

PN-ACF-412

**DIAGNOSTICS OF THE CANDIDATE ENERGOS
FOR THE COMMERCIALIZATION PROGRAM**

Prepared for

**RAO EES Rossi
Moscow, Russia**

Under Contract to

United States Agency For International Development

**Delivery Order No 8
Contract No CCN-0002-Q-08-3152-02
Commercialization of the Power Sector**

Prepared by

**Hagler Bailly Consulting
Moscow, Russia**

July 10, 1997

INTRODUCTION

Eleven energos were nominated by Mr Boris Brevnov of RAO EES Rossu on April 18, 1997 as potential candidates for Task 8(b) Phase III pilot projects under the USAID Commercialization Program Hagler Bailly undertook the task of completing diagnostic evaluations of those energos, and making recommendations as to their suitability for the program This report provides the results of these evaluations

One of the candidate energos, Lenenergo in St Petersburg, was not considered as a suitable candidate for a Phase III pilot due to the level of assistance already provided under Phase II The financial and accounting reform work initiated there under USAID auspices has been continued on a commercial basis by the energo with Price Waterhouse, the accounting subcontractor for the commercialization program

Of the remaining ten candidate energos, three had been visited during Phase II (Nizhnovenergo, Sverdlovenegero and Tyumenergo) to discuss the program, so there was some information available, although updated information was certainly desirable With seven energos (Saratovenergo, Krasnoyarskenergo, Novosibirskenergo, Orelenergo, Dalenergo, Rostovenergo, and Permenergo) there had been no previous contact Hagler Bailly therefore completed diagnostic visits of all seven new candidate energos, and updates at two of the three previously visited energos (Nizhnovenergo, Sverdlovenegero)

DAIGNOSTIC CRITERIA

The results of the visits are summarized in this report by a table evaluating each energo on a scale of 1 to 5 (5 being the best) on fifteen selected criteria Hagler Bailly considered important in evaluating their suitability as pilot energos Those criteria are as follows

- 1 Management Interest in Program- General Director/Staff
- 2 Macro-Economic Environment
- 3 Regulatory and Political Environment
- 4 Competency and Capability of Staff
- 5 General Financial Situation
- 6 Magnitude of Sales
- 7 Organizational Structure
- 8 Information Management System
- 9 Accounting and Reporting System
- 10 Tariff Establishment
- 11 Customer Service/Billing
- 12 Financial Analysis and Planning
- 13 Investment Projects
- 14 Potential Benefit to Energo
- 15 Willingness to Share Cost

Finally, each energo was placed into one of three categories as follows

Type 1 - Recommended as a Phase III pilot

Type 2 - Recommended as a future pilot should more funding become available

Type 3 - Recommended that no work be done at this energo

These rankings and evaluations are intended only as aids in summarizing and understanding the results of the evaluations. They are subjective judgments representing the consensus of the teams visiting the energos, and no mathematically precise evaluations are intended (no weighted criteria, total scores and rankings for each energo, etc.) Such an approach would not be valid given the level of data that can be obtained in such diagnostic visits and the time available for the diagnostic evaluations.

Additional detailed information is provided in the attachments to each diagnostic, such as trip reports, and even more data is available in the raw data obtained by the diagnostic teams. Hagler Bailly will be happy to respond to any requests for further information required by RAO EES Rossi, the ERIU, or USAID.

RESULTS SUMMARY

Three energos are categorized as Type 1 - Recommended as a pilot

Novosibirskenergo

Permenergo

Rustovenergo

Five energos are categorized as Type 2 - Recommended as a future pilot

Orelenergo

Nizhnovenergo

Tyumenenergo

Saratovenergo

Sverdlovenergo

Two energos are categorized as Type 3 - No work recommended at present

Dalenergo

Krasnoyarskenergo

FURTHER RECOMMENDATIONS

The commercialization program scope of work as originally proposed by Hagler Bailly intended to undertake commercialization pilot programs at up to five chosen energos, so as to spread the resources among different candidates and maximize the chances for

success There has been discussion lately concerning the proper uses of the resources of the program in conjunction with the upcoming World Bank program on regional commercialization, which will make much more funding available for more intensive programs of similar work with the regional energos It has been suggested that all of the resources of the USAID commercialization program should be used immediately at one chosen pilot energo

