## PREFACE

This monograph is part of the "Whither Russia?" series of publications produced by the Strengthening Democratic Institutions Project (SDI), based at the Belfer Center for Science and International Affairs (BCSIA) at Harvard University's John F. Kennedy School of Government. Funding for this series has been provided by the Carnegie Corporation of New York.

The aim of the "Whither Russia?" series is to illuminate for the international community the ongoing debate in Russia about the country's identity, security and interests. This monograph seeks to illustrate the environment and prospects for sustainable economic reform in Russia, through a case study of Mr. Brevnov's experiences as CEO of Unified Energy Systems, the Russian power company that operates the world's largest energy grid. Key questions addressed in the report include the role of management, the impact of government policy, the role of Western experts and assistance, and prospects for future change. The monograph makes a significant contribution to an understanding of the political context for economic reform in Russia, and the factors influencing prospects for success of such reform. Its conclusions offer lessons and suggestions for the process of implementing effective economic reform programs in the framework of Russia's emerging market economy and democracy.

The author of the monograph, Boris Brevnov, is currently a Vice President with Enron Communications. His work on this report was conducted while a Visiting Scholar with SDI in September 1998, under the auspices of SDI's "Whither Russia?" Program. Mr. Brevnov was assisted in the preparation of the monograph by Cameron Half, then a Research Assistant with SDI specializing in business and foreign investment in Russia. Mr. Half completed work on the project while a J.D. candidate at Harvard Law School.

In our efforts to present Western scholars and policy makers with the broadest range of views within Russia and the former Soviet Union, the SDI Project solicits a range of opinions on highly controversial topics. The opinions expressed in our "Whither Russia?" series are those of the authors and do not represent the views of Harvard University, the Belfer Center for Science and International Affairs, the Strengthening Democratic Institutions Project, Carnegie Corporation of New York, or translators and editors.

**Graham Allison, Director**
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# Introduction

Few have challenged the assertion that Russia has the potential to be an extremely wealthy country. It has access to vast quantities of natural resources, as well as a highly developed technological and industrial base, and an educated and skilled population. In order to meet this potential, Russia must effectively mobilize and manage these resources and exhibit sufficient political will in order to join the global economy on an equal basis. Observers and analysts of Russia continue to ask whether Russia will succeed in adopting 'normal' Western business practices and models, or whether it will remain mired in a pseudo-capitalist "virtual economy," in which traditional economic levers and incentives are handicapped by a vicious circle of irrational business practices.[1] Russia is now trapped in the middle of this transition process, not yet having fully adopted market management and self-regulation, but still retaining many of the trappings of the former state-owned and controlled system. The country is thus in a precarious position, unable to move to greater integration with the global economy while simultaneously destroying the very foundations on which it could make such a move.

In the early years of post-Soviet economic reform, the direction appeared clear: that Russia was heading—albeit more slowly and with too many compromises than some liberals might have liked—towards successful reform. General trends in key macroeconomic indicators, particularly inflation and the exchange rate, were positive, and Russia possessed a developing system of financial markets. However, failures in these same areas led to the August 1998 financial crisis, including devaluation of Russia's currency and default on domestic debt obligations. Since August 1998, the questions about Russia's ultimate direction—whether it can successfully take a place among the world's major economies—have taken on renewed importance. The past year's Bank of New York scandal[2] and allegations of money laundering by Russian elites have raised further questions about the environment in which such changes occur.

The initial rounds of Russian economic reforms ushered forth a round of optimism which reached its peak in early 1997. Well-respected economists such as Anders Aslund, Richard Layard, and others optimistically wrote about Russia's success and progress in moving towards a Western-style, liberal market democracy.[3] Domestically, this period was the heyday of the 'young reformers,' who were able to take advantage of the changing conditions within Russia to take concrete steps towards the development of a Western-style market economy. By August 1998, however, it became evident that this optimism was somewhat premature, if not entirely misplaced. Behind a façade of success, little had changed. Despite attempts to implement 'reform' policies, the general environment in which firms operated and individuals engaged on an everyday basis remained flawed, and the nature of the Russian economy was little changed.

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[1] The thesis of Russia as a "virtual economy" has been presented by Clifford Gaddy and Barry Ickes. They argue that fundamental market elements of prices, sales, wages, taxes, and budgets in Russia are illusory, and that the economy is characterized by a cycle of barter and artificial pricing which distorts economic priorities and renders traditional indicators of economic performance worthless. See Clifford G. Gaddy and Barry W. Ickes, "Russia's Virtual Economy," *Foreign Affairs* 77(5) September/October 1998: 53-67.

[2] High-ranking individuals at the Bank of New York have been charged with facilitating money-laundering by Russian businesses. See for example Timothy L. O'Brien, "Bank of New York Ex-Employee Charged in Russian Cases," *The New York Times*, 1 Dec. 1999: A8.

[3] See Anders Aslund, *How Russia Became a Market Economy* (Washington, D.C.: Brookings Institution, 1995) and Richard Layard and John Parker, *The Coming Russian Boom: A Guide to New Markets and Politics* (New York: Free Press, 1996).

As a result, the earlier optimism has been replaced by a greater pragmatism, and, in many regards, uncertainty regarding Russia's future direction.

In this environment, firms operate seemingly in ignorance of market forces, delivering goods manufactured by unpaid workers to customers on a barter basis using inputs paid for with services. The sort of rational decision making which is a central characteristic of a market economy is absent. Potential foreign investors and others seeking to tap Russia's vast resources are repeatedly confounded by a lack of transparency and what often appears to be a belief that business transactions are entered into on a zero-sum, rather than mutually beneficial, basis. Rather than restructure to capitalize on market forces, Russian firms have only readjusted, in order to maintain the status quo under new conditions while adopting the outward trappings of market-oriented firms. True economic restructuring and reform has, for the most part, not occurred at anything other than a superficial level.

Some Russian firms—particularly small and medium-sized enterprises—have made noteworthy advances creating the foundations for future economic growth. Even some larger enterprises, for example Baltika brewery and Severstal Steel,[4] have successfully capitalized on opportunities in domestic markets, or reoriented production towards exports. They have become more efficient and responsive to market conditions. These firms, though, are the exceptions. Much of Russian industry remains mired in the legacies of central planning, characterized by massive wage and tax arrears, a reliance on barter commerce, overstaffing, involvement in non-core business operations, and a general lack of adherence to market forces or incentives. Adam Smith's "invisible hand" is so invisible that it is nowhere to be found.

The limited success experienced by many Russian firms raises the question of the extent to which economic reforms and change is in fact possible. In particular, one may ask whether expecting former Soviet businesses to adopt the standards of accountability, transparency, and market oriented activities which will promote interaction and engagement with the remainder of the world is reasonable, and if so, how it can be accomplished. The answer to this question will be of increasing importance to those who seek to work inside and with Russia as the recently unsettled political climate—which has seen four prime ministers in 18 months, resurgence of the war in Chechnya, and increasing power struggles throughout the 1999-2000 election season — again settles, and the focus of the world community can shift from Russia's geopolitical role to its role in the world economy. Many major Western firms await an answer to this question, and in the interim have put their operations and investments—and, as a result, significant opportunities for Russia and the Russian people—on hold.

**Case Study: Unified Energy Systems**

To better illustrate the possibility for this sort of change, and the conditions under which it is possible, it is useful to examine the experiences of one Russian firm, and in particular one of Russia's "marquee" firms. Unified Energy Systems of Russia (UES) is one of Russia's largest firms, and dominates the Russian electricity market. Through its ownership of Russia's electrical power grid, UES policies and actions have some impact in all 89 of Russia's regions—and events in all 89 regions have some impact on UES. As the largest single generator of electricity, it has a great deal of influence over nationwide business affairs. Given the legacy of Communist central planning, its role as a provider of basic and vital services—electricity and heat—to Russian businesses and consumers means that its activities are subject to considerable regulation and oversight at local, regional, and national levels. UES also has the ability to export

[4] For a discussion of Baltika and Severstal, see *Russia Review* 5(20) December 1998.

its surplus production to markets in the CIS, Western Europe, and Asia through wholesale electricity sales, suggesting a possible motivation for pursuing a market-oriented policy, but management has demonstrated little enthusiasm in pursuing such opportunities. UES is also one of the Russian enterprises which might be considered 'too big to fail'—a firm which is so central to everyday life and business that bankruptcy or shutdown are not realistic possibilities, thereby enabling its management to operate with a certain degree of impunity.

UES has followed a mixed reform path, away from its virtual economy origins and towards reforms which would support a more market orientation. Privatization started in 1992 and UES is now one of the most liquid and highly publicized stocks on the Russian stock exchange. At the same time, UES has failed to carry out the sort of restructuring of its operations which would enable it to capitalize on its vast resources and nationwide network to transform it into a power company capable of competing internationally and becoming a major regional force in power generation and transmission in the former Soviet Union and Eastern Europe. The successes and failures of UES thus serve as an excellent illustration of the challenges which face Russian businesses in their attempts to reorient to a true market economy.

The UES example also illustrates the broader realities of Russian economic reform. As the changes within Russia produced a nationwide surge of optimism and release of constructive energy, it appeared to be possible to implement significant changes at UES. When I joined the company as First Vice President for Restructuring and Finance in March 1997, at the height of this period of optimism, UES greatly resembled its previous incarnation as the Soviet-era Ministry of Energy; few real changes had occurred, except that the reduction in centralized planning permitted more opportunities for personal advantage and theft. I was optimistic that I could alter the situation, and change the company from a barely-reformed Soviet style Ministry of Energy into the sort of truly modern, market-oriented company which could serve as a model of the Russian economy. Just over a year later, political struggles forced my resignation, leaving much of this work still incomplete.

The successes of this period demonstrate that it was indeed possible to move even the largest of Soviet-era monopolies in a market direction. Among the most visible measures of success were increasing cash collections from 5% to 30%; introducing audits according to international standards; reforming the electricity tariff (rate) system; restructuring the firm's management and corporate governance; and implementing a true cash-based wholesale electricity market for Russia. Examination of my work at UES, and in particular why my efforts met with only limited success, will help to illustrate both the relationship between political reform and business in Russia, and also the possibilities for future change.

**Overview**

The following assessment of events at UES from March 1997 until April 1998 draws on my personal experiences and observations while working at UES during this period, initially as First Vice President for Finance and Restructuring, and then from April 1997 as Chief Executive Officer. It is my hope that my inside perspective will offer the reader an insightful and illustrative account of the processes at UES and its significance in the overall context of Russian economic reform.

The account starts with an assessment of the state of UES and its operations in early 1997, when I first joined the firm as First Vice President for Finance and Restructuring. It will discuss the reform processes and programs at UES. Finally, it concludes with an assessment of key lessons regarding the Russian reform process and business environment, including

opportunities for reform, the role of management and leadership, and the impact of broader political variables on the reform process.

Throughout, the report seeks to emphasize the conditions and reactions surrounding the overall reform effort at UES. The principal conclusion of this analysis—and the greatest lesson for the reform process—is that implementing a market reform program in a non-market economy requires consensus and support at all levels of leadership. When the support begins to erode or is incomplete, reform becomes increasingly difficult. Without an internal and external environment which is supportive of or at least receptive to change, attempts to reform are likely to fail, regardless of exhortations or expectations to the contrary. Given a sufficiently supportive environment, however, there is no reason why Russian firms cannot seek the same management structures and practices which drive the world's leading companies, and the Russian economy cannot take on a role befitting Russia's great wealth and resources.

# Part 1
# Truly Unified? Overview of the Russian Power Industry

Anyone examining the Russian power industry in 1997 could see that restructuring was imperative. While no longer the domain of the Ministry of Energy, as prior to 1992, in practice little had changed. Reforms since 1991 had 'bolted-on' certain trappings of a more market-based Western model to the former state monopoly system. Power generation, transmission, maintenance, construction and distribution were nominally the purview of over one-hundred privatized firms, but in fact the operations of these firms were still subject to state control and direction, and most were majority-owned by the holding company Unified Energy Systems (UES). Almost universally, these privatized firms paid little heed to the sorts of 'bottom-line' considerations which corporations (even regulated monopolies) typically pursue.

The privatization process which had shifted operational control of the power sector from the Ministry of Energy to UES succeeded in ending direct state involvement in everyday operations. In reality, however, the government had merely adopted a few trappings of private enterprise, sold off (mostly non-controlling) portions of some assets, and otherwise continued to operate much as it always had, leaving the prevailing practices and attitudes in the industry virtually unchanged. In the absence of competition, preserving resources and maintaining the status quo took precedence over profits, efficiency, or other more market-based incentives and objectives. As a result, the sector as a whole was unable (or unwilling) to anticipate or react to crucial problems and challenges, as each individual entity sought to preserve its own viability and position.

In order to illustrate better these conditions, and how they impacted the overall reform process at UES, this section will discuss the operations of the Russian power sector and the nature of some of the key actors. It begins with an overview of the sector, including the highlights of the reform process since 1992 and the role and operations of UES—by far the largest and most important player—within that sector. Throughout, the focus is on the background and managerial conditions and processes, and the possibilities for reform and change which existed in that environment.

**The Russian Power Industry**

The creation of the Soviet energy and power network was one of the central elements of industrialization. The current network was formed as the Integrated Power System of Russia between the 1960s and 1980s, and synchronizes six of Russia's seven energy zones; only the Far Eastern zone operates independently. This network transports electricity across Russia from generation facilities to meet local demand. Supplies of electricity throughout the system are generally quite reliable and predictable. While electricity production declined by 22.8% between 1990 and 1997, in the context of a 54.3% drop in overall industrial production, the power sector has in fact performed relatively well. As a result, the share of the power industry in GDP increased from 3.4% in 1991 to 7.4% in 1997.[7] This relative growth may be attributed to the growth of the Russian service sector vis-à-vis industry, increases in residential usage due to both increased operation of consumer electronics and electric appliances, and a regulatory and pricing

[7] Adam Smith Institute, "UES: Time for Radical Reforms," *Capital Markets Report* 20 July 1998, reprinted at http://www.securities.com.

system which kept tariff increases below the rate of overall inflation[8]—thereby increasing the effective subsidy to consumers of electricity. The low rate of tariff increases has also occurred at the expense of capital investment, placing increasing reliance on a capital stock which is nearing the end of its planned service life.

Partly as a result of this decline in production, the sector possesses a significant excess capacity of nearly 50%. Total generator capacity in the system is approximately 210 GW. While in one respect an asset, in that it presents great opportunities for export and otherwise seeking new markets, this excess is also a liability, as the industry does not face urgent pressure to restructure in order to maintain the minimum necessary level of service.

*Structure*

Reform of the Russian power sector started in late 1992 with a series of Presidential decrees which were intended to implement a plan originally developed under (former acting Prime Minister) Yegor Gaidar. This plan, which was to have taken three to five years for full implementation, called for the state to retain ownership of the national power grid and dispatching system, and for regional utilities and federal generation capacity to be privatized.

The operational concept was developed with the support of multinational organizations, including United States Agency for International Development. It called for the creation of a national wholesale market based on competitive generation, particularly on experience gained in the deregulation of the United Kingdom and Northern European power markets. UES was to act as the overall supervisory agent for the power system, coordinating overall operation; providing and servicing the transmission network; directing nationwide dispatching; and owning and operating hydroelectric generation facilities. Regional electric utilities ("energos") would have responsibility for generating electricity and heat in their respective regions, purchasing energy through the wholesale market to cover shortfalls in their own generation capacity, and providing distribution and other services to end-users.[9] Other generation facilities (those not part of the regional utilities) were to be privatized. Full implementation of these reforms would have greatly improved efficiency and lowered costs through competition. It was hoped that the resulting system would be able to attract domestic and foreign capital investment, which was in turn needed to finance modernization and capital investment to ensure the long-term sustainability of the system, to improve service to end users, and to develop new export markets.

Implementation of this ambitious reform plan was, almost immediately, short-circuited by political compromises between reformers and incumbent leadership. The Minister of Energy, CEO of UES Anatoly Dyakov, and other senior officials were able to manage the reform process to protect their own interests in the system. As Soviet bureaucrats, they had been schooled in the practices of running a ministry, not a private enterprise, and were most comfortable operating within the confines of that system. Perhaps understandably, they were resistant to changes which may have limited their own authority or called into question their fitness to manage the firm in the new market environment. As in many other Russian firms, Dyakov and other senior officials viewed privatization sales as attempts to sell-off the ministry which was their personal fiefdom; these sales diminished their own influence and importance. They also had a more accurate understanding of the firm's finances than USAID and the consultants, and therefore

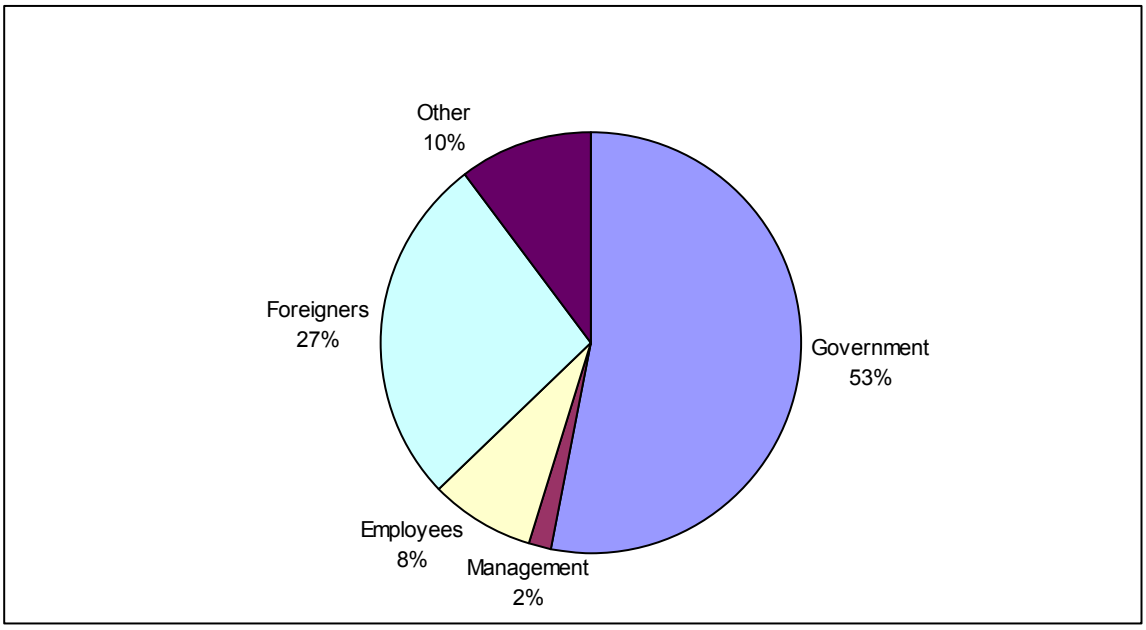
[8] Merrill Lynch Global Securities Research and Economics Group, *Unified Energy Systems: Big is Beautiful*, August 1997: 11.

