing an energy labelling scheme based on the European energy efficiency labelling standards.

Power

The FTP EEE envisages that successful adoption of energy saving technology and measures would result in 44 million tfe in savings of energy resources in the entire Russian fuel and energy complex during 2006-10.⁸

In addition, “State Policy Guidelines for the Power Industry Energy Efficiency Improvement” (Government of the Russian Federation Resolution No. #1-r), adopted on 8 January 2009 as a supplement to the “Renewable Energy Use for the Period up to 2020” program, emphasised, “The state policy on the power industry energy efficiency improvement based on the renewable energy use is an integral part of the Russian energy policy.” The document

⁴ ES2030, Appendix 2 “Indexes of energy security: Indexes of energy efficiency”.

⁵ Ibid, Appendix 4 “Estimates for Russia’s fuel and energy balance up to the year of 2030: Forecast of necessary investment into the development of the fuel-energy complex and energy supply of the Russian economy up to the year of 2030”.

⁶ It is expected that the new “Federal Targeted Program for energy conservation and improvement of energy efficiency up to 2020” will be officially adopted and will replace the FTP EEE in early 2010.

⁷ “Federal Targeted Program for an Energy Efficient Economy for the period 2002-2005 with an outlook to 2010” (hereafter FTP EEE 2010), 17 November 2001, www.mnr.gov.ru/old_site/files/part/3601_1636_0796_2001.pdf, (in Russian only), p.29.

⁸ FTP EEE 2010, p. 31.

established the following state policy targets (defined as “the share of electricity generation at renewable energy generating facilities and its consumption in the total Russian electricity generation and consumption volume”) in *power generation* sector up to 2020, excluding hydro power plants with the installed capacity of over 25 MW: in 2010—1.5%; in 2015—2.5%; and in 2020—4.5%. The document notes that presently the share of renewable energy resources (excluding hydro power) in the total volume of the electricity generation in Russia is less than 1%. In addition, it sets forth a number of measures and principles focused on effective implementation of the state policy on the energy efficiency improvement in the renewable energy based electricity generation sector as well as improvement of the renewable energy infrastructure and the sector’s competition conditions vis-à-vis fossil organic fuel based electricity producers. The Russian Ministry of Energy was assigned the task of differentiating the target values by each renewable energy source type and assigning additional targets, if needed, to achieve the above goals. It is also responsible for carrying out the monitoring of the renewable energy generation sector development.

Industry

To date, a wide range of sectoral development programs and individual energy company investment programs have been developed and implemented. They include the Strategy of Metallurgy Development through 2015; the Strategy of Chemistry and Petrochemistry Development through 2015; the Set of Measures to Improve Competitiveness of the Forestry Industry; energy saving and investment programs of JSC Gazprom, JSC Lukoil, JSC Norilsk Nickel, Urals Mining and Metallurgical Company, JSC Severstal, and others.⁹

In addition, the government has been promoting a number of general energy efficiency measures especially in energy-intensive sectors of Russian economy (such as oil refining, steel, cement, cellulose-paper, aluminium, etc.), while putting a special emphasis on the promotion of high efficiency technologies for energy savings in these areas. For example, in accordance with FTP EEE, the expected decrease in energy intensity in the oil refining industry resulting from the reconstruction and technological upgrades would reach 7% by 2010 (measured in oil equivalent). Furthermore, the program stipulates that as a result of effective implementation of energy-efficient technological upgrades in energy-intensive industries (particularly, in metallurgy, steel, chemical, refining, machinery, cement, wood, cellulose and paper, textile, and food), the total energy savings would reach 50–54 million tfe.

Transport

In accordance with the FTP EEE, due to the introduction of Western energy efficient technologies in the Russian domestic automobile production and overall improvement of energy efficiency in the transportation sector, energy savings of the railroad sub-sector during 2006-10 would reach 5 million tfe, and 4.3–5.5 million tfe in other transportation sub-sectors.¹⁰ In addition, a number of qualitative measures and environmental requirements have been introduced for road vehicles and motor fuels.

Government

It is expected that the improvements through introduction of higher building standards, phasing out of inefficient lighting, water and heat systems, the total savings in the consumption of energy and heat resources in the government (especially budget) sector would be 30-35%.¹¹ In addition, the FTP EEE envisages energy savings of about 8.3 million tfe, which is based on the 5% annual decrease in energy consumption in this sector. Furthermore, overall economic effect of successful implementation of various energy saving and energy

⁹ PEEREA report, p. 36.

¹⁰ FTP EEE 2010, p. 30.

¹¹ Homepage of the Ministry of Energy of the Russian Federation, “Energy efficiency and savings: Activities” accessed on 2009/10/20 at <http://minenergo.gov.ru/activity/energoeffektivnost/index.php> (hereafter ME HP).

efficient measures in this sector during the period of 2002-2010 is estimated at RUB 3.6 billion.¹²

Other

In agriculture, the government adopted a special development program that encourages a gradual replacement of the energy-inefficient agricultural equipment and vehicles, especially tractors. According to the FTP EEE, these measures for the reduction of energy intensity should result in 6-7 million tfe in energy savings during the period of 2006-2010.¹³

1.3. Action Plans for Promoting Energy Efficiency

One of the action plans for promoting energy efficiency and saving in Russia entitled a “Federal Targeted Program for an Energy Efficient Economy for the period 2002-2005 with an outlook to 2010” (FTP EEE) was adopted on 17 November 2001.

