RUSSIA COUNTRY PROFILE

Overview

Russia has a population of approximately 141.64 million, with a GDP of approximately USD 1,608 billion. The total primary energy supply in 2007 was 672.14 Mtoe, of which 2.3% is hydro power, 15.2% is coal/peat, 1.0% is combustible renewable and waste (including biomass, biogas and waste), 6.2% is nuclear power, 54.3% is natural gas, 19.7% is oil and 1.3% of geothermal/solar/wind. Net exports are around 544.40 Mtoe. CO₂ emissions are 1587.36 (measured as Mt of CO₂).

1. Institutional structure

In the Russian Federation (RF) the energy sector’s regulatory functions are distributed among several authorities: the Ministry of Energy (ME), the Federal Tariff Service (FTS), the Federal Anti-Monopoly Service (FAS), and the Ministry of Economic Development (MED). For the electricity sector a non-commercial organisation, the Market Council, has been established to control the proper execution of Wholesale Electricity Market Rules.

The ME and the MED are charged with primary responsibility for the energy sector; ME develops investment programmes and authorises energy facility projects and MED deals with general energy regulation issues in the framework of economic planning and development. Tariff regulation is the responsibility of the FTS.

The FTS is a federal executive body which regulates tariffs of natural monopolies, and in particular tariffs in the electricity, oil and gas sectors. The FTS reports directly to the government. It was established in its current form in 2004, replacing the former Federal Energy Commission.

The Head of the FTS, who may have up to 5 deputies, is appointed (and may be dismissed) by the government. Appointment is for an undefined term of service.

The FTS consists of 12 administrations and 2 independent departments. According the maximum headcount established by the Government, the FTS may have up to 527 staff members. As of January 2009 the number was 359.

FTS does not have regional offices, however there are regulatory governmental agencies (Regional Energy Commissions or RECs) that operate on a regional level and apply rules and methodology guidelines issued by FTS.

Resolution of the RF Government No. 995 of 26 July 2004, “On tariff setting decisions and powers the FTS”, provides the FTS with a Management Board, comprised of 12 members and drawn from FTS executives and officials from various ministries, with the FTS Head serving as the chairman of the board.

89 Information herein is drawn primarily from the regulator (FTS) and information made available on its website and Gazprom’s Annual Reports.
The members of the Management Board are civil servants; conflict of interest provisions stipulated in the Federal Law of RF “On State Civil Service in Russian Federation”, dated 27 July 2004, prohibit them from:

- carrying out any other business activity
- holding profit generating securities in cases stipulated by the federal law
- receiving rewards from natural persons or legal entities executing official duties
- being engaged in payable activity financed solely from funds of foreign states, international and foreign organisations, or foreign citizens
- being member of the management body of any commercial entity (and therefore of any entity regulated by the FTS)

The monthly salary paid to federal civil officials, including members of the Management Board and personnel of the FTS, is established on a differentiated basis by the Orders of the President, and is normally lower than that of companies in the corresponding sector.

The FTS is financed from a special chapter of the federal budget.

Governmental authorities do not formally have the right to overrule, or in any way alter, the decisions of the regulatory authority, even though the government may represent its views through its representatives on the Management Board. FTS’s decisions may only be appealed in court.

The FTS is responsible for setting tariffs (tariff limits) and settling disputes concerning regulated services.

The FTS is also empowered to impose penalties for violation of law on natural monopolies concerning tariff and price regulation.

The FAS is the federal-level executive governmental body which controls the execution of the competition laws and related areas. It was established by the Decree of President of Russia No. 314 of 9 March 2004.

2. Electricity sector

a. Market framework

The strides that Russia has made to reform its electricity market over the last decade offer a useful model for neighbouring countries. The monopoly RAO Unified Energy System (UES) (established in 1992 pursuant to Decrees of the President) has been restructured and unbundled, with 20 of the resulting companies being privatised in 2008. The reforms created six wholesale thermal power-generating companies (OGKs – which remain separate from hydro and nuclear assets) and 14 territorial generating companies (TGKs – which provide district heating as well as power). Foreign investors include E.ON and RWE of Germany (in OGK 4 and TGK 2, respectively), ENEL of Italy (in OGK 5) and Fortum of Finland (in TGK 10, plus a minority share in TGK 1). The (60%) state-owned RusHydro JSC manages the vast majority of the Russian hydro power plants.