[9] See for example Hagler Bailly Consulting, Inc., *Recommended Plan for the Continued Restructuring and Privatization of the Russian Power Industry* (July 1995).

understood the disaster which would have resulted had they been forced to operate at once in a truly competitive market environment, rather than being able to maintain as many of the Soviet practices as possible. When combined with a lack of government direction or oversight, these officials had nearly free rein to manipulate the process to serve their own interests.

As a result of this managerial 'interference' in the privatization process, the original decrees on industry restructuring almost immediately experienced a "First Correction." This "Correction" left control of the dispatching, transmission, and generation networks with UES instead of the separate, competitive generation operations. A subsequent "Second Correction" further postponed the full privatization of the regional energos, and delayed the reduction of the state share in UES below 50% until (initially) at least 1998, instead of the original target of late 1995. The privatization sales themselves did proceed approximately as planned; the state originally retained control of 79% of the total shares (83% of common shares, as 5.3% was non-voting preferred stock), with subsequent sales of 15% for vouchers during 1995 and 11% for cash in January 1997. By March of 1997, the Russian government owned 53% of UES, and foreign investors owned nearly 27%;[10] the balance was held by management, employees, and others (See Figure 1.1).

**Figure 1.1: UES Ownership, March 1997**[11]




UES stock was one of the Russian 'Blue Chips,' and the most widely traded and most liquid on the Moscow Stock Exchange. The issuance of American Depository Receipts through the Bank of New York, originally scheduled for late 1996 but never completed, would have further increased foreign ownership and the stock's importance, as well as foreign visibility. Even as these privatization sales gave non-government shareholders some interest in the firm, they were not accompanied by significant minority shareholder rights; the non-majority owners

[10] RMG Securities, *RAO UES: Electricity Production and Distribution* March 1997, reprinted at http://www.securities.com.

[11] Figures from RMG Securities, *RAO UES: Electricity Production and Distribution* March 1997, reprinted at http://www.securities.com.

had little control and influence over the composition of the Board of Directors, and an amendment to the firm's charter which was passed at the May 1996 annual meeting limited new shareholders to 1% of the total voting rights, regardless of their actual levels of ownership.

As a result of these 'Corrections,' instead of being the product of progressive, comprehensive reforms over a seven to ten year period, the system which ultimately took shape was far less cohesive. The principal elements were the national holding company, United Energy Systems; 72 regional power companies (energos); and Rosenergoatom, a holding company for Russia's nine nuclear power plants. UES controlled the national transmission and dispatching networks; owned and operated large power generation plants; had significant ownership stakes in 70 of the regional energos; operated various other subsidiaries (see Figure 1.2). UES was also charged with implementing a unified electricity supply policy for Russia, by managing the activities of the energos at an operational level as well as in shareholder and board of directors meetings—but notably not through any form of direct operational control. UES is thus a massive firm, directly employing 40,000, and nearly 800,000 with all of its subsidiaries (including the energos). The energos operate local distribution networks and smaller (350 MW or less) regional electricity and heating generation plants. State-owned Rosenergoatom conducts only wholesale sales of the electricity produced by its nine nuclear power plants.

**Figure 1.2: Key UES Assets**

- Ownership (100%) of 22 power generation companies;
- Ownership (100%) of five hydroelectric power facilities;
- Ownership (100%) of seven power facilities, which are leased to regional energos;
- Ownership (100%) of the Central Dispatch Center and six Regional Dispatch Centers, which manage the wholesale transmission of energy;
- Ownership (100%) of Russia's wholesale transmission network, including 146,000 kilometers of high-voltage (greater than 330 kV) transmission lines, 57,000 kilometers of lower-voltage lines, and 120 high-voltage substations;
- Majority ownership (51% or more) in 50 of 70 regional energos;
- Minority stakes (49% in all but three) in 20 additional regional energos[12];
- Significant ownership (25-100%) of approximately 330 construction, repair, research and development, and equipment manufacturing companies;
- Significant ownership of numerous other firms, including banks.

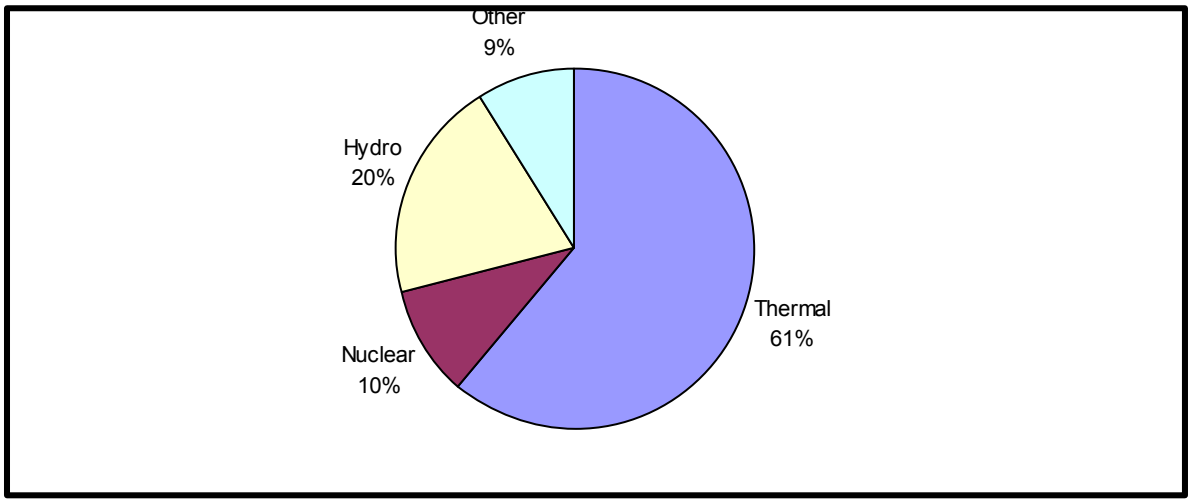
As suggested by the preceding account, UES plays some role in nearly every aspect of Russia's power industry. This role, largely due to the revenue structure, did not bring the same sort of market power or control, which one might expect. UES derives the vast majority (over 90%) of its revenue from electricity transmission. Revenue from transmission ("subscription") fees in 1996 totaled RUB8.2 trillion.[13] On a per kilowatt-hour basis, fees had increased from 0.0625 RUB/kWh in 1993 to 17.16 RUB/kWh in 1996, or nearly 275% in nominal terms—but well below the overall change in the consumer price index from December 1993 to December 1996 of nearly 880%.[14] UES did not receive dividends from its ownership of the energos or

[12] Only Irkutskenergo and Tatenergo are entirely independent of UES, the former having been privatized prior to the creation of UES and the latter being 100% owned by the Tatar State Property Committee.
[13] RUB denotes pre-January 1, 1998 ruble; RUR refers to after revaluation of January 1, 1998.
[14] Goskomstat of the Russian Federation, *Russia in Figures: Concise Statistical Handbook* (Moscow: 1997), reprinted at http://www.securities.com.

generation assets; these generally retained whatever profits they might generate. UES therefore benefited from its holdings only in terms of their intrinsic market value as assets, and not in terms of current cash flow. Thus, UES was most interested in the continued operation of these assets and their use of the transmission network (subscription fees for this use provided current revenue), and not whether they were at all financially viable.

The energos were dominated by local management, including regional administrations and the Regional Energy Commissions (RECs), and UES had few levers by which to counter this influence. In contrast, the energos had a strong interest in management at UES and in keeping subscription fees low, as only seven of 72 energos possess sufficient generating capacity to meet their own needs. The energos which did not have sufficient production capacity of their own purchased the balance wholesale through UES, from the few energos with a surplus, the UES-owned generation facilities, or from Rosenergoatom nuclear generation plants.

**Figure 1.3: Russian Power Generation Capacity**




In this system, UES was concerned with maintaining the flow of electricity through the transmission network, while the energos and RECs which regulated them were concerned principally with keeping retail tariffs affordable and ensuring a steady supply of electricity within their respective regions. These objectives were often at odds, since the only source of revenue growth for UES was to increase transmission fees. Both the energos and RECs opposed such an increase in fees, as in the cost-plus pricing system then in effect it would have meant higher tariffs for end users—to whom the RECs and regional administrations were directly politically accountable. Consequently, as long as the basic system appeared to be functional there was little desire to alter the status quo.

*Regulation*

The power system is regulated by the Federal Energy Commission (FEC), operating in conjunction with the Regional Energy Commissions (RECs). The FEC regulates wholesale tariffs, including tariffs on sales to and from the national power grid, and transmission fees. The RECs set retail tariffs within each region on a quarterly basis, and monitor the operations of the local energo and the provision of electricity and heat. Local administration appoints the members of the REC, meaning that the RECs tend to be closely aligned with regional interests. The RECs set retail tariffs quarterly on a 'cost-plus' basis, calculated as the sum of an allowance

for expected investment, dividends (profit), and other allowable costs (including depreciation, interest, taxes, and social programs). As pressure to keep tariffs low mounted, the investment component was reduced, ultimately hurting the industry's long-term prospects. This differs from the usual practice in the West, in which regulated rates are based on an allowable rate of return for a calculated asset base with the utility free to earn whatever profit is possible within those constraints based on its revenue and cost structure.

The allowed rate structure in Russia also varies by end-user. Household consumers and certain industrial sectors (including agriculture and government enterprises) are heavily subsidized, such that industrial customers generally pay significantly higher rates than residential with further variation across spheres of economic activity. For example, in 1996 industrial customers paid tariffs which were five times those of residential customers; agriculture paid below average rates, and rail above average.[15] In contrast, rates in the West are usually based on usage volume, such that residential customers in fact pay higher rates, since they are the lowest volume customers. While the Russian pricing structure successfully ensured both a steady supply of electricity and the minimum level of investment necessary to sustain operations, it did not provide incentives for efficient or realistic operations. Reasonable rates of return on capital or other standards of corporate performance did not enter into operational calculations, discouraging consideration of efficiency or market rates of return on assets and long-term investments.[16] The primary consideration was securing short-term revenue streams, at the expense of long-term business thinking. Any reform efforts which had long-term payoffs were unlikely to succeed.

**Conclusions**

By 1997, the Russian power industry was an eclectic mixture of Soviet and market structures. UES and the energos were unresponsive to traditional market forces. The system as a whole was on the verge of breakdown, with strikes and power shutdowns looming on the horizon. Changing the existing system at UES, however, was far from a simple matter. The firm was not only large, but immensely political. Its role in transmitting electricity across Russia and its ownership of significant stakes in the energos placed its operations under intense scrutiny by the federal and regional administrations, FEC, RECs, industrial lobbies, and numerous other interest groups. Each group had a strongly vested interest in maintaining the status quo, and it would take strong leadership and determination not to cave in to these pressures. These were the same pressures which had halted previous privatization and other reforms in midstream. Even an activity as simple as finding an office for a new employee was a complicated political maneuver, lest a current employee consider him/herself to be demoted or otherwise slighted, either by being forced to move.

Resolving these problems and making the firm a truly market-oriented entity required developing a comprehensive restructuring and reform plan which would address the system's current shortcomings. Among the necessary elements were building a transparent corporate structure; resolving key issues of financial management; developing and implementing plans for longer-term structural reforms; and increasing transparency and public support. While these were readily apparent to one who conducted a serious, detailed analysis of the power sector, there appeared to be no one willing to take responsibility and risk for this implementation.

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[15] Julie Quist, *Russia's Power Industry: Restructuring Update* (London: MC Securities Limited, 21 April 1997): 3.

[16] For a more detailed discussion of Russian electricity tariff policy, see for example Dresdner Kleinwort Benson Securities Limited, *UES—Company Report*, 7 August, 1998, reprinted at http://www.securities.com.

# Part 2
# Path to UES

My exposure to the problems of enterprise-level market reform in Russia had begun several years previously, in my home city of Nizhny Novgorod. I happened to be in the right place at a time which gave me ample opportunity to apply my natural affinity for business and management. My generation was just completing its formative education at the time of Gorbachev's early efforts at reform, and there was simultaneously a great demand in Russia for open-minded young people not averse to the risks inherent in taking responsibility for and leading some of the changes which were then underway. This was the same mindset which opened the door for the younger generation in Poland, Hungary, and elsewhere. In Russia this group included Boris Fyodorov, Boris Nemtsov, and Yegor Gaidar and his team—those who were eventually to play the leading roles in Russian economic reform. As a result of this set of circumstances, I gained vital experience with local enterprises and politics, and happened to come to the attention of the appropriate individuals when the opportunity at UES arose.

**Nizhny Novgorod**

My hometown of Nizhny Novgorod—also the home of former Prime Minister Sergei Kiriyenko and noted reformer (and former Governor and First Deputy Prime Minister) Boris Nemtsov, among others—at first may seem to be an unlikely place to be a hotbed of Russian reform. During the Soviet period it was known as Gorky, and was closed to most foreigners. It was best known in the West as noted Soviet dissident Andrei Sakharov's place of exile. Despite what one might expect to be a strongly anti-Western environment during the Cold War, I had the good fortune to be enrolled from an early age in Secondary School Number 13, which focused on the study of English, including the literature of Ernest Hemingway, William Golding, and other noted authors.

Other than my background in English, the rest of my early education was typical of the late Soviet period. Following secondary school, I enrolled in Nizhny Novgorod State Technical University, from which I graduated with honors in the notably conservative field of electromechanical engineering; at the time (before 1985) my parents had advised me that there was no future in political science or any other more liberal field. I performed my two years of compulsory military service in a Spetsnaz (special forces) unit in Novosibirsk, after which I returned to Nizhny Novgorod. Following my military service, it was apparent that the Soviet system was undergoing rapid changes, and nearing collapse. At this time, in 1991, I enrolled in the Economics Faculty of Lobachevskii State University. I foresaw that economics, and not engineering, was to be the wave of the future, and I wanted to be properly prepared.

With the support of my fellow students, I was also elected to the regional Duma in competition with local trade union and Komsomol (Communist youth league) leaders in what was a clear demonstration of the pro-reform euphoria and enthusiasm of the day. On the basis of this position, I was soon elected to the boards of directors of several leading regional enterprises, including GAZ, the manufacturer of the Volga automobile; VORP, the Volga United River Transport Company; and Nizhnovenergo, the regional electric utility. Nizhny Novgorod during this time, under the leadership of Governor Boris Nemtsov, was widely hailed in the West as the 'model' of Russian reform.

Partly as a result of my experiences in the Duma and with regional industry, together with several classmates I developed the concept for a bank which would operate according to international standards of transparency and accountability. Backed by local industry, we founded Nizhnegorodsky Bankirsky Dom (NBD) in 1991. NBD participated in numerous programs with international institutions including the European Bank for Reconstruction and Development (EBRD) small and medium enterprise lending programs, which promoted lending to local enterprises, and the EBRD and World Bank Financial Institutions Development Program, which provided technical assistance to selected Russian banks. NBD was also audited by Price Waterhouse starting in 1992, and it actively supported regional investment programs; by 1997, NBD employed nearly 600. NBD also took a leading role in demonstrating that new banking technologies could work in Russia, for example successfully introducing a system of 'smart cards' (stored value cards) which could be used at nearly 250 points of presence in Nizhny Novgorod to pay for goods and services. NBD also established a network of ten automated teller machines, the first in the region.

**Nizhnovenergo**

I obtained my first direct experience with the Russian energy sector while on serving the Board of Directors of Nizhnovenergo. When appointed to the Board of Directors, I initially sought to apply the same standards of real efficiency and openness which I had pursued at NBD. Almost immediately upon joining the Board, I began to press for greater reform and restructuring, and for increasing adherence to true market forces. While I knew that these changes would be neither popular nor easy, it was my hope that with the support of the regional administration—then headed by Boris Nemtsov (the reformist Governor and later a Russian First Deputy Prime Minister)—Nizhnovenergo could demonstrate that it was in fact possible to run a major enterprise on a real market basis. Foreign investors in the region had already expressed dissatisfaction with the tariff system, which, as elsewhere in Russia, cross-subsidized low rates for individual consumers and inefficient industry sectors and services at the expense of more successful businesses. The production and distribution network was inefficient, and did not seek to optimize the various supplies of energy.

