

# Restructuring the Power Industry in Russia

By Jim Balaschak, Managing Partner Consulting, CIS Leader Energy & Resources, Deloitte CIS\*

## A Brief Overview

Electricity giant RAO United Energy System of Russia (UES) recently stated: "During the reform years most problems concerning the implementation of the structural reform were practically solved."<sup>1</sup>

Indeed, over the last five years the Electric Power Industry of Russia has undergone radical changes. The primary stages of the reform plans, blueprinted in 2000 and initialized in 2003, appear to have succeeded. The plan to privatize the essentially competitive element of the electricity market (generation and supply) has almost been finalized with the registration of six wholesale thermal generating units (WGCs), one hydro generating unit and 13 of the 14 territorial generating units (TGCs) under the state registration procedure. Moreover, shares from Mosenergo (TGC-3), TGC-4, TGC-5 and TGC-6 and WGC-3, WGC-4, WGC-5 and WGC-6 were admitted to the stock exchange in 2006.

The creation of a competitive power market remains one of the main objectives of the reform process. An end to subsidies and to match prices to actual costs continues to form a primary element of the reform agenda. Previously under RAO-UES of Russia, the system for deciding and fixing prices on the wholesale market was "obsolete and did not encourage price reduction." As a result, electricity prices were "too low and did not often compensate even for the production costs."<sup>2</sup> The proposal to reorganize the power industry conceived what the Ministers of Energy hoped would not only be a modernization of the industry, but would aim to avoid repetitions of fuel shortage disasters such as those witnessed, particularly by Siberia and the Far East, during the years after the collapse of the Soviet Union, especially during the winter of 2001 and in Moscow during the summer of 2005.

The success of the power sector reform continues to be gauged by the formation of a liberalized and

competitive electric power generation market and by the achievement of the following measures:

- The formation of a new legislative framework
- Restructuring the holding of RAO-UES, of which the state owned 52.7 percent in 2005
- Introduction of a new pricing mechanism in the wholesale market; local marginal prices instead of blanket (weighted) average prices
- Improvements of state regulation of prices in the spheres of the natural monopolies they control

So far, the reform has succeeded in unbundling several of the former Energos assets into the 14 territorial generating companies and seven wholesale generating units (six thermal; one hydro), which are established under dispersed ownership.

The six thermal WGCs have approximately the same installed capacities of 8.49-9.53 gigawatts (GW). Of the TGCs, the biggest by far is Mosenergo (TGC-3) with an installed capacity of 10.6 GW, which is a 5 percent share of Russia's entire installed electric capacity (GW). Mosenergo supplies 65 percent of electricity in the Moscow region. Russia's entire installed electric capacity is 212 GW.<sup>3</sup>

State-owned companies have been established to handle:

- High-voltage grids: Federal Grid Company (FSK)
- Power trading: Trading Systems Administrator (ATS)
- Dispatch of electricity and heating market: System Operator (SO)

The legislative framework has been put in place. In March 2003 the Duma and Presi-

\* Published in the Doing Business in Russia section of the American Chamber of Commerce in Russia website.

<sup>1</sup> "Information Bulletin: RAO UES of Russia Restructuring Process", No. 33, Quarter II, 2006 <[http://www.rao-ees.ru/en/reforming/info\\_bull\\_pdf/q2\\_2006\\_eng.pdf](http://www.rao-ees.ru/en/reforming/info_bull_pdf/q2_2006_eng.pdf)> p.7 15.08.2006

<sup>2</sup> S.I. Palamarchuk and N.I. Voropai, "Power Industry in Russia: Current State and Restructuring" <<http://conference.epri.ac.cn/t-d2005ap/speech/PL2-4.pdf>>, (2005) p.3 15.08.2006

<sup>3</sup> "Mosenergo Regional Generating Company" presentation of May 2006, p.3 <[www.mosenergo.ru/eng](http://www.mosenergo.ru/eng)> 15.08.2006

dent Vladimir Putin enacted a new State Law On the Power Industry, which aims to legislate market relationships and intends to facilitate the amelioration of market efficiency. The Federal laws On Electric Power and On the Peculiarities of Electric Power Functioning during the Transition Period dictate electric power reformations in Russia.<sup>4</sup>

The Electric Power Industry of Russia has indeed undergone radical changes. As promised, the competitive elements of the market have been privatized while the natural monopolies have remained in the hands of the state. Additionally, a transparent legislative framework has been installed to protect the development of a competitive, open market. But, despite these vast advancements, is the perceived "Power to the People" still something of a distant dream, perhaps even a mirage?

### The Current State of the Reform Process

Russia has the world's seventh largest population, with around 140 million consumers.<sup>5</sup> Power consumption is growing every year, and the system is already working at 100 percent capacity.

