



NATIONAL RESEARCH
UNIVERSITY

Energy Institute



Scientific leader -
Corresponding Member
of RAS, PhD
S. Filippov



Director of the Institute
PhD **E. Medvedeva**



Deputy Director of the
Institute for educational
activities
Ph.D. **V. Likhachev**

Energy Institute of the NRU HSE is established in cooperation between the HSE and the Academy of Sciences in order to form a new independent world-class in the field of energy research center.

Directions of scientific research

- ▶ Analysis and forecasting of scientific and technological energy sector development, forming a new technological mode
- ▶ Analysis of the development of the world oil & gas and related markets and new trends in the global energy sector development, forming new conditions for the export of Russian energy resources
- ▶ Analysis of the development of regional and municipal distributed energy supply, including renewable energy to enhance its efficiency and environmental performance

The educational sphere

- ▶ Training of personnel reserve for the Russian energy sector, aimed at the development of new technological order

Energy Institute in figures

2014

Energy Institute year of constitution

28

Employees, including
3 Doctors of Science and
10 PhDs

5

Policy and strategic works for Government of the Russian Federation was carried out by the Institute

4

Model complexes created for research on directions of the Institute

6

Monographs released on directions of the Institute, and 4 more are under preparation

5

Scientific seminars and scientific conferences carried out during the work of the Institute

16

Presentations at international conferences and 20 reports at Russian conferences on directions of the Institute

1

International Congress organized and conducted by the Institute jointly with the Russian Academy of Sciences and ISEDC UNESCO, another one is planned to hold in 2016

20

articles published in authoritative international journals indexed in the Web of Science and Scopus, and more **7** being prepared for publication

1

Master's program "Strategic management in the energy sector" designed and is planned for launch in the 2016/2017 academic year



Head of the Center
for technological
forecasting in the energy
sector

A. Afanasiev



Head of the Energy
Policy Analysis Center,
Ph.D.

V. Ermakov



Head of the Center for
RES,

Ph.D. G. Ermolenko.



Head of the Center for
Regional and Municipal
Energy Studies,
Ph.D V.Tsyba



Head of the Center for
Global Energy Markets
V. Kulagin



Leading researcher,
Prof. V. Lesnykh

The Institute is known in Russia as :

- Forecasting Center of scientific and technological development in the energy sector
- Competence Center for new energy technologies, including renewable and other distributed power generation, energy storage, Smart grid
- Competence Center for the global gas market
- Competence Center for the development of regional and municipal energy
- Organizer of the International Congress REENCON XXI «Renewable Energy XXI century: energy and economic efficiency»

Performing R & D in the interests of

- Federal executive authorities (Ministry of Energy)
- Administration of the President of the Russian Federation
- Energy companies
- Consumers of energy

Expert activities

- in interdepartmental expert and working groups of the Ministry of Energy and Ministry of Industry and Trade
- in the State Duma Energy Committee
- in a number of major energy companies STCs
- at the Russian Science Foundation
- in the editorial boards of scientific journals and others.

Cooperation

- with other departments of HSE
- with RAS institutes (ERI, UHTI)
- with universities (Moscow State University, St. Petersburg State University, Ural Federal University)

The impact of the Institute on industry development

Participation in the development of strategic planning documents

- Energy Strategy of Russia for the period till 2035.
- The forecast of scientific and technological development of sectors of the Russian fuel and energy industry for the period 2035

Participation in the development of energy policy documents

- The national project «Smart Energy System of Russia»
- The Draft «Program of import substitution of power engineering equipment in gas turbine technologies»