The head of the Nizhny Novgorod Regional Energy Commission (and from 1997 head of the Federal Energy Commission) Andrei Zaderniuk and I initiated a program to improve efficiency and eliminate the cross subsidization of retail consumers by wholesale purchasers. The cornerstone of the proposal was tariff reform, to rationalize the tariff system by eliminating the cross subsidization of residential by industrial customers and equalize tariffs across all sectors. We also sought to introduce competitive generation within the region, with the participation of UES-owned generation plants, Nizhnovenergo's own power plants, and large factories which generated their own electricity (the regional automobile manufacturer, GAZ, for example, possessed a 750 MW plant); consumers would be permitted to negotiate with any supplier in order to obtain the least expensive supplies of electricity. Finally, we sought to reduce the share of UES ownership in Nizhnovenergo (then 62%) by forming a strategic partnership with a global energy company or, in the short term, the participation of the EBRD. In the longer term, we wanted to truly separate production and distribution assets in the region. While none of these steps went outside the bounds of normal Western practice in deregulated electricity markets, in Russia at the time they were quite revolutionary. The concepts of efficiency and transparency which motivated such restructuring were heretofore almost unknown in the industry.

The regional leadership and regional Duma were generally supportive of these proposals. UES, though, was less enthusiastic; implementing reforms at Nizhnovenergo required joint action by the Board of Directors, the Governor (Nemtsov), the General Manager (Aleksandr Evdokimov), the head of the Regional Energy Commission (Zaderniuk), and UES. Achieving such a consensus was difficult, particularly due to the existing incentive and business structure of UES, which sought to maintain its monopoly. Nevertheless, this period was still marked by several notable accomplishments. The regional Duma passed laws guaranteeing access to the regional distribution network for all electricity suppliers and reforming the residential tariff system. Ronald Freeman, then First Vice President of the EBRD, initiated discussions with Nizhnovenergo management on how the EBRD might help with technical assistance and financing further reforms. Tariff incentives for large companies were introduced, including a 40% discount for on-time cash payments in order to discourage barter and promote realistic pricing practices, and a new system of paying for the use of the UES transmission network was developed.

Admittedly, at the start I was perhaps too optimistic with respect to Nizhnovenergo regarding the prospects for changing the firm's operations. Having worked primarily in the financial sector, I was not yet convinced of how deeply entrenched the old system was. Nevertheless, the successes which it was possible to achieve gave me some sense of optimism about the possibility for change. While there were many skilled engineers and other technical experts, there were few, if any, individuals who qualified as managers from a business perspective, and who sought to understand real figures on production, revenue, costs, and so forth. Instead, they preferred to work within the confines of the barter-based system, and had little grasp of the costs of doing so.

**Shifting to UES**

In February 1997, Boris Nemtsov left his position as Governor of Nizhny Novgorod and became First Deputy Prime Minister (and later also Minister of Fuel and Energy) of the Russian Federation. Nemtsov placed a heavy emphasis on reforming the power industry, including tariff reform and the issuance of new shares in the energos in order to raise funds for investment. As a part of this program, in late February, 1997, he invited Andrei Zaderniuk (Head of the Nizhny Novgorod REC) and myself to testify before the Federal Energy Commission on the progress which had been made in Nizhny Novgorod; Nemtsov had cited the initial work in this region as a model for the rest of Russia.

The general tone of the FEC session meeting was rather uninspiring. Many of the participants seemed to lack an understanding of the true economic impact of barter transactions and other common practices in the industry. Those who did understand these issues were skeptical of the possibilities for real change. Though perhaps no different than the lack of knowledge or interest in market business practices I had observed at Nizhnovenergo, it was also more discouraging, as these were nominally Russia's top experts on the energy sector and responsible for spearheading its reform. Subsequent to the formal meeting, I met individually with Anatoly Dyakov, CEO of UES. We spoke of the need for reforms in Russia's power system, and of the prospects for expanding and building on the work which had been begun in Nizhny Novgorod. At the conclusion of the meeting, Dyakov invited me to expand on the work which I had begun at Nizhnovenergo, and to join UES as First Vice President for Restructuring and Finance. While I suspected that my appointment may have been significantly motivated by an interest in appearing to accommodate Nemtsov's calls for reform, it was also an outstanding

opportunity for me to make a contribution towards improving Russia's economic and business environment in one of Russia's most important firms.

**Conclusion**

The time for effecting major changes in UES appeared to be at hand. Those familiar with the company knew it was beginning to face the sorts of market pressures which economic reform was supposed to introduce; UES either had to change, or else risk the embarrassment and hardships of insolvency and collapse. The overall environment was also highly supportive of these changes: the energy system itself was still technologically and operationally sound; sufficient financial resources to effect change were available; the UES staff was generally highly professional and competent; the EBRD and World Bank were willing to lend their support to efforts for change; and the existing leadership was beginning to realize the necessity of reform. The conditions were right for reform, and it was into this environment that I entered with the firm conviction that for UES to survive, it had no choice but to implement significant changes in a short period of time.

# Part 3
# Building Capacity:
# Towards the Future of UES

Despite the challenges which I knew awaited me at UES, I was simultaneously quite optimistic. The firm—as did Russia as a whole—possessed tremendous resources, and one only needed to find a way in which to tap these. The overall political environment at least seemed to be supportive, and my appointment as First Vice President was in fact driven by the emerging realization that the firm had no choice but to change. Western investment banks and other potential investors almost immediately took a greater interest in the firm and seriously examining its operations following my appointment, and there was great hope among both Russia's leadership and Western observers that were UES to address successfully its problems it could in fact become a model for the transformation from a Soviet-era ministry and monopoly to a modern competitive firm. Having done so, it could serve Russia's energy needs, successfully compete on the European and Asian markets, and ultimately unlock its corporate and shareholder value.

In order to work towards resolving the difficulties which UES faced, I needed to gain a better understanding of the firm's operations, and the specific structures and practices which had led to these problems. Even before formally starting to work at UES, I built a working group of top experts on the Russian energy industry. This group included representatives of Price Waterhouse, the USAID-IRIS Program on Natural Monopolies, the Institute of Energy Research of the Russian Academy of Sciences, the Federal Energy Commission, PHB Consulting, investment banks, and top experts from within UES. They provided advice on developing a long-term plan for restructuring and financial reform at UES, and helped me to conceptualize some of the key issues which were facing UES.

It was rapidly apparent that the firm required immediate attention. Though I was confident in my own abilities to carry out the necessary programs, I was also conscious of the need for immediate action, before the political winds changed again and progress stalled—as was the case with so many other reform programs in which the architects were accused of making too many promises and achieving too few results. As a result, the first task was seeking to gain a complete understanding of the nature of the problems facing UES, after which I could both build a management team which was capable of undertaking the necessary actions as well as ensure that these measures would receive the appropriate reception at the regional and other levels.

**Current State of Affairs**

One of the most pressing problems facing UES as with other large Russian companies which were undergoing the privatization process was difficulty in both receiving and making payments. UES only received 75% of the subscription (transmission) fees which were due to it (the remainder were in arrears), and only 8% of the total payments received (5% of the total due) were made in cash. As a result, it was difficult to pay salaries, settle payments with fuel suppliers, or meet other financial obligations. UES was effectively illiquid, with insufficient funds on hand to meet its obligations. This was typical of the 'nonpayments' crisis which affected much of Russian industry; the exchanges of money which usually accompanied economic activity were mostly theoretical, inhibiting any attempts to create a true market

economy. The payments which were made were done in-kind, as barter transactions. These barter transactions were non-transparent, lacked a uniform system of valuation, and involved significant transaction costs.

Most people in Russia blamed the origins of the nonpayments crisis on the government, citing in particular an overly strict monetary policy. While the government was not entirely blameless—at the least it could have set a good example with its own obligations—even more so than government policy the nonpayments problems originated at the firm level, and reflected poor overall management.

UES collected far less cash revenue than it needed. It faced urgent pressure from workers, creditors, and others to make payments, particularly for salaries, fuel, maintenance, and investment—those purchases for which mutual settlements and/or barter could not always be used. As at many Russian firms, UES paid salaries late or not at all. Wage arrears totaled RUB500 billion (then approximately $90 million). For dispatchers, wages were delayed an average of three months, and in some regions up to six months. Salaries of generation workers were six months behind schedule, and in construction they were delayed by up to one year. While workers were prohibited from striking in protest due to the status of the power industry as an essential industry, they could refuse to work based on dangerous conditions. Some were already claiming that the nonpayment of salaries made it impossible to afford food, which created dangerous working conditions—grounds on which they could legally refuse to work.

As a result of the cash shortage and nonpayments more generally, fuel shortages were also becoming problematic and threatening the continued ability of UES to provide the necessary supplies of power. Arrears to Gazprom for deliveries of natural gas, the most important source of fuel for the thermal power plants, totaled RUB 20 trillion ($3.5 billion). Gazprom, as the largest single owner, tended to be more forgiving with delays in payments than other suppliers, accounting for the large level of arrears, but it may also have had ulterior motives. Gazprom affiliate National Reserve Bank had been the largest purchaser in the January 1997 sale of 8.5% of the shares in UES, and in March of 1997, Gazprom had publicly sought to acquire 25% plus one share of UES in exchange for some of the outstanding payments receivable from UES.[17] A stake this large would have given Gazprom a blocking ownership position, enabling it to halt amendments to the firm's charter and to appoint a member of the Board of Directors and placing it in a position to challenge the government for control of UES.

When UES did make or receive payments, it depended largely on non-cash forms of settlement and payment. Over 90% of receipts were in non-cash forms of payment, principally barter, mutual settlements, and *veksels* (promissory notes). These forms of payment were all inefficient, non-transparent, and entailed high transaction costs. UES avoided cash whenever possible ostensibly because it was unavailable, but more realistically because such avoidance helped to channel advantages to specific individuals and groups who could profit from the aforementioned characteristics of non-cash mechanisms. In an assessment of key processes and action items for UES, Price Waterhouse estimated that transaction costs increased prices by 20% over cash transactions—plus the loss in transparency and predictability. Other accounts have estimated that prices in non-cash transactions were inflated by as much as three to five times.

Non-cash settlements at UES were conducted by a non-profit cooperative subsidiary, Unified ElectroEnergy Corporation (UEEC). UEEC then subcontracted the settlement of the transactions to a network of smaller (and profitable) private companies which had been founded

[17] See Erin Arvedlund, "UES Bid Signals New Tack for Gazprom," *Moscow Times* 1 March 1997, reprinted in http://www.securities.com.

by past and present UES managers in conjunction with UEEC. UEEC also managed other financial transactions for UES, including receiving hard currency earnings on exports and controlling purchasing operations for capital investments. As a result, a large proportion of the revenue which UES received was first handled by UEEC. UEEC received a commission for this service, further reducing the amount which was due to UES. Its role in performing these services also gave UEEC great leverage in negotiating and arranging payments to UES, for without UEEC's cooperation UES would have had even less access to funds. Many UES managers also worked for UEEC, a fact which led to inevitable conflicts of interest—usually settled in favor of the entity which would pay bonuses for 'performance,' UEEC.

Even when UES did receive cash, its management and banking practices were astoundingly complex, to the point that it was quite possible to lose funds. The firm had 133 separate accounts in 64 different banks; five of the accounts, totaling RUB 2.4 billion ($440,000), were in banks which were bankrupt or whose licenses had been revoked. Twenty-four of the accounts were specifically for mutual settlements with government entities. Each division of the firm established its own accounts—and often separate accounts for salaries, taxes, and operations. Since UES had significant unpaid Federal budget obligations (including taxes, pension payments, and state insurance payments), accounts belonging to the head office were frozen; banks deducted taxes directly from the accounts based on listings of taxes payable, leaving limited funds for potentially more urgent needs and providing a strong negative incentive for money ever to reach these accounts. The firm as a whole had no centralized control or policy on bank accounts, and thus no control over the cash management of individual departments. It was impossible to determine how much money the firm really possessed, or how it was being spent or otherwise being used. In this context, it was hardly surprising that UES was having difficulty in meeting its obligations.

In addition to receiving *veksels* as payments from energos and other customers, UES issued *veksels* of its own. These *veksels* represented claims on UES which circulated almost as money. Originally used by UES to pay for construction and maintenance activities, in theory the *veksels* were then to be recirculated by those firms until they were returned to UES as payment for subscription fees owed to UES. However, since the regional energos often did not pay these fees, the *veksels* were instead used to make payments to other parties, whereupon they would continue to circulate and potentially never be returned to UES while remaining as outstanding liabilities. While the *veksels* remained in circulation, UES was continually printing more in order to fulfill its current obligations, thereby creating increasing liabilities. With these untracked and unmonitored liabilities, it was impossible to make an accurate assessment of the firm's financial state. UES also faced a significant shortfall in its investment needs. It had over 100 projects which required additional funds for completion, and the existing capital plant was aging rapidly. The only sources of funds for capital investments were depreciation, special investment funds, and current income—which were insufficient even to meet minimum annual needs of over $3.5 billion for the replacement of obsolescent generation capacity as it reached the end of its operational life, plus $750 million to upgrade and improve the transmission network,[18] without a significant increase in the amount allocated for investment in the tariff structure. These programs would also take years to complete, and required a sufficiently long-term commitment to the firm's future. Failure to meet these requirements would imperil the

[18] Salomon Brothers, *RAO UES—Underperform: Too Many Things to Too Many People,* (24 July 1996), 18; Merrill Lynch Global Securities Research and Economics Group, *Unified Energy Systems: Big is Beautiful* (August 1997), 14.

long-term ability of UES to deliver sufficient quantities of electricity to the Russian market. Until the broader financial problems of transparency were resolved, attracting a strategic partner or other major foreign investor who might be willing to finance such investment was also unlikely, due to the opaque nature of UES's finances and the highly politicized nature of the regulatory and management environment.

A Federal government hearing on natural monopolies, including UES brought home to me the magnitude of the financial problems which were facing UES. Those present at the meeting on April 10, 1997, included Nemtsov; Minister of Economics Yakov Urinson; and former Prime Minister Yegor Gaidar. The primary emphasis of the meeting was the possibility of reducing tariffs which were charged by the natural monopolies. Reports delivered by UES CEO Dyakov and particularly Urinson concluded that the electricity sector was inefficiently organized; faced excessive construction costs; had failed to continue those structural changes which had been initiated previously; and that Russia's various regional power grids were managed in an unrealistic and illogical manner with wide regional disparities. While strong conclusions, these were not particularly surprising to anyone who had thought through the business aspects of the industry (which admittedly few in positions of high management had done). The report presented by Yevgeni Ignatenko, CEO of Rosenergoatom, which was the state company responsible for building and maintaining Russia's nuclear generation capacity, made an even greater impression on me. Rosenergoatom received only 2% of its income in cash, only one-fourth the level of UES. Rosenergoatom was consequently unable to pay salaries to nuclear engineers or to maintain its generating plants adequately. Highly skilled nuclear engineers and other specialists were occupied with negotiating barter agreements, rather than the more productive applications of their skills, and the firm was on the brink of failure—with whatever dire consequences that might entail for Russian and worldwide security.

After the meeting, it was evident that the current system urgently needed to change in order to preserve the Russian energy industry—but that there was little agreement on how best to accomplish this objective. While a substantial portion of the participants in the meeting had supported the maintenance of the status quo with respect to the natural monopolies, the other half appeared willing to make necessary changes. A related question was where to acquire the necessary resources in order to make changes—for technical assistance, new investment and personnel, and to cover shortfalls once the true magnitude of the problems of barter and arrears had become evident.

As a result of the meeting, the Government formed a working group on energy reform. The group included First Deputy Minister of State Property Pyotr Mostovoi, Former Prime Minister Yegor Gaidar, First Deputy Chair of the Federal Energy Commission Georgy Kutuvoi, First Deputy Chief of Staff Sergei Vasilyev, and myself. The group had three main objectives: ensuring the continued reliability of energy supply while conducting reforms; giving industry access to more efficient (and thus less expensive) electricity supplies; and ensuring that Rosenergoatom and other market participants received sufficient cash payments in order to sustain their operations.

*Assessing the Situation*

Almost immediately upon joining UES, I had recognized that this cash-starved operational system would not be sustainable. One of my first actions was to ask Price Waterhouse to resume their audit of UES, in order to permit a true assessment of the financial state of the firm and to determine what steps were necessary. Price Waterhouse had previously

initiated a USAID-sponsored audit of UES, which had then been halted at the request of UES management. UES management reportedly claimed that Price Waterhouse's assistance was not necessary, and that the auditors were asking too many questions, "like the CIA." With the backing of the government working group, I explained to the head of Price Waterhouse's Moscow operations that the audit was to be used not just for government reporting purposes, but also as the basis for a fundamental reassessment of the firm's operations, including an increased emphasis on transparency and openness; the Price Waterhouse audit would play a central role in developing the necessary action plan. In accordance with these requests, Price Waterhouse again began submitting reports on the financial status of UES, and targeted completion of a comprehensive review for the annual shareholders' meeting on May 30, 1997. When delivered, this report painted a grim picture of UES's financial state: assets were not generating revenue, revenues were being siphoned off into inefficient in-kind investment projects, and the firm had no money. Indeed, upon reading the report one realized the fact that UES still managed to provide reliable, high-quality supplies of electricity was a testament to the volume and nature of the investment in the system which had been made during the Soviet period.

In order to assess the firm's management, I also met independently with each of the heads of departments at UES. We discussed not only each individual's general background and motivations, but also more directed questions about what was done right or wrong at UES. For the most part, the answers to these questions did not give me great confidence in the firm's leadership. While most individuals proved to be quite knowledgeable about the industry as technical specialists, they had little desire or interest in improving the firm's position or performance. They lacked imagination and initiative, and believed that the government should take the lead in changing the industry—that reform should come from outside, and could not come from within. In many cases, they felt that any sort of restructuring was altogether impossible in the current situation. This view sharply contrasted with my own impression that the firm required good management, and that then the rest would fall into place.

