

# ENERGY SAVING AND RUSSIAN MARKET OF ENERGY SAVING





# **TABLE OF CONTENTS**

CONTENTS	3	
RESEARCH METHODOLY	6	
EXTRACTS FROM RESEARCH		
LIST OF SCHEDULES, DIAGRAMS, TABLES AND SCHEMES		
ABOUT INTESCO RESEARCH GROUP		

# **CONTENTS**

# RESEARCH METHODOLY

# LIST OF SCHEDULES, DIAGRAMS, TABLES AND SCHEMES

# 1. GENERAL ECONOMIC SITUATION IN RUSSIA

1.1. Population in Russia

Population size

The largest cities

Social standard of living

Economic activity

1.2. Economic situation

Dynamics of economic development

Stability of state budget

1.3. International Russian position

RF share in the population of the world

# 2. SUBJECT OF RESEARCH

2.1. Types of energy resources

Types of energy resources

Methods of energy consumption

2.2. Classification as per All-Russian Classification of Products on types of economic activities

# 3. INDICATORS OF PRODUCTION, DISTRIBUTION OF ELECTRICITY, GAS AND WATER

- 3.1. Index of production and distribution of electricity, gas and water
- 3.2. Activities of generation, transmission and distribution of electricity

Sales dynamics in the industry

Dynamics of gross profit margin

3.3. Activity on production and distribution of fuel gas

Sales dynamics in the industry

Dynamics of gross profit margin

# 4. ENERGY RESOURCES BALANCE

- 4.1. Structure of energy resource production by type
- 4.2. Energy resources consumption by industries
- 4.3. Share of energy losses
- 4.4. Fixed assets depreciation

# 5. ELECTRICITY CONSUMPTION AND PRODUCTION BALANCE IN RUSSIA

- 5.1. Amount and structure of electricity production
- 5.2. Russian electricity consumption structure by consumer groups
- 5.3. Production and structure of electricity consumption in RF regions
- 5.4. Regions with the maximum number of energy losses

- 5.5. Regions with the minimum number of energy losses
- 5.6. Deterioration of networks and equipment

#### 6. ELECTRICITY CONSUMPTION IN RUSSIA

- 6.1. Dynamics of consumption by years
- 6.2. Electricity consumption by federal districts
- 6.3. Electricity consumption in regions of RF

# 7. FUEL ENERGY PRODUCTION

- 7.1. Fuel gas production and consumption balance
- 7.2. Gas sales structure by consumer groups

#### 8. LARGEST POWER GENERATING COMPANIES

- 8.1. Gazprom Group
- 8.2. FGC UES
- 8.3. Inter RAO UES
- 8.4. Other companies

# 9. TARIFFS FOR ELECTRICITY AND GAS SUPPLY

- 9.1. Tariffs for gas supply
- 9.2. Tariffs for electricity supply
- 9.3. Tariff regulation

# 10. STATE REGULATION OF ENERGY MARKET

- 10.1. Laws and state programs
- 10.2. Results of the government program of energy efficiency
- 10.3. Installation of metering equipment
- 10.4. Prohibition on incandescent light bulbs
- 10.5. Public-private partnership in energy efficient lighting
- 10.6. Electric grid complex development strategy of the Russian Federation

Demand for energy-saving technologies in the public sector

# 11. FACTORS HINDERING THE MARKET DEVELOPMENT

# 12. PROFILES OF THE LARGEST COMPANIES

12.1. «Mosenergo» OJSC

Reference information

Types of activity

Balance sheet

Profit and loss statement

Cash flow statement

Financials of activity

12.2. «FGC UES» OJSC

Reference information

Types of activity

Balance sheet

Profit and loss statement

Cash flow statement

Financials of activity

12.3. «Inter RAO» OJSC

Reference information

Types of activity

Balance sheet

Profit and loss statement

Cash flow statement

Financials of activity

# 13. FORECAST OF ENERGY SAVING MARKET DEVELOPMENT FOR 2014-2016

13.1. Energy conservation in the electricity

Energy saving potential

Lighting in electricity consumption

The potential capacity of the Russian market

13.2. Energy conservation in the gas industry

Gas saving potential

- 13.3. Potential for energy savings in certain sectors of the economy
- 13.4. Potential of secondary energy resources