The operation of the country's transmission grid Unified National System (UNS), remains under state control through the Federal Grid Company, which is the transmission system operator (TSO).
In 2006 a wholesale market (power exchange) was established. The share of electricity that is sold at non-regulated prices is increasing gradually, from 5% of the forecast balance prepared by the FTS for 1 January 2007 to full liberalisation of the wholesale electricity (capacity) market in 2011. By that date, all market participants, excluding the household sector, will be eligible and 100% volumes of electricity will be traded at free prices. As of 1 January 2010, 60% of the non-household market has been liberalised.

In the interim phase, the rest of traded electricity is exchanged and paid for at regulated prices pursuant to regulated bilateral contracts (on a take-or-pay principle).

The wholesale market is made up of:

- **Day-ahead market (DAM):** based on the mechanism of competitive price formulation or auction of electricity buyers’ and sellers’ bids. Auctioning is conducted daily, one day ahead of real time, and simultaneously for each hour of the day in question. Based on its results, balanced planned hourly output/consumption volumes are formed and equilibrium prices are determined, taking into account system constraints and electricity transmission losses. A major bid selection criterion is the maximisation of total benefit to DAM participants (maximum of the welfare function).

- **Free bilateral contracts:** the execution of free bilateral electricity contracts by market participants, offering a complementary trade mechanism by which contractual prices and supply volumes are defined by the parties. For the preservation of the day-ahead market financial balance, the parties to the contract pay the cost of electricity load losses and system constraints associated with the corresponding contract (thus free contracts parties pay the nodal price difference).

The DAM is complemented by a balancing market. Volumes of actual output/consumption deviation from planned amounts for each participant are sold and purchased in the balancing market. The balancing market calculations are performed one hour ahead.

No liberalisation time frame has been established yet for the household sector.

**b. Network access and tariffs**

Russian legislation stipulates non-discriminatory access to grid infrastructures. The FAS is responsible for settling disputes that may arise from access denial, whereas FTS and RECs are responsible, respectively, for those related to tariffs on transmission lines (UNS) and regional distribution networks (less than 220 kV).

The FTS is responsible for setting tariffs, in compliance with the detailed federal relevant legislation.

The RECs are responsible for setting tariffs at the regional level according to the guidelines issued by the FTS. The FTS approves and amends: 90

- tariffs for electricity transmission services through the UNS

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90 FTS website: [http://www.fstrf.ru/eng/about/dep/electro](http://www.fstrf.ru/eng/about/dep/electro)
marginal (i.e. bottom and/or ceiling) tariff levels for electric energy provided to consumers in the territorial entities of the Russian Federation by producers of energy inclusive of marginal tariff levels for electric energy provided to households

marginal tariff levels for heat energy produced by electric power stations functioning as co-generators

tariffs or their marginal levels for electric energy (power) sold by producers at the wholesale market of electric energy (power) at regulated prices

tariffs for services of organised trade operations in the wholesale market of electric energy (power); for services of operational-dispatch supervision in electricity sector; for services ensuring system reliability in electricity sector; for organised operations and development of the UNS

indicative prices for electric energy and power for traders of the wholesale market that supply residential customers for the purpose of shaping regulated contracts

marginal tariff levels for services of electric power transmission through power distribution networks within the territorial entities

fees for technical connection to the UNS

Regulated electricity prices for retail end-users, which are differentiated by categories, are typically the sum of the following components: weighted average generation cost, capacity cost in the wholesale market, cost of ancillary and system services, and retail supply cost (including distribution). The free market prices of the wholesale market (DAM) are transferred to end-user prices for participants of retail market in accordance to liberalised market share. Thus retail market participants (except for households) in fact partially pay for consumed electricity at regulated tariffs and partially (in accordance to liberalised market share) at free market prices.

c. Operational environment

The ME is responsible for monitoring the expected future demand, foreseeing the need for additional production capacity and ensuring the security of supply.