I also sought to learn from the experiences of other countries which had undergone similar processes of power deregulation and liberalization, for example the United Kingdom and much of Scandinavia. I wanted to be able to learn from these examples, as well as from the accumulated expertise of international experts. Under the prevailing conditions, I was confident that reform was possible if policies were properly created and implemented. Outside consultants could help to create and implement these policies, and also to provide some understanding of what shareholders and other potential investors might consider to be the most important steps—but the final implementation had to come from inside.

Price Waterhouse, international energy companies, various investment banks, and other Russian banks all provided useful information, and also expressed their willingness to work with UES on an ongoing basis. Overwhelmingly, these firms noted that they viewed UES as a 'closed' company. It lacked a describable and regularized financial infrastructure, and without specific personal relationships it was difficult to form any sort of meaningful business partnership with UES. Some of the most egregious offenses were the lack of open tenders when forming new ventures and partnerships; hiring practices which emphasized personal friends and other non-business criteria; and the use of small auditing firms with close connections to current management (instead of well-known international auditors) because those firms nominally had better knowledge of the firm's structure (and not surprisingly lacked impartiality).

The reaction within UES to my activities and inquiries was not entirely positive. While specific requests were generally met, it was also evident that UES managers were carefully

assessing my actions and role, and still reporting to Dyakov. Almost immediately after I started working at UES, Dyakov added the more traditionalist Vladimir Stenin in parallel to my own position as First Vice President. Though he had little impact on my daily operations, it was nevertheless politically a significant move. Dyakov was trying to balance us against each other, both to check my freedom of action and to hedge his bets against future changes in government policy; if the government's present liberal tack were to moderate, he would then be well-positioned to capitalize on these sentiments as well.

Based on the reaction within UES management towards reform policies, I realized that the internal environment alone would not provide sufficient support to sustain the package of more radical management and structural reforms which I sought to implement. Instead, I attempted to build and involve an outside coalition of consultants and other experts who could be used in making the necessary arguments for reform. By appropriating their arguments—the technical analyses and outside perspectives—it might then be possible to unite the various interests, including the relevant government ministries, Presidential Administration, power generators, power consumers, World Bank, and others, and to build a sufficient constituency for reform within Russia. In this way, the process could deploy the best available international expertise and specialists to formulate a policy that would be supported and implemented by individuals within Russia. This sort of united approach would hopefully sidestep the sorts of complaints about invasiveness which had previously halted the Price Waterhouse audit and other analyses.

The World Bank and other international institutions were particularly supportive of these processes, and demonstrated a strong commitment to reform and restructuring at the enterprise level and to creating a competitive energy sector. World Bank President James Wolfensohn, among others, was generally supportive, and helped to stimulate the approval of loans for work by the FEC, UES, regional energos, and the regional energy commissions. The World Bank, for example, acted with surprising speed and provided the first tranche of a $5 million loan for energy sector restructuring to the FEC within 1½ months, and subsequently a credit line for another $40 million. The International Finance Corporation (IFC), a division of the World Bank, proved to be particularly helpful in helping to prioritize the necessary programs by bringing its up-to-date experience with evaluating investment projects.

**Taking Charge**

In early May 1997, only one and one-half months after I joined UES, the government held a meeting on its management of and policies on natural monopolies, principally Gazprom and UES. The government realized that despite being the majority shareholder of UES (53% ownership), it lacked effective representation and influence on the Board of Directors. Most notably, this was attributed to the fact that members of the Board of Directors were elected to four year terms, but in the interim it was not unusual for members to lose their government positions, and thus no longer to represent the government's interests even though they may have remained on the Board of Directors. As a result, an oversight collegium to improve management and control and represent the state's interest was created.

The collegium, which first met in mid-May, consisted of representatives of the Ministries of Finance, Economics, Fuel and Energy, Atomic Energy, Federal Bankruptcy Commission, FEC, and Rosenergoatom, Minister (without portfolio) Yevgeny Yasin, and others. Most members had noted liberal or reform records. Among the first proposals of the members was that government representatives on the Board of Directors be elected on an annual basis. The

second major topic was whether the positions of Chief Executive Officer and Chairman of the Board of Directors (currently both held by Dyakov) should be separated, for as presently structured they consolidated too much power in one individual. The committee adopted these recommendations, and suggested that I be given the post of Chief Executive Officer with Dyakov to remain as Chairman of the Board. These changes were to be confirmed at the May 30 annual meeting.

As majority shareholder, the Government was sending a clear message that the status quo at UES was no longer satisfactory, and that I was the one charged with altering the situation. The general response to this message from outside the firm was overwhelmingly positive, and in the West it was widely seen as a triumph of the Nemtsov-led pro-reform movement. For me, the change meant that I would have the necessary freedom of action in order to execute the changes at UES. I would not be restrained by overall conservatism in the management under Dyakov, but would have full authority to carry out the necessary reform program. It was also a tremendous vote of confidence in me personally. Not that long ago I had been a member of the Board of Directors of a regional utility and a bank president, and now I was to head one of Russia's largest companies.

Dyakov's resignation was announced, as well as that I would take his place as Chief Executive Officer of UES. Equipped with the assessment which I had been conducting, this development afforded me the maximum opportunity to direct the reform and restructuring of UES. It would also expose me to greater scrutiny, and put in place even greater pressure to achieve immediate results, lest my position be eroded. Dyakov remained as Chairman of the Board of Directors, and thus still retained significant influence; he also still had many supporters within the firm's management. The best way to quiet any opposition was to demonstrate that I had a definite plan of reform, and that I sought to implement a set of understandable objectives which would have a clearly positive and immediate impact on the company. Promoting such a plan would also demonstrate conclusively that I was not just a 'non-Dyakov' alternative or Nemtsov's puppet leader installed solely to do his bidding, and thus build support for me as an independent leader of UES.

Any long-term solution to the firm's problems needed to start with fundamental managerial changes. Only once management was structured so that it would respond to the proper incentives and was not totally beholden to the old system, it would be possible to initiate and complete the necessary structural reforms. Dyakov's removal as CEO was just the first step. UES needed a management structure which was based on 'normal' business practices of pursuing activities which resulted in positive cash flow, and in which individuals acted with the firm's best interests in mind, rather than pursuing solely private gain.

Immediately following my election as CEO on May 30 , UES held a press briefing. I announced that the following Monday (it was then Friday) UES would announce a new management and operational strategy. The primary message which I sought to convey at that press conference was the importance of making UES a financially strong and transparent company. In doing so, I sought to limit the extent to which it appeared that UES would be undergoing radical changes in structure. I was already anticipating a backlash against the apparent influence of the "young reformers" and their 'misguided' attempts to reform institutions which by most accounts still functioned. UES did have many strengths, particularly on the technical side—a fact which I emphasized. The changes I was seeking to implement were not to the firm's basic function of generating and supplying electricity, but to its financial and corporate management and related aspects of the system's efficiency.

*Support from Above*

One notable asset in pursuing these objectives was the support of the government of the Russian Federation. In particular, Minister (without portfolio) Yevgeny Yasin, Minister of Economics Yakov Urinson, and First Deputy Prime Minister (and former Governor of Nizhny Novgorod) Boris Nemtsov were highly supportive of energy sector reforms. In the power sector, they called for significant reductions in the subsidies for electricity purchased by residential consumers, such that retail prices would double in the next two years, and rationalization (equalization) of industrial tariffs to result in an average reduction of 13% by the end of 1997. Together, such measures would make the energy sector more closely attuned to market forces, likely increasing the volume of sales and/or payment rates (as electricity was more reasonably priced).[19] They also advocated issuing additional shares in the energos, in order to raise additional equity for much-needed investment projects. While diluting the ownership stake of UES, it was hoped that the additional capital would ultimately improve the overall economic position and therefore the value of UES's remaining stake. They also supported the creation of a wholesale power market, and even more radical changes along the lines of deregulation elsewhere in the world which would separate electricity generation from distribution and transmission. It was this pro-reform sentiment which had brought me to UES, and on which I now sought to capitalize.

I was inspired by the level of support from within the government as a whole at this time, even beyond Yasin, Urinson, and Nemtsov, who were generally liberal and reform-minded. On July 4, I made a formal presentation to the government of how I sought to implement broader objectives for the energy sector. Victor Chernomyrdin, then Prime Minister, directed the meeting. Surprisingly, Chernomyrdin was highly supportive of these proposals.[20] He was extremely pragmatic, and recognized the problems which UES faced—perhaps a product of his time at Gazprom. He even let drop hints that he saw UES as a model for reform of Russia's other natural monopolies, perhaps including Gazprom. He had become more open and receptive to liberal ideas as a result of Yeltsin's influence and from working with Yegor Gaidar, Boris Fyodorov, and other liberal reformers, and he seemed to have captured and propagated the pro-reform outlook which was then prevalent. Perhaps more importantly, he was attentive to the influence of key international institutions and actors, including the IMF, World Bank, and US Vice President Albert Gore (through the Gore-Chernomyrdin Commission).

The importance of the government in UES management and policy was further reinforced later that month when I met with Boris Yeltsin, while he was on vacation in Samara. This was the first time I had an opportunity personally to meet with him. Nemtsov, Central Bank Chairman Sergei Dubinin, Minister of Social Services Oleg Sysuev, Minister of Fuel and Energy Sergei Kiriyenko, and several others were also present for a general discussion on reforming Russia's industrial sector. Notably, I was the only private sector representative; all of the other participants were members of the government or Presidential Administration. My presence at this meeting demonstrated the central role of UES in the Russian economy, and therefore the high level of interest from above in its operations and direction. I hoped that I might also have opportunity to discuss my plans for reforming UES, and in fact to obtain government approval for further privatization of UES.

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[19] Julie Quist, *Russia's Power Industry: Restructuring Update* (MC Securities Limited: 21 April 1997), 3.

[20] I say surprisingly as prior to becoming Prime Minister, Chernomyrdin had been President of Gazprom, and was generally supportive of the 'insider' interests of Russia's monopolies.

Though Yeltsin was on vacation, he was also still at the peak of his faculties, and open to the suggestions of a wide range of advisors. The meetings demonstrated his skill as a politician and president. He sat through numerous lengthy discussions, and demonstrated a grasp of and interest in a wide range of topics, including policy on and investments in gold mining, VAT implementation, privatization, and electricity policy. Yeltsin signed a decree authorizing the sale of an additional 2% of UES, to reduce the government stake to 50% plus one share. We also discussed salary reform in state-owned enterprises, which I was advocating in order to attract honest, well-qualified professionals. The present system paid low salaries and "encouraged" bribes and other unofficial payments in order to reach higher levels of compensation.

**Managing Changes**

From the assessments of UES which I had while First Vice President of the firm's business and financial situation, it was evident that UES required a complete management overhaul. The lack of cash collections and disorganized nature of the firm's finances, for example, demonstrated nothing more than a lack of concern and control by the firm's management, and not a major structural problem or weakness. Simultaneously, the centralized control of UES management over the various UES assets and subsidiaries needed to be strengthened, in order to ensure sufficient unity of purpose at all operational levels.

*Internal Management*

As I had learned from the process of interviewing and meeting with various UES managers, one of the major limiting factors was a general unwillingness among the firm's senior management to identify weaknesses in UES and to offer criticism, and to seek imaginative or unusual solutions. As CEO, I sought to install senior management who possessed a common conception of the firm's future and who were willing to be flexible and imaginative in reforming UES but were also committed to the idea of transforming UES into a normal, transparent, market-oriented firm. Along with changing the membership of the management team, I sought to implement the sort of incentive structure which would make them responsive to UES needs.

Finding a group of talented and experienced managers with the right mind set and whom I could trust—and who were also politically acceptable to the Board of Directors and other oversight organizations—was not easy. I was an outsider to Moscow's 'power circles,' and the company's current situation made it difficult for me to rely on and trust the majority of management—holdovers from the Dyakov era.. Finding the right sort of leaders, and breaking the connection with the preceding system, required looking outside of UES and other usual sources of senior managers in the energy industry.

The most important position to fill was that of Chief Financial Officer, for the individual in that role would have lead responsibility for improving the firm's cash flow and bottom line. It was crucial to find someone who both understood cash-based business practices and sound accounting principles and who would also not be lured into the existing non-transparent, non-market, virtual system which prevailed at UES. A true outsider—for example a foreigner who lacked intimate knowledge of *veksels* and barter and was not aligned with any of the existing power circles and also who would have been comfortable and credible in addressing the concerns of investors—would perhaps have been ideal, but members of the government suggested that a foreigner was not a politically acceptable choice for a firm with majority government ownership.

As a second-best option to a foreigner, I sought to hire a Russian partner from one of the 'Big Six' international accounting firms, as someone who was well-versed in Western

management and cash-based accounting and business practices, but would also have sufficient background with Russian firms and institutions to be politically acceptable and not be discouraged by the existing system. The connection to a well-known international firm provided both accountability and credibility; if he or she wished to preserve the option of returning to that position after a stint at UES, I could be sure that he or she would pursue the necessary changes; his or her background would also build confidence among investors. While such an individual would need to be paid considerably more than was usual for a Russian firm, this additional pay would also lessen much of incentive to engage in the sorts of side-deals and private ventures for personal gain which are commonplace in many Russian enterprises. Mikhail Kislyukov of Arthur Andersen had produced an impressive report on cash flow in Russian companies, and I targeted him for the job. Not only had he worked for Arthur Andersen for five years, but he also had a strong resume, having previously worked for the Central Bank and Ministry of Finance. He thus met the goal of being an outsider, coming from Arthur Andersen, and was also a product of the best aspects of the Russian system. Following discussions and negotiations with Arthur Andersen's management, he agreed to take this key position.

I similarly sought outsiders to UES, or at least persons with limited ties to the status quo establishment, to head other financial and investment departments. Oleg Brtvin, an experienced technician, became Head of the Production Directorate, a position complementary to Kislyukov as CFO. Vladimir Sidorovich, a former banker with the EBRD who had helped to structure financing for Nizhnovenergo, took responsibility for capital investments, and Yuri Kucherov, an Irkutsk native who had gained experience in utility deregulation and privatization as the head of an energy laboratory in Hungary, was to head Strategy and Science. In total, I replaced nine of the fifteen members of the UES executive management board, a number sufficient to ensure that most of the key positions were occupied by new appointees.

Along with changing the membership of the management board, I changed the management board's salary structure in order to improve managerial accountability, incentives, and transparency. In the past, salaries were small, and individual managers received much of their compensation 'on the side' or in the form of various perquisites—all non-transparent processes which led to conflicting loyalties and open graft and corruption. Salaries of senior managers were now to be sufficiently large that it was possible to live in a satisfactory manner without resort to such side-payments. This sort of salary reform was required in order to attract experienced managers schooled in Western business practices, such as Kislyukov, and important more broadly in ensuring that the firms' managers were in fact primarily loyal to UES, not some other firm (e.g. UEEC).[21] The objective was to get the UES and its management to function properly, and not to foster animosity and conflict or to suggest that I had opposed particular individuals. For the most part, this process involved encouraging various members to 'retire,' in order to make room for new appointments. These personnel and other changes were approved by both the state oversight collegium and the UES Board of Directors without significant opposition within a week, in order to enhance the credibility of the new management team.

*Challenges to Control*

In addition to changing the central management of UES the importance of building support and making managerial changes at the regional level had been apparent even before becoming CEO. Without achieving control over UES assets, it was impossible to have any hope of implementing the necessary structural reforms. Despite its levels of ownership, UES enjoyed

[21] This is the same matter which I discussed with Boris Yeltsin at our meeting in July 1997.

remarkably little control over its subsidiaries, as exemplified by events at two key energos, Mosenergo and Krasnoyarskenergo. In both cases, the regional management attempted to undertake actions which were contrary to the interests of UES as a major shareholder and overall manager of the power system.

Mosenergo, Moscow's regional energo, was generally considered to be one of the most progressive and transparent of Russia's energy utilities. It was among the first Russian companies to publish US-standard GAAP audited financial statements. In October 1995 it made a private foreign placement of its shares, again among the first Russian companies to do so. Foreign shareholders also held approximately 34% of the company—more even than UES. The willingness and ability of the Board of Directors of the firm to uphold the rights of foreign shareholders made Mosenergo an important test case for shareholder rights and corporate governance in Russia.

Despite its relatively progressive status, several weeks prior to its annual meeting, in early April 1997, Mosenergo management proposed to limit minority shareholders to 1% of voting rights, and to approve the issuance of additional shares to the Moscow City government in order to increase Moscow's influence on the firm. The Mosenergo management was trying to balance the interests of both Moscow and UES, and, in the process, disregarding the interests of shareholders. Together, Moscow and UES diluted the holdings of existing minority shareholders, and limit the influence of shareholders on the firm's management. Had these proposals been implemented, they also would have been a major blow to efforts to attract foreign shareholders in Russian firms. If an equity investment in one of Russia's most progressive firms was not secure, attracting investors to far riskier firms and projects would have been that much more difficult. Mosenergo was a litmus test for the willingness of Russian companies to accept foreign investors as minority shareholders, and to respect the rights which accompanied that ownership. Spurred by complaints from the EBRD and World Bank, I raised these concerns with Dyakov and the Mosenergo Board, and emphasized the importance of not adopting such anti-investor policies.

Dyakov was forced to agree with this view, as it was also backed by the federal government. We forced an emergency meeting of the Mosenergo Board of Directors on April 17, and to convince the Board to remove the more compromising initiatives from the agenda for the annual meeting. Mosenergo's share price almost immediately rebounded, and outside assessments praised my involvement and "the Nemtsov-Brevnov alliance." They stated that "with the combination of political will and the right people appointed to the right positions, Russia now has a reformist team in place that can actually put the Russian power sector back on track."[22] These comments reflected the general optimism of the time, and the hope that more liberal reforms would be given a chance to succeed.

