Poland is preparing amendments to its Energy Law under the pressure of the EU

Distributed generation features

Kilowatts under the hood: the future of electric cars in Russia

Addition rules
The industry sums up the 2012 results. It was marked by a number of processes all aimed at consolidation of assets
INTER RAO UES GROUP*
IS A DIVERSIFIED ENERGY HOLDING OPERATING IN VARIOUS SEGMENTS OF THE ENERGY VALUE CHAIN IN THE RUSSIAN AND INTERNATIONAL ENERGY INDUSTRIES.

POWER GENERATION
- 33.5 GW OF THE INSTALLED CAPACITY
- 148 TWH GENERATED

RETAIL SALES
- 153 TWH SOLD
- 15% SHARE OF THE RUSSIAN RETAIL MARKET

INTERNATIONAL TRADING
- 18.4 TWH EXPORTED
- 2.6 TWH IMPORTED

ENGINEERING
- 2.3 GW OF INSTALLED POWER GENERATION CAPACITY
- BUILT IN RUSSIA

FOREIGN ASSETS
- 6 GW OF INSTALLED POWER GENERATION CAPACITY

INNOVATIONS
- 34,000 KM OF POWER GRIDS

ENERGY EFFICIENCY
- 3.2 BILLION RUBLES SPENT ON INNOVATIONS IN 2012

* as of 2012

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Dear readers,

It has been five years since RAO UES of Russia was eliminated, and the power industry stepped onto a new path of changes. Now, change-overs are not expected to be that substantial; the majority of players are sure that the energy industry juggernaut’s reform and functional disaggregation have, on the whole, paid off.

But the Russian energy sector has faced the beginning of, in a certain sense, reverse processes: merger of companies and consolidation of assets. After long arguments, the government has made a final decision to unite transmission and distribution grids under a single management body. Meanwhile, generators have begun to streamline their structures to improve financial and operational performance: this is obviously going to become one of the key priorities in development of energy companies in the near future. Simultaneously, we observe powerful market players acquiring smaller companies and the most attractive assets. In such a dynamic situation, it is essentially important to have good understanding of the current state of the industry’s major players. Apart from anything else, it serves as a basis of benchmarks for the near future, which are now being actively developed at annual meetings of shareholders. This is why we have decided to devote our issue to 2012 results and analyze the industry dynamics. Quite recently, companies have summed up the final results for the accounting period that may be used for further calculations.

For the time being, power companies have to complete the construction of quite a substantial amount of new facilities under the capacity delivery agreements. The latest facilities developed under such agreements and the new energy market model are also covered in this issue. In addition, you will learn about the prospects of distributed generation in Russia, about amendments to the Polish Power Law that are being drafted, and about Inter RAO’s plans concerning international energy trading. As always, you will be offered interesting news on the energy sector in Russia and abroad, forecasts of financial analysts and summer calendar of the most important events in the industry.

I wish you an informative reading experience and look forward to getting your feedback at editor@interrao.ru.

Sincerely yours,
Anton NAZAROV,
Editor-in-Chief
Unite and Rule
In 2012, major market players focused on internal reorganization processes to improve their business performance. The government also joined the consolidation trend and decided to unite transmission and distribution grids within a single management company.

Add-ons to the Reform
The Government plans to launch the new market model in 2014. The draft document was returned for further revision, since it does not yet provide for modernization of facilities. Without it, the country may face a shortfall in generation in five years’ time already, as experts believe. Market players are convinced that the existing model has generally proved its value, while the main price risks are associated with poor forecasting and nonpayment.

Final Warning
To avoid punitive sanctions from the European Commission, the Polish government will approve the “three-pack” amending its Energy Law this June. And by the end of 2013, it will adopt a new Renewable Energy Sources Act. Thus, being under pressure from the EU, Poland will start reducing its dependence on coal.

Going West
Inter RAO is trying to give a new momentum to international energy trading. The Group is planning to enter new European markets with exports of electric power from the Kaliningrad Region, develop the retail business in the Baltic states, and start power imports from Scandinavia.

“Each Trial Means the Company’s Reputation for Us”
In Inter RAO, the range of authorities of the Legal Affairs Unit is much wider compared to similar departments in other conventional companies of the industry. In addition to the teams working on legal support of M&A transactions, tax and corporate structuring of foreign assets, management of subsidiary holding companies in the Netherlands, Cyprus, Belgium and other countries, the unit’s new responsibilities include tax legal relations, cooperation with tax authorities and transfer pricing. Here, Alexander PAKHOMOV, Member of the Management Board and Head of the Legal Affairs Unit, discusses these issues in detail.
Power Generation

Popular Trend

Distributed generation today gains popularity all over the world. In Russia, the established centralized structure of the energy sector and vast reserves of conventional energy sources allow to take time and set priorities properly.

Expert Club

White Nights Time

The 17th Saint Petersburg International Economic Forum is scheduled for June 20–22. Check the comments of our experts to find out how the energy sector specialists’ activities have been reflected in the discussions held at Saint Petersburg Forums.

Innovation

Kilowatts under the Hood

A countrywide project to develop infrastructure for electric vehicles has been launched in Russia, with Federal Grid Company of Unified Energy System as its main proponent and responsible entity. Under an optimistic scenario, by 2020, hundreds of thousands of electricity-powered vehicles will be operating across the entire country. Pilot projects will be limited to corporate and commercial transportation. In order to be properly deployed across Russia’s vast expanses, electric vehicles will need government support.

Finance

Totally Cautious

Analysts are not very enthusiastic about last year’s performance of generation companies and their preliminary results for Q1 2013. Most analysts believe that the development is restrained by the general uncertainty in the power industry, while the market is dampened by companies’ obligations and tariffs.

NB

Russian Light for Europe

There is still a popular belief that before the revolution Russia was an ignorant and savage country, until the “Lenin’s lamp” lit up. Meanwhile, in the 19th century already, the empire’s capital was illuminated with lights, streets were full of electric transport, and Russian inventors participated in lighting projects for Paris and London. St. Petersburg was the center of scientific and technical progress.

Event Calendar

Major conferences, forums and exhibitions in June–August 2013; dates of annual general meetings of shareholders for key companies of the industry.

Photo Editor’s Choice

Flying to the East

Solar Impulse, an experimental solar-powered aircraft, has made its first cross-US flight out of the five scheduled ones.
Five Goals for the Ministry of Energy

Alexander NOVAK, Minister of Energy of the Russian Federation, announced five main public goals for the ministry for 2013 during the All-Russian Meeting on the Results of Electric Power Industry Entities for the 2012–2013 Autumn and Winter Period.

One of the main goals announced by the Head of the Ministry of Energy is to reduce the number of stages of technological connection to the grids from ten to six and the connection timeframe from 280 to 195 days. The second goal is to develop a new model for development of the retail and wholesale power markets. The third one is to establish a new regulatory framework and a new model for the heat market within a one-year horizon. The fourth workstream concerns preparation and implementation of power supply for Sochi, the host of 2014 Olympic Games. The last goal is to restructure the coal industry. According to Alexander NOVAK, the list of workstreams and goals of the Ministry of Energy was by far not exhaustive. Moreover, the announced priorities are open for discussion. Particularly, all market players and industry experts are welcome to discuss them.

Moscow Power Supply Company expands its borders

This April, Moscow Power Supply Company started to supply power for two glass factories of Ruscam Group in the Krasnodar Territory and the Vologda Region. Previously, they had been serviced by Vologda Power Supply Company and Kuban Power Supply Company. The contract details are not announced. It is only known that Moscow Power Supply Company has offered the enterprises more attractive terms compared to the local guaranteed suppliers. Moscow Power Supply Company, being a guaranteed supplier in Moscow and the Moscow Region, has been operating externally of its area for several years already. For example, the company serves consumers in the Tula, Chelyabinsk, Rostov, Omsk, Smolensk and other regions. According to market experts, the company’s active expansion is driven by the brand reputation and significant financial safety margin. Besides, Moscow Power Supply Company does not enter into standard contracts offering its customers individual terms, including additional services. For example, the company may install energy saving equipment at enterprises under special energy service contracts obliging the customers to return the funds, plus interest, from the saved money.

Wholesale Power and Capacity Market Is Beyond the Law

The State Duma approved the exclusion of the wholesale power market contracts from the public procurement law. Correspondent amendments to Article 1 of the Federal Law “On Procurement of Products, Works and Services by Certain Types of Legal Entities” were finally approved by the Lower Chamber of the Russian Parliament in the middle of May. The public procurement law adopted in 2011 obliges state corporations and natural monopolies to publish information on procurement and execution of contracts at the official websites and in the Unified Public Register of Contracts, respectively. The document sets the minimum volume of information to be published, which includes procurement regulations, notices of open tenders, procurement documentation, amendments, clarifications and protocols. The minimum volume of published information is also set for the register of contracts, where the information should include the subject of the contract, method of purchase, price, term and information on the supplier and acceptance certificate. According to the proposed amendments, the requirements of the base law will not be applied to relationships associated with conclusion and execution of contracts obligatory for the wholesale and retail electricity and capacity market players.
wind energy facilities will be built in Kamchatka.

Saint Petersburg officials are to reduce energy consumption by 10% by January 1, 2014.

**Calculate the Price Yourself**

Moscow United Electric Grid Company (MOESK) has launched a service price calculator. Now you can calculate the price of connection to electric grid at http://utp.moesk.ru/ before submitting an application. All you have to do is specify the required maximum capacity, power supply reliability category and distance to the existing power grid facilities in interactive boxes of the calculator.

The new service will be available to the customers with a contract demand of up to 8,900 kW and voltage of lower than 35 kV in Moscow (within its new boundaries) and the Moscow Region. As the company representatives stated, the calculator will compute an approximate price for technological connection. It may be adjusted subsequent to the development of technical specifications.

**Russian Grids Are Concerned About the Status**

In addition, MOESK is establishing a branch responsible for the development of power balance across the company’s grids. The new subdivision is named Energouchet (energy metering). The MOESK management hopes that “concentration of power accounting functions in one branch will allow them to optimize service expenses of the population” and reduce losses across the company’s power grids to 8% of the total output by 2016.

**Battery for the 70th Anniversary**

The worldwide known Kurchatov Institute celebrates its 70th anniversary. The Institute was founded in 1943 as Laboratory No. 2 of the Academy of Sciences of the USSR. Its main objective at that time was development of nuclear weapons. Today, it is going to put a new spin on the power industry. For example, experts of the state corporation and scientists of Kurchatov Institute are developing next generation megawatt-class nuclear reactors for spaceships, the so-called thermonuclear batteries.

“Today, refueling should be carried out once in 1.5–2 years,” says the Head of ROSATOM State Corporation Sergey KIRIENKO. “We are capable of making refueling required once in four to five years. But our goal is one refueling in 25 years. This would be possible with the so-called thermonuclear battery; small size, large capacity and one time fueling.”

