



SMART GRID & METERING

Communications. Transport. Utilities. Energy.

The Russian economy has reached the point when a further qualitative leap requires the use of cross-industrial technological and economic concepts and solutions to bring the development of infrastructural sectors, which determine the industrial and overall economic development of the nation in the long term, to a new level. The sectors include the power industry, transportation, telecommunications and utilities.

The advanced foreign experience shows that a fast industrial development can only be achieved with the help of intellectual management systems and «smart» solutions as well as integrated measurement and metering systems.

The utilities in the industrialized countries are today in a period of change and agitation. On one hand, large parts of the power grid infrastructure are reaching their designed end of life time, since a large portion of the equipment was installed in the 1960s. On the other hand, there is a strong political and regulatory push for more competition and lower energy prices, more energy efficiency and an increased use of renewable energy like solar, wind, biomasses and water.

*According to ITU, **Smart Grid is** a new electricity network, which highly integrates the advanced sensing and measurement technologies, information and communication technologies (ICTs), analytical and decision-making technologies, automatic control technologies with energy and power technologies and infrastructure of electricity grids.*

A Smart Grid is a concept of building intelligent electricity grids, active bilateral grids, which help solve key problems connected with the energy performance and energy loss reduction, efficient grid and network system management, the system of compensating for the energy consumption irregularity due to energy peaks and dips, the integration of telecommunications and electric engineering infrastructures. No efficient construction of distributed power generation systems, including renewable energy sources and the stimulation of cost-effective resource use is possible without a Smart Grid.

The general goals of Smart Grid are to ensure a transparent, sustainable and environmental-friendly operation and integration between generation, transmission and distribution of energy. Without Smart Grid there is not possible to develop efficient distributed energy generation systems including renewable energy sources, as well as to stimulate cost-effective resource usage. Also, Smart Grids have the capacity of more effective electricity markets and electricity trades, implement optimized configuration of resources, increase efficiency of the electricity grid, and reduce electricity grid wastage.;

The Smart Grid concept is present throughout the whole technological chain starting from software management of distributed systems on a national infrastructure level, to the measurement systems and last mile smart meters, specific equipment, which transforms passive elements of energy grids into active, i.e. controllable elements, and ensure that a link is built between elements of separate systems.

FOR RUSSIA, THE SMART GRID CONCEPT IS CONTROVERSIAL

Some experts say that a Smart Grid is the "tuning" of the energy system, the need for which will be felt when all opportunities for the for energy system optimization and upgrade, as well as energy performance improvement are exhausted. In Russia, where up to 25% of energy is lost at the transmission and distribution level, such a position has a point.

The opposite viewpoint is that a Smart Grid is the basis for the future development of the whole industry, its transition to "a digital energy", the use of up to date active adaptive management systems throughout the whole technological and marketing chain from generation to consumption, which will produce a greater effect than a mere technological modernization when implemented.

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The aim of the Forum is the creation of a cross-industrial platform to discuss the Smart Grid concept as the basis for a further fostering the technologic, economic and information interaction among market players as well as the integration of telecommunications and power engineering infrastructure in Russia and CIS.

The Forum's priorities: unlike other events dedicated to the Smart Grid, our Forum will focus not only on the technological aspects but also on strategic issues of the Smart Grid ecosystem development, namely the interaction of all related parties and the development of stimulating mechanisms, including the legislative mechanisms, which will help use advanced concepts and solutions on a national level.

The success of the Smart Grid in Russia requires the creation of a **roadmap** to install and implement key corporate and government initiatives, the pro and contra analysis of current foreign experience and the applicability of cross-sectoral standards.

The Forum will pay much attention to the deployment of telecommunication infrastructure and its integration with power grids and to partnership opportunities of power companies and telco operators in the deployment of intellectual systems.

The Forum's discussion subjects include the analysis of the power industry development trends, its regulation and standardization, strategic and economic aspects of the Smart Grid and the assessment of its future, the practice of Smart Grid deployment, including distributed intellectual metering systems, renewable energy resources development and management, the future of new technologies and equipment, the issues of IT systems development, the data processing and transmitting security, the practical experience and results of Russian and European projects.

The Forum is a an efficient platform for sharing opinions and experience by key players of the Russian electric power industry – generation, transmission and distribution enterprises, consumers, regulators, equipment manufacturers, engineering companies and players of related industries, such as telecommunications operators and utilities.

The Forum's participants include representatives of executive and legislative state bodies, heads and specialists of management companies and enterprises, equipment and systems manufacturers, representatives of engineering companies, industrial and academic scientific centers, experts and consultants.

Foreign guests, including European Commission representatives, vendors, leading European power companies, telecommunications operators will also participate in the Forum.

The Forum is supported by the ETNO – the European Telecommunications Network Operators' Association and Cullen International – the leading European research company monitoring the Smart Grid evolution.

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PROGRAM

The Programme is subject to change. It can be altered, supplemented or adjusted without special notification. For the most up to date information on the presentations, please contact the Programme Committee.

