

# Market Overview

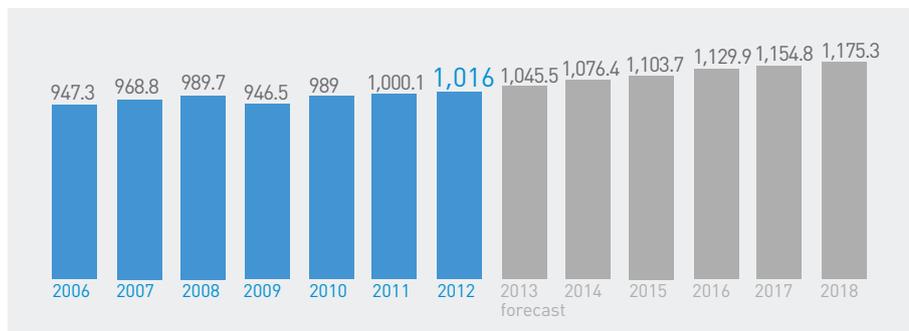
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KWH OF ENERGY CONSUMPTION IN RUSSIA FOR 2012

## The Situation in the Industry

The growth of power consumption started from 1998 during the recovery and development of the Russian economy (except for 2009, when the global financial crisis resulted in an energy consumption decrease). In 2012, energy consumption reached 1,016 billion kWh, while the achievement of the historical maximum of 1,073.8 kWh (1990) is expected in 2014. On 2 February 2012, the Unified Energy System of Russia registered one more record in power consumption comprising 155,226 MW, which is the maximum consumption in the entire modern history of Russia, evidencing the growth in energy and power consumption.

## Forecast of energy consumption across the Russian UES for the period till 2019, billion kWh\*



\*According to the Scheme and 2012-2018 Russian UES Development Program approved by Order # 387 of the Russian Ministry of Energy, dated 13 August 2012

2012 was a very important year in respect to the development of the electric energy industry. The Russian Ministry of Energy approved two crucial documents providing for the reliability and safety of the sector for a few decades: the Program for the Modernization of the Energy Industry till 2020 and the Basic Rules of Price Formation in the Heat Supply Sphere. Moreover, Russian Government's Decree #442 providing new rules for the functioning of retail markets of the electric energy and capacity for the protection of suppliers' and consumers' interests and the creation of competitiveness and reliability of electric energy supply was put into effect.

To develop Russia's electric grid complex, coordinate management of the complex, and to restrain tariff growth for end consumers of electric energy, in November 2012, the Russian President signed a Decree "On Open Joint Stock Company Russian Grids," providing for the re-naming of IDGC Holding as Russian Grids and the contribution of the State's 79.55% stake in Federal Grid Company to Russian Grids' share capital.

The development of the national energy sector is based on the scenario of innovative economic development. In accordance with the Energy Strategy of Russia for the period till 2030, as approved by the Russian government, it is expected that during implementation of the Strategy the dependence of the national economy on the energy sector will diminish due to the priority development of innovative energy-saving sectors, and the implementation of the technologic potential of energy saving. This will be expressed in an almost two-fold decrease in the share of the fuel and energy complex in the Gross Domestic Product by 2030 (compared with 2005).

At the same time, the energy sector will maintain its key role in making essential strategic decisions pertaining to the national development. First of all, this is so in regard to the construction of new power infrastructure that will enable accelerated social and economic development of the Eastern Siberia and Far East, and overcoming infrastructural gaps among numerous regions, thus forming new territorial and production clusters based on the development of energy-generating and processing facilities.

The decrease in dependence on the power sector will be accompanied by qualitative changes in the role of the fuel and energy complex in the national economy. The Russian power sector will maintain its influence on the social situation in the country, as the level of energy comfort and the availability of energy resources define the standards of living of Russian citizens in many respects.

↑ 17%

RUSSIA'S FORECAST ENERGY  
CONSUMPTION GROWTH FOR  
2012-2018

# JSC Russian Grids

# Power Grid Complex (PGC) Development Trends

Based on the PGC Development Strategy (5+5 Strategy) adopted in 2006, there were three priorities formulated for the governmental policy on the Russian power grid complex, namely the following:



The power grid complex of Russia underwent a number of essential changes recently. Considerable investments in the grid infrastructure helped eliminate lags from the nineties, decreasing the degree of wear to the grids and improving reliability. The implementation of RAB-regulation provided for additional investments in the industry. The implementation of economic responsibility of power grid companies for the quality servicing of customers and their timely connection to power grids contributed to improvements in service quality and increased reliability of grid operations.

However, there are some tasks in the industry, such as the increase in the capitalization of sector companies that are still pending as they were put aside due to numerous different reasons, including: the economic crisis and increasing energy product prices. Furthermore, the PGC has some more pending issues, such as: cross-subsidizing, insufficient operations, the investment efficiency of companies and the last mile problem, etc. Taking these into account, it was decided to integrate major PGC companies, meaning JSC IDGC Holding and Federal Grid Company. A decree on the establishment of JSC Russian Grids was signed in November 2012. The new company is tasked with the implementation of an integrated PGC policy, the development of a common plan for the development of backbone and distribution grids, and control over the unified tariff rate and PGC management.