Mikhail KOVALCHUK, Director of Kurchatov Institute, called this technology disruptive. The scientist reminded that the Earth-to-Mars flight time makes up two years and expressed confidence that application of the thermonuclear battery will make it possible to provide energy for this period in the near future. The new nuclear power-generating unit for spaceships should be launched by 2018.

The Head of Federal Grid Company Oleg BUDARGIN has asked the government to allow the company Russian Grids to take part in the tender for the selection of a guaranteed supplier in the regions where Energostream subsidiaries have been deprived of this status for their debts. According to him, in case the company wins the tender, it would like to acquire the guaranteed supplier status for three to five years.

“The guaranteed supplier status should not be granted for a one-year period, because it involves a very labor-intensive and hard work. We suggest that the government should allow us to participate in the tender for acquisition of the guaranteed supplier status in regions where we have picked up the load,” noted Oleg BUDARGIN.

The Ministry of Energy has not responded to this statement so far. However, previously, the Head of the Ministry Alexander NOVAK declaimed against the transfer of the guaranteed supplier status to local branches of interregional distribution grid companies. According to the Minister, it would be unreasonable, because the centralization of power transmission and supply functions is prohibited by the law and contravenes the reform.
200 million for rural smart grids.

Rules Clear to Everyone

Speaking to journalists, Sergey NOVIKOV, Head of the Federal Tariff Service of Russia (FTS), said that the agency was developing general approaches to regulating and attracting investments in the electric power infrastructure in cooperation with the regulators of G20 countries. According to his words, this work is aimed at fixing regulatory principles that would not just be approved by the regulating bodies, but also would be approved and understood at the level of government of G20 countries.

According to the Head of FTS, there are several key areas of work today. First, they concern the development of the market operation rules and tools that would allow the agency to ensure reliable continuous operation. The second area is protection of consumers’ interests through the development of rules and regulations allowing the customers to acquire non-discriminatory access to the market. “The rules should be clear and accessible for the customers. We hope that this document will be considered at the summit in September,” said Sergey NOVIKOV.

ZiO-Podolsk Machine Building Plant (a part of Atomenergomash) has won the tender for the manufacture of a reactor and other vessel-type equipment of RITM-200 generating unit for next generation versatile nuclear icebreaker. The total contract value is RUB 1.3 billion.

Faster, Higher, Stronger

May Toshiba Help You

The Japanese Toshiba Corporation will help Federal Grid Company upgrade the power grid system of the North Caucasus. This will be a continuation of joint work of the two companies under the cooperation agreement signed last year in the framework of APEC 2012 Summit in Vladivostok. Oleg BUDARGIN, Head of Federal Grid Company, and Toshiba CEO Norio SASAKI reached this agreement at the workshop held on April 29. Other priority areas of the Russian – Japanese cooperation in the power industry include the establishment and development of smart grids, pilot territorial clusters, research works and production of energy saving and high technology power generating equipment in Russia.

Toshiba is one of FGC’s strategic partners. The corporation is already participating in the modernization of the Russian power grid system. For example, the company has developed an advanced SF6 transformer for 220 kV Skolkovo Underground Substation under the project to supply power for Skolkovo Innovation Center.

According to Igor KOTOV, CEO of ZiO-Podolsk, the competition for the contract was tough. However, the enterprise managed not just to offer a competitive price, but also prove that its employees have sufficient capabilities to produce equipment for nuclear power units, including marine ones.

RITM-200 is a two-reactor unit that has thermal capacity of 175 MW at each reactor; it considerably exceeds the power capacity of the power units of the existing icebreakers (140–150 MW). Nevertheless, the concern representatives noted that it is nearly twice lighter and smaller, consumes less space on the ship and is more technically and economically efficient.
Consumers of Energy Sources, Unite!

The Russian authorities with the assistance of the Agency for Strategic Initiatives have established a Council of Retail Consumers of Energy Resources. It includes representatives of retail consumers of energy sources, associations of business communities, regulatory authorities of the Russian Federation and energy companies. The charter documents of the non-commercial partnership state that it will be a consulting agency representing the interests of retail consumers. Its key objective will be development of a mechanism allowing the customers influence the development and operation of target models of the energy source markets. Besides, the Council of Retail Consumers of Energy Resources will foster the market competition. As a result, the energy source consumers will be given the right to select the supplier and play a certain role in pricing. Members of the Council are also expected to take an active part in monitoring over implementation of the roadmap for improvement of the accessibility of energy infrastructure accepted by the Agency for Strategic Initiatives in June last year. This project is destined to reduce the technological connection cost and timeframe.

Global Energy Specialist Became the Head of RAN

At the end of May, the Russian Academy of Science (RAN) elected a new president: a 67-year-old physicist Vladimir FORTOV, whom his colleagues respectfully call “the new LOMONOSOV”. One month before, the director of the Joint Institute of High Temperatures of the RAN was awarded the Global Energy Prize for his research into thermal-physical properties, high-power impulse energy equipment and high-efficiency energy converters. The Russian scientist is globally known as the creator and manager of a new research area: the dynamic physics of collision plasma. Besides FORTOV, the Global Energy Prize was awarded to the Japanese scientist Akira YOSHINO, the inventor of lithium ion batteries. The laureates were selected from a field of 82 candidates. The laureate medal, golden badge of honor and the Global Energy Prize will be presented in June during St. Petersburg International Economic Forum.
UKRAINE

Chernobyl’s New Life

The first interim storage facility for spent nuclear fuel at the Chernobyl NPP will be put in operation in 2014, as reported by Volodymyr KOLOSHA, Head of the State Agency of Ukraine on the Exclusion Zone Management, prior to the 27th anniversary of the disaster at the Chernobyl NPP. Construction of the centralized storage is under way at the premises of the Vector facility. It will be used for decontamination, transportation, recycling, and disposal of radioactive waste.

NIGERIA

The Very Best for Business

The government of Nigeria announced privatization of the energy sector through a sale of state-owned power facilities. The communiqué released by the administration of Nigeria’s President Goodluck JONATHAN reports, in particular, closing of deals involving handover of ten generation companies and five distribution companies. Large national companies operating in alliance with foreign investors were granted priority rights to acquisition of state-owned electricity assets.

TURKEY

Nuclear Cooperation

Japan is going to build Turkey’s second nuclear power plant. Construction of a nuclear power plant in Sinop, worth over USD 20 billion, will start in 2017. The new facility is supposed to start generating electric power already in 2023. The NPP construction project will be implemented by a joint venture consortium of the Japanese Mitsubishi and the French GDF SUEZ. However, the Japanese company will be the project operator.

USA

Have a Sunny Journey!

In Idaho, a highway paved with solar panels is ready for test driving. The surface of a road section sized 3.5 by 11 meters was equipped with photovoltaic solar collectors with a capacity of 5,700 W. The project was funded with a USD 750,000 grant from the Federal Highway Administration awarded to the developers – a married couple, Scott and Julie BRUSAW. The BRUSAWS concede that the road surface built out of solar panels will generate less electric power than similar modules on house rooftops, since the ground cannot be tilted at an optimum angle to the sun. However, the area of road surfaces is considerably larger than that of rooftops, which is the aspect the project developers placed their bets on. Besides, paving roads with solar panels costs cheaper than installing them on rooftops.

SERBIA

Windswept

Naftna Industrija Srbije (NIS), a Serbian subsidiary of Gazprom Neft, closed its acquisition of 50% of Plandište Wind Park project’s shares from Energowind. Construction is scheduled to start in summer 2013. The wind power plant project involves construction of 34 wind generators with a total power capacity of 102 MW in the Plandište municipality in Serbia. The total cost of the project, including development of basic documentation and permits, amounts to EUR 160 million.
NORTH KOREA

Legitimate Atom
The government of the North Korea reports that a new Ministry of Atomic Energy Industry has been established in the country. The purpose of the new ministry is to modernize the nation’s nuclear power sector, increase the production of nuclear materials, and further develop the independent nuclear power industry. In February 2013, the United Nations imposed sanctions on North Korea, followed by Pyongyang’s promise to launch a nuclear reactor and nullification of the official non-aggression pact with South Korea.

GEORGIA

Misuse of Funds
The Prosecutor's Office of Georgia launched an investigation into the previous government’s expenditure in the energy sector, as the country’s Minister of Energy Kakha KALADZE reported in May. According to the Georgian official, the previous government’s expenditure on reconstruction of the power industry can be classified as misapplication of funds, which is now being inspected by investigating authorities. “There are a number of cases when 700–800 lari was charged for work that in fact cost 100 lari. No one knows where the rest of the amount went,” Mr. KALADZE said.

DOMINICAN REPUBLIC

Energy with Guarantee
Gazprom International, a subsidiary of Gazprom, is going to develop the electric power sector in the Dominican Republic. At the end of April, the company signed a memorandum of understanding on Russian-Dominican cooperation in the energy sector. The Dominican Republic’s interests are represented by Transgas Caribe S.A. and the Dominican Corporation of State Electricity Companies (Corporación Dominicana de Empresas Eléctricas Estatales (CDEEE)). At the first stage, the memorandum envisages implementation of projects involving construction and operation of a number of power infrastructure facilities against the guarantee of electric power purchases provided by CDEEE.

CHINA

Heat for the Resort
The largest ocean thermal power plant will appear in the coming years in China. The facility’s operation will be based on a closed cycle: it will use solar energy accumulated in the sea water. The capacity of the new power plant to be built off the Hainan Island will total 10 MW. The power generated will be used to satisfy the needs of the resort’s tourist facilities.

UZBEKISTAN

Plant on Loan
State owned Uzbekenergo will have a new combined heat and power plant constructed by 2018 in the Namangan Province in the eastern part of the country. The new facility’s power capacity will total 900 MW. The project’s feasibility study preparation is supposed to be completed in the first half of 2013. Meanwhile, before the end of the year, a tender will be announced to select the general contractor for the construction. The project, with the cost tentatively estimated at over USD 1 billion, will be funded with loans provided by international financial institutions as well as Uzbek organizations.
In 2012, major market players focused on internal reorganization to improve their business performance. The government also joined the consolidation trend and decided to unite transmission and distribution grids within a single company.

**UNDER ONE GUISE**

Gazprom Energoholding, the owner of TGC-1, OGK-2, OGK-6 and Mosenergo, was the first to start consolidating its subsidiaries. 2012 became the first year in the history of Gazprom Energoholding after the merger of OGK-6 and OGK-2 on the basis of the latter. The consolidation was completed in autumn 2011. The consolidated statements predictably showed weak financial performance (according to IFRS, the new structure made a profit of only RUB 10 billion), but the synergies of the merger came to light already in 2012. Owing to cost reduction and optimization of inefficient capacities of the united company, EBITDA increased by 79%, while net income exceeded RUB 3 billion having soared by a factor of 302, boosted by the low-base effect.