a) Objectives

The FTP EEE, in line with the ES2030, is aimed at helping the transition of the Russian economy to an energy-saving development path by decreasing the energy-output ratio of GDP on the basis of energy-saving policies in Russian industries. The key targets set in the 2001 program included the reduction of energy intensity by 13.4% (total final energy consumption/GDP) below 2000 levels by 2005, increasing to a 26% reduction below 2000 levels by 2010. The program’s other objectives include reliable provision of energy resources to industries, decreased production costs in energy sector as well as preserving and widening export potential of the fuel and energy complex of the Russian Federation.

b) Applicable sectors

The FTP EEE sets targets and outlines measures for energy efficiency improvements in various sectors of the Russian economy.

c) Outline

The FTP EEE is composed of three key sub-programs, such as “Energy efficiency of Fuel and Energy Complex”, “Security and Development of Nuclear Power”, and “Energy Efficiency in the Sphere of Consumption” (with a special focus on energy saving measures in energy-intensive industrial sectors, agriculture, residential, commercial, transportation, and government).

The program is to be implemented in two stages, 2002–05 and 2006–10.

The First Stage of the FTP EEE includes the following measures that aim to promote the strengthening of structural reforms and market foundations in Russia’s energy sector:

- Ensuring a stable supply of fuel and energy resources to the regions lacking such resources during the winter period
- Realising the structural reforms in power and gas sectors and technical restructuring of gas industry
- Increasing the supply of domestically produced high-tech equipment, materials and technologies in the Russian domestic market for a wide use in energy sector
- Modernising existing atomic stations with the goal of safe and effective operations
- Completing distribution of the equipment and audit systems that would allow consumers to conduct energy saving performance checks as well as realising highly effective, cost-beneficial and inexpensive energy saving projects.

During the Second Stage, the program sets forth the following five key tasks:

- Maximal speeding up the renewal and upgrade of the material and technical base

¹² FTP EEE 2010, p. 31.

¹³ Ibid, p. 28.

- Increasing efficiency and competitiveness of industrial production
- Increasing the fuel and energy potential of the atomic stations currently in operation
- Preparing for the removal of the outdated and expiring energy equipment
- Increasing energy efficiency of production based on the utilisation of modern, highly efficient technological processes and equipment.

d) Financial resources and budget allocation

The total budget for the program was set at RUB 7004.66 billion (about USD 269.41 billion at the January 2001 exchange rate). It was to be financed partially by the federal budget (RUB 50.26 billion in total) as well as municipal/regional budgets, and other, non-budgetary, sources. Eligible costs and expenses included equipment, external expertise, infrastructure (buildings, etc.), labour costs (training, study trips, etc.), and others.

e) Method for monitoring and measuring effects of action plans

The FTP EEE calls for the establishment of various administrative mechanisms for effective management and control of monitoring and measuring the program's effects based on the compilation of data and statistics and trend analysis. Additional monitoring mechanisms include energy-efficiency and energy-saving surveys, data collection, and the comparison of the results with the indicative targets or norms established by the related legal acts. In addition, according to the new Federal Law No. 261-F3 on "Energy Conservation and Increase of Energy Efficiency" (hereafter FLEC IEE) adopted in November 2009, other methods include mandatory energy monitoring and regular auditing (once every five years) for heat and power usage of buildings, energy-intensive equipment, and other energy-consuming entities; installation of compulsory meters and requirements of the energy efficiency certificates ("energy passports"); establishment of a single, unified federal energy efficiency information network system comprised of the data collected from the energy audits; and others.

The State Standard, GOST P 51380-99 "Energy conservation and methods of assurance for energy efficiency compliance", which has been in force since November 1999, sets forth the requirements for the verification of energy-consuming products' energy efficiency indicators and their comparison to the normative values. In accordance with the standard, the following monitoring methods have to be applied: producers' declaration of energy efficiency performance; certification of production testing and verification; collection of data and its analysis concerning product energy consumption in comparison with energy efficiency normative values.

Annual energy efficiency and energy saving surveys are conducted through comparison of energy intensity per GDP unit with the indicative targets of the ES2030. Similar evaluations are made in a number of Russian Constitutional Entities regarding changes in their economy's energy intensity per gross regional product. At the level of enterprises and economic entities, energy efficiency and energy saving are monitored at their discretion and at their expense or with the involvement of energy audit organisations.

At the federal level, monitoring of the realisation of energy efficiency and energy saving policies and measures is carried out by the Section on Monitoring of the Department of the State Energy Policy and Energy Efficiency at the Ministry of Energy. In addition, the Federal Agency on Technical Regulating and Metrology (FATERM), which was founded in May 2004 and placed under jurisdiction of Ministry of Energy of the Russian Federation, carries out the functions on rendering state services, administration of public estate in the field of technical regulating and metrology, including licensing of activities with respect to manufacture and maintenance of various technical requirements. It also controls and supervises the compliance of mandatory requirements of state standards and technical regulations, including in the field of energy efficiency.