It is Hagler Bailly's recommendation that if such an approach is chosen, that rather than risking an immediate large scale dedication of resources to one energo, that all three recommended pilot energos be started using the resources of the program A scope of work should be developed with specific criteria and decision points for continued work at each Should each pilot proceed successfully, each could be continued using the resources of the World Bank program If not, then resources could be concentrated at the pilot, or pilots, that proceed successfully

DIAGNOSTIC EVALUATION OF NOVOSIBIRSKENERGO

Dates Visited July 7 - 8, 1997

Attachments Trip Report - Michael Swider
Trip Report - Vladislav Khominski
Agreement of Cooperation Protocol, signed on July 8, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	5/5
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	4
4 Competency and Capability of Staff	4
5 General Financial Situation	2
6 Magnitude of Sales	4
7 Organizational Structure	3
8 Information Management System	4
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	4
12 Investment Projects	3
13 Potential Benefit to Energo	5
14 Willingness to Share Cost	3

Recommendations and Summary Type 1

Novosibirskenergo was very enthusiastic about hosting the Commercialization project and was open with us about where they need the most help. All the management, from the Board of Directors on down, was positive towards our project. In the protocol we developed with several managers, and signed with the General Director, Novosibirskenergo requested assistance in the following areas:

- 1 The development of a strategic plan for the company to increase cash collections, and develop an overall strategy for their energy sales subsidiary "Energosbyt"
- 2 Analyze the current management system at the company and make recommendations for its restructuring
- 3 Develop materials, and form a training group for training company personnel in the areas of customer service, personnel management, financial and investment analysis, budgeting, and international accounting standards
- 4 Develop a plan for personnel management and compensation
- 5 Analyze Novosibirskenergo's relationship to the FOREM and develop recommendations for working within this market

6 Analyze tariff formation for electric and heat energy and make recommendations on how the process could be improved

Based on our interviews, we believe that Energosbyt in particular, as a sub-unit of the energo would be an excellent counterpart for the Commercialization program. Novosibirskenergo Energosbyt is unusually progressive in their attitudes toward customer service, and in their general approach to new ideas. Also, as the energo is so large it would be easier to implement change first at the sub-unit scale. Having a specific counterpart to work with, who is ready for change, is critical to the success of any consulting project.

Novosibirskenergo is currently in a difficult financial situation, and many of their business practices are questionable. But the management has started to recognize that there needs to be a change in the way they do business. There is much more interest in becoming more customer oriented, and in restructuring, than in any other energo we have visited. That is why we categorize Novosibirskenergo as a Type 1, to be included in the Commercialization program.

TRIP REPORT FOR NOVOSIBIRSKENERGO

Novosibirsk
July 7 - 8, 1997

Prepared by Michael Swider
Hagler Bailly Consulting/Moscow

SUMMARY

On July 7 and 8 Michael Swider of Hagler Bailly Consulting and Aleksander Kozlov of Carana corporation visited Novosibirskenergo to perform a short diagnostic. We found the energo to have generally the same problems that plague all the other regional energy systems. These are primarily

- Poor level of collections for power sold
- Weak internal control systems and a management that is not concerned with increasing shareholder wealth
- No cost control systems
- An almost total lack of interest in customer service

As with other regional power systems these problems are related to the energo not viewing their activities a part of a commercial business. What we also observed was that the management at Novosibirskenergo is beginning to become interested in improving the financial condition of the company. We were greeted very enthusiastically and openly by the senior management who showed a keen interest in participating in the Commercialization program. We believe that there are people with whom we could productively work with at this energo. We are also encouraged by the areas of support which they requested.

- 1 The development of a strategic plan for the company to increase cash collections, and develop an overall strategy for their energy sales subsidiary 'Energosbyt'
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Based on our interviews, we believe that Energosbyt in particular, as a sub-unit of the energo would be an excellent counterpart for the Commercialization program. Novosibirskenergo Energosbyt is unusually progressive in their attitudes toward customer service, and in their general approach to new ideas. Also, as the energo is so large, it would be easier to implement change first at the sub-unit scale.