Scientific studies of energy problems

- The impact of scientific and technological progress in the energy and other sectors of the economy on natural gas demand
- Selection of high-priority technologies of energy generation and storage for the purpose of development of the Arctic and the Far East
- Requirements for the energy performance of cogeneration plants based on gas turbines of small capacity
- Разработка Development of forecasting methodology of scientific and technological development of energy sector
- The study of prospects for energy sector development on the basis of RES in Russia
- Assessment of the technical and economic potential of RES peat in the energy sector of Russia
- Development of the Atlas of renewable resources in Russia
- The analysis of the current state of the European gas market and assessment of prospects for gas importing to the region up to 2025
- Study of China and Japan's gas market
- The study of LNG supply perspectives for the European market and price competition with pipeline gas



Leading Researcher,
Ph.D. F. Veselov



Leading Researcher,
Ph.D. A. Kovalev



Leading Researcher,
Ph.D. M. Dilman.



Leading expert
E. Petelin

The impact of the Institute on international development

Organization of the international cooperation on renewable energy development in Russia

The Institute, in collaboration with the Russian Academy of Sciences and UNESCO ISEDC initiated the International Congress REENCON XXI «Renewable Energy XXI century: energy and economic efficiency», which was first held on October 27-28, 2015 in Moscow.



REENCON-XXI

As a result of the Congress the report «The goals, objectives and policies of the use of renewable energy sources and peat for energy

in Russia» was prepared and sent to the Government.

In 2016 Congress is organized in collaboration with the Ministry of Energy, the «Skolkovo» Foundation and the Government of Moscow.



Leading expert
I. Ryapin

Participation in the international expert activities:

- in the working groups of the Executive Committee of the CIS, including the cooperation of the CIS countries in the energy sector,
- in the working group on energy efficiency of the CIS Energy Council,
- in the UNECE working group (including development of the Concept of common markets of oil and gas creation)
- in the Ministry's of Energy of the Russia working groups on cooperation with the SCO and BRICS countries
- in the Russian-Chinese working group on renewable energy,
- in international network Energy Watch Group,
- in a team of regional authors REN21 Global Status Report on Renewable Energy in 2016 under UNEP.



Leading expert
I. Ryapin

The planned works for 2016

- Impact of STP in the natural gas end-user demand sector
- Prospects of natural gas substitution by alternative types of energy resources (gas hydrates, coal bed methane, oil associated gas)
- Study of new challenges for the Russian gas export strategy
- Review of gas markets in Europe, China, Japan
- Analysis of the distributed energy development, including renewable energy, and energy storage, in Russia
- Development of Handbook on Renewable Energy of the European Union, and RES industry map of Russia

Educational activity

The Institute initiated a unique for Russia network master's program «Strategic management in the energy sector. Energy sector: Leadership Practices», which is implemented through cooperation of three leading Russian universities: National Research University «Higher School of Economics», Saint-Petersburg State Polytechnical University, Ural Federal University with the active participation of experts from the academic community and major energy companies.



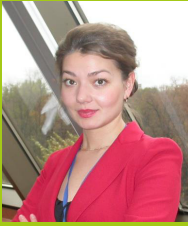
Leading expert
Yu Fetisova



Expert
A.Karaivanov



Expert
A. Reutova



Expert
I.Tolmacheva

The program is based on the experience of the best management schools in Russia, as well as the advanced training ideology of «thinking and effective managers», developed by professor at McGill University Management in Melbourne, Henry Mintzberg and successfully implemented in the framework of the project IMPM (International Masters in Practicing Management) with the participation of universities in India, China, Brazil, Canada and the UK.

The program is designed for employees of energy companies with experience on the managerial positions and feel of the need to expand their professional horizons, getting acquainted with the latest ideas in the field of management and their carriers: program participants - people with rich experience and serious demands.



Expert
A.Matsura

The Program includes a study of the original author's courses, introduction to the best business practices of Russian and foreign energy companies, as well as the development of team projects based on real cases of companies that collaborate with the Program.

Training is conducted in person and in absentia, practically on-job. Duration of the program is 2.5 years. Training is carried out successively in Moscow (2 active modules), St. Petersburg (1 active module) and Yekaterinburg (1 active module).



Expert
M.Ionov

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