The Russian government is currently planning to establish a Federal Agency of Energy Savings, which will be modelled on the German Agency of Energy Efficiency (DENA). The priority task of this agency will be the monitoring of the energy savings policy at the federal and regional level. Furthermore, the agency will establish energy efficiency criteria and indicators.

f) Expected results

Successful implementation of the program should help overcome negative development tendencies in the fuel and energy complex as well as the achievement of the following targets:

- 1) Necessary levels of extraction and production of fuel and energy resources, including primary energy resources
- 2) Transition of the economy towards an energy-saving development path through the use of technological upgrades (total energy saving during 2002–05 would be 143–156 million tfe and during 2006–10 would be 152–169 million tfe)
- 3) Assurance of the safe operation of nuclear power stations
- 4) Lowering the GDP energy/output ratio by 13.4% in 2005 and by 26% in 2010 compared to 2000 levels
- 5) Technological upgrades of existing equipment (by 2010 the technical – more energy efficient – upgrades in the oil sector should reach up to 50%, in the oil refining sector up to 70% in the gas sector up to 40%, in the coal sector up to 30%, and in electrical power generation up to 30%)
- 6) Reduction of emissions and environmental damage
- 7) Maintaining and expanding the expert potential of the fuel and energy complex
- 8) Creation of 199 000 additional jobs.

g) Future tasks

The Ministry of Energy recently submitted to the government for final approval the draft of the federal targeted program “On Energy Saving and Energy Efficiency Improvement up to the year of 2020,” which will replace and upgrade the FTP EEE, while focusing on reaching the overall target of minimum 40% decrease in energy intensity of the Russian economy by 2020 compared to 2007.

The latest draft of the new FTP EEE envisions the following two key policy directions for the improvement of energy efficiency of the Russian economy: 1) the stimulation of various cross-sector processes and mechanisms encouraging the improvement of energy efficiency of the Russian economy, and 2) the realisation of the energy conservation projects by sectors to reach the energy saving potential of the Russian economy. To reach these goals, the program proposes such measures as:

- 1) Significantly increasing the share of renewable energy resources in the total energy consumption balance
- 2) Enhancing and coordinating federal, regional and municipal energy efficiency and energy saving programs
- 3) Establishing information dissemination, public awareness and promotion of education initiatives
- 4) Introducing various financial assistance measures for the promotion of the efficient use of energy and heat resources, and many others.

The new program (which will be carried out in two stages, 2010–15 and 2016–20, to gradually reach the overall goal by its completion) is expected to be approved and come into effect in early 2010. Upon successful completion of the above measures and policy proposals, the program envisions the reduction of energy intensity of GDP by 7.4% by 2015, reaching an overall goal of a 13.5% reduction by 2020. According to Russian Ministry of Energy estimates, the savings of energy and fuel resources from the successful implementation of the

program are expected to reach 300 million tfe during the first stage and 1000 million tfe in total during the entire term of the program.

In addition to the new FTP EEE, a new Federal Targeted Program, titled “Increasing effectiveness of energy consumption in the Russian Federation,” which focuses on the improvement of energy saving and energy efficiency improvement in the government (especially budget) sector, is being drafted by the Ministry of Energy to be adopted by the government later in 2010. Furthermore, the Ministry of Energy put forth a “Complex Measures Plan for the realisation of the federal policy for energy saving and improvement of energy efficiency” across the Russian economy in order to facilitate the execution of the 4 June 2008 Presidential Decree No. 889 entitled “Concerning some measures for improving the energy and ecological efficiency of the Russian economy”. The plan was comprised of the following five key areas:

- The development of modern legal and regulatory framework
- The establishment of institutional structures
- Government financial support and the creation of a favourable investment climate (to encourage energy-efficient investments)
- Interaction with private financial and business sectors on the basis of public-private partnerships
- Informational and educational support for various measures and activities at the international, federal, regional, and municipal levels.

Each of the above areas included a range of specific measures that have already been put in effect to promote greater energy savings and efficiency in different sectors of the Russian economy, such as the use of codes and energy efficiency passports to ensure effective implementation and monitoring of progress of energy efficiency and energy saving policies.

Additionally, a number of regional and local energy saving programs, which identify major energy saving and energy efficiency measures at a regional or municipal level and use regional or municipal budgetary resources for their implementation, have also been developed and put in effect to supplement the above-mentioned federal programs. According to the 2007 PEERA report, more than 600 energy saving programs that have been developed and implemented in 78 of the Russian constituent entities: 50 regional, 93 sectoral (residential, education and other sectors), and 462 municipal programs.¹⁴ Currently, several regions of the Russian Federation have already established or are currently establishing regional energy efficiency programs or initiatives. One example is the territorial project of the region of Arkhangelsk, called “White Sea Energy”, with an estimated project investment of USD 1 billion. Jointly with the Russian energy company Roskommunenergo, the administration of the Arkhangelsk region established a public-private partnership program with such participating financing institutions as the Russian banks (Mosurabank, Sberbank, and the Foreign Trade Bank of the Russian Federation) and the Czech Export Bank. The aim of the project is to provide comprehensive optimisation and development of the housing sector and the power supply of the regional enterprises. Furthermore, it is envisaged to implement efficient, high-tech and ecological projects in the electricity, industry and municipal services sector in the Arkhangelsk region. The third project task comprises the improved competitiveness of the enterprises in Arkhangelsk through the optimisation of the energy costs.

1.4. Institutional Structure

In the Russian Federation, legislative power is vested with the two-chamber Federal Assembly consisting of the State Duma (more powerful lower house) and the Federation Council (upper house). In addition, policy responsibility for energy efficiency actions varies

¹⁴ PEERA report, p. 18.

between the levels of government, with the federal government holding the higher jurisdiction.

At the federal level, until May 2008, energy saving and energy efficiency policy was placed within the competence of the Federal Assembly. However, during the administrative restructuring of the Russian government in May–June 2008, the responsibility for energy policymaking and oversight was transferred from the Ministry of Economic Development and Trade (which was reorganised into the Ministry of Economic Development and a separate Ministry of Industry and Trade), the Ministry of Industry and Energy and the Federal Energy Agency to the newly established Ministry of Energy (Minenergo), currently headed by Sergey Shmatko.