In addition to the above questions we believe that all the work and recommendations that will be made under the Commercialization program need to be orientated toward increasing the level of financial and management control over the organization, and in increasing the role of customer service in the strategic goals of this or any energy company.

THE ENERGO

Novosibirskenergo (NE) is the monopoly electricity supplier for the city of Novosibirsk and the Novosibirsk region. The company also supplies 60% of the region's heat demand. The city of Novosibirsk is populated by about 1.5 million residents in an Oblast of 2 million. Novosibirsk's economy is dominated by heavy industry and military industrial production and is poor in natural resources relative to other Siberian regions. Novosibirsk is also well known for its wealth of universities and institutes, which are now a drag on the local economy as most have lost their federal funding.

The energo's generating assets consist of five CHP plants and one hydroelectric plant that it rents from RAO UES. The following is a breakdown of generating capacity at the end of 1996:

Generator	Installed Capacity	Available Capacity	Operating Capacity
Novosibirsk CHP-2	340.0	321.0	249.0
Novosibirsk CHP-3	464.0	341.5	300.0
Novosibirsk CHP-4	368.5	316.5	248.0
Novosibirsk CHP-5	900.0	841.4	619.9
Barabinsk CHP	113.0	87.0	32.8
Hydroelectric	455.0	350.0	245.0
Total	2640.5	2257.4	1694.7

The oldest stations, both commissioned before 1945, are Novosibirsk 2 and 3. The newest is Novosibirsk-5, where the last block was put on line last year. Due to their age, both Novosibirsk-2 and 3 have passed their expected operating lives and need to be retired. Construction was started on Novosibirsk-6 in 1992, but this project has been halted due to lack of cash and doubts as to whether the new station would be profitable given the current tariff regime.

In the long-run, the management of Novosibirskenergo wishes to build more capacity to replace old equipment, and to increase the total amount of capacity. The system imports about 35% of its energy on average (about 60% in the summer months and nearly none in winter), and this is seen as a weakness by management.

All of the thermal power plants burn mainly coal from the neighboring Kuzbass and Krasnoyarsk regions. They purchase coal for their five thermal power plants from about 160 middlemen. The large number of middlemen is related to the "churning" of expenses that is typical in most electric energy systems that we have seen. The technical director admitted that it was only a scheme to get certain people feeding off the energy system that he has no power to stop. Another problem with fuel supply is the lack of quality control. Fuel purchased often contains a heat value lower than its rated value, and is often in poor condition (too wet or dirty) and damages the generation equipment. But there is no plan currently to set controls over fuel purchases. The higher cost of coal from paying a raft of middlemen is passed along to the rate payer due to the cost-plus system of tariff setting used in Russia today.

In addition to its five generation companies, NE consists of eight electric distribution companies, one heating distribution company, plus the typical collection of repair, construction, transportation, manufacturing, and transportation companies - totaling 22. The number of employees in the organization totals 13,000. The General Director claims that most social assets have been turned over to the municipality, and that remaining social assets are those that are too difficult to dispose of or necessary to retain within the company.

GENERAL DIRECTOR

The General Director of Novosibirskenergo Vitali Tomilov, expressed considerable interest in the commercialization program, and invited two members of the board of directors to meet with us immediately. Major areas of concern for the management are

- 1 Development of management skills for senior managers
- 2 Continue to improve the function of the energy sales subsidiary (Energosbyt)

The financial situation at the energo was describe as poor because of the weak condition of the Novosibirsk economy, which has been traditionally loaded with Federal agencies and military complexes. Because of the weak economy the local governor exerts considerable pressure on the energo to subsidize and support the region. The local government is capable of exerting considerable influence on the energo because it holds 30% of the voting shares. Tariff negotiations are done directly with the local administration as there is no functioning REC at this time in the region.