In 2012, another energy holding, Inter RAO, successfully followed the consolidation trend. Within several months, the Group completed the reorganization, which resulted in the transfer of the Russian generating assets that had previously been owned by OGK-1 and OGK-3, to Inter RAO Electric Power Plants, a wholly owned subsidiary of Inter RAO (previously, it had Severo-Zapadnaya TPP, Sochinskaya TPP, Kaliningradskaya TPP and Ivanovo CCPP on its books). Shares of OKG-1 and OKG-3 owned by minority shareholders were converted into additional issue common shares of Inter RAO.

Moreover, in November 2012, Inter RAO and Sistema JSFC completed the reorganization of Bashkirenergo: the vertically integrated company was replaced with a regional power grid company controlled by Sistema JSFC, and Bashkir Generation Company, a wholly owned subsidiary of Inter RAO.

According to Investcafe analyst Liliya BRUEVA, consolidation of generation will allow Inter RAO not only to considerably increase the free float, but also to improve the transparency and efficiency of generation asset management.

Apart from reputation effects, internal consolidation and restructuring of assets should theoretically reduce holdings’ management expenses, allow them to save on the purchase of fuel and components, and improve the economic efficiency of capacity utilization and operations in the wholesale electricity market. VTB Capital analyst Mikhail RASSTRIGIN believes that optimization of purchasing is likely to produce a certain impact, but its scale is not yet clear. The companies will sooner save on restructuring the management system by eliminating superfluous elements, the expert adds.

The optimized schemes affect not only generation, but also other sectors. For example, Inter RAO has already given up on managing supply through a separate management body and has launched the process to disband the United Power Supply Company. According to Inter RAO, the company has achieved its initial goals, but now, after the Russian government has introduced changes in the regulatory framework, it is necessary to switch to a new governance model. In particular, in order to reduce management costs, Inter RAO is going to centralize a number of sales functions within the parent company. At the same time, the plan envisages the sharing of best practices, as well as development of new products and customer services and rolling them out to all power supply companies of the Group.
BUY AND SELL

Alongside with the internal consolidation, the largest energy market players were completing the purchasing of the most attractive assets from smaller players – private companies. In 2008, when RAO UES of Russia (the state controlled monopoly) was eliminated, more than ten players emerged in the market purchasing generation capacities. However, as soon as two years later, it became obvious that not all investors succeeded in this.

In 2012, Gazprom Energoholding entered into active negotiations concerning the purchase of several companies simultaneously. The first target was Quadra (former TGC-4), a subsidiary of ONEXIM Group. Besides the overall depreciation in the sector, the company got additional problems due to their failure to introduce RAB regulation to the heating sector in pilot regions. Last march, Gazprom Energoholding applied to the Federal Antimonopoly Service for the permission to purchase Quadra. The application is still pending. Aside from that, in 2012, the Gazprom subsidiary launched negotiations with the Moscow government on the purchase of Moscow Integrated Power Company (MIPC). When Yury LUZHKOVB was the mayor of Moscow, the city refused to sell the company; but the new city administrator Sergey SOBYANIN apparently agrees that professional managers will be more efficient in operating energy assets. The transaction estimated at about RUB 100 billion is to significantly improve the performance of Gazprom Energoholding as well. at present, heat is partially generated through the capacities of Mosenergo in Moscow. The Federal Antimonopoly Service has already approved the transaction, and the
Moscow government has announced that it is putting MIPC up for an auction with a reserved price of RUB 98 billion.

A possible transaction between Gazprom Energoholding (controlled by Renova Group; holds the controlling interest in TGC-5, TGC-6, TGC-7 and TGC-9) could be an even more attractive deal. Last year, the companies had protracted negotiations on consolidation of their assets. In summer, the parties announced their plans to establish a joint venture, where Renova would own a 25% minus one share stake, and the rest would go to the subsidiary of the gas industry juggernaut. However, the parties have failed to agree on the transaction terms.

Moreover, the Federal Antimonopoly Service declaimed against the transaction between Gazprom Energoholding and Renova. Antimonopoly authorities are, in fact, the only opponents of consolidation in the energy market. While approving the majority of new capacities purchase transactions by large players, the Federal Antimonopoly Service usually dictates further course of actions or orders to sell certain plants in the future. Sometimes it decides to lay an absolute embargo on transactions, though. For example, it happened with MOESK (Moscow United Electric Grid Company) securities: last year, the Federal Antimonopoly Service banned the agreement between MRSK Holding (now – Russian Grids) and Gazprombank for the transfer of 50.9% of MOESK shares from the energy company to the bank for trust management. Continued claims of the Federal Antimonopoly Service against generators could potentially cancel reduction of free power transfer zones (FPTZ), which serves them as a determinant factor of the dominant position of energy companies. The FAS has already announced a radical proposal: reduce the number of FPTZs from 21 to 4 within the framework of competitive power takeoff by 2014, which would also eliminate the capacity price ceiling.

On the whole, according to experts, merger of energy companies is a regular and expected way of the sector development, and it is similar to other industries in this respect. The decision on the sale of assets to RAO UES of Russia by relatively small parcels of shares opened the way to privatization not only for large companies, but also for smaller players. As a result, the government has managed to sell the maximum amount of assets, thus creating competition between investors. Meanwhile, the reform was not intended to dissipate assets, its objective was to liberalize the market, divide the generation and transmission functions and create competition in the sector. And as experts suggest, the current consolidation is a reasonable market process that does not conflict with the reform objectives.

“In fact, these are investment decisions, which are grounded by the aspiration to streamline business processes, build up one’s share in the market and, as a result, increase shareholders’ revenues,” says Mikhail RASSTRIGIN.

According to Sergey PIKIN, Director of the Energy Development Fund, enhancement of the state run companies role is logical: they are the most powerful players in the market at present. “When the reform was launched, the state was not a sufficiently strong institute in terms of management and financial capabilities, that is why energy assets were offered to be privatized as soon as possible. Today, the financial power of the state is by far greater, which makes it absolutely reasonable to put state companies at the core of the sector structuring: strategic
Antimonopoly authorities are, in fact, the only opponents of consolidation in the energy market.

Assets, such as the energy sector, must have strong owners,” the expert suggests.

**NET WEAVING**

Last year, along with the largest generators, the government followed the consolidation trend and made a decision to return to the centralized management of the country’s power grid system. In May 2012, the state approved a decision concerning transfer of the state owned stake of Federal Grid Company to MRSK Holding; this April, the merged company was renamed to Russian Grids. Consolidation of transmission and distribution networks into a single structure is expected to improve management efficiency across the entire sector, synchronize investment programs, eliminate redundant management functions and introduce unified technical standards.

However, the decision to create a unified company as such would not solve the cross-subsidization problem without additional decisions by regulators. Imperfection of legislation poses a threat of a legal proceeding against distribution grid companies to repay about RUB 58 billion to large consumers that have been paid under the last mile agreements over the past three years. Besides, consolidation of companies contravenes privatization of operational grid companies in the near future. Over the last years, major hopes in the market have been placed on attracting private investors in the sector. Another problem is the potential limitation of tariff growth that would put the grid companies’ investment plans at threat.

“It is clear that the establishment of Russian Grids will not solve these issues by itself,” says Alfa-Bank analyst Dmitry DORONIN. “But this way the government is trying to unify its power system policy and find a single universal solution of the pressing problems.”

*Alexander BELKIN*
The Government plans to launch the new market model in 2014. The draft document was returned for further revision, since it does not yet provide for modernization of facilities. Without it, the country may face a shortfall in power generation in five years’ time already, as experts believe. Market players are convinced that the existing model has generally proved its value, while the main price risks are associated with poor forecasting and nonpayment.

In March, construction of the last facilities to be commissioned under the capacity delivery agreements (CDA) began. After its completion, Verkhnetagilskaya TPP will be equipped with a new 400 MW power unit, and the renovated Permskaya TPP, another power plant controlled by Inter RAO Group, will rank among the five largest thermal power plants in Russia. Shortly before, LUKOIL had started construction of a combined cycle power plant in the vicinity of the Stavrolen gas chemical facility. The new CCPP is also being constructed under a CDA: as part of this program, the company will commission five CCPPs with a total capacity of 890 MW. OGK-2, TGC-1, and TGC-11 have also commissioned new facilities under the capacity delivery agreements in 2013. Overall before the end of 2015, when the main construction projects under the capacity delivery agreements are completed, these companies and some others will have to launch the facilities with over 11 GW of generation capacity, in accordance with their contract obligations. Moreover, for a number of companies such facilities will become the key growth drivers not only today but also in the near future. “Commissioning of RusHydro’s facilities under the capacity delivery agreements (about 1,000 MW within the next two years) will virtually double the company’s revenue from capacity sales and will enable it to achieve a positive free cash flow balance starting from 2014,” Elina KULIEVA, an analyst at Alfa-Bank, says. OGK-2 is in a similar situation, demonstrating positive revenue statistics in the first quarter. “The growth of this indicator was substantially influenced by the increased revenue from capacity sales under the capacity provision agreements at Adlerskaya CHPP,” the company explained.

The capacity provision agreements not only enabled the market players to improve their financials, but also allowed them to implement strategic projects involving construction of power plants. For instance, the main facilities for the Olympic Games in Sochi, including the above mentioned Adlerskaya CHPP and Dzhubginskaya TPP, are being constructed under the capacity delivery agreements.

The payback of investments into new power plants built after these facilities are commissioned cannot be actually guaranteed anymore. The mechanism of capacity provision agreements will function for nearly another five years. Within 2007–2017, facilities with a total capacity of slightly over 35 GW will be commissioned, but this only accounts for 15% of the installed capacity the country requires.

The most controversial and much-criticized provisions of the market model developed by Yuri UDALTSOV, the chief ideologist of reforms in Russian electric power industry, are related to shortfall risks. In the context of the project, generation companies and consumers are assumed to interact independently, by entering into direct long-term contracts. This plan does not provide any guarantees for investors, though. However, if the funds for modernization are not secured, commissioning of the first renovated power plants is unlikely to start before 2018 – it cannot be done faster due to the investment cycle duration. In this case, more than half of all the installed facilities in a number of energy systems will be over forty years old, which will lead straight to an irreparable generation shortfall.

The document is expected to remain under further revision until the beginning of July. As discussed at the meeting with the Prime Minister Dmitry MEDVEDEV, the impact of the new scheme on the energy sector has yet to be thoroughly investigated, although its advantages were named as well, in particular, relieving customers from the burden of payments to ensure the system’s reliable.
The overall capacity of facilities commissioned in 1995 through 2012 totaled 28,2 GW, while over three quarters of them are thermal power generation facilities, including power plants at industrial enterprises.

operation. "Sometimes consumers say that they are ready to purchase electric power either of poor quality or from failure-prone systems that have blackouts, if this power is sold to them at stable tariff rates. But in fact, this is nothing but idle talk," Denis FYODOROV, Director General at Gazprom Energy holding, made an objection speaking at the forum “Russian Energy and Fuel Complex in the 21st Century.” “In reality, consumers need high-quality products and, consequently, they will have to pay for them.”