# INFORMATION ABOUT INTESCO RESEARCH GROUP

# RESEARCH METHODOLY

# **Subject of research:**

ENERGY SAVING AND RUSSIAN MARKET OF ENERGY SAVING IN THE AREA OF ELECTRICITY AND GAS SUPPLY

#### Goal of research:

EVALUATION OF THE MARKET AND FORECAST OF ITS DEVELOPMENT FOR 2014-2016

# Regions of research:

**RUSSIA** 

**REGIONS OF RF** 

# MAIN BLOCKS OF RESEARCH:

INDICATORS OF PRODUCTION, DISTRIBUTION OF ELECTRICITY, GAS AND WATER

**ENERGY RESOURCES BALANCE** 

ELECTRICITY CONSUMPTION AND PRODUCTION BALANCE IN RUSSIA

**FUEL ENERGY PRODUCTION** 

LARGEST POWER GENERATING COMPANIES

TARIFFS FOR ELECTRICITY AND GAS SUPPLY

STATE REGULATION OF ENERGY MARKET

FACTORS HINDERING THE MARKET DEVELOPMENT

FORECAST OF ENERGY SAVING MARKET DEVELOPMENT FOR 2014-2016

# Profiles are made for the following largest Russian enterprises:

FGC UES

Inter RAO UES

Mosenergo OJSC (Gazprom Group)

Information about the main enterprises' production volume, financials of activity, balance sheet, profit and loss statements, cash flow statements, subsidiaries and some other information is also presented.

# The sources of information, which are used in the research:

Federal State Statistics Service

Ministry of Economic Development of RF

RF Ministry of Energy

Ministry of Regional Development of RF

Federal Tax Service

Industry experts' estimates

Federal target programs and subprograms

Printed and electronic publications of the branch

Data of state structures (ministries and agencies), industry associations, unions, dealing with the development of construction and building industry

# Symbols used in the study:

E – estimate

P – forecast

\* - estimate of forecast

The research contains 29 schedules, 12 diagrams, 38 tables and 3 schemes.

# EXTRACTS FROM RESEARCH

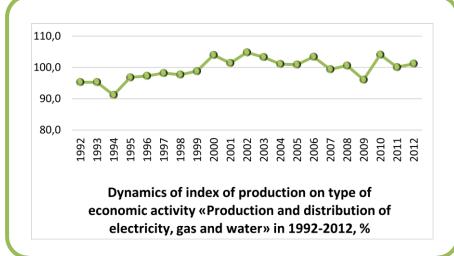
# CHAPTER 3

# INDICATORS OF PRODUCTION. DISTRIBUTION OF ELECTRICITY, GAS AND WATER

In 2012 production and distribution of electricity, gas and water increased by \*\*%, what is slightly higher than that of the previous year (100,1%).

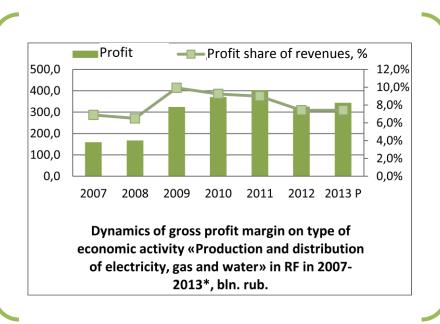
The minimum number was recorded in 1994 - \*\*%. the maximum one - in 2002 -104,8%. Relatively high growth rates were also observed in 2010 - 1\*\*%.

In 2013 the predicted



increase in revenue from the production, transmission and distribution of electricity by \*\*%, is awaited, consequently the index will amount to \*\* 34,8 bln. rub. In the previous years there was a negative dynamics by 1,8%.

Except for 2012 the changes in the sales dynamics from activities of production,



transmission and distribution of electricity is characterized as rising ones, tending to a gradual reduction of the growth rates.

# CHAPTER 4

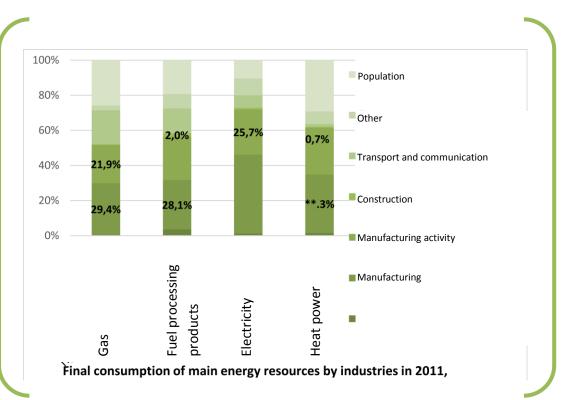
# ENERGY RESOURCES BALANCE

The main consumers of gas are: manufacturing (\*\*%),industrial production (\*1,9%) and population (\*\*,8%). Final consumption of fuel processing products by \*\*,1% in 2011 was also formed by the above groups in 2011. Manufacturing accounted for about \*5% in the structure of energy consumption, the population accounted for less than 10% of demand. At the same time, the latter group accounted for \*9,2% in the consumption of heat power.