08.30 - Registration, Welcome - coffee

09.00 - Conference opening, introduction of the Organizers and the Sponsors

PLENARY AND THEMATIC SESSIONS

9:00 - 11:00

SMART ENERGY CONCEPTS & TRENDS.
Strategy of Innovative Development of the Russian Energy Market

Moderator:

Miguel Toledano, program director, **Cullen International**

Welcome Address

Ivan Grachev, the Chairman of Committee of the State Duma on power, **the State Duma of Russia**

Welcome Address

Roman Berdnikov, vice-chairman of Board, **FGC UES**

Speakers:

Alexey Kulapin, deputy director of Department of power efficiency and modernization of energy industry, **Ministry for the Power Generating Industry of Russia**

- ❖ *The state policy on promoting energy efficiency and the cost-effective use of resources*

Miguel Toledano, program director, **Cullen International**

- ❖ *The foreign experience of implementing cross-industrial Smart Grid projects and programs and organizing the interaction of market players throughout the energy generation, transmission and consumption processes. The patterns of European electrical energy future, the Third Energy package.*

Igor Kozhukhovsky, **CIO**, **Agency on forecasting of balances in power industry**

- ❖ *Concept of innovative development of power industry*

Alexey Konev, chief innovation, **Rosenergo**, Ministry for the Power Generating Industry of Russia, Coordinator of the Technological Platform "**Intellectual power system of Russia**"

- ❖ *Practice: effect of realization of a technological platform "Intellectual power system of Russia": results and prospects.*

Eric Young, CEE E&U Industry Executive Energy & Utilities Industry, **IBM**

- ❖ *Intellectual account, trends and possibilities*

Dmitry Govorov, director, **NP «Community of consumers of energy»**

- ❖ *Active consumer: What necessary criteria of participation of the consumer in the electric power market?*

11.00 – Coffee break

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11:20 - 14:00

**SMART GRID ECOSYSTEM & ROAD MAP.
Prospects of Development of the SMART GRID System**

Moderators:

Irina Volkova, deputy director of Institute of problems of pricing and regulation of natural monopolies of the National research university, **the Higher school of economy**
Feodor Veselov, head of department of development and reforming of power industry of Institute of power researches of the **Russian Academy of Sciences**

Speakers:

Dmitry Novitsky, deputy head of the Center of system researches and development of IES AAS, **scientific and technological center FGC** (Federal Grid Company)

❖ *Development of reference architecture of IES AAS*

Andrey Sorochinsky, CIO, "Lenenergo"

Andrey Zykov, deputy general director, **"Lenenergo"**

Vyacheslav Kondratyev, head R&D center, **MFTI**

Dmitry Novikov, deputy director on scientific work, professor, **IPU Russian Academy of Sciences**

❖ *Lenenergo experience: Smart-platforms for networks and technological accessions in power*

Wolfgang Domann, vice-president of a cluster the Central and Eastern Europe in the direction oil and power, **Atos**

❖ *Practice: the "Intellectual" account in Europe - calls and decisions on the basis of the fulfilled realization (The requirement within the European Union)*

Hiroshi OTA, project manager on standardization of Smart Grid, **International Telecommunication Union**

❖ *Practice: Actions and requirements of telecommunication operators of ITU in the field of Smart Grid*

Alexander Bocharov, Business Development Manager Smart Grid, **Ericsson**

❖ *Intellectual communications for clever networks*

Vladimir Dorofeyev, head of laboratory "Intellectual power", Joint Institute of high temperatures, **Russian Academy of Sciences**

❖ *Basic principles and conditions of creation of an intellectual power supply system of Russia*

Nikolay Voropay, director of institute, the member correspondent of the Russian Academy of Sciences, **Institute of systems of power of L.A.Melentyev, Russian Academy of Science**

❖ *The integrated intellectual systems of power supply*

Edward Naumov, CIO, INVEL

❖ *Branch innovative hubs, as new element of innovative infrastructure*

Michael Akim, Strategy development director, ABB Russia, **ABB Group**

❖ *Management of the distributed generation and renewables*

13.50 – Lunch

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THEMATIC SESSIONS

14:30 - 16:15

SMART METERING: Automated Smart Metering Systems: Data Collection and Metering. Industrial Solutions

Moderator:

Silvian Seu, CIO, «Engineering center "ENERGOAUDITKONTROL"»

Speakers:

Sergey Tsybmal, deputy chief of department of information and business technologies, **IDGC Holding**

- ❖ *Main directions of development of the intellectual accounting of the electric power*

Bastian Fischer, vice-president for industrial strategy, **Oracle Utilities Global Business Unit**

- ❖ *Transformation of Data into Value: technologies of processing of considerable data files in the SmartGrid networks. Examples and the best practices of the international smart meter/smart grid of projects (on an example of projects in Europe and USA).*

Dominique Fache, chairman of board of directors, **"Enel OGK-5"**

- ❖ *Practice: Intellectual systems of the accounting of the electric power and intellectual networks: experience and advanced technologies of Enel*

Sergey Shirgin, deputy head of the department of IT, **IDGC of Ural**

- ❖ *Practice: Smart Metering project results in Perm*

Vitaly Larin, business development manager, **SAP**

- ❖ *Smart Metering Analytics. Examples of applied tasks*

16.20 -16.40 – Coffee break

16:30 - 18:00

Panel Discussion:

"Renewable Energy Sources and Alternative Electric Power"



Chairman of the panel discussion: **Michael Akim**, Strategy development director, ABB Russia, **ABB Group**

Alternative electric power has developed considerably in the whole world but its advancement in Russia is restricted by a number of factors connected with the necessity of altering the current legislation, state support measures, connecting to grids and current electricity and energy sources' prices. Last year's saw a significant reduction in the unit construction costs particularly for solar and wind power generation which stimulated their ever-growing use in the number of countries.