In his turn, Vyacheslav KRAVCHENKO, Head of Market Council (a non-profit partnership with a number of regulatory functions), points out that giving complete control to the market today would be a premature decision. “We can put it like this, for example: we have signed long-term contracts with twenty customers, go ahead, raise a loan and start construction. It is an abstract model, and it should be taken into account that for the time being, very few people in this country have long-term plans,” he said in an interview to Kommersant.

Besides, according to the new model, the state will have virtually no means for interfering in case of different crisis situations, such as large debts or delays in payment. “If we assume that a generation company and a consumer can come to an agreement, it will be difficult to interfere with this process,” Mr. KRAVCHENKO says.

RAISING MONEY

To guarantee at least a partial payback on investment, primarily in modernization, the updated CDA mechanism was developed. First and foremost, it is meant to enable market players to understand how exactly they are going to develop and cover their capital expenditure. According to the Head of Market Council, the updated CDA model can be compared to the connection fee that used to be charged by RAO UES of Russia. But the principal difference is that back then, funds were raised for the benefit of one company, whereas now the idea is to distribute them among several generation companies interested in capacity development.

Igor MIRONOV, Director of the Council of Power Producers, draws attention to the fact that the current price allows to cover the expenses for the existing power plants, but it would hardly ensure return on investment in modernization or new construction. “The updated CDA instrument proved its efficiency and functionality, and by using it, generation companies make a commitment to implement projects involving construction of new generation facilities in exchange for preconditions ensuring return on investment. It is necessary to improve the model of economic incentives for investment in modernization of generation facilities, based on the CDA methodology,” Igor MIRONOV emphasizes in his article on reforms in the electric power sector.

Vladimir SHELKOV, General Director of Quadra – Power Generation, is convinced that it is virtually impossible to plan modernization, including that of heat networks, without applying this kind of approach. At the forum “Russian Energy and Fuel Complex in the 21st Century,” he also said that further use of the CDA mechanisms is essential, since they are among the few instruments able to keep afloat the companies that actively invest. "When the reforms began, we were given to understand that all justified expenses related to electric power sales would be compensated to generation companies. However, a number of power plants have rather expensive facilities, while the tariffs are determined by the Federal Tariff Service. As a result, the reforms proved to have a zero effect for the companies. Nowadays, the key development driver for us is construction of facilities under capacity provision agreements," Vladimir SHELKOV believes.

TO BE ON THE SAFE SIDE

Specialists agree that, to eliminate the risks, the key prerequisite is not a new model, but rather solution of general issues that are beyond the model itself. “We are still missing a comprehensive and understandable system of planning and forecasting in the energy sector: the existing programs are already obsolete and fail to reflect the actual state of things,” Vyacheslav KRAVCHENKO emphasizes. Furthermore, the existing territorial development programs often lack the required degree of elaboration. With a proper forecasting system, the CDA mechanism would have been able to function more efficiently. “I believe that everything might have been different. Probably, there would have been fewer CDA facilities, and prices would have been somewhat different,” the Head of Market Council says.

Another stumbling block on the path to correcting pricing is nonpayment. Electricity theft and large debts affect the price of electric power no less than the “excess” generation facilities. At present, consumers owe about RUB 147 billion to power supply companies, and the figures are growing. Moreover, according to Vyacheslav KRAVCHENKO, this debt belongs to non-disconnectable consumers which take advantage of their special status and refuse to pay. The observers perceive the current situation as a proof that it is too early for the state to leave the market alone.

Though the Ministry of Energy is theoretically inclined to accept the direct contract model, in practice it seems that the authorities are not likely to give up on the CDA scheme. For example, in April it was announced that a similar mechanism would be used in the construction of a new CHPP in Tuva, which would cover the regional power shortfall. Taking into account that the shortfall, according to the experts’ forecasts, threatens to affect consumers in other locations, not only Tuva, it is far too early to consider the CDA issue as resolved.

Yuliya MAKAROVA
To avoid punitive sanctions from the European Commission, the Polish government will approve a “three-pack” amending its Energy Law this June. In addition, by the end of 2013, it will adopt a new Act on Renewable Energy Sources. Thus, under pressure of the EU, Poland will start to gradually reduce its dependence on coal.

Polish deputies have drafted the so-called “three-pack”, i.e. amendments to the Energy Law: the first pack concerns the whole energy sector; the second one amends the Gas Law; and the third one touches upon the Act on Renewable Energy Sources. The latter is especially important for Poland, because it was the requirement of the European Union to increase the share of renewable energy that was causing tension in the energy sector between Poland and the EU over the last two years. The “three-pack” is expected to be finally approved by the government in June. According to the new amendments, owners of small power plants based on renewable energy sources (with a capacity of up to 40 kW) will no longer have to pay for connection to the power grids. As to the owners of plants with a capacity ranging from 40 kW to 200 kW, they will be given discounts. Besides, according to the new law, gas producers will be obliged to sell a certain amount of their output through the country's commodity exchange. The “three-pack” also contains provisions intended to ensure protection of the poorest consumers when Poland starts implementing the plans involving elimination of a number of limitations in the energy retail sector.

STUMBLING BLOCK

The Renewable Energy Directive was approved by the European Parliament in 2009 and entered into force in December 2010. This Directive is a part of the EU’s 20–20–20 Strategy aimed at increasing the percentage of “green” energy, i.e. the energy generated from renewable sources (the sun, wind, solid biomass, and biogas). The concept’s developers set the following objectives by 2020: to reach 20% of renewable energy in the total energy consumption in the European Union, increase energy efficiency by 20%, and reduce emissions of greenhouse gas by 20%. The Directive set specific goals and objectives for each member state of the EU: a certain national benchmark determining the share of renewable sources in the country’s energy mix. Thus, each of the member states had to develop its own action plan.

While the share of conventional fossil fuels (coal) in the power mix of some member states is well below 20% (Sweden, France, Spain, Italy), other member states rely heavily on coal, including Greece (56%), Czech Republic (56%), Denmark (49%), Bulgaria (49%), Germany (42%), and the UK (42%). But Poland turned out to have the most serious problems trying to follow the Directive’s requirements: its share of coal was equal to 88%. These figures were reported in 2013 by the European Commission to the European Parliament, the Council, the Committee of the Regions, the European Economic and Social Committee in the Communication on “The Future of Carbon Capture and Storage in Europe.”

The largest coal producer in the EU (among the global top ten of black and brown coal producers), Poland is least dependent on the import of energy sources. But at the same time, it will be way harder for the country to meet the set objectives, as its economy is heavily dependent on the export of coal.

According to the individual action plan developed for Poland, the share of renewable energy must reach 15% by 2020 and 20% by 2030. Besides, the Directive contains another requirement: all member states must reach a 10% share of renewable sources specifically in the transport sector.

For two years after the adoption of the Directive, Poland avoided amending its energy legislation in accordance with its provisions. In 2011, the European Commission issued a warning for the country. In 2012, the new law had not yet been passed, but the Polish government expected to implement it by the beginning of 2013. It did not
happen either: the project was suspended, because the Ministers of Finance, Foreign Affairs, and Economy failed to agree on the final version of the bill. In March this year, the European Commission lost its patience: it referred Poland to the EU’s Court of Justice for failing to meet the Directive’s provisions. The value in dispute: daily penalties amounting to EUR 133,228 until the moment the country revises its law. After this incident, the Polish government became much defter: the “three-pack” is expected to be adopted as soon as June this year.

“Amendments have been reviewed for such a long time mainly due to bureaucratic obstacles,” Ernest WYCISZKIEWICZ, the Deputy Director of the Center for Polish-Russian Dialogue and Understanding, commented to Energy without Borders. “The ‘three-pack’ contains a huge number of documents, which have been considered at the level of ministries and expert commissions. Besides, without a doubt, there has been a certain influence from the conventional industry: coal companies are not pleased with such changes. But Poland has no other way. The more so, the coal industry is not going to suffer greatly: today, our share of renewable energy is 7–8%, and it will be 15% in future. It is less than in many other EU member states.”

MONEY THROWN AWAY
Poland is planning to subsidize EUR 13.7 billion to generating companies using renewable sources by 2020. 43% of this amount will go to wind power generators, 27% to owners of solar plants (they are going to be intensively developed), 15% to biogas, and 9% to biomass energy generators.

The government plans to invest a total of EUR 16 billion in wind power in 2013–2020. However, according to experts, a considerable part of this money will go to Germany, where basic equipment for wind power plants is produced. Arkadiusz SEKSCINSKI, the Vice-President of the Polish Wind Energy Association, says that until recently, half of the subsidies in the renewable energy sector had been spent on production of coal and biomass mixtures. However, such government support did not result in construction of new generating capacities in Poland. At the same time, support to wind power generators involves, mainly, construction of new plants.

The alterations in the energy policy are expected to cause tough consequences for the energy sector with the EU. “Poland’s primary objective in updating the energy policy is to reduce power expenses and lessen the dependence on coal-based power plants,” Marcin KOROLEC, the Polish Minister of Environment, said in April this year at the Bloomberg New Energy Finance Summit. However, he also remarked, “We are in a deep crisis. We are living in the paradigm of high prices for energy sources.” Until recently, Poland had been planning to build additional 11,300 MW of new coal-based power capacities by 2020; but the European Commission suggested that EU member states should reduce carbon emissions. The Polish government considered these requirements discriminating against coal producing countries. Poland imposed a veto on this document (Energy Roadmap 2050) to be approved by the EU Environment Ministers twice: in June 2011 and in March 2012. This argument between the EU and Poland coincided with the situation concerning the directive-related problems; and how it will be settled, is still unknown.

“Increase in the share of renewable energy sources is a closed issue,” Ernest WYCISZKIEWICZ says. “We are concerned with another problem. The shale gas revolution in the USA and Europe gave way to a renaissance of coal: the USA, where gas has become cheaper than coal, began exporting coal to Europe. And look at the Germany example: it is one of the leaders in the use of renewable energy sources, but it has also started to increase consumption of conventional fuel. But the limitation of carbon emissions and the EU’s intention to raise the price for quotas may be a much more damaging blow to the coal industry; therefore, Poland opposes it so insistently.”

During the panel discussion on renewable energy sources held on May 15 at the European Economic Congress in Katowice, Chairman of the Energy Committee in the Polish Parliament Andrzej CZERWINSKI announced that the Act on Renewable Energy Sources will be fully adopted by the end of the year. However, he also declaimed against “thoughtless adoption of European recommendations,” as Poland is a coal producing country and has its specific nature, which must be defended during negotiations in the European Parliament.

Olga BESLEY

Coal strip mine close to the Belchatow power plant, Poland
Inter RAO is trying to give a new push to its international energy trading operations. The Group is planning to enter new European markets with exports of electric power from the Kaliningrad Region, develop the retail business in the Baltic countries, and start power imports from Scandinavia.