As aforementioned, in order to improve transmission capacity and stabilize the Russian power sector it is necessary to create a competitive electric power generation market. Thus, during the implementation of the reform the Russian government decided that effective reform depended on the separation of liberalized markets and state-controlled monopolies, which include Russia's entire nuclear generating capacity.

However, not only does the state now own and manage the Russian Rosenergoatom (producer of nuclear energy),

but also maintains control of HydroOGK (producer of hydro energy). These are the giants of Russian generating companies. HydroOGK has an installed capacity of 23.31 GW, while Rosenergoatom has an installed capacity

of 23.24 GW. The average installed capacity of the six WGCs is 8.845 GW. Even with privately owned Mosenergo's installed capacity of 10.6 taken into account, the total installed capacity of the competitive generation markets in Russia amounts to 63.67 GW – 30 percent of Russia's entire installed electric capacity. HydroOGK and Rosenergoatom alone have an installed capacity of 46.55 GW or 22 percent of Russia's entire installed electric capacity. Add to this all of the state-controlled monopolies, and the Russian State owns upward of 70 percent of the entire Russian installed capacity. Therefore, in reality, the government only allows for the privatization of around 30 percent of the electricity generation market. With this in mind, where is the promised liberalization?

Moreover, despite promises in 2003 to draw up legislation which would create a transparent regulatory framework, the separation between state and judiciary remains opaque.<sup>6</sup> While the new legislation is transparent in theory, it is not necessarily the case in practice. Russian politics are cited as responsible for the continuing air of mistrust directed towards the legal apparatus of electrical privatization. The Russian Government wishes to retain a majority stake in the activities of the power industry. In hydro-generation, the government will own 75 percent of holdings plus one share (51 percent at minimum) in order to control the retail prices. This smacks of monopoly, and potential investors agree.

The main problem facing the Russian Power Industry at the moment is the need to attract investment, both foreign and domestic. Financial injections are needed due to the condition of the aging generating and transmitting facilities and for the development of the market infrastructure. As Julian Evans notes in *The Times* (UK), it is essential for the industry to raise billions of dollars from investors to "prevent possible collapse of Russia's electricity system."

Dmitri Vasiliev, deputy director of the energy generator Mosenergo in Moscow, describes the need for investment as "dramatic."<sup>7</sup>

In order for Russia's power sector to be attractive to investors it is essential for the government to provide assurances to potential investors. According to Russia's Energy Strategy, \$50 billion in new investment is estimated to be required over the next five years to bring Russian facilities up to modern standards, 30 percent of which is expected to come from foreign investment.<sup>8</sup>

<sup>4</sup> Monpromenergo, "About the way of Power Industry Reforming" 14.06.2006 <<http://www.minprom.gov.ru/eng/appearance/17>> 17.08.2006

<sup>5</sup> Michael Cuthbert, "Investors must learn that Russia isn't all gas and gushers" in *The Times* 03.07.2006

<sup>6</sup> Michael Cuthbert, "Investors must learn that Russia isn't all gas and gushers" in *The Times* 03.07.2006

<sup>7</sup> Julian Evans, "Russians set to seek power from foreign offerings" in *The Times* 09.06.2006

<sup>8</sup> "The European Commission's Delegation to Russia — Energy" <[http://www.delrus.cec.eu.int/en/p\\_217.htm](http://www.delrus.cec.eu.int/en/p_217.htm)> 16.08.2006

Fundamentally, this includes the provision of economic stability, financial transparency, effective systems of investment insurance, reliable and clear legislation and predictability and stability of state policies.<sup>9</sup> However, foreign investors not only remain skeptical as to the transparency of the regulatory and judiciary system governing the Russian electrical companies, but are increasingly concerned by the monopolies that companies like Gazprom, which holds 20 percent of the world's gas, are attaining. The problem is, as The International Energy Agency has drawn attention to, Gazprom's policy of "spreading into other markets and sectors, including oil and electricity, instead of concentrating on its core activity – producing and exporting gas".<sup>10</sup>

RAO UES of Russia has suggested that the company intends to attract more private investment in thermal generation by issuing additional shares of WGCs and TGCs. According to the publication "Information Bulletin" (QII, 2006), "Shares will be either publicly offered on the stock market or privately placed among strategic investors."<sup>11</sup> The latter seems to be the presently favored course of action. At the moment, the main players on the new market will be strategic investors, such as gas, coal, aluminum, and chemical companies since they consume a lot of energy.

It seems that these strategic investors will become the main players on the new market. Thus, investment in the privatized thermal resources is open to the open market. However, the problem which investors face is with the natural monopoly stakes currently held by the government. The state's attitude towards the European market was demonstrated shortly before the G8 Summit, when President Putin likened Russia's oil and gas reserves to a boy holding a sweet. In the allegory, the boy asks the other children what they will give him for his sweet.<sup>12</sup> This is indicative of President Putin's use of Russia's energy resources as a linchpin to Russia's geopolitical position and role in international affairs. Investors, especially international, are dissuaded from financially committing to the Russian power sector because of the way in which the government seems set to elbow out the major consumers.