Mosenergo demonstrated the importance of being actively attuned to and involved in the actions of UES subsidiaries, and that more than just a restructuring of business operations was necessary to change the Russian power industry; the entire management and control mentality had to be changed. It would take active involvement at all levels in order to improve the state of the Russian power industry. The dynamics of the Mosenergo share price also demonstrated that the international financial community was indeed watching events in the sector, and that attracting investors required responsible management of the underlying assets.

My visit to Krasnoyarsk in early May further underscored the independence of many regional managers, and reinforced the importance of forging strong relationships with regional

[22] Julie Quist, *Russia's Power Industry: Restructuring Update* (MC Securities Limited: 21 April 1997), 3.

leaders. UES owned only 33% of the shares in Krasnoyarskenergo, one of its lowest ownership rates, and the senior management of Krasnoyarskenergo was notably independent of shareholder control. The management was attempting to capitalize on the energo's surplus generation capacity and to become an independent player in the Russian electricity market by selling electricity outside the bounds of the UES system. The Krasnoyarsk power station was one of Russia's larger and more efficient facilities, and Krasnoyarskenergo management was keenly interested in any future plans for the Russian power industry put forth by UES and how these might impact their own objectives of capitalizing on their regional over-capacity.

Krasnoyarskenergo's management again attempted to assert its independence over ownership of the 3,000 MW Krasnoyarsk Hydro plant in a notable example of attempted 'asset stripping,' the practice of illegally transferring ownership of key assets to private control. Without seeking shareholder and board approval, Krasnoyarskenergo sold a major stake in the hydroelectric plant, one of its greatest assets, at a below market price. While the sale had been completed in January 1997, it was not made public (including to myself, as CEO of UES) until August 1997. The plant was purchased by a group which wanted to sell its electricity to one of Krasnoyarsk's major industries, Krasnoyarsk Aluminum. While upon close examination the sale was clearly illegal (and of no benefit to Krasnoyarskenergo), untangling the network of documents and decisions in order to return the plant to its proper owners took another five months. Firing the Krasnoyarskenergo general manager was also rather complicated—in a further illustration of the tangled management structure of the Russian power industry, he served on the Board of Directors of UES. Nevertheless, under sufficient pressure he eventually resigned over the incident.

In both cases, it was necessary to demonstrate to the regional administration, REC, plant management, energo management, and others that the plans which UES was proposing were in fact to their advantage, and that they would be better served by continuing to cooperate with UES. Successfully doing so required an in depth knowledge of the needs of both consumers and the utility, and then attempting to find a middle ground which would lead both groups to continue to lend their support to UES. Through this process, I was ultimately able to convince the management to follow the UES lead, and that in fact the reforms which I was attempting to initiate at UES—particularly the creation of a wholesale electricity market, which would permit Krasnoyarskenergo and other regional utilities to sell surplus electricity throughout Russia—would eventually be to their great benefit.

As these experiences with Mosenergo and Krasnoyarskenergo demonstrated, UES control over its assets was limited at best. At the regional level there was widespread opposition and lack of understanding surrounding seemingly straightforward profit-maximizing market activities. Even though the wholesale market and other changes would enable energos and generators to profit from their excess capacity and reduce costs, the fact that the majority of production would then be allocated to the most efficient producers—mostly the hydroelectric and other large generation facilities which were at present being underutilized—left the managers of many energos fearful about the continued competitiveness and longer term prospects for their enterprises. As a result, they opposed any alteration of the status quo, and needed to be assured that their interests and concerns were being given appropriate consideration.

Unless oversight capacity was improved, the management of energos and power stations would continue to circumvent the authority of UES and foil any attempts at broader structural reform. In order to limit these tendencies, I initiated a series of efforts to improve control over the energos, generally promoting and expanding the role of UES in the management process and

introducing reforms within the energos similar to those which I sought to implement at UES. UES reevaluated the performance of the general manager of each energo, and forced changes in 30%. Price Waterhouse expanded its audits from just UES to cover the energos as well, in order to provide a better sense of the financial situation in these core UES assets. Partly as a result, UES changed its contracts with the energos to emphasize cash collections, and where possible introduced incentives based on levels of cash payments. The management of the energos agreed that their cash receipts were to increase by 5% of total collections in each quarter. To ensure accountability, UES agreed with each general manager that he or she would resign if a published target for cash collections could not be met.

Through its seats on the Boards of Directors of these firms, UES also attempted to influence key practices, such as the selection of banks and debt management. In several instances, I brought in foreign partners or consultants to provide additional training, such as Electricité de France with Nizhnovenergo and the IFC with Novosibirskenergo, Permenergo, and several others. UES also implemented a program to educate the managers of regional energos on basic operational principles and objectives in a real, cash-based economic system, and formed a committee of key regional managers which was devoted to the discussion of issues of central regional concern.

**Cash Shortages and Management Responses**

Closely related to the challenges of restructuring UES management and control was addressing the problems which had been created by past managerial shortcomings. Most critically, UES faced an acute cash crisis, and urgently needed some form of bridge financing or other cash infusion in order to have sufficient liquidity for basic operating activities. Partly as a result, several regions of Russia were beginning to suffer from electricity shortages, particularly the Far East, as the overall transmission and distribution network began to break down. These shortages undermined the one major success of UES since its formation, that of ensuring adequate supplies of electricity. Workers in nuclear power plants were also increasingly upset at not being paid, and a group had marched from Smolensk to Moscow in protest. All of these were at their most basic level management problems, and could be resolved without major changes in the firm's operating practices. They had come to be problems because decisions made at one level were generally made without considering the firm's overall long-term financial and business objectives—the sorts of problems which in the long-term altering the firm's management ideology would prevent, but which now required immediate attention. They were also all typical results of the Russian "virtual economy," which discouraged cash transactions and open or transparent economic operations.[23]

*Indicators of Distress*

The electricity shortages and labor unrest necessitated quick action, as these were highly visible demonstrations of shortcomings at UES. In the Far Eastern power region, and Primorskye Krai in particular, the electricity shortages were not technical in nature; they were a result of the mismanagement of available resources. The system of cross-subsidization of some customers by charging higher rates to others was highly politicized, thereby severely distorting incentives. Tariffs in the region were also among the highest in Russia—as much as triple those in Irkutsk, for example. As a result, electricity and energy had become the battleground for a range of conflicts between federal, regional, and municipal interests. Each group sought to

[23] See p. 3for further discussion of the "virtual economy" thesis .

manipulate the tariff structure to its own advantage, with the result that system now barely worked at all. For example, the REC's tariff structure was based not on spheres of activity, as was customary in Russia, or customer volume, as in the West, but instead on a system of patronage for regional customers. Industrial tariffs were ten times higher than residential tariffs, and local enterprises paid tariffs one fourth those of Federal enterprises. The distribution network was entirely unregulated; the various local distributors did not pay for the electricity which they received from UES and Dalenergo, the regional energo. Nevertheless, it was impossible to cut-off nonpaying distributors in order to enforce payment, as essential end-use customers (such as schools and hospitals) would also then be cut off. Dalenergo itself was highly inefficient and unproductive, but unwilling to purchase less expensive electricity from the wholesale market. It also lacked the necessary funds to purchase coal (the primary fuel in the region), and was therefore facing a fuel shortage.

The first step in resolving these problems was to emphasize to Dalenergo, the regional administration, the REC, and other parties the futility of using the energy sector as a battleground for their internal political conflicts. Instead, each entity had a joint interest in maintaining an efficient, reliable regional energy supply. While perhaps self-evident to the outside observer, in the context of competing political interests such a unified perspective had been lost. They agreed to reform the local distribution network so that it would operate on a fee-based and transparent basis, and to give the REC responsibility for overseeing distribution and serving as the arbiter of disputes. When necessary, disputes would be referred to the courts for resolution (at present they were unmediated and left unresolved). The REC, regional administration, Dalenergo, and coal suppliers agreed on a strict policy for splitting available funds between coal, taxes, generation, dispatching, and transmission payments, so that each creditor received some level of satisfaction, instead of bickering over to whom a given payment belonged. Finally, we agreed to rationalize the tariff structure in the region—to increase residential tariffs by 60%, to decrease industrial tariffs by a similar amount, and most importantly to treat all enterprises (whether regional or Federal) similarly. I even granted the REC and Dalenergo permission to blame UES publicly for what were difficult local political steps, in order to make these policies more palatable. At the end of my visit, I appeared on television with the head of Dalenergo, and publicly explained the resolution which we had developed and the impact on the region. In just two days, we had managed to develop a resolution which helped to prevent power shortages in the region for the next two years—demonstrating the importance of common sense, simplicity, and transparency in addressing pressing problems facing the energy sector.

One of the most important labor problems was that of the unpaid nuclear power workers. While Russia's nine nuclear generating plants operated under the direction of Rosenergoatom, an independent state firm, almost all of their output was sold into the UES-managed wholesale power market. This exemplified the workings of how nonpayments (or non-cash payments) had a knock-on effect throughout the Russian economy, as arrears on wholesale electricity purchases then adversely impacted generation facilities. The government looked to UES to resolve the situation, since UES administered the wholesale market and settlements system.

The fact that a group of workers was traveling on foot from Smolensk to Moscow—and ultimately to the Russian White House (the seat of government)—to protest these conditions was highly visible. It was also a national security problem, for unrest at the nuclear plants could have dire consequences for Russia, and the rest of the world. In consultation with Minister of Science and Technology Vladimir Bulgak, Nemtsov delegated to UES responsibility for resolving the situation. The day after the workers reached the White House, I asked for a group of ten

representatives to meet with Nemtsov and myself. I hoped that by being honest and open about the situation they would be able to understand the reasons why their salaries were not being paid, and to take some comfort in the fact that we were aware of their plight and actively working on resolving the situation. In particular, I focused on the proposed wholesale market system. Nuclear power plants, with their low marginal costs of generation, would most likely be among the gainers from the ability to earn market-determined prices for their electricity output. An increasing emphasis on cash payments would also help to alleviate the salary arrears problem. This approach proved to be successful, and after several hours of frank discussions we emerged with a signed agreement and a resolution to the dispute.

As with Dalenergo and the Far East, it did not take tremendous insights to resolve the situation; all that was required was a commitment by all parties to finding an equitable, satisfactory solution, as well as sufficient openness that each party might understand what it stood to gain or lose and the relative position of each actor.

*Financing Solutions*

UES's financial problems went well beyond the readily-apparent problems of workers protesting wage arrears and non-payments. Russian consumers owed UES and the energos $16.5 billion, and in turn UES and its subsidiaries owed Gazprom $7.9 billion for the natural gas used in generating electricity.[24] As a result of these arrears, UES was unable to meet its other obligations: its bank accounts were frozen for non-payments of taxes; it had unknown outstanding liabilities in the form of *veksels*; salaries were not paid; and its ability to collect on accounts receivable was extremely limited. Energos rarely paid their subscription fees, which were the main source of revenue for UES, in cash, but instead as in-kind payments or offsets of other amounts due from UES. Investment suffered the most under this system, as many of the barter transactions were in the form of in-kind contributions to various construction projects—most of which were then never finished. The management was too decentralized to monitor these transactions, and in any event the exchanges themselves were far too opaque to assess the real costs and benefits for UES.

One of the major findings of the general Price Waterhouse audit of UES had been a heavy criticism of the firm's financial practices. Price Waterhouse assisted in developing an action plan to help bring the firm's resources back under central control, and recommended a complete review and restructuring of financial processes and procedures. Among their specific suggestions were centralizing control of export operations (currently handled through a number of inexpert agents, who charged high commissions); simplifying the organizational structure; reaching an agreement with the Federal Tax Service to release the frozen bank accounts; adopting a zero-based, centralized investment policy; eliminating mutual settlements and barter transactions; and creating real commercial relationships with the energos. Of these suggestions, perhaps the most revolutionary (for a Russian firm) was the move away from the use of mutual settlements and barter and towards cash-only operations. While distinguishing characteristics of the post-Soviet Russian economy, mutual settlements and barter also offered great room for abuse and corruption.

Based in part on this action plan, UES announced that as of June 15, 1997, it would accept only cash payments, and that it would no longer coordinate barter transactions. Customers who paid in cash would receive discounts of 20-30%, and only *veksels* issued by Sberbank, Uneximbank, Inkombank, and Vneshtorgbank (at the time the most reputable national

[24] "Russian Utility Reforms Pay Off in Profits," *Intercon* 8 January 1998, reprinted at http://www.securities.com.

banks) would be accepted. UES *veksels* would only be accepted as payments for the next three months. Managers at all levels of UES were to make monthly reports on the levels of cash collections, and they would be held publicly accountable for meeting specific collection targets.

Not surprisingly, this program was initially unpopular, and difficult to implement. Despite the fact that it would ultimately lead to more rational and timely payments to the enterprises with which UES had business dealings, the 'cost' was the lost opportunities for individuals to capture personal gain. As transactions shifted to a cash basis, it would become apparent who was siphoning resources from UES, and how much. Even as I sought to make UES a 'normal' company, I still had to operate within the reality that UES also did still have an obligation, as a state monopoly, to ensure the viability and operations of numerous sectors of the Russian economy, and that cutting off (or even threatening to do so) supplies of electricity to hospitals, schools, and the like was simply not politically possible. As a result, exemptions to the cash-transaction policy were granted by the government, but only with strict time limits and without possibility of prolongation.

Along with shifting to a cash basis for receivables, UES initiated a program to clear its tax arrears to the Federal government. By the end of 1997, UES had settled in cash its own tax debt to the Federal budget of US$100 million. However, the energos and power stations still had large tax debts, totaling an additional RUB 6.8 billion (US$1.1 billion).[26] These liabilities of UES subsidiaries were an impediment to any plans to offer bonds on international capital markets or to secure a strategic investor. In a novel program, UES and the Federal Tax Service agreed to restructure the tax debts of those energos, power stations, and other subsidiaries which were wholly-owned by UES, and that UES would enforce on-time monthly tax payments by these entities. I was even optimistic that UES would soon be able to receive a "reliable taxpayer" certificate from the Federal Tax Service, recognition accorded to those firms which had the best payment records.

The results of these programs were immediately apparent. Within one month, the level of cash collections doubled, and by the end of 1997 it had increased to twenty percent of overall revenue. With the increase in cash collection, it became possible to free the bank accounts, to pay salaries in full and on time, and to make inroads on clearing the firm's arrears. These results supported my hypothesis that the "non-payments crisis" in Russia is not an economic problem, but rather managerial; barter is only prevalent in the economy because it is of advantage to too many vested interests who can profit individually, even though it is of net harm to the entire system. Where barter is prohibited, or made unprofitable, cash will reappear, shifting operations from the 'virtual' to the real.

The next item in improving UES's financial position was tariff reform. Electricity tariffs in Russia were structured such that residential customers paid less than industrial, the opposite of the usual practice in the West.[28] Russian electricity tariffs for industry were on average 230 RUB/kWh, versus 130 RUB/kWh for residential customers; industrial customers cross-subsidized residential, as well as agriculture and state organizations. The disparity in some regions was even greater, as in the case of Mosenergo which charged industrial users RUB 400/kWh and residential RUB 188/kWh.[29] Russian industrial tariffs were proportionately far

[26] Boris Aliabyev, "UES Vows to Pay off Subsidiary Tax Debts," *Moscow Times* 21 February 1998, reprinted at http://www.securities.com.
[28] See pages 11-12.
[29] RMG Securities, *RAO UES: Electricity Production and Distribution* March 1997, reprinted at http://www.securities.com.

higher (compared with residential) than in other countries. Lower and more uniform tariffs across industry sectors would aid efforts to increase cash collections, by making it more likely that enterprises could in fact make their payments. Tariff reform would also aid Russian industry, by lowering their production costs. The resulting increased demand for electricity would also benefit UES. To reach these objectives, several Presidential decrees seeking to rationalize the tariff structure on a national basis were issued in the course of 1997.

The final element of the short-term package was obtaining bridge financing, to help finance the firm's needs for the immediate future. Five banks participated in a tender to provide UES with a short-term credit line for $200 million. Deutsche Bank and Renaissance Capital made the best offer, for a six month unsecured line of credit at LIBOR plus 3.5%. In the end, UES drew upon only $50 million, as improvement of the firm's management and cash position reduced the need for external financing. The entire sum was repaid on time in January 1998. The most important aspect of the loan was the signal which it sent regarding UES's relationship with the West, and with Western financial institutions. Banks were ready and willing to work with UES, and foreign investors also had an interest in helping UES to resolve its difficulties.

To further emphasize the firm's openness to foreign investment, and as a longer-term solution to the firm's financing, UES started planning a convertible bond offering. The hope was that the opportunity to obtain a 2.5% ownership stake in UES through a convertible bond offer might attract a strategic investor, who would be willing to help finance necessary infrastructure and capital investments. While in the long term the state would ideally retain only a minority stake in UES, in the shorter term the political environment (particularly in the Duma) would not permit such a step. A convertible bond offering, in which bonds could later be redeemed for shares in UES, seemed to be the best vehicle to capitalize on these possibilities. While the 2.5% of UES which was to be privatized in this manner represented a relatively small proportion of the firm, reducing the state share to 50% plus one share would emphasize the state's interest in divesting itself of both ownership and control. This was also to be the first convertible bond offering by a Russian firm, placing UES among the most aggressive Russian firms in its reform plans.