Issues to discuss:

- ❖ *The need for alternative energy in Russia. Which kinds are of the highest priority?*
- ❖ *Is there a "particular Russian way" in the development and spread of alternative energy in Russia taking into account its geography, natural resources and economic prerequisites?*
- ❖ *Which technological changes might be crucial for use in Russia?*

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- ❖ Which legislative, financial and investment instruments are necessary to promote alternative energy usage in Russia?
- ❖ Alternative energy, Smart Grid and Micro Grid.

Speakers:

Vadim Kulikov, partner, **Bright Capital**

Oleg Shutkin, head of department on strategic planning and support of projects, **Hevel**

Vladimir Stanev, head of department of power efficiency, **Lukoil**

Andrey Pankov, the chairman of Subcommittee on strategic innovations in the automotive industry, **Chamber of Commerce and Industry of the Russian Federation**

Andrey Kulakov, director for a power machine-building complex, **INTER RAO UES**

Ivan Borisov, director for development and restructuring, **Rosatom**; board member of JSC Energy Efficiency Centre, **INTER RAO UES**

Alexey Kornushin, head of expert group of committee on power policy and power efficiency, **RSP**

Lyudmila Kozhanova, head of sector of world power in a context of sustainable power development of Department of scientific and expert and analytical activity of the International center of sustainable power development under the aegis of **UNESCO**

13.50 – Lunch

THEMATIC SESSIONS

14:30 - 16:15

SMART GRID 2.0. STANDARDIZATION AND TELCO INTEGRATION. Technical Policy, Standardization and Integration of Telecommunication and Energy Infrastructure

Moderator:

Nikolay Repin, CIO, **Perspective line technologies**, head of the working group on Smart Grid to systems, **Association of Documentary Telecommunication**

Speakers:

Dmitry Gurevich, director for telecommunications and information technologies, **JSC FGC UES**, Board member of **JSC FGC UES**

- ❖ *Interaction of the energy and network companies within creation of SMART GRID*

Anna Dulneva, director of IT consulting department, **Compulink**

- ❖ *Integration of information systems of the energy company on the basis of CIM model as the first step to «clever networks»*

Alexander Kukanov, director for work with the state sector and to strategic projects, **Vympelcom ("Beeline")**

- ❖ *Smart SIM for Smart Grid*

Grigory Bochechka, head of department of the innovative center, **Aykominvest**

- ❖ *Application of the M2M networks for creation of the intellectual electropower Smart Grid networks*

Yury Kucherov, head of the department of technical regulation, **SO UES**

Yury Morzhin, deputy general director, **FGC UES**

Yury Fedorov, leading expert of Department of technical regulation, **SO UES**

- ❖ *Methodological aspects of development of IES AAS and standardization role*

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16.20 -16.40 – Coffee break

16:30 - 18:00

**Panel Discussion:
“Standards for Intellectual Power Networks”**



Российское
Энергетическое
Агентство

Chairmans of panel discussion: **Alexander Dzhincharadze**, director for regulation and technology, **Russian Energy Agency**, adviser to the Minister, Energy Ministry of Russia.

Alexey Konev, chief innovation, **Rosenergo**, Ministry for the Power Generating Industry of Russia, Coordinator of the Technological Platform **"Intellectual power system of Russia"**

Issues to discuss:

- ❖ *Whether there is a system of normative and technical regulation in the Russian power industry?*
- ❖ *Development of national standards for intellectual power networks of Russia*
- ❖ *Whether the standards accepted by bodies to standardization, such as National Institute of Standards and Technologies of the USA in Russia are applicable?*
- ❖ *A variety of the Smart Grid standards for power branch and inherent in each standard defined «responsibility zones»*
- ❖ *Standardization on the basis of ISO 50001. Power management*
- ❖ *Standards on ensuring functional compatibility of the power equipment and information technologies with electric power systems (EPS), systems of end users and loading in intellectual networks.*

Speakers:

Vasily Zubakin, head department of power, **Lukoil**

Vyacheslav Samkov, first deputy director for R&D, **VNIIMASH**

Vyacheslav Popov, managing sector of accreditation and power efficiency, **VNIIMASH**

Oleg Vasilenko, leading system architect, **Ericsson**

Larisa Levina, deputy general director, **NP INVEL**

18.00 - End of Conference. Closing sparking wine

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