Currently, the only cross-border power grid connection from the Kaliningrad Region is to Lithuania, but a project involving construction of a power transmission line to Poland is already being discussed.

PLANS FOR EUROPE
Nowadays, Inter RAO own only one facility in the Kaliningrad Region, Kaliningradskaya TPP-2. This power plant satisfies the power demand in the region and generates power for further exports. At present, the only cross-border power grid in the Kaliningrad Region connects it with Lithuania; therefore, electric power generated at Kaliningradskaya TPP-2 is exported solely to Lithuania and supplying power to any other energy system, apart from the Lithuanian one, is technically impossible.

Inter RAO is considering a number of projects to diversify exports: Poland is one of the potential new export destinations for Russia. A project involving construction of a power transmission line to Poland is already being discussed by the Russian-Polish intergovernmental commission. “Before long, we expect our Polish colleagues to provide us with the information on the results of the technical research on potential impact of Russian electric power exports on the power flow distribution in the Polish power system,” says Karina TSURCAN, Head of the Trading Unit at JSC Inter RAO UES. The top manager is convinced that this infrastructure project will be beneficial for both countries: more connections mean higher reliability of the energy system and more intense competition in the domestic market, which is always good for consumers.

Meanwhile, Inter RAO Group is already present on the Polish market. Last year
For Inter RAO, development of the retail business is one of the strategies that enable the company to maintain its market presence and, probably, to increase its market share in the Baltic states.

organizing activity along two parallel workstreams. The first one is improving power grid connections and expanding the capacity of interconnectors. The second workstream involves trade development on the internal Baltic market through AB Inter RAO Lietuva and its subsidiaries in Latvia and Estonia (Inter RAO Latvia Ltd. and Inter RAO Eesti OU). Today, Inter RAO Group has over 500 end consumers in the Baltic states, and this business is actively growing. “Although the last year saw a decline in supply from the Russian energy system to Lithuania, the overall decrease of AB INTER RAO Lietuva’s trading operations volume was far less obvious due to the power supply provided for retail consumers in the Baltic markets,” Karina TSURCAN observes. “The last year demonstrated that we should diversify our business activity. Development of the retail business is one of the strategies that enable us to maintain our market presence and, probably, to increase our market share in the Baltic states.”

FINNISH REVERSE

Last year proved to be challenging for Russian power exports to Finland, which was traditionally the main market for JSC Inter RAO UES’s international trading. The supply volume reduction by nearly 60% (from 9.6 down to 3.8 bn kWh) was caused by a dramatic drop in prices in the Nord Pool Spot market, owing to the favorable hydrological situation at the Scandinavian hydro power plants.

In this situation, when at certain periods a megawatt hour cost less in the neighboring Finland than on the Russian market, JSC Inter RAO UES naturally gave thought to the possibility of electric power import from Suomi. At present, electric power can only be supplied from the Russian energy system to the Finnish one, not the other way around. However, a joint team of Federal Grid Company, System Operator, Inter RAO, NP Market Council and a Finnish company Fingrid is now working on making the reverse power supply technically possible already in 2014. For this purpose, it is necessary to revamp one of the four 350 MW back-to-back converter units of the Vyborg converter complex, through which Russian electric power is now supplied to Finnish substations.

“We forecast that the Nord Pool Spot market will go through periods of low prices again (for example, in July last year a megawatt hour cost EUR 13 in Finland), when power supply to the Russian energy system will be cost effective for us,” says Karina TSURCAN. “Besides, the possibility of power interchange between neighboring regions always improves the overall reliability of any energy system.”

Alexey YEGOROV

AB Inter RAO Lietuva (the company controlling the Group’s operations and assets in Lithuania and other Baltic states) undertook the IPO procedure at the Warsaw Stock Exchange and established its subsidiary in Poland – IRL Polska Sp. z o.o., which is supposed to start trading in the local power market in future.

WHOLESALE AND RETAIL

The Baltic states are among the traditional major markets for Russian export. However, last year the electric power supply to the Baltic states dropped by almost 14%.

This effect was brought about by two overlapping factors: the large scope of maintenance work at transmission lines, due to which Inter RAO was unable to ensure the target volume of power supply, and a substantial fall in prices in the Nord Pool Spot market that affected export profitability during certain hours. Development of Inter RAO’s trading operations in the Baltic states implies...
The key responsibilities of the unit you are in charge of are legal proceedings and contractual work. How do you manage to achieve good results in legal proceedings?

Each trial means the company’s reputation for us. For example, over the last month, judgments for a total of RUB 250 million were rendered in our favor. This figure covers only the parent company, without account of pre-judicial proceedings and debt collection across the market. It would surely be much higher if taking into consideration the entire Inter RAO Group. The largest case we won last year was a trial between OGK-3 and the Tax Service for RUB 1.7 billion, which resulted in the judicial act of the Supreme Commercial Court. All in all, Inter RAO Group won over 1,400 cases totaling more than RUB 11 billion over the last year. This efficiency was driven by highly professional lawyers of the Group’s companies. I believe that Inter RAO Group and its subsidiaries have the strongest team of lawyers and tax specialists in the industry at the moment.

Recent high-profile proceedings include a dispute between generators and Energostream companies concerning debt collection. What is the current status of this process? How are judgment debts to Inter RAO collected? I mean, winning a case is one story, but debt recovery is a totally different one.

The current situation with Energostream is due to the lack of a system of guarantees on the part of consumers in the market. Apart from anything else, troubles with power supply in the Caucasus arise from the special status of regulation in the market and non-payments by the consumers. Nevertheless, practically all court decisions on collection of debts in favor of Inter RAO from Energostream Group and other troubled consumers have either been obtained or are at the final stage. However, as you said, getting a court decision does not mean getting money, especially when the debtor is a bankrupt. In case there is no possibility to collect the debt we work in two areas: the first one concerns...
exercise of the rights of claim to the debtor by the third parties, the second one involves debt repayment through the rights of claim of guaranteed suppliers to the end consumers.

In addition, there is no secret that some of the money that Energostream companies have not repaid to the generators remains in foreign jurisdictions. Now we are cooperating with Gazprom Energoholding and IES-Holding in search for foreign assets of Energostream’s shareholders. In essence, the process is about initiating criminal proceedings in various foreign jurisdictions and in Russia in order to return the money that has been illegally transferred to offshore financial centers through. This is a test case for Russia; and if it demonstrates positive dynamics, this will mean that the principle of inevitability of punishment for frauds in the power market has been put into practice. And no foreign assets will help the wrongdoers.

Is it right to say that large power companies unite in order to lobby for their interests in the industry and collect debts from consumers?

As for the collection of bad debts, you are right: all sellers are on the same side of the fence. They have joined their efforts to influence the industry law and cooperate on the debt collection issues. Inter RAO is now playing an active part in the rulemaking process at all levels, including NP Market Council, the Russian government, the State Duma, the Russian Union of Industrialists and Entrepreneurs and the Chamber of Commerce and Industry. For example, at the meeting held on May 21, the Supervisory Board of NP Market Council accepted amendments to the wholesale market participation agreement that we had suggested. These amendments cancelled the obligatory extrajudicial dispute resolution procedure in the wholesale market. This will allow generators to save from three to five weeks previously spent on receiving writs of execution against debtors, which is quite a substantial period of time given endless bankruptcy proceedings.

However, lobbying interests in the industry and rulemaking is a different story. Energy companies are not as united as oil and gas companies. I think this is due by the fact that major industry players often belong to different economically influential groups with varying interests. Naturally, these groups have different, and often opposite, objectives with regard to business and legal practice development.

Various teams have proposed to manage non-payers through introduction of criminal responsibility for non-payments.

Speaking about individual consumers, it would not be a reasonable measure from both the social and the legal points of view. Ordinary consumers (individuals) and power supply companies have civil law relationships. The Criminal Code already contains two provisions (Articles 159.4 and 177) on responsibility for evasion of the repayment of debts. We may admit, though, that these provisions are not actively enforced at present.

Moreover, the industry law and technical equipment in the commercial accounting system is far from being perfect, which may often cause difficulties in determining the amount of payment obligations. There have been a lot of arguments on this issue between consumers, power grid companies and suppliers. In the criminal law system, criminality of the act and unambiguous interpretation of the rules of law play an essential role. In the current industry conditions, it would be very hard to prove the criminality.

Anyway, what is the current progress on the issue?

I would not say that we are succeeding in it. In my opinion, this proposal has low potential for implementation. We are still applying the existing law and have been closely cooperating with the divisions of the Ministry of Internal Affairs to put the current and future regional statements against persistent non-payers under control.

What are other ways to deal with non-payers?

It is necessary to come up with a stronger mechanism for disconnecting consumers with large debts outstanding for a long time. If you do not pay for your mobile phone in Dagestan, it will not work. The same trends should be following with respect to the power. Since the government imposes a certain veto on disconnection of strategic and socially important consumers, it means that it should bear financial responsibility for them. This involves the improvement of the subsidy mechanisms, state guarantees and the budget for debts of privileged consumers.

Speaking about tax-related arguments, has the number of legal proceedings reduced after
Inter RAO entered into a horizontal monitoring agreement with the Federal Tax Service last year? The main benefit from participation in this project is the possibility to establish a constructive communication with the tax authorities and discuss taxation issues before the tax authority imposes sanctions and makes a decision. Another important advantage is the possibility to obtain advance tax rulings implemented in many countries with developed taxation systems, which helps companies reduce the amount of additional tax accruals. This cooperation has already resulted in the company’s conclusion of an amicable settlement with the tax authority on one of the arguments considered by the court. Inter RAO was the first Russian company to conclude such an agreement in the framework of horizontal monitoring not just for the benefit of its budget, but also for the benefit of the taxpayers. Today, the entire company and the tax authority are discussing the possibility of out-of-court settlement of another argument considered by the first instance commercial court. It is also important that, under this project, Inter RAO participates in building the tax authority’s position concerning taxation of certain business transactions with respect to the entire industry.

Another important area of your activity is contractual work. What is your main focus right now? First and foremost, it is the development and introduction of common criteria for contractual work in the Group, which would eliminate corrupted elements, lack of economic feasibility when concluding contracts, conclusion of contracts beyond the framework of budgeting and business planning, and provide for more efficient procurement. Some of these criteria are already being applied, while others have been developed and will be also introduced as the Group’s corporate standard. The Legal Affairs Unit’s plans for the near future include the development of a common contractual framework for the entire Group based on a unified IT solution, as well as optimization of procurement using standard contracts that have already been accepted in the Group’s companies.