In a somewhat unusual stance for a Russian general director, Mr Tomilov allows the directors of his subsidiary companies considerable latitude in managing their business. All are subordinate to NE, but each director of an affiliate has full control over day-to-day operations. But while management autonomy often brings more inspired management, the lack of financial controls at NE does bring a considerable risk that needs to be immediately addressed at this energo.

PLANNING DEPARTMENT

The main function of the planning department is in the analysis (accounting for costs) and setting of tariffs, which is driven by FEC rules. Other activities include coordinating planning with the companies affiliates and analysis the energo's effectiveness (efficiency). To perform this work the department is divided into three groups

- 1 Cost analysis
- 2 Production planning and scheduling
- 3 Tariffs

The current tariffs in Novosibirsk are

- Average 245 rubles/kWh
- Industrial 308 rubles/kWh (with a two-part tariff for >750 kV)
- Residential 175 rubles/kWh

These are based on a calculated average cost of 220 rubles/kWh. Generation costs at NE's CHPs range from 150 - 180 rubles/kWh. The cost of purchased energy from RAO UES is only 103 rubles/kWh. But after connection, service, and maintenance fees are added to the kWh purchased, the total cost of imported power rises to 245 - 260 rubles/kWh. The total cost structure for a kilowatt of power in NE is

Fuel	35%
Construction	15%
Services	9%
Payroll	9%
Materials	8%
Amortization	8%
Other (rent)	3%

Purchased energy 12%

Profit is also in the tariff equation, but they have no real profits because about 8% of all sales are uncollectable

ECONOMICS DEPARTMENT

The economics department is responsible for preparing the yearly production plan. It also prepares an investment and construction plan that has a separate budget. All affiliates in NE have their own yearly budget that they must meet, and this is used in the tariff calculations.

One of the most difficult costs to control is the fuel purchases. NE buys from about 50 sources. These are purchased through about 160 middlemen. The middlemen add at least 5% to the cost in the view of the economic director. All but Novosibirsk CHP-3 can work on natural gas but they are very limited as to the amount of gas that can be purchased because it must be paid in cash.

Last year NE was able to collect only 9% of its sales in cash. Most of this cash went to the payroll and pension fund, and this has not been sufficient with wages falling behind nearly nine months. Accounts Receivable for the 1 April 1997 total \$282 million on annual sales of about \$480 million. (This is slightly worse than average for the energos we have seen.) The economics director admits that NE is largely guilty for the cash problem as they were the ones who began to propose barter payments when the cash problems started. They have been taking concrete steps to limit barter payments and this has helped raise the level of cash collected to 36% in June.

One of the hindrances to cash collection has been the resellers who skim off the cash that they collect. Also there are many companies who they know can pay 100%, or 70%, or 50% cash, for example but don't because there is no pressure to. They are working on this problem with the local administration and are targeting to have collections up to 50% in cash by the end of the year.

One way that they could better their financial position they know is to cut costs. Unfortunately there is no overall plan for increasing efficiency at NE. They are planning to develop some measures in the areas of cutting repair costs and down time, better use of marginal pricing for dispatch, and a program to upgrade lines, substations, and metering to cut technical and non-technical losses. As in other energy systems, NE suffers from a lack of metering for a large part of their service area.

BOOKKEEPING DEPARTMENT

Each affiliate of NE has their own bookkeeping department, and their accounts on production, fuel, and collections are sent up to the head bookkeepers office for consolidation. They use electronic mail for consolidating accounting information, but it is not done daily, rather over weekly or monthly intervals. Collections notices are sent by Energosbyt, and collections are made at their partner bank - Bank Alemar.

Because NE has trillions in debt on its main bank account it has been allowed by the local administration to open a separate bank account at Energosbyt. In this way they are able to meet some of their cash expenses. Even under this arrangement their cash position is still quite poor and they have only recently paid Octobers back wages.

The main reason for the cash crisis is barter, of course. While barter is approved at the head office it is mostly managed by a separate company, NESKO, which has its own bank account.

The head bookkeeper believes that NESKO is part of the problem rather than the solution as they appear to be getting rich off of barter arrangements. She thinks that it is time to eliminate this organization.