Transformation into other kinds of energy accounts for the large amount in the structure of fuel natural gas consumption (more than 40% of the total resource volume).

The most energy-intensive industry is the metallurgic production of fabricated metal products -\*0.8% in consumption of fossil fuels by manufacturing industries, and also production of other non-metal mineral products -30% in the same structure.

In the process of energy resources transportation and consumption the share of losses amounted to \*,2 in 20122, electricity - \*\*,1%. Oil and gas losses were considerably small - \*.4% and \*,8%

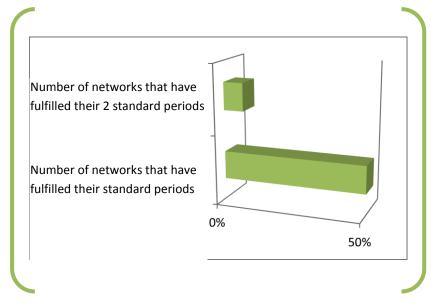


respectively.

# CHAPTER 5

# ELECTRICITY CONSUMPTION AND PRODUCTION BALANCE IN RUSSIA

Most of the total volume of electricity consumption is lost in of the Republic Ingushetia (48%). The losses are also big in the Republic of Tuva (39,2%), the Chechen Republic (34,5%) and the Republic of Dagestan (32,9%). More than one fourth of the consumed electricity is lost in North Ossetia, the Republics of Altai, Kalmykia, Adygea, Kabardino-Balkaria.



In the regions of the North Caucasus Federal District the situation is particularly severe and the problems with worn-out electric equipment are of crisis character.

In Russia today, there is a significant physical and technological deterioration of networks. According to the Ministry of Energy, «the share of distribution networks that have fulfilled their standard period amounts to \*\*%, of the networks are in the middle of the standard period. The overall deterioration of distribution network amounts to \*0%».

It should be emphasized that the state power grid assets in Russia is much worse than in other major countries, where the rate of deterioration is 27-44%. Besides, the modern equipment, providing high reliability and lower operating costs, yet are not widely used in the Russian ESCs.

The average age of the main power plant equipment at the beginning of 2011 amounted to more than 32 years, including in HPP - 36 years, TPP - 31 years old, NPP - 25 years. The average age of technological equipment of the grid complex is about 40 years.

# LIST OF SCHEDULES, DIAGRAMS, TABLES AND SCHEMES

#### RESEARCH METHODOLY

# LIST OF SCHEDULES, DIAGRAMS, TABLES AND SCHEMES

# 1. GENERAL ECONOMIC SITUATION IN RUSSIA

- Schedule 1. Population in Russia in 1990, 2000, 2005 and 2008-2012, ths. peop.
- Schedule 2. Dynamics of the population size in Russia in 3 scenarios in 2011-2031, ths. peop.
- Diagram 1. Structure of the population in Russia in relation to a working age in 2011-2031, % (medium scenario)
- Table 1. Population of the largest Russian cities according to the National Census in 2002 and 2010 and by 1 September 2013, ths. peop.
- Schedule 3. Dynamics of actual disposable money profit and its annual growth rate in 2000-2012, %
- Schedule 4. Dynamics of demographic burden ratio in three scenarios in 2011-2031
- Diagram 2. Dynamics of employed and unemployed population number in Russia in 2000-2012 and its forecast for 2013-2015, mln. people
- Schedule 5. Dynamics of unemployed population number in economically active population by federal districts of RF in 2006-2012, %
- Schedule 6. Dynamics of GDP in Russia in the prices of 2008 and 2002-2012 and its forecast for 2013-2015, bln. rub..
- Schedule 7. Fixed capital investment in RF in 2002-2012 and its forecast for 2013-2015, bln. rub.
- Schedule 8. Fulfilled consolidated budget surplus/deficit in RF in 2006-2012, % of GDP
- Schedule 9. Dynamics of RF total external debt and its GDP share in 2009-2013 (as for 1st January), bln. USD.
- Diagram 3. Changes in the structure of external debt of RF in 2009-2013(as for 1st January), %
- Schedule 10. Dynamics of consumer price index in 2006-2012 and its forecast for 2013-2015, % by the same period in the previous years
- Schedule 11. Dynamics of population in Russia and in the world in 2000-2012 and its forecast until 2100, bln. peop.
- Schedule 12. RF share in the world GDP in 2001-2012 and its forecast for 2013-2016, %