Inter RAO has established a powerful international legal affairs unit. Why was it necessary? Although the crisis resulted in the global trend to reduce the amount of M&A transactions, our company is rather active in the international market. At the end of May, we completed a transaction for the purchase of a Turkish power plant; besides, Inter RAO participates in the construction of Akkuyu Nuclear Power Plant in the same country, considers the possibility to invest in the wind energy sector, and studies the markets of Eastern Europe, the Baltics, Scandinavia and Latin America. Business in such countries as Georgia, Armenia, Tajikistan, Kyrgyzstan and Turkey, where the legal systems are rather immature and unstable, and in European jurisdictions with developed legal culture, determines the need for a strong legal affairs unit, which would protect the company’s interests to a high standard in any political and economic environment. Here is an example: last year, an Inter RAO Group’s company participated in legal proceedings where the claimants were Israeli citizens, the respondent was the Georgian government, the proceedings were held in the Netherlands, and the decision against the Georgian government was made by the International Court of Justice under the US jurisdiction.

In the picture (from left to right): Rostekhnadzor’s Deputy Director for Legal Affairs Alexey Vorotilkin, EVRAZ’s Vice President for Legal Affairs Elena Zhavoronkova

Nikolay Gorelov
Distributed generation today gains popularity all over the world. The main reason why European countries focus on active development in this area is high energy costs. At the same time, in Russia, the established centralized structure of the energy sector and vast reserves of conventional energy sources allow to take time and set priorities properly, especially in the current situation where the so-called green energy has neither proven its economic viability nor has become widespread either in Russia or around the world.

Distributed generation (DG) is a decentralized power supply system. It is based on low-capacity power units, such as gas turbine power units, combined-cycle gas turbines, gas-engine power units, as well as non-conventional and renewable energy sources that generate power from wind, sun, water or biomass. The key advantage of DG facilities is their location in close proximity to consumers, which improves power supply reliability and makes it possible to supply with electric power remote regions where it is difficult to install central power grid transmission lines.

In fact, for historical reasons, DG initially supplemented the centralized power grid that allowed for solving problems and overcoming the weaknesses of the traditional model. However, over the last fifteen years, Western countries have regarded distributed generation as an upcoming trend bound to become a priority in the future. This is largely explained by the growing interest in renewable energy sources (RES), also known as green energy.

**THIS IS WASTEFUL!**

According to the forecast of Branan consulting company (Renewable Energy Sector Technologies research), the green energy’s share will be close to 25% of the overall production already by 2020. Even now, its share makes up about 50% in some countries such as Denmark, whereas in Russia it is likely to reach 4.5% by 2020, as estimated by the Ministry of Energy last year. However, a group of experts that performed an evaluation of construction costs for such facilities upon the Ministry’s request observed that Russia would hardly require even this small share, since it has long-lasting reserves of hydrocarbons. Therefore, at present, any large-scale investments in non-conventional power sources would be a mere waste of funds.

Nevertheless, distributed generation has a number of other advantages unrelated to renewable energy sources: it is widely accepted that the cost of electric power is substantially lower for consumers if it is generated by their own facilities. As an example, Branan refers to the experience of Magnitogorsk Iron and Steel Works (MMK) that meets most of its electricity demand by producing its own power. In 2011, the cost of electric power purchased by MMK from the Unified Energy System was RUB 2.2 per kWh, while the cost of electricity generated by the plant’s own facilities was RUB 1.1 per kWh.

However, what is good in a particular case is not necessarily good for the country on the whole. “Small-scale generation projects require mandatory supporting the capacity margin and ensuring reliability at the expense of the Unified Energy System,” observes Igor MIRONOV, Director of the Council of Power Producers. “This margin is to be provided by conventional generation companies in association with consumers. In case a large enterprise covers its electricity requirements by producing power at its own small station, the CHPP that supplies it with heat through cogeneration would be operating at a loss.”
the Unified Energy System are missing in capabilities for integrating DG facilities into the regulatory framework and technical to. Branan’s specialists point out that capacity of the grid they are connected between the generators’ capacity and the of certain grid segments and the relation of factors, such as the operating condition system may vary depending on a number of generators, diff erent technologies and are required, as there are diff erent types the common standards for all participants facilities. But to make the scheme work, for construction of their own generation quickly compensate for the expenditures for their equipment and optimize the choose more effi cient operating modes of distributed generation facilities to surplus to the grids allows owners as well: the opportunity to sell power sell their energy surplus. This scheme to grids to buy redundant power and micro-generation systems get connected grid. In Western countries, owners of it's synchronization with the central although this experience can hardly be regarded as a role model.

Magnitogorsk Iron and Steel Works (MMK) meets most of its electricity demand by producing its own power, although this experience can hardly be regarded as a role model.

Russia today: consumers are not prepared to provide power for grids with a capacity of 110 kV and above, since it requires additional capital expenditures. Grids with a capacity of 35 kV and below are not designed for voltage regulation in case of activation/deactivation of a power station. In addition, special equipment is needed to enable remote control of generators’ operating modes, in particular, meters that would transmit measurement data in real time – the so-called smart grids.

The second major issue is the tariff policy for energy. The centralized power grid has a tariff rate that includes not only a consumption fee but also fees for connection, for the grid maintenance, its reliability and service support. If owners of micro-generation systems connected to the central grid use the same tariff rate, it would cause a problem: if their current consumption rate drops, the grid companies’ costs will be automatically passed on to other consumers who do not use their own generators. Alternatively, energy companies will have to pay these costs.

Fyodor OPADCHY, Deputy Chairman at System Operator (dispatch control operator of the Russian energy system), also highlighted other problems of distributed generation integration into the electric power system in the report “Distributed Generation Abroad and in the Unified Energy System of Russia”. These include: voltage build-up in distribution grids, excess capacity and frequency control issues, ensuring stability of the power system in the event of outages at a number of power plants, enabling standalone operation of all types of generation units, complexity of maintenance of transmission lines with energy-intensive consumers and DG units.

DG facilities do not necessarily have to be connected to the unified grid, but in this case a consumer would not be protected from risks. Electric power supply from the Unified Energy System is stable. If one of the system facilities fails, the UES would be able to redistribute the load to make certain that consumers are supplied with electricity anyway. But what if a consumer’s generator is not connected to the system? Any failure of the consumer’s own generation facility leads to power outages and, consequently, to business interruption.

WHY TAKE RISKS?

Apart from problems and complexities related to distributed generation in itself, there is a whole range of other obstacles that hinder its development in Russia. Experts from the SKOLKOVO business school Energy Center Jack NEUSHLOSS and Igor RYAPIN name the following factors: customs duties on part of the imported equipment for small- and medium-scale generation, strict requirements for certification and licensing of DG facilities imposed by regulatory agencies (since thermal power plants, including distributed generation facilities, are classified as hazardous industrial facilities), lack of a common standard for connection of distributed generation facilities to grid companies’ power grids. All these issues require time-consuming elaboration.

Therefore, distributed generation, on the one hand, offers new opportunities, while on the other hand it is a complicated multifaceted problem, and its solution requires considerable spending, amendments to the legal and regulatory framework, and establishment of new regulatory agencies. The European Union started dealing with these issues during the second half of the 1990s. However, Russia, unlike Europe, does not suffer from high energy costs. Moreover, the centralized grid is historically more appropriate for this country, while European households have long been accustomed to being more self-sufficient. Needless to say, it does not mean that the global trend should be ignored, but the system developed in Russia has its own specific features. “Nowadays, the area of application for distributed generation covers mainly the consumers deprived of the centralized power supply: transportation corridors of prime importance, border areas and coastal districts, mining areas with high potential, areas in the Far North and the arctic zone,” says Igor MIRONOV. “It is advisable to implement small-scale power generation projects in areas where the traditional energy system is unable to function. I am certain that in the regions with developed power grids it is more reasonable to help the existing businesses secure funds required for upgrade of power facilities instead of financing a high-risk and expensive energy production method.”

Olga BYLINKO
One of the key energy-related topics discussed at the St. Petersburg Forum 2009 was development of renewable energy sources in Russia. In the same year, the Prime Minister Vladimir Putin signed the relevant order determining the key priority areas in the renewable energy sector. However, until recently, development of renewable energy sources had been restrained, primarily due to the lack of a legal framework that had been under development over these years. Not long ago, the Government accepted a series of normative legal acts aimed at facilitating attraction of investments. This fact brings certain hopes that the renewable energy sector will start developing in the country. For example, according to the target values fixed in the documents, the total installed capacity including all types of renewable energy sources is supposed to reach 6 GW by 2020.

One of the key prospects for the Russian solar energy sector is construction of hybrid solar/diesel power plants in regions with a high share of diesel generation (the average equipment wear is over 60%) and hard-to-access areas. Domestic technologies focused on the relevant type of power plants will allow Russia to reduce regional budget expenses on maintenance of diesel generators by 1.5–2 times and ensure 24/7 power supply for entire settlements.

According to the estimates made by the Ministry of Energy, modernization of the power sector will require over RUB 8 trillion by 2020. Meanwhile, Russia has nearly run out of possibilities for extensive funding (by increasing the power tariffs). The power prices for business consumers in Russia are already higher than in the USA and are rapidly approaching the European rates. To ensure modernization in such a capital intensive industry as the power sector, it is essential to guarantee long-term predictability and consistency of the rules of the game and abandon “manual adjustment” of the power market. For this reason, the best type of support from the government would be to establish long-term regulation in the power grid system, stimulating companies to implement efficient investment projects, and to develop sustainable business mechanisms for generators. The most widespread mechanism applied in construction and modernization of generating facilities across the world today is long-term power supply agreements between suppliers and consumers. We should be headed in the same direction. I believe the participants of the relevant discussion at the St. Petersburg Economic Forum will support my opinion.
The 17th St. Petersburg International Economic Forum is scheduled for June 20–22. One of its key topics will be modernization of the energy sector. Over the last 16 years, the forum has been the platform for discussing many subjects and issues important for the industry. Check the comments of our experts to find out how the discussions held at St. Petersburg Forums have been reflected in the activities of energy sector specialists and what effect they will produce in future.

In 2011, the concept of establishing a financial agency for the energy sector was first presented at the St. Petersburg Forum. The agency was expected to be set up already in 2012. It was supposed to be an independent legal entity focused on attracting long-term investments in energy efficiency and energy conservation projects. However, I have never seen any information confirming its establishment. And it is not surprising, because the process requires time-consuming coordination of technical issues concerned with organization and control over allocation of funds, etc. Rushing things at the initial stage may cause troubles in the course of operation. As practice shows, it is better to be safe than sorry when dealing with such issues. It is also important to develop a mechanism for determining priority areas and a project selection procedure. The objective is to maximize the efficiency of investments and to attract private investors, who may play the main role here. The agency may become a great incentive for power market development — but only in case it can actually count on up to RUB 50 billion of state investments by 2020. Co-funding by the state will encourage more active investments by private players.