## Pricing Mechanism

An important factor for the success of the electricity reforms in Russia depends upon the restructuring

of the electricity markets themselves. When reforms were planned and set into action four to five years ago, they were supposed to provide electricity producers and customers either an opportunity to "participate on the spot market" or "arrange bilateral forward contracts for electricity delivery."<sup>13</sup> Unfortunately, the greatest impediment that remains for the restructuring process today is the persistence of the weighted average pricing mechanism. Like their American counterpart, the Russian Government wants to keep the public happy by avoiding energy price hikes. As a result, there are continued debates over the regulations surrounding the pricing mechanism. Universally the price of gas is on the rise, yet the weighted average pricing mechanism still employed by the Russian Power Sector fails to reflect actual cost of electricity, which should be formed on a demand and supply basis. The regulated tariffs only apply to the consumer market. The wholesale market does operate on a marginal pricing mechanism, although the effect of this leads producers to be out-of-pocket, thus eliminating the incentive to increase output efficiency. A weighted average needs to be developed into a marginal cost at a consumer level otherwise there will be no incentive for those working in the energy sector to become more efficient. As it stands, 85 percent of prices remain regulated in Russia, although there are plans to liberalize 5-15 percent of the market each year. Predictions forecast the market to open at 10-12 percent annually. Predictions are that the whole privatization process will take five to seven years.

On that note, consider that John Kenneth Galbraith once stated, "In economics, the majority is always wrong." While clearly facetious, it might be worth bearing these words in mind before deciding that a deregulated market is optimal because the West says it is. When considering the power blackouts in California in 2001, or the fact that the United Kingdom is working at overcapacity, one should perhaps beg the question, is de-regulation truly the best way? This is not to say that de-regulation or to offer an alternative pricing mechanism is wrong but that those

<sup>9</sup> Doing Business with Russia's Electric Energy Sector ed. Marat Terterov (2004)

<sup>10</sup> Arkady Ostrovsky, 'Skeptics remain over Russia's bid to woo EU on energy' in The Financial Times Jul 06 2006

<sup>11</sup> Information Bulletin: 'RAO UES of Russia Restructuring Process' No. 33, Quarter II, 2006 <[http://www.rao-ees.ru/en/reforming/info\\_bull\\_pdf/q2\\_2006\\_eng.pdf](http://www.rao-ees.ru/en/reforming/info_bull_pdf/q2_2006_eng.pdf)> p.6 15.08.2006

<sup>12</sup> Arkady Ostrovsky, 'Skeptics remain over Russia's bid to woo EU on energy' in The Financial Times Jul 06 2006

<sup>13</sup> S I Palamarchuk and N I Voropai, "Power Industry in Russia: Current State and Restructuring" <<http://conference.epri.ac.cn/t-d2005ap/speech/PL2-4.pdf>>, (2005) p.5 15.08.2006

who pass swift criticism on the electricity sector reforms in Russia based on the continuation of a weighted average pricing mechanism at a consumer level should be restrained.

## Conclusion

Over the last five to six years the Russian energy sector reforms have made huge progress. However, it is worth considering the latest statements to be issued from the Kremlin in order to gauge the degree of success with which the RAO-UESR reforms have been implemented. On Aug. 19, 2006, RAO-UESR CEO Anatoly Chubais warned of an electric power supply shortage that would threaten dozens of regions in Russia. Thus, Russia's electricity sector is still facing chronic revenue shortages, which has been blamed on the government regulated tariffs.

Despite these warnings, however, the reforms are continuing to be implemented, and rapid progress is being made. Foreign investment is still desperately needed, which is impeded by Western fears about the lack of sufficient guarantees on tariff regulatory reform. The government needs to work

hard on its image, and to do this, it must instate a reliable and independent judiciary system which will protect the interests of shareholders. However, the fact that Italian wholesale traders ENEL have just invested \$100 million should be an encouraging sign.

While the RAO-UESR reforms still have a long way to go, the progress to date is encouraging. Although there must be a recognition that the government will continue to hold a majority stake in the electric resources of Russia, potential investors should understand that there are good opportunities available. The shortages warning by Chubais, a potential sign that the reforms are decidedly lackluster, will be taken up by the private sector of Russia's energy market, but allowances must be made for the still early stages of this re-structuring process.

In conclusion, there is still much work that needs to be done in intensifying the legal apparatus that supports the reforms and in dispelling the skepticism of potential foreign investors. Thus, while the forward-thinking energy sector reformers have much to congratulate themselves for, the champagne still needs to be kept on ice. □