One of the greatest problems in implementing better controls over the system in general, and finances in particular, is that they are not able to pay sufficient wages to hire competent personnel. The head bookkeeper has been trying for months to hire an assistant to develop a better accounting information system, but has been unable to find a qualified person who will agree to the low wages the energo pays. This is a problem that affects all of the energo's financial and control operations.

INFORMATION SYSTEMS

The main IS department has traditionally supported the technical aspects of the business. The director of the department spoke in length about their basic needs to upgrade their information system, including a minimum of \$44,000 in hardware to replace old vacuum tube computers. But the plans only include upgrades for technical/production information flows.

All of the customer service and metering IS is performed by Energosbyt. It is there that we found an IS manager who was much more interested in collecting and analyzing customer and financial data. Energosbyt has already begun a program to install more sophisticated metering equipment that can report information on demand through standard telephony. The problems of installing this system are enormous. Not only is there a huge backlog of meters that require the new electronic readers, but the energo's telephone system is of very poor quality and can only handle 400 baud.

Despite the poor state of their communications, and lack of resources, the IS department at Energosbyt is moving ahead with their installation program (already up to 60% of all substations) and is preparing a customer service database with all customer demand information and profiles to be automatically updated. One of their greatest obstacles is also hiring quality programmers to complete the work as the salaries that they can offer are non-competitive. As with most regional energy systems in Russia, NE continues to spend too much of their payroll on redundant production personnel, and leaves the staff that needs to do the commercial work short-handed.

ENERGY SALES (Energosbyt)

The main problems for Energosbyt at this time are

- 1 Low collections
- 2 Lack of resources to buy the technical systems that they need to upgrade metering

They are addressing the collections problem by introducing a system of contracts with customers, whereby all customers will agree to a level of service for a level of payment. This is helping to solve the collections problem with commercial customers, but it does not help with residential customers as they are serviced through resellers. As the city also needs cash, the money that flows through the municipal resellers never makes it to the energo.

To increase collections from residential customers, Energosbyt is trying to introduce a system of meter readers, whom they call "agents." The deputy director for Energosbyt understands the importance of customer relations and therefore requires that all agents have at least a college degree and proper training. For commercial customers, each will be assigned an "inspector" who will be responsible for knowing their customers, including how much that customer can really pay for electricity. If a customer cannot pay all in cash then in their contract they will

agree to pay a certain percentage in cash, based on the inspectors evaluation of their ability to raise cash. She doesn't think that customers should be treated as "segments," but each as individuals. We were very encouraged to finally meet a person working in the Russian energy system who has an interest in customer service

One of the largest problems for collections is Federal customers because by government decree they have no right to force collection or disconnect. Many of these Federal customers could actually pay for some or all of their energy as they are housing now commercial companies on their premises. But they hide behind the protection of the Federal government. NE also loses a lot in commercial (black) losses. Much of this is due to poor metering, but also from outright stealing. This may cost them as much as 10% of revenues. The deputy director does not believe that there is currently a good law on prosecuting energy thieves, and that one needs to be prepared by RAO and put before the government.

Finally they also need to improve their information systems as do not have enough financial information on their customers. They also want a financial management system developed at the energo that would help stimulate cost cutting. The current cost-plus system provides no motivation to work more efficiently and needs to be discarded.

We also received a specific request from Energosbyt when we asked in what way our program could help. We were told that they need help in developing a system of compensation at Energosbyt that provides a stimulus for employees, especially those that work directly with customers. The deputy director felt that as Russia has little experience in performance-based compensation that they would definitely need the advice of a foreign consultant.

ENERGOSERVICE

Novosibirskenergo also is the leading member in conglomerate, called "Soyuz Energoservice" involving their bank that is looking to invest in a program of "diversification" for the energo. They have currently made investment in three local companies that build power equipment. Even though the business is related to power we believe there is a danger in allowing a monopoly to diversify, while retaining its monopoly power. Of course the temptation is to finance the risky business with the regulated one. The problem of creating "side businesses is an epidemic in Russia, and we believe a result of a lack of ownership controls over the business. This often allows management to strip the assets of the company that they are running to create a new company that they will eventually own. This is a question that needs to be addressed on the Federal level, but one that can be analyzed as part of the Commercialization program.