Within the new Ministry of Energy, for the first time, the Department of the State Energy Policy and Energy Efficiency (currently headed by Mr. Sergei A. Mikhailov) was created to deal specifically with the issues and policies pertaining to energy saving and efficiency. In addition, in 2009, to facilitate policymaking and improve inter-government communication concerning energy saving and energy efficiency, two special intergovernmental groups were established. The first group, the commission on the fuel and energy complex, is located at the prime minister's office and headed by Minister of Energy Sergey Shmatko. It is engaged in legal aspects and institutional structures, as well as preparing and monitoring the National Program. The second group, the Expert Group on energy efficiency within the Commission on Modernization and Technological Development of the Russian Economy, was established in May 2009. The Commission's Expert Group is located at the president's office and is headed by President Dmitry Medvedev himself. It holds regular monthly meetings and is engaged in the coordination of federal, regional, and municipal projects and initiatives, as well as choosing and funding the most innovative projects in energy efficiency and renewable energy that can be implemented within the Russian Federation.

At the government level, the responsibility for the state energy policy, including energy saving and energy efficiency, is also shared by the Ministry of Regional Development, the Ministry of Natural Resources and Ecology, the Ministry of Finance, the Ministry of Agriculture, the State Atomic Energy Corporation "Rosatom", the Federal Tariff Service, and other agencies. At the level of the Russian constituent entities, the relevant functions are performed by the regional legislative and executive bodies.

In addition to governmental organisations, there are several energy efficiency centres operating under different external supporting programs in the Russian Federation. Some of the largest are: the Center for Energy Efficiency (CENEF), Center for Energy Policy, AcademEnergServis, Institute for Energy Policy, RusDem, ESCO Negawatt, Rus Esco, 3E, Energo Servis and regional centers for energy efficiency with the major located in Kaliningrad, Murmansk, Kola, Karelia, and Ekaterinburg.

In order to improve policy coordination at different levels, a number of Coordination Councils for the realisation of energy saving and energy efficiency policies have been established in Russian regions and municipalities. Energy saving and energy efficiency issues and policies have been addressed by energy service organisations and associations, as well as by energy producer and end-user economic entities at the regional and municipal levels. The majority of the Russian constituent entities have relevant energy saving management infrastructures (in 2007 there were 75 centres and agencies and 24 energy saving foundations).¹⁵ Additionally, according to the Russian Ministry of Energy, the establishment of a state energy services company "Federal Service Company" (OAO FESCO) and regional (municipal) public-private energy service companies (RESCO) is planned. It is envisaged to create a network of such companies in the regions to cover with their activities all the territory of the Russian Federation. These federal and regional ESCOs will, however, only serve state-owned enterprises and municipal buildings.

¹⁵ Ibid, p. 19.

a) Name of organisation

The Ministry of Energy of the Russian Federation; its official website is available in Russian only at <http://minenergo.gov.ru/>.

b) Status of organisation

The Ministry of Energy is a Federal governmental body within the legal branch of the Russian government. In accordance with the administrative reform of May 2008, it replaced the Federal Energy Agency and the Ministry of Industry and Energy. The ministry reports to the executive branch of the Russian Federation, the prime minister's office and the Russian president.

c) Roles and responsibilities

The ministry is responsible for design, realisation, and oversight of the state energy policy and legal framework of the Russian energy structure, particularly in the oil and gas, power generation, coal, renewable energy sectors as well as in the area of energy efficiency, saving and transportation.

d) Covered sectors

The Ministry's Department of the State Energy Policy and Energy Efficiency covers all sectors of the Russian economy.

e) Established date

In May 2008, the Ministry of Energy replaced the old Ministry of Industry and Energy and the Federal Energy Agency.

f) Number of staff members

No information available

1.5. Information Dissemination, Awareness-raising and Capacity-building**a) Information collection and dissemination**

The new FLEC IEE includes a separate chapter entitled "Information provision concerning energy conservation measures and energy efficiency increase". Article 22 of Chapter 6 outlines the following activities for the dissemination of information:

- Establishment of a single integrated federal information network on energy conservation and energy efficiency
- Publication of information about energy saving and energy efficiency programs in the print and other media at the federal, regional, and municipal levels
- Organisation of various television and radio programs on the measures and best practices for energy efficiency improvement and latest equipment and technologies in the field of energy conservation
- Distribution of information on energy saving issues to the consumers
- Dissemination of information about the energy saving measures and potential in the building and residential sectors
- Organisation of exhibitions of equipment and technologies with high energy efficiency
- Realisation of other measures for energy conservation and energy efficiency improvement in accordance with the FLEC IEE.

In addition, a number of measures to improve information dissemination and awareness-raising have been developed by the Russian government under the "Complex Measures Plan for the realisation of the federal policy for energy saving and improvement of energy efficiency," which was presented by the Ministry of Energy in June 2008.