# 2. SUBJECT OF RESEARCH

Scheme 1. Methods of energy and energy material consumption

# 3. INDICATORS OF PRODUCTION, DISTRIBUTION OF ELECTRICITY, GAS AND WATER

Schedule 13. Dynamics of index of production on type of economic activity «Production and distribution of electricity, gas and water» in 1992-2012, %

- Schedule 14. Sales dynamics on type of economic activity «Production and distribution of electricity, gas and water» in RF in 2007-2013\*, bln. rub.
- Table 2. Sales result on type of economic activity «Production and distribution of electricity, gas and water» in RF regions in 2007-Sept 2013, bln. rub.
- Schedule 15. Dynamics of gross profit margin on type of economic activity «Production and distribution of electricity, gas and water» in RF in 2007-2013\*, bln. rub.
- Table 3. Amount of profit on type of economic activity «Production and distribution of electricity, gas and water» in RF regions in 2007-Sept 2013, mln. rub.
- Schedule 16. Sales dynamics on type of economic activity «Production and distribution of fuel gas» in RF in 2007-2013\*, bln. rub..
- Table 4. Sales result on type of economic activity «Production and distribution of fuel gas» in RF regions in 2007-Sept 2013, mln. rub
- Schedule 17. Dynamics of gross profit margin on type of economic activity «Production and distribution of fuel gas» in RF in 2007-2013\*, bln. rub..
- Table 5. Amount of profit on type of economic activity «Production and distribution of fuel gas» in RF regions in 2007-Sept 2013, ths. rub.

#### 4. ENERGY RESOURCES BALANCE

- Diagram 4. Structure of energy resources by types in 2011, %
- Table 6. Energy resources balance in Russia in 2011, mln. tons c.e.
- Diagram 5. Final consumption of main energy resources by industries in 2011, %
- Table 7. Structure of energy resources distribution by consumption types in 2011, mln. tons c.e.
- Schedule 18. Losses share at the stage of transportation and consumption by types of energy resources in 2011, %
- Schedule 19. Degree of depreciation of the main funds in separate economy sectors in 2012, %

# 5. ELECTRICITY CONSUMPTION AND PRODUCTION BALANCE IN RUSSIA

- Schedule 20. Structure of electricity production in UES branches in Russia by types of generation in 2012, %
- Schedule 21. Structure of electricity consumption in RF in 2011, %
- Table 8. Electricity production and consumption balance in RF regions in 2011, mln. kWh
- Schedule 22. Regions with the maximum number of energy losses in power networks in 2011, %
- Schedule 23. Regions with the minimum number of energy losses in power networks in 2011, %
- Schedule 24. Share of power networks which have fulfilled their standard period, %

#### 6. ELECTRICITY CONSUMPTION IN RUSSIA

- Schedule 25. Dynamics of electricity consumption in 2008-2013\*, trln. kWh
- Table 9. Volumes of electricity consumption by federal districts of RF in 2008-2012, mln. kWh
- Diagram 6. Structure of electricity consumption by federal districts of RF in 2012, %

Table 10. Volumes of electricity consumption in regions of RF in 2008-2012, mln. kWh

Diagram 7. Regional structure of electricity consumption in RF in в 2012, %

# 7. FUEL ENERGY PRODUCTION

Diagram 8. Structure of produced gas by «Gazprom» Group by groups of consumers in 2011-2012, %

# 8. LARGEST POWER GENERATING COMPANIES

- Table 11. Index of «Gazprom» Group activity for 2011-2012
- Table 12. Index of «FGC UES» OJSC activity
- Table 13. Index of «Inter RAO UES» activity in 2012
- Table 14. The largest companies in terms of sales results on type of economic activity «Production, transmission and distribution of electricity» in 2012
- Table 15. The largest companies in terms of sales results on type of economic activity «Production and distribution of fuel gas» in 2012

# 9. TARIFFS FOR ELECTRICITY AND GAS SUPPLY

Table 16. Tariffs for supplying the population with pipeline gas in regions of RF in the 1st half a year of 2010-2013, rub.

Schedule 26. Tariffs for electricity in different types of houses by federal districts of RF in the 1st half a year of 2013, rub.

Table 17. Tariffs for supplying the population with electricity in houses with gas stoves in regions of RF in the 1st half a year in 2010-2013, rub.