The legislation and market structure include a last resort supplier (LRS), which operates within the territory of the subjects of the Federation (Service Area of the LRS). Within each subject of the Federation several LRS can operate. LRS are defined for a certain period at special tenders. Each LRS is obliged to conclude contracts for electricity supply with any customer within their service area.

Currently, the legislation does not include any provision on vulnerable customer categories.

In the competitive areas of the electricity market - that is generation and supply - there are no limitations on foreign capital investment. Transmission assets and facilities are controlled by the state.
Each federal executive authority is obliged to prepare and publish annual reports on its activity. The annual reports of the FTS are available on its official website: www.fstrf.ru. FTS decisions are also posted.

3. Gas sector

a. Market framework

In Russia, one state-controlled company, OAO Gazprom, dominates the gas sector, accounting for over 60% of Russian reserves (almost 30 tcm according to IEA 2008) and almost 85% of Russian production, amounting in 2007 to about 548.6 billion cubic meters. This means that Gazprom is by far the largest gas producing company in the world.

Oil companies and independent gas producers each account for another 20% of the Russian gas reserves and produce the balance of the total production.

Since the beginning of 2000s, international concern about Gazprom’s capacity to keep current production levels has increased. For more than 20 years Russian gas production has relied on three super-giant fields (Medvezhe, Urengoi and Yamburg) located in the Nadym-Pur-Taz region of western Siberia. These fields are all well in their declining phase. To compensate for declines at older fields, in the next decade, Gazprom will have to put into production undeveloped giant fields for which it holds development licenses. The three main options are: the Ob and Taz Bay fields, the Yamal Peninsula fields and the Shtokman fields in the Barents Sea.

Gazprom owns the Russian gas transit and transmission system. The year 2006 marked a change in the legal status of Gazprom Export – the company’s export subsidiary – in relation to exports. Before 2006, Gazprom enjoyed a de facto monopoly position over gas exports, but not a legal one. Starting from mid 1990s, the monopoly of Gazprom was challenged: first, independent companies such as Itera began to export gas to CIS countries; then, about a decade later, Eural Trans Gas started exports to Europe. Partly in response to these developments, and mainly as a consequence of the January 2006 Ukrainian gas transit/supply crisis, the 2006 Law “On Gas Exports” gave Gazprom a legal monopoly.

Russian gas exports to Western Europe started in December 2007, initially to Austria. Overall exports to Europe, in the period 1997-2007, have shown a steady increase, reaching at the end of the period a level of approximately 160 bcm per year. This means that Gazprom is by far the largest exporter to Western Europe and of critical importance for the region’s security of supply. The vast majority of gas is sold on long-term 20-25-year contracts, mostly renewed in the first half of the 2000s; however it is worthy to note that in recent years Gazprom Marketing and Trading, Gazprom’s UK subsidiary, has an increasingly active short-term business in the Northwest Europe.

Gazprom’s deliveries to Europe depend mostly on transit through CIS countries. Currently, more than 90% of its gas exports transit Ukraine, Belarus and Moldova (Ukraine alone accounting for about 75%). Only supplies to Finland

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91 According to Gazprom’s 2009 Annual Report, as 31 December 2008, the Russian government controls 50.002% of shares in Gazprom through: the Federal Agency for Federal Property Management (38.373%), Rosneftegaz (10.740%) and Rosgazifikatsiya (0.889%); ADR holders own 22.150%.

and Turkey (through the Blue Stream submarine pipeline) are direct. In order to reduce dependence on transit countries and to meet Europe’s growing import needs, Gazprom has launched two major submarine pipeline projects: the Nord Stream pipeline and the South Stream pipeline. The former will link Russia’s Baltic coast near Vyborg with Germany’s Baltic coast in the vicinity of Greifswald, with a total length of about 1,200 km (planned for commissioning in 2011); the latter will run under the Black Sea from the Russian coast (Beregovaya compressor station) to the Bulgarian coast, with a total off-shore length around 900 km. At the same time, for domestic use and for re-export Gazprom has been buying cheaper gas from neighbouring CIS countries, such as Turkmenistan and Kazakhstan. A major issue for direct imports from Central Asia to Europe has been transportation capacity, which will improve in the near future thanks to the construction of several large pipelines.