The St. Petersburg Economic Forum 2010 brought up the issue of the smart grid technology in our country. Without a doubt, introduction of smart grids in Russia would be a very promising project; but on the other hand, it is very risky owing to the huge size of the country. Besides, Russia still lacks reasonable incentives to roll-out such systems. For example, Europe introduced smart grids due to the need to connect a large amount of small-scale power generation facilities, in the first place. The second reason is the significant growth of fines for power grid failures. In Russia, such incentives are still missing: small- and medium-scale power generation is hardly showing any progress, while renewable energy sources, which are supposed to constitute a considerable part of small-scale generation, are at the infant stage. Nevertheless, some elements of smart grids are being introduced in distribution grids in a number of regions, for example, interregional distribution grid company (IDGC) of the North West has already applied some of such technologies. But I would like to stress it again that it is early days to talk about widespread introduction of smart grids in Russia. As to the timeframe for the active roll-out of smart grids, it may take years, judging by the experience of other countries. It is necessary to build a legislative framework for the introduction of such systems and provide economic incentives for companies.

Modernization has been, and remains, one of the most significant issues for the power industry. This year, it will be one of the key energy-related topics discussed at the St. Petersburg Economic Forum. But certain peculiarities should be mentioned with regards to companies modernization capabilities. Firstly, power generation is one of the basic and socially important industries. Its efficiency dictates the level of power expenses for businesses and population, which has a considerable impact on the marketability of products and the standards of living. Secondly, this industry is characterized by large capital expenditure, a long payback period, and high fuel cost risks. These features explain the increased attention of the government to the sector. The government’s part is to ensure a favorable environment for investments and regulate the energy market. The initiative involving capacity provision agreements has helped achieve a positive impact in the first area. In the framework of the grid system modernization, it is essential to solve the problem concerned with the ratio between margins of transmission and distribution grids. Consolidation of energy systems should boost competition in the power market for transmission grids. Development of distribution grids by the government will simplify the process of consumer connection to the grids. Eventually, all these measures will make the industry more attractive for investors, which will open the way for modernization of the power sector.
A countrywide project to develop infrastructure for electric vehicles has been launched in Russia, with Federal Grid Company as its main proponent and responsible entity. Under an optimistic scenario, by 2020, hundreds of thousands of electricity-powered vehicles will be operating across the entire country. Pilot projects will be limited to corporate and commercial transportation. In order to be properly deployed across Russia’s vast expanses, electric vehicles will need government support.

**Forecasts**

One of every ten vehicles will be electricity-powered as soon as 2017. According to Pike Research experts, by that time, electric vehicles should account for 3% to 10% of the market in all segments, on average. According to a forecast by Revolta, electric vehicles will account for about 20% of public and light commercial transportation in the near future. Overall, about 200 thousand electric vehicles could be operated in Russia by 2020. According to an estimate by MOESK (Moscow United Electric Grid Company), their number will reach 50 to 110 thousand vehicles in Moscow and the Moscow Region alone.

**How They Operate**

At present, there are two main standards for charging electric vehicles. DC charging envisages the minimum station capacity of 50 kW and allows for fully charging the battery in less than half an hour. AC charging is performed at the level of 3.3 to 43 kW depending on the model of the vehicle and its battery, taking from four to eight hours.

**What We Have**

Over 100 electric vehicles have been imported into Russia by now, according to Rolf Import (distributor of Mitsubishi i MiEV). Despite the modest figures, the initial pace of sales exceeds the trends observed in the European countries at a similar stage. Electric vehicles are purchased mostly by corporate customers; however, several units still have ended up in private hands. The importer notes that such vehicles, as a rule, are purchased by environmentally conscious citizens, either for their own use or as a gift to family members. The first five production electric vehicles of the El Lada model manufactured in Russia by AvtoVAZ were delivered in early 2013 to a local taxi company in the Stavropol Region. In some major cities, a handful of domestically manufactured electric buses are used for urban transportation.

**Savings**

By using an electric vehicle (consumption standard of 15 kWh per 100 km) instead of a vehicle with an internal combustion engine (standard of 7 L per 100 km), the savings will amount to approximately RUB 2 per each kilometer traveled.

**Key Risks**

The first risk is a narrow market. Most experts are certain that it is impossible to establish a network of electric charging stations similar to that of filling stations within a short timeframe. This is why the use of electric vehicles will be most likely limited to major cities. Popularity of electric vehicles in the remainder of Russia’s territory in the next several decades will be hindered by limitations of the power grid facilities and long travel distances outside the range of even a fully-charged vehicle.

The second risk is the low affordability of these vehicles. The price of an electric vehicle is several times higher than that of a similar vehicle with an internal combustion engine. Even with a preferential customs treatment, the price of an electric vehicle would noticeably exceed RUB 1 million. The majority of Russian consumers are for now not prepared to spend that much, even taking charging-related savings into account.
WHO WILL PURCHASE
According to surveys by the Chamber of Commerce and Industry of the Russian Federation, literally every driver is prepared to move to an electric vehicle. Claim that they are not opposed to replacing their vehicle with an environmentally friendly one. Think that reducing the price of electric vehicles is necessary to accomplish that. Cited establishment of a broad infrastructure network as the key condition.

STATE SUPPORT
Ministry of Industry and Trade has announced the intent to abolish customs import duties on electric vehicles for a period of one year. This should make electric vehicles cheaper by about 20%. However, market participants are asking for other preferences as well, citing to experience of other countries:

- Purchase subsidies – in the U.S. and the EU, they amount to up to USD 8 thousand per vehicle
- Free “Toll road travel” project
- Right to use dedicated lanes
- Transportation tax incentives.

What about ë-mobile?
The company reports that a budget electric vehicle by ë-AUTO will be available in the market only in March 2015. Production of the electric vehicle is scheduled to be launched in 2013. The first production model of the ë-mobile will be a crossover, as it is much more popular compared to other modifications among the potential owners who pre-ordered.

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<tr>
<th>MODELS</th>
<th>El Lada – the first production electric vehicle in the Russian Federation</th>
<th>Mitsubishi i-MiEV (Mitsubishi innovative Electric Vehicle) – the first electric vehicle officially sold in Russia</th>
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<td>Manufacturer</td>
<td>AvtoVAZ</td>
<td>Mitsubishi Motors</td>
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<td>Production vehicle cost</td>
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<td>RUB 1.8 million</td>
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<td>Maximum speed</td>
<td>140 km/h</td>
<td>130 km/h</td>
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<td>Range</td>
<td>140 km</td>
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<tr>
<td>Charging time using residential grid</td>
<td>8 hours</td>
<td>6 to 8 hours</td>
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INFRATRUCTURE
500 thousand charging stations of all types represent Russia’s demand for charging infrastructure. At present, about 50 electric charging stations, predominantly located in the Moscow Region, operate across the country. Within the scope of the project aimed at developing infrastructure for electric vehicles, it is planned to install 2,260 charging stations, including 310 fast charging stations, in Moscow and the Moscow Region.
BFA BANK
MARKET-OUTPERFORM DYNAMICS
The Moscow Government put Moscow Integrated Power Company, one of the capital’s largest power grid companies, up for an auction. A single lot with a reserved price for privatization of RUB 98.6 billion includes all real and personal property rented from the city. Shares of MIPC are estimated at RUB 91.7 billion. BFA Bank analysts bring to notice that the Federal Antimonopoly Service has simultaneously approved a motion of Gazprom Energoholding for the purchase of 75% of voting shares of MIPC. “This means that the long-discussed transaction acquires more and more perceptible outlines,” experts say. They also note that consolidation of heating assets of MIPC and Mosenergo, a subsidiary of Gazprom Energoholding, will allow the generating company to considerably increase its presence in the Moscow heating market and, besides, replace certain inefficient boiler plants. The latter, according to analysts, will improve the company’s performance and will allow it to restraint the growth of heating tariffs in the region. Experts of BFA Bank are also optimistic about stock-exchange results of the transaction primary participant: “We believe that this news will support the share quotations of MOSENERGO making them outperform the market.”

INVESTCAFE
RETAIL SECTOR HAS MADE A DIFFERENCE
In May this year, the functions of guaranteed suppliers were transferred to subsidiaries of Russian Grids (interregional distribution grid companies – IDGCs) in another two regions: the Tver Region and the Republic of Buryatia. “This means that Interregional of Center and IDGC of Siberia have won again, as their subsidiaries have already been performing the same functions in several regions since the beginning of this year,” says Investcafe analyst Liliya BRUEVA. According to her, sales revenue and margin influenced the performance of Russian Grids subsidiaries, which had the status of general suppliers in January–March. The first in the row will be the Penza Region covered by IDGC of Volga. Investcafe analyst notes that the company may be deprived of the retail business, which earned 14% of the total profit according to RAS and operating margin of 10.3%. During this period, the revenues of five IDGCs which obtained the guaranteed supplier status increased by 14% compared to 2012, while other IDGCs’ revenues increased by 3.7% only. According to the expert, saving this business is important, primarily, for IDGC of Center, which performs these functions in several regions already. The analyst believes now is a perfect time to purchase the securities of IDGC of Center. The papers of the parent company, Russian Grids, also remain too oversold: the potential growth makes up 52%, the objective is RUB 2.093. Mid-term recommendation is to buy them.

ZERIC CAPITAL MANAGEMENT INVESTMENT COMPANY
STATISTICS WILL NOT HELP
Despite good results in 2012, the Second Generating Company of the Wholesale Power Market (OGK-2) has not managed to gain the affection of a number of analysts. According to Zerich Capital Management investment company, OGK-2 showed better financial results compared to the previous accounting
period considerably exceeding consensus forecasts. In particular, the company restrained the growth of expenses, while its operating income increased by a factor of three in 2012. Meanwhile, the generator’s securities showed a dramatic decrease by 20.9%.

“On the whole, experts are skeptical about the prospects of OGK-2. Mid-term drivers of the company are not expected to favor generation of the positive flow,” specialists of the investment company emphasize. According to analysts, the MICEX statistics indicates that the papers are not sufficiently liquid. For example, the annual average trade volume was about RUB 15 million. "We think that the company shares are fairly valued by the market, they have an 11% growth potential," conclude experts saying that the target price is RUB 0.27 per share.

SBERBANK INVESTMENT RESEARCH
NO REASON FOR DIVIDENDS

Non-audited IFRS financial results for Q1 2013 provided by Enel OGK-5 showed increase in profitability. EBITDA reached USD 160 million, which exceeds the results of the same period last year by 18%. Sberbank Investment Research specialists note the increase in the profitability and overall revenues. The quarterly increase in prices by 8% did not affect the indicators, as the energy yield also dropped. Nevertheless, the EBITDA growth was partially driven by an increased difference between the power price and the coal fuel cost element. These are good results," analysts say. They emphasize that such news will provide support for the company’s shares. However, a long-term driver for the shares should become announcement of the dividend policy; but according to specialists of Sberbank Investment Research, Enel OGK-5 is not likely to pay dividends for 2012.