A report on energy saving and energy efficiency published by the Ministry of Energy notes the lack of efforts made to provide “informational and motivational” background for preparing and putting into effect the policies concerning energy saving and energy efficiency issues. The shortage of information and public awareness has hence led to the development of the pervasive public attitude of “do as others do”, meaning that it was acceptable to waste energy resources.¹⁶ The report also states that it is critical for the government to cooperate with the private sector as well as provide informational and educational support for the energy saving and energy efficiency initiatives and programs at the international, federal, regional, and municipal levels. The Ministry of Energy, along with the State Foundation of Support for Social and Informational Programs, have developed a plan to provide information support for the improvement of energy efficiency and energy saving.¹⁷

Finally, private companies distribute information about the energy efficiency and energy saving potential of their products to consumers through their websites or informational brochures.

b) Awareness-raising

In accordance with Chapter 6 of the FLEC IEE on “Information provision concerning energy conservation measures and energy efficiency increase”, the federal, regional and municipal governments are required to organise and support various media-based awareness campaigns and events for the promotion of energy saving, improvement of energy efficiency, and effective use of natural resources in industrial and social spheres of Russia. In addition, the producers of energy-consuming equipment and suppliers of energy resources are obliged to inform consumers on a regular basis about energy- and heat-consuming potential of their products by using the Internet, advertisements and other means.

c) Capacity-building

Currently, there are no specific programs or strategies available to boost capacity building in the field of energy efficiency, particularly concerning the short supply of energy efficiency audits and advisory services. As one of the measures for improvement in this area, President Medvedev, in his Decree No. 889 “Concerning some measures for improving the energy and ecological efficiency of the Russian economy” (4 June 2008), stressed the need to include basics of ecology, including improving basic knowledge on energy saving, into the federal standards for secondary education, which was incorporated in Chapter 6 of the FLEC IEE.

1.6. Research and Development in Energy Efficiency and Conservation

The ES2030 stressed the need to gradually replace imported technology and equipment with domestically produced innovative and advanced technologies and equipment in order to help boost energy efficiency and energy conservation in various sectors of the Russian economy. With this task in mind, the FTP EEE’s funding and budgetary scheme features a special provision for measures and activities aimed at promoting scientific and technology research, as well as innovating and investing in the field of energy saving and energy efficiency. The federal funding for these measures and activities was set at RUB 12.34 billion in 2002–05 and RUB 37.92 billion in 2006–10. The share of the total budget (including non-governmental funding) for the scientific research and modelling projection works was 4% (RUB 130.7 billion) of the FTP EEE’s entire budget in 2002–05, rising to 4.4 % and reaching RUB 171.1 billion during 2006-10.¹⁸

In addition, two Federal Targeted Programs, titled “Research and Development in Priority Areas of Science and Technology Complex of Russia 2007-2012” and “National Technological Basis for 2007-2011”, which contain tasks and measures related to appropriate

¹⁶ ME HP, p. 2.

¹⁷ Ibid, p.6.

¹⁸ FTP EEE 2010, p. 33.

research and development activities (including on energy saving) in the Russian economy have been introduced.

There have been a growing number of private research institutes and organisations engaged in research on improving energy efficiency and energy saving in various sectors of the Russian economy, such as the Center for Energy Efficiency (CENEF), the Sustainable Energy Development Center (ISED), the Institute of Energy Strategy (IES), and others.

According to the PEEREA Report, research is under way on priority areas of the development of science, technology, and equipment in the Russian Federation and on the List of Critical Technologies having a direct bearing on the improvement of energy efficiency (including technologies of nuclear energy, hydrogen energy, new and renewable energy resources, development of energy saving heat and electricity transportation, distribution and consumption systems, development of energy efficient engines and propulsion plants for transportation systems, nanotechnologies and nanomaterials, etc.)¹⁹

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

2.1. Government Laws, Decrees, Acts

2.1.1. Energy Efficiency Act

The legal framework for energy efficiency is based on various codes and Federal laws, such as the Civil Code, the Tax Code, the Customs Code, the Urban Development Code, the Laws on Electricity Sector and on Municipal Housing Sector, as well as a specific law, Federal Law on Energy Saving No. 28-F3, which has been in force since 3 April 1996 and has been recently replaced by the new law. In November 2009, the Russian Government has taken the policy for energy efficiency improvement and energy conservation to a new level by adopting the Federal law No. 261-F3 “On Energy Conservation and Increase of Energy Efficiency” (approved by the President on 23 November 2009). President Medvedev announced that the new law will take effect on 1 January 2010 after amendments to several sections of the legislation are approved. In addition, a number of draft laws amending some existing laws and technical regulations with a view of improving opportunities for the use of non-traditional energy and improving energy efficiency and energy conservation are being currently developed to supplement the new law.

a) Name

Federal Law No. 261-F3 “On Energy Conservation and Increase of Energy Efficiency” (hereafter FLEC IEE) has been approved and adopted by the Russian government and signed by the President on 23 November 2009 is expected to come into effect in January 2010.

b) Purpose

The FLEC IEE is designed to create economic and organisational conditions leading to the increase in energy savings and improvement of energy efficiency of the Russian economy. It also sets a legal framework for the use of energy resources in Russia in terms of promoting rational use of exhaustible energy resources and alternative fuel resources for electricity and heat generation.

c) Applicable sectors

The FLEC IEE applies to all large energy users across all sectors throughout the Russian Federation.

d) Outline

The FLEC IEE, which is effective throughout the territory of the Russian Federation, sets forth the following five key principles of the policy for energy saving and energy efficiency

¹⁹ PEEREA report, p. 36.

increase in the Russian Federation:

- Effective and efficient use of energy resources
- Support and encouragement of energy conservation and energy efficiency improvement
- Systematic and full-fledged realisation of the measures to encourage energy conservation and energy efficiency improvement
- Planning activities for energy conservation and energy efficiency improvement
- Use of energy assets based on resource, technological, ecological, and social conditions.