At the wholesale domestic level, the Mezhregiongaz (MRG) gas exchange was established in November 2006. The exchange was intended to accelerate the transition to unregulated gas prices by providing a price discovery mechanism. In 2007, the first year of trading, 10 bcm of gas were traded, with Gazprom accounting for about half of the volumes and independent operators for the rest. In 2008 volumes were below that level.

Gazprom is also the largely dominant end-user supplier, controlling the vast majority of the regional distribution companies.

b. Network access and tariffs

The law stipulates that gas transmission and distribution network owners are obliged to provide non-discriminatory third-party access to free capacity, according to procedures determined by the government. The procedure to access Gazprom’s system is currently stipulated in the Regulation “On the Provisions for Access of Independent Enterprises to the Gas Transportation System of JSC Gazprom” approved by the Resolution No. 858 of the RF Government, dated 14 July 1997.

FTS regulates and approves tariffs for the following areas:

- gas transmission and distribution
- wholesale supply
- gas supply to end users (as maximum prices)
- liquefied gas used in the household sector

Since the end of 2006, a new policy has been in force in Russia that addresses price increases, specifically holding that by 2011 domestic prices will be at “parity” with export prices (less transportation and excise duty), resulting in a domestic price that would be 60-70% of export prices. This is the culmination of steady progress over the past 2-3 years to bring domestic gas prices to more cost-reflective levels. In 2008, prices were slightly less than half of the European level. The price reform envisaged by the new policy (even if the fulfilment of

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93 Companies that are not affiliated with Gazprom OJSC, Yakutgazprom, Norilskgazprom, Kamchatgazprom and Rosneft are not subject to regulation.
the target price for 2011 appears to be uncertain) is expected to have a knock on effect on energy efficiency, bringing needed improvements in the sector.

c. Operational environment

In the gas sector the role of the ME is less prominent than in the electricity sector. Nevertheless, it assesses and coordinates draft investment plans of gas companies and prepares draft decisions for the government; for that purpose, it can require relevant documentation from the involved companies.

The legislation does not formally include a last resort supplier in the gas sector. In practice, regional gas companies belonging to the Gazprom Group perform this function.

As for security of supply (at the end-user level) and protection of vulnerable customers, the law “On Gas Supply in the Russian Federation” provides a number of qualified buyers with a priority right for the conclusion of gas supply contracts. These subjects are essentially state or municipal entities and utilities that supply gas to household consumers (and provide universal service).

Foreign capital investment in the gas sector (exploration, production, transmission, wholesale supply and export) is subject to state control, and is included in the list of business activities “which have strategic value for the Defense of the State and National Security Support”, according to the Federal Law No. 57 of May 2008, “On the Procedure of Foreign Investments into Economic Organisations of Strategic Importance for the Defense of the State and National Security Support”.

4. Renewable energy sources/energy efficiency

The energy policy of Russia is broadly outlined in the Energy Strategy document approved by the Government in 2000 and confirmed in 2003. The document sets out key energy policy for the period up to 2020 and identifies several priorities including: increasing energy efficiency, reducing impact on the environment, and sustainable development.

Russia’s current use of renewable energy is very low, although it has huge wind, hydro, geothermal, biomass and solar energy resources. In particular, Russia’s territorial expanse of arable land provides ideal conditions for biomass production for both bio-fuels and heat generation. Russia has over 20 million unused hectares of available land.

The ME is charged with primary responsibility for the implementation of the national renewable energy and energy efficiency policy.