UF S INVESTMENT COMPANY
RECOMMENDATION TO KEEP THE PAPERS

According to analysts from UFS Investment Company, after the results of Inter RAO UES were published, funding of the investment program has been the key issue for investors. Experts are also sure that the management’s statement saying that additional issue is not subject to consideration must calm down the players to some degree. UFS specialists expect growth of debt burden due to the investment program and state that the pricing policy simultaneously presses the generation and sales sectors. However, they also list a number of positive factors, for example, intensive growth of generation due to new capacities and increased trading returns.

“This year, we expect Inter RAO UES to show improvement in generation, where capacities continue to grow in accordance with the investment program, and in trading due to improved pricing environment in external markets,” states the UFS report. “We believe that Inter RAO UES still looks more attractive than the majority of assets in the Russian energy sector and despite the depressing condition of the whole industry it should not fall to such a low level. The comparative analysis confirms it. According to our revised assessment, the potential growth is over 85% compared to the current level,” the analysts forecast. At the same time, they also warn that investors are frightened and careful about energy assets now. The analysts recommend keeping Inter RAO UES securities.

VTB CAPITALS
TARIFFS TO THE DAMAGE OF PROFIT

One of the most striking factors was the initiative of the Ministry of Economic Development to set tariff limits. It was suggested to reduce their annual growth in 2014–2015 to 5% for gas supply and to 6% for power supply.

“Annual increase in gas tariffs by 5% will mean zero or even negative growth of spot prices for power. It may cost generating companies about 4–15% of net income in 2014-2015,” think experts. According to them, in absolute terms, the greatest losses are going to be suffered by RusHydro (~ RUB 2.7 billion, 7% of net income), OGK-5 (~ RUB 1.3 billion, 14%) and TGC-1 (~ RUB 1 billion, 14%). For all these companies, fuel expenses do not considerably depend on gas prices.

The Moscow government put Moscow Integrated Power Company JSC, one of the capital’s largest power grid companies, up for an auction.
There is still a popular belief that before the revolution Russia was an ignorant and savage country, until the “Lenin’s lamp” lit up. Meanwhile, in the 19th century already, the empire’s capital was illuminated with lights, streets were full of electric transport, and Russian inventors participated in lighting projects for Paris and London. St. Petersburg was the center of scientific and technical progress.

November 23, 1706, when St. Petersburg celebrated the Russian army’s victory over the Swedish troops at Kalisz, marked the beginning of street lighting in the city. At that time, by order of Peter the Great, facades of houses in four streets in the vicinity of the Peter and Paul Fortress were equipped with oil lanterns, which were lit up on big holidays. In 1718, Jean-Baptiste Alexandre LE BLOND, an architect, designed a permanent street lantern. According to his drawings, the glass works in Yamburg manufactured four lanterns that were later mounted at the quay, opposite the Winter Palace.

In five years, main streets of the capital were illuminated with 595 lanterns, maintained by 64 people. They hastily ran from one lantern to another, carrying small ladders on their backs. Lanterns were filled with hemp oil and lit up “at nighttime only, during dark hours according to dark-hour schedules sent from the academy.”

Such lighting was used in St. Petersburg for another 130 years, although in 1821 first gas lanterns appeared in the city, followed by kerosene lanterns.

Electricity started up in St. Petersburg in 1873. Alexander LODYGIN, an electrical engineer, conducted first experiments with electric lighting in Odesskaya Street. In two lanterns, kerosene oil was replaced with incandescent light bulbs radiating bright white light. Excited onlookers were running from one lamp pole to another and comparing which lamps gave more light to read newspapers.

The first public building in St. Petersburg equipped with electric lighting was “Mr. Floran’s ladies’ lingerie and men’s underwear”, a shop at 16 Bolshaya Morskaya Street. Three light bulbs of the type invented by Alexander LODYGIN were lit up there in 1874. Goods were illuminated with electric light for three months completely free of charge.

The St. Petersburg Academy of Sciences awarded Alexander LODYGIN with the Lomonosov Prize, though his lamp never went into mass production.

Things worked out much more successfully for another Russian genius – a military engineer Pavel Nikolayevich YABLOCHKOV from St. Petersburg. He was busy bringing existing arc lamps “up to the mark”.

As early as in 1874, the gifted engineer, who worked at a telegraph office, was
to install lighting on Nevsky Prospekt. However, the approval of the project took as long as two years. By that time, Carl von SIEMENS had already obtained a license for using Edison lamps in Russia and built a factory in St. Petersburg to manufacture all associated equipment – cables, lamps, switches, etc. Thus, as we would say today, he won a tender for the Nevsky Prospekt lighting project. At the end of 1883, electric lights illuminated the capital’s main avenue. The lights were powered by two electric power plants: one, with the capacity of 35 KW, on a wooden barge on the Moyka River near the Police Bridge (now Green Bridge), and the other near Kazanskaya Square. A bit later, the Winter Palace was also electrified.

On July 16, 1886 in St. Petersburg, an industrial and commercial Society for Electric Lighting founded by Carl von SIEMENS was registered. The same year, the Society launched the construction of Russia’s first power plant at the Obvodny Canal. This date is widely accepted as the starting point of electrification of the country. By 1916, the capacity of all Russian power plants totaled 1192 MW. Tsarist Russia ranked eighth in the world in electric power production.

Larisa SMOLYAKOVA
June – August

International exhibition on renewable energy sources: Renewable Energy Asia 2013
June 5–8, Bangkok, Thailand
This year’s exhibition will be devoted to the issues of commercial use of the currently available renewable energy sources. Within the scope of the event, manufacturers and suppliers of equipment and services will be able not only demonstrate their latest achievements but also exchange business, scientific, and technical information.

Annual specialized exhibition of the electric power industry: Smart Energy Japan – 2013
June 13–14, Osaka, Japan
The exhibition will feature machinery and devices used in the electric power industry and electrical engineering industry for manufacturing, transmitting, and distributing electric power, as well as computer and telecommunication systems and methods for upgrading existing power systems. Smart Energy Japan traditionally serves as a discussion platform. This year, discussion topics will focus on the issues of utilizing biomass energy, obtaining biogas from organic waste, and other issues related to the power industry.

22nd International Exhibition for Electrical Equipment for Power and Electrical Engineering, Automation, Lighting Engineering (ELEKTRO-2013)
June 17–20, Moscow, Russia
The total exhibition floor space will amount to 28 thousand sq. m. For convenience of the visitors, the exhibition will be divided into six theme-based halls: electrical equipment for the electric power industry, electrical engineering, and electronics; energy- and resource-saving technologies; household electrical appliances, and so on. ELEKTRO-2013 annually hosts on its premises over 500 companies from all over the world, which allows its participants to establish new connections and build close commercial collaboration at the international level.

Leading exhibition and conference on using and generating solar power: Intersolar Europe 2013
June 19–21, Munich, Germany
The exhibition of technologies for the solar power industry first opened its doors in 1991. Since then, its popularity all over the world has only been growing. Devices for converting solar and light energy into electrical energy, solar energy heating technologies, and achievements of solar energy-based architecture will be the key exhibits of Intersolar Europe 2013.
Fifth international exhibition of the solar power industry: SOLARCON India 2013
August 1–3, Bangalore, India
SOLARCON India is showcasing new solutions, innovations, and technologies of the energy sector of the future – generation of renewable energy. This year, the main theme of the exhibition is generating and utilizing solar power to provide hot water and heating for low-rise and high-rise buildings.

Sixth international exhibition of industrial electrical equipment and technologies: Vietnam ETE 2013
July 24–27, Ho Chi Minh City, Vietnam
Vietnam ETE will feature the entire spectrum of electrical and power equipment and technologies: from electric power plants to office equipment by famous international brands. The exhibition’s program includes a specialized conference on the development strategies for the power sector and electrical engineering industry, B2B forums, demonstrations of new technologies and new products of the industry, and business tours. The event’s participants will be offered an opportunity to visit electrical equipment manufacturing facilities of the factories and power plants located in the southern part of Vietnam.

International exhibition on renewable (wind) energy: Guangzhou International Wind Energy Exhibition – GZWEE 2013
August 19–21, Guangzhou, China
GZWEE is one of the popular exhibitions in the area of utilizing wind energy. The exposition floor space this year will amount to 30 thousand sq. m; the exhibition will feature equipment for power systems, wind turbines, control and measurement equipment, and many other items. Within the scope of the exhibition, a conference dedicated to trends and prospects of development of the wind power sector will also be held.

Exhibition and conference devoted to hydropower industry: HydroVision International 2013
July 23–26, Denver, USA
HydroVision is a modern forum bringing together experience and knowledge of leading representatives of the hydropower community. The exhibition does not have a permanent location, and is held each year in various cities in the U.S. This year, it is held in Denver. Within the framework of the event, there will be demonstrations of innovative technologies and solutions for the hydropower industry. Companies operating in this industry, as well as scientific and design organizations, government authorities, financial institutions, and investors will take part in the exhibition and the conferences held on its platform.

Interregional conference of the fuel and energy sector
August 19, Moscow, Russia
The main theme of the conference this year is implementation of the Federal Law “On Heat Supply” and the associated problems. Conference participants plan to discuss mechanisms for improving efficiency of the market for energy resources. It is expected that the discussion will result in submission, on behalf of the industry communities, of proposals regarding laws regulating operations of the companies in the heat and energy sector specifically, as well as the market’s functioning as a whole. The event will take place with support of the Ministry of Industry and Trade of the Russian Federation.
Solar Impulse, an experimental solar-powered aircraft, has made its first cross-US flight out of the five scheduled ones. The aircraft piloted by the Swiss Bertrand PICCARD and André BORSCHBERG flew from San Francisco to Phoenix, Arizona, which took 18 hours and 18 minutes.

The aircraft is equipped with four engines powered by nearly 12,000 silicon solar cells. They are mounted on horizontal surfaces of the wing and the stabilizer. It is no wonder that the plane has a wingspan similar to Boeing 747 (nearly 64 meters). The aircraft can fly day and night, because the energy accumulated during the daytime is stored in lithium-ion batteries.

The Solar Impulse project was launched in 2003 and is conducted by the Swiss Federal Institute of Technology in Lausanne. Over the past ten years, EUR 100 million have been on the project.

Successive legs of the flight will take Solar Impulse to Dallas, Saint Louis, Washington and finally New York. In each of these cities, the pilots will be waiting for solar weather.
### Annual general meetings of shareholders for key companies of the industry

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<td>Mosenergo (TGC-3)</td>
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<td>E.ON Russia (OGK-4)</td>
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<td>Bashkir Grid Company</td>
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<td>Yenisei TGC (TGC-13)</td>
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<td>Kuzbassenergo (TGC-12)</td>
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<tr>
<td>Moscow Power Supply Company</td>
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<td>Russian Grids</td>
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<td>SIBECO</td>
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<td>Tambov Power Supply Company</td>
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<td>Volga TGC (TGC-7)</td>
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<td>TGC-6</td>
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