Yeltsin had approved the offering in my meeting with him in July 1997. The plans for the bond offering were announced in early August, and the UES shareholders approved the offering at a meeting in late August, marking the final go-ahead. All of the major investment banks which operated in Russia were invited to solicit bids in order to manage this offering. The selection committee included representatives of UES, the State Property Committee, Ministry of Economics, and Ministry of Finance. The proposals went through several rounds of submissions, and in the end a coalition of SBC Warburg, Salomon Smith Barney, and Brunswick won the tender. They were selected based on the proposal and the expertise which these banks offered, including SBC Warburg's European reputation and experience; Salomon's position in the US and its experience in energy, including with Mosenergo; and Brunswick's research and analysis. The banks estimated that the offering could raise up to $1 billion, based on the current demand for Russian stocks and trends in the UES share price.

Over the next several months the bankers analyzed the general financial situation at UES, including its debts to (and from) the state and other enterprises. The investment bankers made several recommendations in order to improve the firm's attractiveness to foreign investors, most of which were already in progress at some level. Among these were settlement of the firm's Federal debts, and helping to clear debts between the Federal budget and the regional energos. They also recommended that future electricity production for the Federal budget be capped, so

that even if payment was not received it would only encompass a portion of the total production and leave the remainder available for commercial sale—guaranteeing a certain free cash flow to purchasers of the bonds or other creditors. While preparations for the bond offering proceeded over the next several months, by the time the offering was prepared international financial markets had taken a dramatic turn for the worse; the Asian markets were in free-fall, and the climate was no longer as favorable as in August. The offering was postponed, initially until October 1997 and, later, indefinitely.

Together, these measures helped to alleviate the immediate financing crisis which was facing UES. While the firm still faced significant hurdles, the progress on resolving problems with the Far Eastern power network, and the disgruntled workers and in moving towards a solution to UES's financial problems provided grounds for guarded optimism and a basis on which to prepare for further reforms.

**Conclusion**

Despite the pressing nature of some of the problems which affected UES, it was evident that truly addressing any of these problems would take concerted, long-term efforts. Any short-term actions, regardless of how highly touted in the press or advocated by outside (especially Western) observers only addressed one level of the problems facing UES. Resolving these matters through anything other than sheer will and force of personality would require a longer-term restructuring plan which could move UES from being a quasi-ministry to being a true private enterprise. The key question was how to craft a plan which would both operate to the benefit of UES as well as not destroy the fragile management balance which I was attempting to create. For example, drastic measures such as cutting off the electricity supply to certain customers in order to enforce adherence to market mechanisms would clearly elicit a sharp reaction, perhaps too much for UES and Russia as a whole—but it also might be the only way in which to enforce adherence to the necessary structural changes.

# Part 4:
# Towards Long-Term Sustainability

In addition to resolving the managerial and financial challenges which were affecting UES, I sought to focus on the firm's core electricity business, and to plan for the longer-term structural reforms most necessary to meet the objective of improving the company's operational efficiency and viability and its attractiveness to foreign investors. These were the same reforms which had been short-circuited time and time again in innumerable Russian firms, and I was sure I would face significant opposition. In a time of crisis it was comparatively easy to unite even disparate viewpoints behind immediate action. Carrying through on seemingly less crucial measures, however, required a more concerted and sustained effort.

I first sought to complete implementation of the wholesale electricity market system, a program which was supposed to have formed a central component of the initial power sector reforms. The next step was to assess what additional reforms might be both most useful and most practicable, and then to begin implementing them. Finally, it was necessary to build and buttress the firm's position and image both inside and outside Russia. Such support would help to expand the consensus in support of reforms, and hopefully enable UES to move out of the realm of the virtual economy and transform itself into a truly market-oriented firm.

**Wholesale Market**

The wholesale electricity market was the system by which electricity was distributed through the national transmission grid from generators which produced surplus quantities of electricity to those which operated at a deficit. A wholesale electricity distribution system in Russia had been operating since 1992 as the Wholesale Market for Electricity and Power (FOREM). However, it did not function as a true wholesale 'market,' for prices were arbitrary and payments rare. Under this system, the Central Dispatching Center (CDC) of UES, which principally served to coordinate the operations of the transmission network, delivered and sold electricity generated by those generators with excess generation capacity. The energos first satisfied demand in their own regions, and then filled any shortfall through purchases or sales on the wholesale market. The major contributors to the wholesale market were the twenty-seven UES-owned and operated thermal and hydroelectric power generation stations, eight of the nine Rosenergoatom facilities (the Bilibinskaya nuclear power plant operated independently), and the seven regional energos which had surplus generation capacity. In 1995, 50% of the 278 billion kWh which was sold on the wholesale market was supplied by UES power stations; 32% by nuclear power stations; and 17% by regional energos with a production surplus. Sales were 93% to regional energos; 5% exports to CIS countries; and only 2% other exports.

The CDC's administrative control prevented the system from truly operating as a market. The CDC was a monopoly purchaser of electricity, and it resold this electricity to those energos which had a production deficit. Prices were set by the FEC, nominally on a 'cost plus' basis consisting of capital (fixed) and fuel (variable) cost components for each producer; electricity was supplied to and purchased from the FOREM at a known, stable price. Prior to 1995, the CDC was also responsible for making payments to and receiving payments from the two parties to the transaction; by 1997, though, it acted only as a settlement center for buyers and sellers. On each transaction, UES received a fixed charge sufficient to cover maintenance of the transmission network; dispatching; market operating costs; technical supervision of the system;

and planned future growth and expansion of the power network. Approximately 33% of Russia's electric power production passed through this wholesale system.

The greatest shortcoming of the system was that prices were not market determined, but set administratively. Under pressure from the RECs and energos, the FEC tried to keep prices low, to ensure that electricity could be supplied to the energos at as low a cost as possible. Consequently, producers had little real incentive to sell excess production on the wholesale market, since additional proceeds from sales were limited—if and when payment was received at all. Since generation facilities operated by energos first served local needs, when viewed across the entire Russian power network efficiency was relatively poor. UES-owned hydroelectric and thermal plants and the Rosenergoatom nuclear plants, which tended to be among the more efficient facilities (the hydroelectric plants had the lowest generation costs of all), operated at relatively low levels of utilization when compared to energo-owned thermal plants; Russia's most modern and efficient generation capacity was underutilized. The CDC also had a great deal of discretion in allowing contracts among various producers, making the process susceptible to significant political influence.

Creating a real wholesale market in Russia, in which buyers and sellers could make exchanges at market-determined prices, was not a new idea. The government decree "On a Federal Wholesale Market of Electric Energy and Capacity" of July 1996 had established the basic parameters of a true wholesale market operator; it attempted to create a deregulated system in Russia on the model of those operating in Scandinavia, the UK, and elsewhere. As envisioned in recommendations prepared under a USAID grant, the wholesale market-maker (UES) would moderate between generators and end-users. Each generator would submit to the Settlement and Dispatch Center (SDC, wholesale market operator) a bid to supply a particular quantity of electricity at a given price and at a specified time. The SDC would then allocate demand among the lowest-cost suppliers at a given time so as to ensure an efficient supply. UES was to administer the settlements and payment system through this SDC, but in a change from past practice would not directly participate in the purchase. The system would operate based on principles of open access to the national power grid for all producers; market-determined prices which could reflect real costs of production, transportation, and distribution; and self-regulating market principles.

Compared with the FOREM system, the new wholesale system would be particularly advantageous to surplus producers of electricity and the most efficient generators. These producers would be able to receive a market price for their surplus capacity, rather than an administratively determined price. Purchasers of electricity would also automatically contract to purchase electricity from the efficient generators in their region. Perhaps most importantly, the process would be dictated by market forces, rather than by the objectives of the CDC management.

In the long run, the creation of the wholesale market would promote cost-cutting and improve efficiency among producers. In the short term, wholesale prices might be expected to increase as they more accurately began to account for capital and other costs. However, the requirement that purchasers pay in cash was expected to offset this increase, based on the higher value of cash when compared to in-kind or barter payments. Perhaps most importantly, the ability to shift production towards the most efficient producers would lower wholesale prices. Lowering prices would ultimately ensure that retail customers had access to electricity at the lowest possible costs, as energos passed along the savings. Those energos which purchased power would be able to do so at a lower cost, industrial and other large customers would be free to sign contracts

directly with producers, and new producers will be able to enter the market. Despite these potential benefits, most of the energos opposed the system on the basis that they would likely face decreased demand for their own generation capacity; it was often less efficient than the (currently underutilized) UES generating stations. However, the tariff-setting system also did not provide adequate incentives to take advantage of lower-cost supplies of electricity, as the cost-plus system required all savings to be passed on to customers, instead of allowing the energo to capture the benefits of more efficient production. Consequently, UES-owned generation facilities and surplus producers tended to support the creation of the wholesale market operator; energos which were net purchasers of electricity (the vast majority) opposed the concept. Regional administrations tended to side with the local energos, out of concern for the impact on local welfare.

Despite the issuance of the enabling decree in 1996, the implementation of the wholesale market system had languished due to management indifference at UES, politically-motivated attempts to shift control of the system from UES to UEEC, concerns about the negative impact on the energos which were net purchasers of electricity, and heavy lobbying by the energos, RECs, and regional administrations of UES. Boris Sutkin, Deputy Head of the Central Dispatching Unit, was responsible for the initial project development and implementation. His job with the CDC was something of a conflict of interest, however, as with the successful creation of the wholesale market operator responsibility would shift away from the CDC, thus implying a reduction in his own importance. Upon becoming CEO I immediately sought to have him removed from his position and replaced with someone who was more willing to implement the necessary structural changes, but Sutkin was reluctant to leave.[30] I was reluctant to apply too much pressure, out of concern that his departure might disrupt the dispatching network across Russia. Finally, after protracted negotiations, he agreed to resign. I gave his replacement for organizing the independent wholesale market, Alexander Remizov, two weeks to finish implementation.

Remizov successfully met this goal. He had put the necessary infrastructure to begin testing the system in place by late June 1997, and full operational capacity was scheduled for July 1. As implemented, the wholesale system required two-week advance payments in cash for all purchases. While it did not immediately result in a significant increase in the volume of wholesale market transactions due to the limited numbers of participants and the prior existence of long-term set-price contracts between many generators and producers, the use of cash settlements was immediately popular and encouraged support among generators. As long as a generator could efficiently produce enough to cover its variable costs with wholesale sales, it could be assured of a ready source of cash earnings. The generators were so eager to receive cash payments (and purchasers reluctant to pay in cash) that wholesale 'prices' (if the former system could be described as having 'prices') dropped by 40-50% almost immediately even while the volume of sales was unchanged.

The creation of the wholesale market also aided in improving management, as evidenced by a series of discussions with Irkutskenergo. Irkutskenergo was one of the two energos in which UES held no ownership stake (the other was Tatenergo, in Tatarstan); the largest share of 40% was held by the regional administration. With the support of the State Antimonopoly Committee, Irkutskenergo sought the right to sell electricity directly to Mongolia over existing UES transmission lines, and had filed suit in commercial courts in order to force this access. While the potential export sale demonstrated the market potential inherent in the Russian power

[30] It was not possible to fire Sutkin directly, but only to ask for his resignation.

industry, this independence also challenged the UES monopoly on the use of transmission lines. UES argued that it possessed exclusive rights over the transmission network, and that Irkutskenergo could only sell the electricity through the existing wholesale market system, by selling to UES at a standard price; UES would then determine how much would be sold to Mongolia and at what price as a part of its general export operations. UES had transformed what should have been an economic discussion—since UES would have gained from the transmission fees—into one based on power to export electricity.

Since UES had no plans to sell electricity to Mongolia, I saw no reason for this opposition. Instead, it was an example of the benefits of the wholesale market system, for UES to suggest that all energos which had similar excess capacity would be able to pursue such opportunities for additional sales, whether for export or within Russia. I suggested that Irkutskenergo be granted rights of access to the power grid, and have the right to sell its extra electricity on a market basis to any customer—in Mongolia, Russia, or any other country—which was willing to pay a fair market price. Irkutskenergo should not have preferential access to the Mongolian market, but neither should it be prohibited from directly contracting with Mongolia to supply electricity, if that was the most advantageous business decision.

The wholesale market system which started in 1997 has continued in operation to the present. While still not operating with the volume of transactions as wholesale markets in Scandinavia, the UK, or the US, it has nevertheless proven to be an important part of the Russian power industry, building experience and understanding of the benefits to be gained from efficient, cash-based operations.

**The View from Outside**

In order to conduct a more accurate assessment of UES and to develop strategic implementation and action plans, I sought the perspectives of outside consultants. While I preferred to depend on internal sources, as it was difficult for an outside group to have a true understanding of the nuances of the firm's operations; the sort of overall reassessment and strategic planning which UES required was best done by outsiders who were not beholden to status quo political forces. Not only would outsiders be able to examine the firm in an impartial manner, but they could also bring the best lessons of international energy experience to UES. The World Bank had already allocated $5 million for energy sector restructuring technical assistance, as well as a follow-on $40 million credit line, money which I sought to use for this purpose.

Selecting an appropriate group which had the appropriate skill-set, however, was not simple. I wanted a group which could both analyze UES's everyday operations, as well as develop a longer-term strategy for UES. Hagler Bailly had worked on numerous energy projects under USAID grants throughout the CIS on wholesale market development and related projects, and Price Waterhouse had already demonstrated their skill in assessing the financial status of UES. This project, though, required not the technical and industry-wide expertise which Hagler Bailly had ably demonstrated, or the financial analysis of a Price Waterhouse; in line with the managerial nature of the majority of the changes, UES needed the services of a management consultancy, a firm with a broader and more generalist corporate perspective. The consulting arms of the 'Big Six' accountancies, plus Bain and McKinsey, all responded to the tender, and of these, McKinsey had the most impressive proposal. I was impressed by their willingness to listen to my feedback and to revise the proposal, and to agree to my requests that they apply their best international energy experts to the work at UES.

Over the next several months, the McKinsey consultants developed and presented a comprehensive plan for restructuring the Russian energy industry. Their plan included both changes within UES, and also industry-wide changes in the role of and relationship with the regional energos. One of the central points of this analysis was the formal recognition that UES was organized as a functionally-defined ministry, not a market-based corporation (a realization I had already made), but more importantly accompanied by a comprehensive plan for changing this structure, and promoting the penetration of market incentives and growth of operational transparency. The current structure of UES did ensure that it fulfilled its core functions, but devoted only passing attention to efficiency or the resulting impact on the firm's management or longer-term strategic development. Development and strategic planning were centrally planned, rather than being based on an assessment of the firm's needs. Social welfare objectives almost always took precedence over business interests, exacerbating the lack of incentives for efficient operations.

McKinsey developed an operational plan for transforming UES into a firm which would meet international standards of transparency, accountability, and sound business operations. Meeting these objectives would then, it was hoped, lead to an increase in shareholder value, just as a restructuring and reform plan would do for any other world-class company. Then it would be possible to attract foreign investment in order to improve UES's operations within Russia, and to increase its export presence. The process was far from simple, as it required UES to create a more efficient organizational structure; to promote the development of core businesses and divest UES of other assets; to increase operational efficiency; and to increase the managerial efficiency of UES in the power market. McKinsey estimated that UES could save RUB 23.2 to 29.1 trillion rubles (US$4.5 to 5.7 billion) per year from more efficient power market operations alone.

The McKinsey plan was intended to remedy the chief fault of the Russian power system: that despite its success in meeting energy demand, the goals of maintaining and even improving reliability, attracting significant numbers of foreign investors as shareholders, and creating the basis for a competitive wholesale market had not been achieved. At its core the system was inefficient and wasteful. Sources of improved efficiency and cost cutting in UES operations could be found at almost every level of operations and management. Some of the major sources of inefficiency were poor management of generating plants; disorganized management, maintenance, and operation of the power grid; suboptimal dispatching practices with long-term contracts; and lack of central (UES) concern with retail sales and distribution.

Eliminating suboptimal dispatching practices, by which each energo had priority distribution rights over its own (potentially inefficient) output would result in the greatest gains, by improving the utilization and deployment of generation assets.[31] Tremendous savings were particularly possible from improving utilization of generation assets. Hydroelectric plants, which had very low marginal production costs (since they did not consume fuel) were relatively underused; all the major hydroelectric facilities were operated by federal generation companies, not by the regional energos, and thus lacked a guaranteed market for their electricity (or at least an openly competitive wholesale market). Meanwhile, smaller and less efficient thermal plants operated by the energos ran at much higher levels of output. Excess fuel consumption due to this poor allocation of generation capacity amounted to between 17 and 23%, accounting for a potential annual savings of RUB16.8-22.7 trillion (US$3-4 billion) for the next five years.

[31] See also the discussion of the wholesale market in the preceding section.

The declining demand for electricity since 1990 had also left UES with excess generation capacity, even in excess of what was required to meet the most optimistic projections of demand over the next twenty years. Despite the fact that fixed (maintenance and operations) and variable (mostly fuel) costs in many of these redundant facilities were as much as three times higher than those at more efficient and newer facilities, they remained in operation in order to serve demand for local jobs and generation capacity. Even after accounting for shut-down and replacement costs, McKinsey estimated that in many cases it was more cost-effective to shutdown older generation capacity and invest in new construction which would be more efficient to operate and have lower repair and maintenance costs. McKinsey projected that eliminating obsolescent and redundant capacity could result in annual savings of another RUB 2.9 trillion (US$530 million) for the next five years.