# 10. STATE REGULATION OF ENERGY MARKET

Scheme 2. Legal regulation of the energy saving market in Russia

Schedule 27. Dynamics of competitive tenders and value procured on type of activity «Energy efficient lighting» in 2012

Diagram 9. Changes in the structure of tenders on type of activity «Efficient energy» by quarters of 2012, %

Diagram 10. Changes in the structure of value procured on type of activity «Efficient energy» by quarters of 2012, %

# 11. FACTORS HINDERING THE MARKET DEVELOPMENT

Scheme 3. Factors hindering the development of energy saving and energy efficiency in Russia

#### 12. PROFILES OF THE LARGEST COMPANIES

- Table 18. Shareholders/founder members of «Mosenergo» OJSC
- Table 19. Subsidiaries of «Mosenergo» OJSC
- Table 20. Balance sheet of «Mosenergo» OJSC, ths. rub.
- Table 21. Profit and loss statement of «Mosenergo» OJSC, ths. rub.
- Table 22. Cash flow statement of «Mosenergo» OJSC, ths. rub.

- Table 23. Dynamics of financial activity of «Mosenergo» OJSC
- Table 24. Shareholders/founder members of «FGC UES» OJSC»
- Table 25. Subsidiaries of «FGC UES» OJSC
- Table 26. Balance sheet of «FGC UES» OJSC, ths. rub.
- Table 27. Profit and loss statement of «FGC UES» OJSC, ths. rub.
- Table 28. Cash flow statement of «FGC UES» OJSC, ths. rub.
- Table 29. Dynamics of financial activity of «FGC UES» OJSC
- Table 30. Shareholders/founder members of «Inter RAO» OJSC
- Table 31. Subsidiaries of «Inter RAO» OJSC
- Table 32. Balance sheet of «Inter RAO» OJSC, ths. rub.
- Table 33. Profit and loss statement of «Inter RAO» OJSC, ths. rub.
- Table 34. Cash flow statement of «Inter RAO» OJSC, ths. rub..
- Table 35. Dynamics of financial activity of «Inter RAO» OJSC

#### 13. FORECAST OF ENERGY SAVING MARKET DEVELOPMENT FOR 2014-2016

- Table 36. Forecast of Russian economy development for 2014-2016
- Table 37. Forecast for prize of oil and gas for 2014-2016
- Diagram 11. Energy saving potential in the Russian economy, %
- Schedule 28. Dynamics of the demand for electricity in 2012-2013\* and its forecast for 2014-2016, bln. kWh
- Table 38. Volume of light points subject to modernization
- Diagram 12. Gas saving potential in the Russian economy, %
- Schedule 29. Dynamics of production and domestic consumption of natural gas in Russia in 2010-
- 2013\*, and its forecast for 2014-2016, bln. m3

# INFORMATION ABOUT INTESCO RESEARCH GROUP

# ABOUT INTESCO RESEARCH GROUP

**INTESCO RESEARCH GROUP** is the analytical group, having its principal directions of activity in development of high-quality business plans, feasibility studies and marketing researches of both Russia's and regional markets of RF. We provide our clients with up-to-date and accurate information, professional recommendations for conducting business.

All works of INTESCO RESEARCH GROUP are based on the proven research and development methods. When conducting marketing researches and developing the business plans the group applies the worldwide accepted methods of investments efficiency evaluation and they are based on the Russian and international quality standards.

Analysts of INTESCO RESEARCH GROUP are the graduates of the leading Moscow institutions of higher education (Moscow State University, Moscow Institute of Physics and Technology, Russian academy of economics named after Plekhanov, Higher School of Economics, State University of Economics and Finance) and have deep knowledge in marketing, methods of marketing research arrangement, investment projects efficiency evaluation, preparing the analytical reports and business-forecasting.

Professional approach and service, high-quality specialists, deep knowledge of various markets, broad design experience and constant improvement allow the **INTESCO RESEARCH GROUP** to provide the high-quality service to all the clients.

Information from our reports is published in the largest Russian newspapers and magazines: "Vedomosti", "Kommersant-Dengi", "Rossiyskaya gazeta", "Forbes", "Russian Food Market", "FoodService", "MAXIM", "Partner: myasopererabotka", "Moe delo. Magazin", "Odnako", "Khlebopekarnoe proizvodstvo", "Producty i Pribyl", "Konditerskaya sfera/khlebopechenie", "Tsenovik", "RBK daily", "Unipack.Ru", etc.

Among INTESCO RESEARCH GROUP clients there are companies such as:













































































и многие другие

# PURPOSE OF OUR COMPANY IS TO ENSURE THE SUCCESSFUL IMPLEMENTATION OF BUSINESS PROJECTS OF OUR CLIENTS

E-mail: info@i-plan.ru

Web-site: www.i-plan.ru

Tel.: +7 (495) 212-91-91