# State Regulation in the Power Industry

The Russian government controls the power industry in accordance with the Federal Law #35-FZ "On the Electric Power Industry", dated 26.03.2003.

The federal authorities empowered by the Russian government to exercise the State regulation of the power industry include the following:

— The Ministry of Energy of the Russian Federation (the Russian Ministry of Energy), tasked with the functions of developing a State policy on normative regulation in the sphere of the fuel and energy complex, including electric power issues;

— The Federal Service for Environmental, Technological and Nuclear Supervision (Rostekhnadzor), engaged in control and supervision over the power industry, as well as licensing individual activities, and checking for compliance with Russian laws on the power industry.

## The Company's Role in Russia's Energy Strategy

The Russian 2030 Energy Development Strategy approved by Decree #1715-r of the Government of the Russian Federation, dated 13 November 2009, is one of the key landmarks for corporate development.

The 2012-2018 Plan and Program for the Development of the Unified Energy System of Russia were submitted to the Russian Government by Federal Grid Company and JSC SO UES on 1 February 2012. The new document takes into account 2011 actual energy and capacity consumption dynamics, the volume of power distributed pursuant to the installed power agreements concluded in 2011 and the commissioning of generating grid equipment and the adjusted plans of the power industry subjects for the construction of new facilities, and a number of other factors impacting the development of the Russian power industry. The 2012-2018 Plan and Program contains a separate section describing the development of the Moscow and the Moscow Region's energy system, characterized by the highest energy consumption rate. On 13 August 2012, the Plan and program were approved by Russia's Ministry of Energy.

## Planning the future development of the power industry

Decree #823 of the Government of the Russian Federation "On Plans and Programs of the Future Development of the Power Industry", dated 17 November 2009

The Russian Ministry of Energy,  
JSC SO UES,  
Federal Grid Company

The General Scheme for the Arrangement of Power Industry Facilities for a 15-year Period (to be adjusted at least once every three years)

Federal Grid Company,  
JSC SO UES

The administrations of Russia's constituent territories

UES Development Plan (including the UNEG Development Plan) for a period of 7 years (annually, till 1 March)

Russia's constituent territory's Power Industry Development Plan based on the social and economic development forecast for a period of 5 years (annually till 1 May)

Investment programs of power industry entities

The adjustment of the General Scheme for the arrangement of power industry facilities till 2020, in view of 2030, as approved by the Russian Government (an excerpt from Minutes #24 of the meeting of the Russian Government, dated 03.06.2010b)

Federal Grid Company's results for 2012

2012-2018 Plan and Program for the development of the Russian UES, including the development of the 220 kV and higher Unified National (all-Russian) Electric Grid (UNEG), as approved by Order #387 of the Russian Ministry of Energy, dated 13.08.2012

2013-2017 Investment Program of Federal Grid Company as approved by Order #531 of the Russian Ministry of Energy, dated 31.10.2012.

Federal Grid Company's results for 2013

Projects of the Plan and Program for the development of the Russian UES and Federal Grid Company's investment program for 2013-2018

The Company, jointly with SO UES, develops and submits to the Russian Government the Plan and Program for the development of the Russian UES for a 7-year period. The key task of this

document is to contribute to the development of grid infrastructure and generating facilities and to meet long-term and mid-term demand for electric energy and capacity.

## Key tasks of the Plan for the Development of the Unified Energy System of Russia

Decreased number of closed main substations	<ul style="list-style-type: none"> <li>Providing consumers with the opportunity of technological connections;</li> <li>Increased reliability of electric energy supply to consumers;</li> <li>Improved quality of provided services.</li> </ul>
Enlarged free power transfer zones	<ul style="list-style-type: none"> <li>Development of electric capacity market;</li> <li>Providing for competitiveness;</li> <li>Optimizing the tariff burden for consumers.</li> </ul>
Priority development of electric grid infrastructure	<ul style="list-style-type: none"> <li>Implementation of plans for the social and economic development of regions;</li> <li>Stimulating development of undeveloped deposits;</li> <li>Contributing to the economic and social growth of the country.</li> </ul>
Providing power from generating plants	<ul style="list-style-type: none"> <li>Fulfilling the government's plans for the supply of capacity to the market;</li> <li>Providing demand for electric energy;</li> <li>Removing technologic constraints between energy systems.</li> </ul>
Renovating fixed assets	<ul style="list-style-type: none"> <li>Increased reliability of electric energy supply to consumers;</li> <li>Replacing outdated and inefficient equipment;</li> <li>Reducing expenses for the maintenance and repair;</li> <li>Reducing negative environmental effects;</li> <li>Increasing the efficiency of assessing fixed assets' status.</li> </ul>

The 2012-2018 Plan and Program for the Development of the Russian UES implies the commissioning of 44 thousand kilometers of 220kV and higher overhead power transmission lines, including 27 thousand kilometers of 220 kV overhead power transmission

lines and 17 thousand kilometers of 330 kV and higher overhead power transmission lines. Other goals include: commissioning 168.2 thousand MVA of 200 kV and higher power transformer equipment at substations.

# Regional development of the 220 kV and higher UNEG grids till 2018

(length in thousand km)



Actual 2018, forecast