Based on the examples of electricity deregulation in Argentina, Chile, Norway, the United Kingdom, and elsewhere, McKinsey also proposed a number of changes to the firm's operational structure. Introducing competition in certain areas would improve economic incentives, and thus overall efficiency. These countries had also adopted competitive generation markets, a regulated monopoly grid structure, and separation of retail sales and local grid management. While these elements were not unrecognizable in Russia, they were not distinct; UES played some role at each level. One proposal called for UES operations to be split into three operational subunits with responsibility respectively for managing the operations of the relevant subsidiaries: generation; transmission and dispatching; and energos. UES would serve as a holding company, and focus on the performance of the individual business units, but not everyday operations. For example, the UES-owned generation assets were to be split off into one or more generation companies, which would then provide a consolidated supply of electricity to the wholesale market (compared to the existing system, in which all plants operated independently). Restructuring would thus increase production and managerial efficiency, build accountability, and make the firm more attractive to outside investors.

Staffing and human resources provided another area of potential savings. Perhaps not surprisingly given its origins as a ministry and continuing majority state-ownership, UES employed vast numbers of excess personnel. McKinsey estimated that savings from staffing cuts (even beyond those due to capacity reductions) could reach RUB 2.4 trillion (US$430 million) per annum.

UES management and human resources practices also left significant room for improvement, and wasted a great deal of employee talent and potential. Among the more serious problems identified by the McKinsey analysis were a lack of clear personnel priorities; poor time management; inadequate analysis of information; lack of transparency; mixed lines of authority; and the absence of any executive body with a responsibility for executing and ensuring adherence to corporate policy. UES lacked a comprehensive human resources policy, and particularly one which emphasized the development and support of the careers of individual employees. McKinsey also developed a plan to create a more performance and development-oriented system, in order to make better use of its personnel assets.

While many of these findings may not be particularly surprising, given the 'typical' state of a Russian state-owned enterprise, the fact that the analysis was conducted by an outside entity added additional legitimacy and support. As always, however, the greatest challenge of even the best developed plans was the actual implementation.

**Building a 'Corporation'**

Most publicly-traded firms around the world are motivated in their business activities by the objective of increasing shareholder value. While certainly one of my driving objectives, and a pursuit in which I enjoyed government support, other parties with interests in the management of UES did not necessarily agree. These divergent interests were one of the firm's fundamental problems.

Since UES was a state-owned enterprise, many within the Russian government, the UES Board of Directors, and in other influential positions were not interested in increasing shareholder value. To them, the value of UES was in how it was used, and how they were able to influence that process—what resources and capabilities were allocated either for their personal use, or for the use and benefit of their supporters. Cash flow, return on equity, and other common measures meant little to them. These individuals stood to benefit most not from efficiency gains and better bottom-line performance, but from more particular elements of the firm's activity—ensuring the continued operation of a particular generation facility, signing certain contracts, and other more localized benefits which were often based on favoritism and forms of insider deal-making. While not necessarily 'corruption,' prior to implementing anything more than the barest outline of the McKinsey (or any other) proposals, it was necessary to change this mentality and to address the fact that the basic incentive structures, attitudes, and practices which made such improvements in corporate governance, efficiency, and the like both possible and worthwhile were in many cases absent or malformed. This same mistake of ignoring and not seeking to change the underlying incentives has been endemic in Western technical assistance efforts, and has sadly led to strong (and unfair) backlash against the "Harvard economists"[32] and their recommendations for reform.

Even without investigating the firm's books or business practices, a visitor to UES headquarters could grasp almost immediately that the firm little resembled a typical corporation, even one which was insolvent and facing collapse. The offices were located in the former Ministry of Energy building; the lack of organization was astounding. While perhaps well-structured to serve the needs of a bureaucracy, it was not the proper environment for the headquarters of one of Russia's largest corporations. Departments were scattered throughout the building, and had poor lines of internal communication; offices lacked any sort of computer network, and electronic mail and other features of a modern office were unknown. Outside of the main offices, there was even less communication, whether with Moscow or other UES facilities.

UES also lacked any sense of a team environment, or the sense that a given employee (or manager) had any interest in the firm's long-term well-being. Each division, facility, or even manager operated independently, pursuing its/his/her own intentions. In order to improve this situation, I appointed Sergei Medvedev, a young, ambitious former Yeltsin press spokesperson, to head a public relations campaign. This campaign was to build a common corporate image, both to UES employees and to those outside the firm.

*Building Self-Image*

The first part of building an internal corporate spirit was to improve internal communications and flows of information. The new public relations department issued a newsletter which explained the company's operations, and the background behind particular

[32] A reference to the Harvard Institute for International Development's significant role in USAID finding of technical-assistance programs in Russia.

decisions. The more remote facilities received this newsletter over a newly created e-mail network. A series of meetings with employees in Moscow and in the regions similarly served to spread the message about the firm's course of action and provide opportunities to ask questions. These meetings were intended to present some sense of UES as being team-oriented, and that the ongoing campaign was more than just another round of empty proclamations which ignored the interests of the average worker.

When visiting the energos and other regional power plants, I also allocated time to meet with average workers and to gain some sense of their concerns and wishes for the company. A surprising number of their questions dealt with the share price of UES stock; despite the criticism of large-scale privatization in Russia, many employees had managed to become owners of at least a few shares of UES stock, and they had begun to catch-on to the repeated emphasis on and concern with the importance of the share price. This was a good sign, for it indicated that ordinary employees saw some connection between the firm's operations and their own welfare.

Another aspect of this campaign to improve the firm's self-image dealt with more material issues. While in many respects symbolic, these measures also helped to support the idea that employees should take pride in working for UES, and not just view it as a source of opportunities for private gain. I made what improvements were possible to the immediate operating environment, including trying to promote cleanliness and order and even such seemingly minor improvements as ensuring that bathrooms were adequately supplied with toilet paper (a persistent problem). I also planned to move out of the old offices and into a new and more modern location with an open floor layout which would resemble a real corporate headquarters. UES signed a lease for a new building, and even began to outfit the building with modern telecommunications, furniture, and other fixtures. I consciously sought to keep the furnishings modest, and to avoid the marble and general opulence which was in style among many other Russian firms. Though a large and important company, UES also did not have the hard currency export earnings of a gas or oil company which might justify something more elaborate.

Another event in the task of improving the firm's image and building a more unified corporate image was the observance in December 1997 of the 100th anniversary of the first Russian power plant, GES-1 (the large facility on an island in the Moscow river near the Kremlin noticed by almost every visitor to the city). The event was promoted as a celebration of electricity in Russia, and a demonstration of the accomplishments of Russia's electricity industry, starting from the electrification initiative of the 1920s and 1930s. While for me an important event in the firm's internal politics, I sought to keep the emphasis away from politics, and instead on the Russian electricity sector as a whole. In addition to a series of events at GES-1 itself, the main event was a ceremony in the Bolshoi theater, to which were invited the present and past leaders of Russia's energy sector. The list included general directors of the regional energos, other senior managers, regional governors, members of the RECs and FEC, and Duma deputies. President Yeltsin sent a congratulatory message, as did Federation Council speaker Yegor Stroyev; Duma speaker Gennady Seleznyov attended in person.

The event was admittedly reminiscent of various Soviet celebrations, but it was also an important vehicle for gathering many of the industry's leaders together in one place, and for demonstrating that the Russian power industry was in fact something of which one could be proud. Perhaps adding to the Soviet feel, I used the event as an opportunity to make a major public announcement on the future of the Russian energy sector. I discussed the reforms and restructuring on which UES was embarking, including plans for reform of the dispatching

system, reductions in excess capacity, and other cost cutting. The presentation was nevertheless well received; the audience listened attentively, and seemed to appreciate the logical nature of what was being attempted with UES. Seleznyov's presence was particularly important, as the Duma's support was an important element in ensuring long-term success.

*Building an External Image*

In addition to working to create the appropriate corporate mentality within UES, it was necessary to work with elements within the Russian government in order to allay their concerns. Gaining the support of the more conservative Duma and the regional governors (with their links to the RECs and energos) posed the greatest challenge.

In September 1997 I was called to testify before the Duma on UES's preparations for the winter, and whether it had sufficient fuel stocks on hand to ensure adequate electricity supplies. This was always a key issue, as transporting fuel during winter was considerably more difficult than at other times of the year. I was particularly nervous about meeting with the Duma, since the Communist majority generally opposed exactly the sorts of liberalization policies which I advocated. Perhaps more importantly, they also disliked Nemtsov, my biggest backer. Fortunately, as a result of the increased cash on hand at UES from the emphasis on cash collections, it had been possible to amass larger fuel stocks than in any of the preceding years. UES had actually been able to purchase this fuel through open tenders, rather than depending on barter deals. The Duma was quite pleased with this result. The deputies were also generally pleased with my efforts to improve transparency at UES, though admittedly perhaps for a rather different purpose than what I intended. Even as it gave outside investors a better understanding of the state of affairs at UES, greater transparency also allowed the Duma more effectively to monitor UES operations. The openness assuaged fears among more conservative elements in the Duma that the national power grid would be separated from the rest of UES or that other elements of great 'national interest' would no longer be under state control. To keep the Duma apprised of events at UES, I also began to meet with the Energy and Industry committees on a monthly basis.

In building relations with regional governors, I sought to address the problems which had previously become apparent in Krasnoyarsk and elsewhere. Most significant was achieving the proper balance between the centralized control which would permit UES to make the necessary changes in both UES and energo operations and the level of autonomy and local control which most of the governors sought in their regions. In permitting some local control, it was vital also to maintain the overall momentum behind reforms. In a meeting with numerous governors, REC representatives, and managers of regional energos, I explained a system which I hoped would help to find the right balance. Each region would be given certain goals and targets in cash collections, tariff structure, and other areas, but also have general autonomy to fulfill these however the local authorities thought best. Federation Council Speaker Yegor Stroyev and others found this to be a generally satisfactory arrangement, and we started with seven formal agreements with regional administrations, including Orel, Kostroma, and the Far East, which detailed specific arrangements, as well as making numerous other informal arrangements.

While only time would reveal the success of these arrangements, in the short term they did succeed in limiting regional opposition. Saying that the reform plans for UES enjoyed widespread regional support might be too much, but at least on the surface there was a grudging acceptance and willingness to work with UES.

**Towards Reform**

UES also initiated several programs which demonstrated a longer-term emphasis on efficiency, improvement of managerial incentives, and general improvement of the firm's financial health. These were based partly on the McKinsey recommendations, as well as recommendations from other outside analysts who were assisting in the preparations for the convertible bond offering, and were intended to anchor the firm firmly in the realm of the real economy, and to limit the incentives for non-cash and other forms of virtual economic activity.

As suggested by the preceding discussion, acquiring sufficient fuel stocks for the winter was a persistent challenge for UES, since in many regions delivering fuel became increasingly difficult as the weather worsened. Financing these purchases was the greatest source of difficulty, since UES did not have sufficient operating capital to make significant investments in the necessary fuel inventory. To avoid the usual last-minute worries, in late July and early August 1997 UES initiated a centralized competitive tender among twelve major suppliers for supplying oil to several thermal generation facilities (power plants generally contracted independently for fuel supplies). The tender clearly specified the quantities and conditions for delivery, and offered the promise of a large order—paid for in cash. LUKoil offered the best proposal, with a 30% reduction over the current price. The second-best offer was only slightly less favorable, suggesting that implementing such tenders for fuel supplies across Russia could result in significant cost savings for UES.[33] By early 1998, these lower fuel costs resulted in a further five percent drop in wholesale electricity prices.[34]

"Program 101" sought to improve the focus on core business activities, and to divest the firm's interests in many of its unrelated assets (as previously noted, in addition to the energos, generation facilities, and dispatching stations which comprised the central portion of its operational activities, UES possessed interests in over 300 other enterprises, including insurance companies, banks, agricultural processing facilities, and more). These non-core assets had in many cases been acquired in order to hide cash flows, as a part of barter transactions, or otherwise to keep corporate operations non-transparent. Their operations played only a peripheral role in the Russian power industry, and UES management had no real expertise in their operations.

**Foreign Relations**

Alongside the improved position and view of UES within Russia, I sought to build stronger business relationships with CIS countries. Export electricity sales had the potential to be a significant source of revenue and even growth for UES, but little was being done to capitalize on these opportunities. While UES was a major supplier of energy to many of the other former Soviet republics, it was rarely paid for this electricity. Instead, the supplies were a continuation of Soviet practices of state orders without regard for willingness or ability to pay. These countries were all significant export markets for UES, but as of August 1997, other CIS republics, including Belarus, Kazakhstan, Georgia, Ukraine, Armenia, Latvia, and Lithuania, had debts to UES of US$483 million.[35] In effect, Russian customers were subsidizing exports—

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[33] The oil market was far more competitive than gas, the primary fuel for thermal plants. While Gazprom monopolized the latter market, making such a competitive tender impractical, Russia had numerous competitive oil producers.

[34] "Dengi," *Russian TV* 20 January 1998, reported in *CIS Oil and Gas Report* 26 January 1998, reprinted at http://www.securities.com.

[35] "Russian Power Company Gets Tough on Foreign Debtors," *Interfax* 4 August 1997, reported in *BBC Worldwide Monitoring* 10 August 1997, reprinted at http://www.securities.com.

hardly a sensible or politically tenable position when tariffs for household consumers in Russia were increasing. It was important to 'normalize' business relations in the energy sector throughout the CIS and to move towards a more market-oriented system of distribution and payments, as well as to increase the revenue which UES received from export sales.

A meeting of the CIS Electricity Group in Kiev in July 1998 provided an opportunity to initiate discussion of how to achieve this objective. I explained what steps UES was undertaking, and how these would impact supplies of electricity throughout the CIS. Most importantly, the group discussed the creation of a CIS-wide wholesale electricity market, on the model of the wholesale market which was beginning operations in Russia. I also sought to develop active partnerships with the other republics. In particular I focused on Kazakhstan, as it was both one of the largest export markets and the largest debtors to UES, with debts of nearly $340 million. It had also undertaken advanced reforms in the energy sector similar to those which I sought to implement in Russia, including an emphasis on cash collections and reforming the tariff structure.

Kazakhstan purchased power from Russia via a number of transmission lines from northern Russia, particularly in winter. A high capacity transmission line from Siberia to European Russia also passed through Kazakhstan, but had not been used since 1995 due to payments problems and disagreements with KEGOC, the Kazakh grid management company. KEGOC had already undertaken progressive programs of its own in order to improve cash collection, generation capacity, and management, and its President, Mukhtar Avlyazov, and I saw numerous avenues for cooperation between KEGOC and UES. In a series of subsequent negotiations which grew out of the CIS energy group meeting, by October of 1997 Avlyazov and I had agreed on a program to repay the debts of Kazakenergo (KEGOC's predecessor) to UES, to resume exports (and accompanying payments) in time for winter (Kazakhstan had been facing a severe winter electricity shortage), and to begin work on restoring the cross-Kazakhstan transmission lines. This agreement between UES and KEGOC was hopefully to serve as a model for future relations with other CIS countries, in the process giving UES significant influence in the regional power market.

Other significant non-CIS export customers for UES included Finland, Turkey, China, and Mongolia. However, few attempts in the past had been made to exploit the full potential of these markets and to capitalize on the range of opportunities which were available for UES. Particularly since Russia had a declining domestic demand for electricity, UES had significant surplus generation capacity which it could profitably sell in the European markets, especially in Scandinavia through the Nordpool wholesale market system. Finland already purchased 5 million kWh of electricity from Russia per year, and the market was potentially far larger.

In order to capitalize on this export potential, I pursued cooperative agreements with other European energy firms, including Tractabel, ABB, and Electricité de France. In February 1998, Enron (of the US) agreed to invest $55 million into upgrading the Russia-Finland transmission link, in order to provide the necessary increases in export capacity. This investment would eventually increase export capacity to Finland by 30%, or US$120-150 million per year. It was hoped that ultimately one or more Western firms would be willing to take a significant minority ownership stake in UES and act as strategic partners, and provide technical and managerial support; Enron and Tractabel (Belgium) appeared to be the most promising possibilities. Discussions never progressed beyond preliminary and theoretical stages, but this possibility did provide another motivation in pursuing transparent, market-oriented operations.

**Changes Afoot**

By early 1998, UES appeared to be in the midst of a turnaround. In the words of one journalist, "Ten months later [than April 1997], UES looks like a different company."[36] According to the preliminary financial results, in 1997 output had remained constant, and revenue increased. Payments received (all forms) for electricity had increased from 65.2% in the first quarter of 1997 to 99% in the second quarter and 109% in the third quarter, reflecting the clearance of arrears. Cash receipts had increased from 8% to 20%, and UES had even repaid $100 million in debts to the government.[37] UES had successfully consolidated its financial operations, cleared its Federal tax arrears, and was developing a plan to clear the tax debts of the energos. Plans for restructuring the industry as a whole were under consideration and development, and UES had significantly raised its international profile. Perhaps most importantly, UES had made major strides in improving its managerial incentives and structures, changes which would lay the groundwork for further reforms and operational improvements. One could almost call UES a 'real' company.

Despite these positive results, the political winds were beginning to shift. By January 1998 government attitudes and policies towards reform had noticeably changed. Nemtsov's influence was waning, as he was ousted from his position as Minister of Fuel and Energy and replaced by Sergei Kiriyenko (though Nemtsov still remained as First Deputy Prime Minister). Anatoly Chubais stood accused of accepting bribes, and the Duma was adopting an increasingly hostile attitude towards privatization and reform. Internal opposition at UES also increased over the first few months of 1998. Sensing that my support in the government might have weakened, from late January my predecessor as CEO, Anatoly Dyakov (who had retained his post as Chairman of the Board of UES), reasserted his influence. At a special meeting of the government collegium and the Board of Directors, he expressed general 'dissatisfaction' with the progress which was being made at UES. At the conclusion of this extraordinary Board meeting, seven of fifteen Board members voted in favor of my dismissal as CEO, but fortunately (from my perspective) were not supported by the government representatives. Instead, I was granted a one month reprieve to resolve the disagreement with the Board.[38] At the February Board meeting the prior decision was completely overturned; my position again appeared to be secure leading into the April annual meeting.