The law is comprised of 10 Chapters and 50 Articles, including the following regulations and provisions:

- General government regulations in the area of energy conservation and energy efficiency
- Requirements for energy efficiency labelling of goods and commercial inventory of energy resources
- Energy efficiency of buildings and installations in the residential and commercial sectors
- Requirements for mandatory energy efficiency audit, inspection, and monitoring (including requirements for data collections and analysis of the energy passports)
- Requirements for information dissemination (including the establishment of the federal integrated information system) and campaigns for awareness raising
- Requirements for energy conservation and energy efficiency in the budget/governmental sector
- Government support and stimulation of energy conservation and energy efficiency
- Enforcement of compliance with energy conservation and energy efficiency requirements.

e) Financial resources and budget allocation

There is currently no information available about budget allocation in support of the FLEC IEE. However, the law includes a separate chapter (Chapter 8), which stipulates the directions and forms of government support in the field of energy conservation and energy efficiency. In accordance with Article 27 of Chapter 8, the programs and activities in this field should be financed by federal, regional, and municipal budgets; domestic and foreign private investments; and other resources in accordance with the existing laws and regulations. In addition, the article stipulates that the government support of investment activities in the field of energy conservation and energy efficiency improvement will come in the forms of various stimulation measures, such as direct subsidies, special loans, tariff regulations, special privileges, tax deductions, fee reductions, payback schemes, and others.

f) Expected results

The new law on energy saving and energy efficiency will become the core of a legal framework for the use of energy resources in the Russian Federation in terms of promoting rational use of exhaustible energy resources and alternative fuel resources for electricity and heat generation. Notably, it will help provide state support for the companies implementing investment activities in the energy efficiency field. Furthermore, the law will help encourage additional financial incentive mechanisms for energy saving activities, separation of energy saving competences between the federal, regional, and municipal level authorities, promotion of increased production and sales of equipment that corresponds to the most advanced energy efficiency requirements, a linkage between addressing environmental and energy saving programs, and increased use of renewable energy and alternative types of fuel. The enactment

of the FLEC IEE will ultimately help create the necessary environment to achieve the overall energy efficiency goal of reducing energy intensity of the Russian economy by a minimum 40% by 2020 compared to 2007.

2.2. Regulatory Measures

The FLEC IEE has several articles dedicated to standardisation, mandatory certification, audit, and declaration of energy efficient indicators (“energy passports” and energy efficiency certificates). Specifically, Article 9 and Article 10 in Chapter 3 “Federal regulations in the field of energy conservation and increase of energy efficiency”, require governmental standard declarations for all energy-consuming production to be supplemented by energy efficiency data, including energy consumption data; prohibition of the production and circulation of goods with low energy efficiency performance; mandatory inventory of energy resources; energy efficiency requirements for buildings and installations; requirements of mandatory energy audit and energy passports, and so on.

In addition, there is many federal and regional codes and regulations (State Standards or “GOST”) in the area of energy conservation and energy efficiency improvement, most important of which include GOST P 51541-99 “Composition of indicators and basic concepts in the field of energy saving and efficiency”, GOST P 51379-99 “Power-engineering certificates for industrial consumers of fuel-energy resources” (adopted and set in force on 30 November 1999) that regulates the mandatory issuance of energy passports to energy- and fuel-consuming industrial producers; GOST P 51380-99 “Energy conservation and methods of assurance for energy efficiency compliance”, GOST P 51388-99 “Energy conservation and informing consumers about energy efficiency of equipment in the residential sector”, as well as a number of building codes and thermal performance regulations.

2.2.1. Minimum Energy Performance Standards and Labelling

Presently, there are no MEPS in Russia, but the government is planning to introduce mandatory MEPS for white goods and electric appliances.

In accordance with GOST P 51388-99 “Energy conservation and informing consumers about energy efficiency of equipment in the residential sector”, instead of MEPS, partially mandatory energy performance certificates and energy saving labelling (based on a 7-class, 95/75 ES and 92/2 ES international standards system) for specified equipment, materials, and products are currently being used. In addition, Article 10 of the FLEC IEE stipulated the requirements for obligatory posting of technical information, including energy efficiency class/rank, by marking and labelling most domestically-produced and imported goods (to come into effect on 1 January 2011 for white goods and on 1 January 2012, for computers and computer-related goods).

In addition, in accordance with Article 10, Section 8 of FLEC IEE, in order to improve energy saving of lighting devices, the government has ruled to introduce a ban on the distribution, sale, and general use of inefficient lighting, such as 100-watt or higher incandescent lamps, starting on 1 January 2011, particularly in the budgetary and government sector. This ban will be followed by the prohibition of sale and distribution of 75-watt lights from 1 January 2013, and completely prohibiting the sales and distribution of all incandescent lighting (25-watts or higher) starting on 1 January 2014.

a) Name

Labelling and “energy passports” (energy efficiency and thermal efficiency performance certificates for specified equipment and materials)

b) Purpose

To provide the energy labelling of the goods, appliances, and materials in order to improve their energy efficiency

c) Applicable sectors

The requirements apply to white goods, appliances, heat and lighting units, and other equipment and materials in the industry, transport, residential/commercial, and government sectors.

d) Outline

In accordance with GOST P 51388-99 “Energy conservation and informing consumers about energy efficiency of equipment in the residential sector” as well as FLEC IEE and FTP EEE, it is required to verify, and provide consumers with information about, energy efficiency and actual energy performance of the following types of products: household appliances and equipment, including lighting; gas stoves and heaters for residential/commercial use; heat-insulation products and materials; as well as automobiles and vehicles in private use.

In addition, the aforementioned GOST established an energy efficiency performance classification system, particularly for white goods and appliances. It is based on the 7-class standards system, with the A class being the most efficient (less than 55% actual energy consumption than expected), while the G class being the worst (exceeding expected energy performance by over 125%).