Currently, the Russian legislative and regulatory framework appears to provide insufficient mechanisms for renewable energy promotion. A comprehensive draft law on a renewable energy has been pending since 1998. There is a policy on the promotion of electricity generation on renewable energy basis and it is laid down in the Federal Law No. FZ-250 dated 4 April 2007 “On Introduction of Changes into Separate Regulatory Acts of Russian Federation Connected with the Implementation of Measures on the Restructuring of the Unified Energy System of Russia” with concretisation and detail specification in further bylaws. Although there is still no specific renewable energy legislation, the Russian Strategy for Energy Efficiency, produced in 2006 and specific to energy efficiency rather than the sector overall, mentions the importance of distributed power generation from renewable sources.
A November 2007 amendment to the Electricity Law of 26 March 2003 stipulates that the government may decide to establish special certificates for renewable energy producers or special tariffs (i.e. mark-up over average market price) for access to the wholesale markets for the electricity generated by renewable technologies.

The Law stipulates support mechanisms for energy generation on renewable energy basis including:

- subsidies for grid connection costs for generators with a capacity below 25 MW and possibility to cover other costs from the federal budget
- obligation for grid companies to buy electricity from renewable energy at fixed tariffs established by the government for the compensation of their technical losses
- mark-ups to the RES-electricity price above the wholesale market price

However, there are still no provisions regarding licensing, land use, and the installation of capacities for renewable energy.

Similarly, there is no formulated governmental policy and comprehensive legislation for the promotion of combined heat and power generation (even though the above-mentioned amendment of March 2006 applies also to CHP) and energy efficiency.

The President approved the Kyoto Protocol to the United Nations Framework Convention on Climate Change on 4 November 2004 and Russia officially notified the United Nations of its ratification on 18 November 2004. The issue of Russian ratification was particularly closely watched by the international community, as the accord was brought into force 90 days after the Russian ratification.

Russia does not face mandatory cuts since its greenhouse-gas emissions fell well below the 1990 baseline due to a drop in economic output after the break-up of the Soviet Union. Because of this, despite its growing economy, by 2012 Russia will not exceed the level of emissions in 1990.

It is debatable whether Russia will benefit from selling emissions credits to other countries in the Kyoto Protocol, although Gazprom has already entered the market.

Russian renewable energy producers aim at Emission Reduction Units from Joint Implementation projects under article six of the Kyoto Protocol.

5. Conclusion

Russia performs reasonably well overall and very well with respect to its grouping (Group C), largely above average for both electricity and gas. Within its Group, Russia has an electricity sector score of 0.829 relative to the Group C average score of 0.461. Russia’s electricity sector performs well in comparison to the average assessment score of the Energy Community contracting parties and observers (0.827) though it lags behind the EU Member States (with a group score average of 0.93). With regard to the gas sector, Russia’s score is 0.648, well above the Group C average of 0.399. In comparison to the average assessment score of Group B (0.711) and Group C countries (0.864), however, Russia does not perform that well.

The institutional structure and the regulatory framework are significantly above the average of its group, and the regulatory body, FTS, appears to be close to international standards in terms of authority.
Russia’s efforts in the last decade to reform its electricity market offer a useful model for its neighbours. The former monopoly RAO UES has been unbundled, and 20 of the resulting companies were privatised in 2008 — several with foreign investor participation. The wholesale market can be regarded as competitive and the reform is now smoothly moving towards a full liberalisation of the non-household market.

The situation is sharply different in the gas market, in which the state-controlled Gazprom has a legal monopoly on gas exports. Huge investment is needed in the exploration and production sector to allow Gazprom to meet expected domestic demand and export contractual obligations and to compensate the declining production of aging fields.

Since 2006 Russia has had a new policy to address price increases and requires that by 2011 domestic prices will be at “parity” with export prices (less transportation and excise duty); this in order to bring domestic gas prices to more cost-reflective levels. The price reform is expected to have a very positive effect on energy efficiency.

Electricity spider graph – Russia

Note: The diagram presents the electricity sector results of Russia, in accordance with the benchmarks and indicators identified in the assessment model. The extremity of each axis represents an optimum score of 1.0, that is, full compliance with international best practices. The fuller the “web”, the closer the overall electricity regulatory framework approximates international best practices. The results for Russia are represented by the thick bold line. See next page for comparison purposes, the shaded area present the electricity sector average of the Group C countries.
Electricity Sector - Comparative view of Group C countries

Gas spider graph - Russia

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Gas Sector - Comparative view of Group C countries