In March, the situation took a dramatic turn for the worse, both for me at UES and for Russia more generally. On March 23**,** 1998, Victor Chernomyrdin was fired as Prime Minister, along with the remainder of the cabinet, including Nemtsov and Chubais. The pendulum of Russian economic reform had retreated from its liberal peak, and it became apparent that without the strong backing of Chernomyrdin, Chubais, and particularly Nemtsov, my position would rapidly become untenable. Opposition also came from within the government, as pressure mounted to find a sufficiently important new position for Chubais. Discussions had already been underway on replacing Dyakov with Chubais as Chairman of the Board, and once Chubais lost his government position these assumed greater urgency. Chubais needed a more high profile and important post than the mostly symbolic post of Chairman of the Board. UES offered this sort of

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[36] Gary Peach, "An Economic Perspective on UES Coup Attempt," *The Moscow Times* 3 Feb. 1998, reprinted at http://www.securities.com.

[37] "Russian Utility Reforms Pay Off in Profits," *Intercon* 8 Jan. 1998, reprinted at http://www.securities.com.

[38] For more detail on these events, see for example Stephanie Baker-Said, "Coup Bid Jolts Electricity Monopoly," *The Moscow Times* 29 Jan. 1998 and "Russia: Two Sides in Power Grid Scandal Give their Versions in TV Interviews," *Russian TV* 28 January 1998, printed in *BBC Worldwide Monitoring* 29 January 1998, reprinted at http://www.securities.com.

post, as the firm's reach extended throughout Russia on both a business and governmental level. I had also demonstrated that the position of CEO required management expertise more than in-depth knowledge of the power industry, and had successfully challenged the conventional wisdom that only a power engineer could in fact succeed in the position. Chubais had a similar background, with his record as a liberal economic reformer and government minister, and was thus well-qualified to lead UES.

Faced with these circumstances, I resigned my post as CEO on April 3, the day preceding the annual meeting. Particularly as the new government was being formed, the position had become increasingly politicized. I was a manager, not a politician, and found this situation unpleasant. For similar reasons, I declined some of the other options which were available, including management of other major Russian enterprises or appointment to a senior government position. By June I had resigned from the Board of Directors as well, bringing to an end my tenure at UES.

**Conclusion**

These changes in the government marked the end of what appeared to be a promising period for Russia and UES. While I had made some measurable improvements in UES operations, my impact had been limited principally to halting the immediate threat of the firm's decline and collapse. The longer term task of building UES into a true power company, rather than a ministry-like consolidation of resources, remained unfinished, just as the consolidation of Russian economic reform has been perpetually stillborn.

The new Prime Minister, Sergei Kiriyenko, and his cabinet lacked the strength to force the continuation of the process. They had insufficient experience and resources to conduct the sort of campaign against the entrenched old-guard interests that was necessary for industrial reform and restructuring. The government's concern became not improving the situation in Russia, but staving off collapse—a task in which they were to fail as well by mid-August 1998, when Russia defaulted on its domestic debt and devalued the ruble. Russia had moved on to a new stage in its economic reform process, and the window of opportunity for liberal, radical reforms which had brought me to UES had passed.

## Conclusion

The events at UES from March 1997 to May 1998 offer an illustrative example of the difficulties in attempting to change the status quo of the economic system in Russia. When I arrived at UES, the firm was in danger of failing, both in the short-term as a business and in its ability to execute its core business function of providing electricity to Russian citizens in the longer-term. Even where it was possible to prevent immediate failure and collapse, Changing the system proved to be far more difficult. The range of interests and opportunities for personal gain which resulted from the firm's non-market structures made the process exceedingly complex, and created a broad spectrum of opposition forces all having a vested interest in maintaining the status quo. Transforming UES into an understandable, manageable, corporate entity required a comprehensive set of changes at all levels, whether managerial, financial, or image-based. It was necessary to create almost an entirely new company based just on the existing operational shell.

Success in this process was both built on and sustained by a belief in the possibility and prospects for change at all levels. Some aspects of this process were more successful than others. Rather than dwelling on the specific successes and failures, however, it is more useful to focus on the general conclusions which one may draw from experiences at UES, and which are of relevance for the overall reform process:

1. *Opportunities for reform are short-lived and modest.* Russia had a real opportunity in 1997, but once the influence of reformers waned, it rapidly became difficult to build the necessary support for reforms.
2. *Reform cannot be done half-way or under optimal conditions*. Each opportunity must be acted upon immediately. While an ad hoc process may not agree with traditional economic logic, under dynamic conditions it is the only way of ensuring success. At UES, those measures which were implemented first proved to be the most lasting (i.e. cash collection, wholesale market); other reforms (i.e. separation of generation and transmission networks) had been on the books since 1992, but had never been executed as conditions did not allow this to happen.
3. *Individuals are most open to reform when they can observe strong leadership and direction.* Managers of regional energos were far more supportive of the wholesale market system when they understood exactly how it would impact them, and could observe and follow strong leadership.
4. *Consensus for reform is strongest when crisis is imminent.* Comprehensive Reform at UES was hindered for a long time by the general success of the power system, due to its over-capacity and overall strength. Only when this existence was in some way threatened did a sufficient consensus for reforms develop.
5. *Outside experts and consultants are most effective when used on concrete projects, such as creating the conditions for a particular process*. The most valuable work performed for UES by PriceWaterhouse, McKinsey, the World Bank, IFC, British Know How Fund, and others was their basic market research, assessment and integration of global experience into the Russian context, and otherwise helping to create a background environment which welcomed and accepted reforms. Their role in implementation was far more limited.
6. *The best results are achieved with a simple, understandable process in which each actor can immediately see his or her self-interest.* Ongoing efforts to improve

transparency at UES helped to ensure that anyone could understand the procedures and events, pleasing both shareholders and potentially disgruntled employees.

7. *New leadership is essential in changing the mentality which opposes reforms*. Difficulties arose at UES when the new leadership came into conflict with the old, such as Dyakov's continuing role as Chairman of the Board of Directors.

While these conclusions are based on events at UES, to the extent that UES exemplified other Russian firms in its mentality and ministerial structure, one may generalize these observations across other industries as well. UES was and remains a state owned enterprise. As long as the Russian government owned the majority of the company and wanted to take an active role in the firm's management, the firm's policies would be subject to changes in the political winds, with little or no power to act independently. This strong government role is what brought me to UES, and what ultimately forced me out one year later when the focus of government policy shifted from reform to stability. Regardless of whether or not my work was successful, patience within the government had expired, and the window of opportunity for the "young reformers" (myself included) had closed.

While the politicization of the overall environment blocked more widespread reforms, important and lasting changes at UES were nevertheless possible. It was possible at least to begin the transition from a ministerial structure to something that resembled a normal company and made normal business decisions. Some of the most important changes were the improvements in the firm's governance and management, both internally and externally and a greater emphasis on responsibility and accountability to move towards a more 'corporate' approach.

Inside UES, many Soviet-minded bureaucrats were replaced with more liberally-minded reformers, and all departments began to take on greater accountability and responsibility for their own actions. The concept that electricity was a commodity with a value rather than a social entitlement finally manifested itself in the firm's operations, and terms such as 'efficiency,' 'profits,' and 'loss' began to have a greater impact on both the operations of UES and its relations with the energos. The emphasis on cash collections and payments helped to refocus attention on customers who were able to pay, and away from those towards whom UES might have more of a 'social obligation' than a real business relationship. While it was not possible to end supplies to many of these non-paying customers, the very fact that those who could pay were expected to do so—and in some cases would even receive discounts—marked a significant change in business practices. Similarly, the creation of a true wholesale market helped to introduce a measure of market efficiency, and provided a clear incentive for energos to purchase electricity from lower-cost and more efficient generators. Progress in tariff reform helped to rationalize consumption patterns, ending the implicit tax which previously had penalized Russian industrial customers. Efforts to expand the international role and presence of UES prepared the initial ground for a time when UES would be a player in the international energy market and be able to utilize fully its existing production capacity.

UES also became more responsive to its shareholders, an absolute necessity if it is to receive the necessary investment in order to become a true world-class energy company. In 1997, the Russian government, as the majority shareholder, was able to dictate and manipulate the agenda and process of the annual meeting and election of the board of directors, and even to limit foreign shareholders to 1% of the voting rights. One year later, nearly 300,000 shareholders participated in the April 1998 annual meeting, and asserted an active interest in the

company's direction by electing Anatoly Chubais and myself to the Board of Directors over conservative opposition and protests.

While none of these changes had a revolutionary impact on UES, they were important incremental steps. They have been sustained through the changes in management, and even now are forming the basis for further progress. Chubais has continued to work on improving UES's financial situation even as he has capitalized on and benefited from the firm's political role. While many of these policies do not differ significantly from those which I had sought to implement, it is apparent that UES is continuing to act more as a firm than a ministry. It is a long process, but one which ultimately holds great prospects for Russia and Russian business.

The most visible measure of success was the UES share price on the Moscow stock market. UES has always been among the most liquid and widely traded stocks on the market, and is often regarded as a proxy for investor sentiment in the Russian economy as a whole. The price of UES shares increased on the Moscow stock exchange by 68.7%, versus 9% for the Russian Trading System index between April 1997 and April 1998.[40] This differential indicates the level of confidence in the direction of UES, and a vote of confidence in the overall direction of the firm's policies and general satisfaction with the firm's improved transparency and openness. Indeed, some analytical reports from investment banks have cited the optimism generated by these moves as the only reasons to invest in UES.[41]

Even beyond the external political situation and internal opposition, however, one factor more than any other influenced the course of reforms at UES. This was the fact that Russia is actually an extremely wealthy country. Just as UES 'suffered' from over-capacity, in the sense that reforms long lacked urgency, Russia has a surplus of resources, and one could say is even too wealthy. In Russia, only in extreme cases is the need for reform and change truly imminent. As long as a business is doing sufficiently well to cope and survive, there will be only limited enthusiasm for any attempts to alter the status quo; any such changes will require a great deal of energy and effort. While UES was able to meet the domestic demand for electricity, there was no demand for change. Without any sort of managerial accountability to shareholders or others who might demand profitability or a return on investment, UES was under no pressure to alter its operations. For example, the 50% over-capacity in the electricity sector was seen by most as a margin of safety, not as an opportunity to expand exports and to seek new markets. Efficiency and profit maximization were irrelevant to the firm's behavior.

In such a situation of wealth and surplus, until a firm is faced with a crisis it is difficult to find a consensus viewpoint in favor of any particular course of action. Management is divided, and more interested in preserving the privileges associated with the status quo than any sort of net improvement. Only when the contradictions of the virtual economy are becoming truly critical does a sufficient consensus form to effect reforms. This was the case with the financial situation at UES when I took office, such that UES was unable to meet even its minimum obligations. My task in reforming UES was thus not only executing change, but also building a sense that change itself was in fact necessary. My role bore less resemblance to that of a 'turnaround artist' in a failing Western firm than to an entrepreneur responsible for building a firm from the ground up. Once the immediate financial crisis had passed, however, my task became far more difficult, particularly as the initial euphoria and burst of political backing

[40] The RTS-1 index was 298.5 on April 1, 1997, and 325.5 on March 31, 1998; UES share prices increased from $0.1875 to $0.3163 over the same period. Data from http://www.securities.com.

[41] See for example D. Martin, et. al., *UES Company Report* (Dresdner Kleinwort Benson Securities Limited: 1 July, 1998).

evaporated. Perhaps had the situation at UES truly reached a crisis, such as with the firm facing seizure of assets by creditors or bankruptcy proceedings (if Russia had sufficiently strong bankruptcy laws), my task might have been easier; I would have enjoyed the support from a more broad-based coalition within UES. As it was, most thought the medicine I was prescribing was too strong. On the contrary, I argued that it was not strong enough, and that the firm was sick beyond what the medicine was capable of curing.

While many might question whether Russia is a truly 'wealthy' country in the current circumstances, I maintain that at its core it is. Much of this wealth is being misspent or mismanaged, to the detriment of the Russian people, but as a country hardly anyone questions Russia's great potential. The challenge is always seen as making use of and capitalizing on its resources, not how to find some niche in the world economy. When Russia's macroeconomic situation hit an all-time low in August 1998, in order to address the apparent sense of disaster Yevgeny Primakov became a consensus choice for Prime Minister; he was backed by a broad coalition led by the liberal Yabloko party. By May 1999, when the economic situation was improving measurably, Primakov was fired, and political wrangling again dominated the composition of the Government. Just as the situation again appeared to be under control, Primakov's successor Sergei Stepashin was fired, once more throwing the system into turmoil. Similarly, in 1991 and 1993 the country united behind Boris Yeltsin in times of extreme political crisis—but each time that support evaporated as he brought apparent stability to the country. Unity was possible only in the face of crisis, just as at UES my greatest success came in the most immediately critical areas, such as the Far Eastern energy crisis, cash management, and emergency financing. At the time of printing, it appears that the county might again be waiting uniting behind Valdimir Putin—at least temporarily.

Radical reform and change thus depends on building a consensus among key leaders regarding the necessity and urgency of change. Most commonly, this occurs during or immediately after a crisis, when the attention of relevant individuals is easily focused on a particular objective. Once a crisis has passed, there is a strong tendency to return to a more divided position, in which individuals may pursue their own opportunities for gain. It is this sort of inertia which has supported the continued existence of the virtual economy in Russia, and hindered the overall economic reform process. Despite attempts to change managers and to initiate a public relations campaign, ultimately the group of reformers failed to receive sufficient support for full reform of UES. Changes in the external political climate as the initial euphoria which had accompanied reformers into office waned, impacted me as well, undermining the positive steps I had made and support I had been building within UES.

In the case of UES, the accession of reformers (including myself) to positions of power in Russia temporarily infused the country with a pro-reform consensus. As is perhaps often the case with young, idealistic leaders, it was more natural for us to seek change, rather than work for compromise. As dissatisfaction with the pain induced by these efforts rose—including for example in the energy sector higher tariffs for consumers; the general limitation of special privileges through competitive practices such as the implementation of the wholesale market; and the creation of a central UES management which was more active and concerned with the energos and the other more diverse subsidiaries—the task of sustaining these reforms became increasingly more difficult. Not only did the actions that I and others sought to implement build opposition in themselves through the pain they induced, but their very success lessened the immediacy of their implementation.

**UES in Hindsight**

In viewing a series of events after the fact, one always wishes that more could have been accomplished, or that events had turned out differently. While there were a number of apparent successes at UES, my tenure at UES was not without mistakes. Perhaps chief among these was my acceptance of Dyakov's continued presence as Chairman of the Board. As long as he remained within the UES management structure, he was able to undermine my efforts elsewhere, and to build support among those who stood to lose from changes in the firm's managerial and operational structure. Even as I hired Kislyukov as CFO and made other changes in the senior management, those who lost out found a voice ready to argue their case. When the overall climate in the Russian government turned against me, Dyakov stood ready to receive the support of many from both within and outside UES.

One might also argue in retrospect that I should have pushed for more far-reaching structural changes from the start, and not waited until the firm's financing and other immediate needs had been satisfied. While this argument is not without its merits, in my defense I also lacked sufficient experience and knowledge of UES to make such major decisions immediately. I had only served as First Vice President for just over one month, and my prior experience in energy was limited. More importantly, even basic information on the firm, such as a comprehensive audit, was not available, and the incumbent senior managers could not be trusted to provide this information. Even assessing the true nature of the problems facing UES required assistance from outside consultants, auditors, and others; and developing a comprehensive action plan would have been nearly impossible.

I was also hindered in my work by a natural desire to wait for the most favorable conditions for a given action, and as a result did not attempt to accomplish enough, fast enough. For example, preparations for separating generation and transmission assets were repeatedly delayed in the hope that the climate would improve, until such a point when it was no longer feasible. Again, in retrospect it is apparent that it is better to pursue definite achievements whenever possible rather than to wait for an environment which might lead to a marginally better outcome. If one waits, one risks losing the opportunity altogether—as ultimately happened at UES.

On a personal level, UES marked my first foray into managing a large national (or international) corporation, and it differed significantly from my prior experience at NBD. The broader scale of UES did pose a major challenge, as I was called on to be equally familiar with operations in diverse aspects of the firm's operations at every turn. As CEO of a major company, rather than a small, growing bank, I had to make broader, long-term strategic decisions, rather than more operational decisions to which I was accustomed at NBD. In recognizing this, however, I also realized that making the necessary step back to view the bigger picture was very difficult for me personally. It was evident that in order to be comfortable in making such a step, one had to have a secure position, both internally within a firm's power structure and also externally, in terms of market position and market role; achieving this sort of security was an ongoing struggle at UES.

In retrospect, above all I remain optimistic about Russia's future possibilities. The country presents tremendous opportunities, and still possesses all of the right ingredients to be a true world leader. For me, as with many others of my generation, the time at UES was a good time to grow together with Russia, and to make my contribution to an extraordinarily dynamic and optimistic period. While one might argue that I was too young, too inexperienced, or the task before me at UES simply too immense, I did have some success, and given the overall

environment for reform it is difficult to argue that any of this was significant to the final outcome of my tenure at UES. Ultimately, though, Russia needs for the younger, reform-minded generation—those whose influence held sway for the brief period which brought me to UES—to mature and gain greater experience in business and government, both inside and outside of Russia. As time passes, this generation will take on an increasingly prominent role in Russia's leadership, and be able to effect on a sustained basis the sorts of progressive changes and reforms which Russia desperately needs.