Электроэнергия	
Производитель	1 Siemens
Модель	2 ККЗ1Е01
Низкий расход	3
Высокий расход	4 325
Энергопотребление, кВт·час/год	5 190 90
Полезный объем Холод. (л)	
Полезный объем Мороз. (л)	
Шкала при работе объём от 1 куб.м	

1. Maker
2. Model
3. Energy Consumption Class (A to G)
4. Actual energy consumption (kWh/year)
5. Size of the freezer and refrigerator, etc.



2.2.2. Building Energy Codes

a) Name

Federal and regional building and heat efficiency (thermal performance) codes

b) Purpose

The aim of the existing building codes is to improve the energy efficiency of the design and construction, as well as thermal efficiency of existing and new buildings.

c) Applicable sectors

Residential/commercial and government (especially budgetary offices)

d) Outline

Energy efficiency provisions for housing were first introduced in the mid-1990s at both federal and regional levels. Established in 1996, GOST 30494-96 “Residential and Public Buildings: Microclimate parameters for indoor enclosures” (the code for the temperature and humidity of indoor facilities) was among the first Russian building codes to promote building efficiency and account for energy consumption.

In addition, in February 2003, the new Thermal Performance of Building Code (also known as Construction Code and Regulations, or SNiP 23-02-2003) was introduced. Effective 1 October 2003, it required architects, builders and contractors to comply with energy

efficiency requirements and technical regulations. More specifically, the new code established numerical values for required technical targets, corresponding to world levels; classified new, renovated, and existing buildings according to their energy efficiency and thermal performance, encouraging buildings that are more efficient than required by code (such buildings would qualify for economic incentives); created a mechanism for identifying low-performing existing buildings and mandating necessary upgrades; developed design guidelines for both prescriptive and performance-based compliance paths; and developed methods for oversight and enforcement of compliance in terms of thermal performance and energy efficiency (energy passports), during the design, construction, and prospective operation phases.

Between 1995 and 2004, 50 regions of the Russian Federation implemented their own building codes in accordance with federal building standards. Some local enforcement agencies offered incentives for exemplary performance, while others mandated auditing. Regions established their own requirements for calculating a building's energy consumption and compliance with local codes.²⁰

Furthermore, Article 11 and 13 of FLEC IEE introduced requirements for the monitoring of energy efficiency standards for existing and new buildings and installations, including such measures as keeping records on energy efficiency compliance information in the mandatory energy passports; updating at least once every five years energy efficiency requirements for buildings and installations; installing compulsory meters to encourage lower use of water, electricity, and heating as well as reducing budget expenditures on energy use and heating (the compliance deadline is set on 1 January 2011 for most of the public sector and on 1 January 2012 for most of the residential sector); regular building audit and monitoring in existing and new buildings and construction units to ensure compliance with the established regulations and laws; and so on.

e) Financial resources and budget allocation

In addition to introducing various incentives to improve energy consumption performance in the building sector, the government established a special Housing Reform Fund at the amount of RUB 25 billion (USD 726.3 million) in early 2009 in order to provide financial support for the remodelling of existing housing facilities by private citizens and entities.

f) Expected results

Overall improvement of energy efficiency and thermal performance of new, existing, and renovated buildings, indoor facilities, and related equipment

2.2.3. Fuel Efficiency Standards

Currently, Russia does not have enforceable fuel efficiency standards for its domestic transport industry. However, Article 14, Chapter 3 of FLEC IEE introduces the measures for the use of vehicles with a high level of fuel efficiency, specifically by replacing gasoline with more efficient fuels such as natural gas in motor vehicles in the transport sector.

The fuel standards and other measures and initiatives for the promotion of energy efficiency in the transport sector (such as eco-driving educational campaigns) as well as financial incentives for compliance are expected to be introduced for all types of vehicles in the new federal targeted program "On Energy Saving and Energy Efficiency Improvement up to the year of 2020", which was adopted in early November and will come into effect in early 2010.

2.3. Voluntary Measures

No information available

2.4. Financial Measures Taken by the Government

FLEC IEE and the "Federal Targeted Program for Energy Saving and Improvement of Energy

²⁰ IEA Energy Efficiency: Policies and Measures database (Russia).

Efficiency in the Russian Federation up to 2020,” which is expected to be come into effect in early 2010, encourage tax-related, budgetary, and other financial measures of governmental support designed specifically for energy efficiency and energy saving programs and initiatives in the Russian Federation.

In accordance with FLEC IEE (Article 27 of Chapter 8), the programs and activities in the field of energy conservation and improvement of energy efficiency should be financed by federal, regional, and municipal budgets; domestic and foreign private investments; and by other resources in accordance with the existing laws and regulations. In addition, the law stipulates introduction of incentives and tax benefits for Russia’s heavy industry to replace highly energy-inefficient machinery and equipment.

With the aim to promote energy saving and improvement of energy efficiency in Russia, the article also recommends the following forms of government support of investment activities and stimulation measures in this field, such as direct subsidies, special loans, tariff regulations, special privileges, tax deductions, fee reductions, payback schemes, and others.

2.4.1. Tax Scheme

Currently under consideration

2.4.2. Low-Interest Loans

Currently under consideration

2.4.3. Subsidies and Budgetary Measures

President Medvedev, in his Decree No. 889 “Concerning some measures for improving the energy and ecological efficiency of the Russian economy” (4 June 2008), called to develop certain types of subsidies allocated from the Federal budget in order to support ecologically clean and energy effective technologies.

FLEC IEE (Section 3, Article 27 of Chapter 8) introduces various methods of budgetary support, including direct budget distribution through subsidies and co-financing among federal, regional, municipal organs, and other entities of the Russian Federation in support of their respective energy conservation and energy efficiency programs. However, the entities can qualify for such government support based on their proposed programs’ energy efficiency performance and energy saving potential.

2.4.4. Other Incentives

In accordance with Article 27 of Chapter 8 of FLEC ICC, economic entities in the Russian Federation can qualify for government support in order to develop energy efficient technology as well as energy saving procedures and measures in their production (including the use of renewable energy resources). If they have successfully introduced such technologies and measures, they can also apply for various financial benefits and privileges and will also have a right to internalise their energy saving costs in the prices and tariffs of their products, goods, and services for the amount and period determined by the law.

2.5. Energy Pricing

In Russia, prices for the products of natural monopolies, such as electricity, gas, pipeline transport, etc., are regulated by the state, which sets an upper limit on heat and power tariff increases. These state-regulated prices are established by the Federal Tariff Service (FTS) and regulated by the Federal and Regional Energy Commissions within their authority (due to Russia’s geographical size, electricity and gas prices are differentiated by 9 territorial zones). The Federal Energy Commission regulates wholesale electricity tariff and prices, while the Regional Energy Commissions regulate retail tariffs for power and energy at a regional level.

In order to stimulate efficient use of energy resources, the government established a system of seasonal energy consumption quota and gas prices, seasonal tariffs for heat and electricity, as

well as differentiated (based on the time of the day) electric power rates in accordance with the federal law on price and tariff regulations and FLEC IEE recommendations.

It is important to note that despite the existence of several independent gas producers and oil companies that can sell gas in a deregulated sector, the overall gas sector is not fully liberalised yet since the market is dominated by the de-facto monopolist Gazprom. Currently, domestic gas and electricity prices in the industrial, residential, and commercial sectors are kept at an artificially low level and regulated below market prices. In May 2008 the government approved the increases in electricity prices for the domestic market to be capped at the rate of 26% in 2009, 22% in 2010, and 18% in 2011. As for the gas tariff growth, the government raised the limit of 25% in 2009, followed by higher caps of 30% and 40% for 2010 and 2011, respectively. Furthermore, in accordance with Section 6 Article 25 of Chapter 7 of FLEC ICC, the government introduced a long-term tariff system in order to encourage energy conservation and improvement of energy efficiency.

Since 1 September 2006, the new rules of operation of wholesale and retail electricity markets have come into force. As a consequence, the wholesale electricity (capacity) market saw a transition to regulated contracts to be concluded between buyers and generation companies, the free trade sector was liquidated, and spot market (day ahead market (DAM)) was launched. In accordance with Russian Federation Government Resolution of 7 April 2007, there are plans to replace regulated contracts with free (unregulated) ones by 2011. The rules of operation of retail markets suggest that gradual liberalisation of retail markets should go in parallel with wholesale market liberalisation. It is important to note that during the transition period electricity tariffs for the population will remain regulated.

One of the important developments as the first step towards liberalisation and privatisation of the Russian electricity market was the completion of the reorganisation of the former monopolist Unified Energy System of Russia (RAO-UES) and the subsequent creation of several electricity generation, transmission and distribution companies located over the territory of the Russian Federation in July 2008. As a result of the ongoing policy of a phased liberalisation (except in the household and public services sectors), electricity and gas prices in industrial and power sectors are expected to reach market levels by 2011–2012.²¹

2.6. Other Efforts for Energy Efficiency Improvements

2.6.1. Cooperation with Non-Government Organisations

There is no official record of the Russian government cooperating with non-government organisations in order to stimulate energy saving and energy efficiency improvements.

2.6.2. Cooperation through Bilateral, Regional and Multilateral Schemes

The Russian government cooperates actively with many economies within bilateral and multilateral formats. Some examples include the establishment of the Russia-EU Energy Dialogue, which has been in place since 2000 and has a special area dedicated to energy efficiency; the Joint Ministry of Industry and Energy of Russia and US Department of Energy Working Panel on Energy Efficiency, and Russian-German Energy Efficiency Forum under the auspices of the Russian-German Energy Agency (RUDEA). In addition, a number of important intergovernmental agreements were recently signed concerning cooperation in the area of energy efficiency and energy conservation, such as the Memorandum of Understanding (hereafter MoU) that was concluded between the then Ministry of Industry and Energy of Russia and the Ministry of Economy of the Netherlands Regarding Energy Efficiency and Renewable Energy Sources (2006); the Memorandum on Cooperation between the Ministry of Energy of the Russian Federation and the Ministry of Economics, Trade and Industry (METI) of Japan Regarding Increasing Energy Efficiency and Renewable Energy Usage (May 2009); the Memorandum on Cooperation between the Russian Ministry of Energy and French Ministry of Ecology, Energy, and Sustainable Development (20 September

²¹ IHS Global Insight, Russia – Country Report (Energy): Tariffs and Prices, February 2009.

2008); and the MoU to cooperate in energy efficiency projects between the energy ministries of Russia and the UK (5 October 2009). In addition, Russia is an active participant in international energy organisations, such as CERA, IEA, IEF, Gas Exporting Countries Forum, and others.

2.6.3. Other Cooperation/Efforts for Energy Efficiency Improvements

Russia has been pursuing international cooperation in the area of energy efficiency on the basis of such instruments as the Kyoto Protocol and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA).

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