CONCLUSIONS

At the end of our initial diagnostic we prepared a list of issues on a protocol (attached) that was signed by the General Director. The energo has request of us, under the aegis of the Commercialization program to provide assistance in

- 1 The development of a strategic plan for the company to increase cash collections, and develop an overall strategy for Energosbyt
- 2 Analyze the current management system at the company and make recommendations for its restructuring
- 3 Develop materials, and form a training group for training company personnel in the areas of customer service, personnel management, financial and investment analysis, budgeting, and international accounting standards
- 4 Develop a plan for personnel management and compensation

- 5 Analyze Novosibirskenergo's relationship to the FOREM and develop recommendations for working within this market.
- 6 Analyze tariff formation for electric and heat energy and make recommendations on how the process could be improved

In addition to these questions we believe that all the work and recommendations that we will make under the Commercialization program need to be orientated toward increasing the level of financial and management control over the organization, and in increasing the role of customer service in the strategic goals of the company, or any energy company. A small, or growing business in Novosibirsk cannot hope to get a new connection to the power grid, even though they are able to pay cash. This lack of customer orientation costs the energo dearly, and is a drag on the local economy.

MANAGEMENT INTERVIEWED

Tomilov, Vitalii Georgievich, General Director

Zhurba, Dmitri Gennadievich, Member of the Board of Directors, and General Director of Bank Alemar

Melamed, Leonid Borisovich, Member of the Board of Directors and Director of Soyuz Energoservice

Novoselova, Galina Vladimirovna, Head Bookkeeper

Bystrov, Sergei Nikolaevich, Head of Information Systems Department

Osovskii, Alfred Semyonovich, Technical Director

Zharkov, Yuri Viktorovich, Head of Economics Department

Burovnikova, Tatiana Ivanova, Head of the Planning Department

Podshasova, Tatiana Nikolaevna, Deputy Director, Energosbyt (Sales)

ATTACHMENTS

- 1 Protocol
- 2 Balance Sheet for 1 April 1997
- 3 Technical Specifications of Generators
- 4 Carana Report

ПРОТОКОЛ
о намерениях сотрудничества в рамках проекта
"Коммерциализация энергетики"

В соответствии с поручением РАО "ЕЭС России", в рамках первого этапа проекта "Коммерциализация энергетики", финансируемого USAID, группа специалистов в составе

- 1 Майкл Свайдер - "Хаглер Байи Консалтинг"
- 2 Александр Козлов - "Карана Корпорейшн"

в течении 7-8 июля 1997 г рассмотрела информацию, представленную руководством ОАО "НОВОСИБИРСКЭНЕРГО" по вопросам возможностей и направлений сотрудничества в рамках вышеназванного проекта

По результатам совместной работы было принято следующее соглашение

ОАО "НОВОСИБИРСКЭНЕРГО" заинтересовано в проведении данного проекта по следующим направлениям

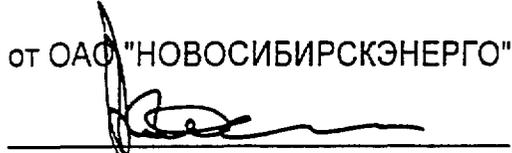
- 1 Разработка стратегии и политики компании, направленных на сокращение неденежных форм расчетов, формирование эффективной стратегии сбыта
- 2 Анализ существующей системы управления компании и подготовка возможного плана ее реструктуризации
- 3 Разработка методик, формирование учебных групп и организация обучения персонала компании по следующим темам работа с клиентами, управление и стимулирование персонала, финансовый и инвестиционный анализ, управление ресурсами бух учет IAS
- 4 Разработка концепции кадровой политики и рекомендаций по ее внедрению
- 5 Анализ системы отношений компании и ФОРЭМ, разработка рекомендаций по ее изменению Проработка инвестиционных возможностей компании по отношению к ФОРЭМ с целью увеличения эффективности инвестиций
- 6 Анализ методики формирования тарифов на электрическую и тепловую энергию и разработка рекомендаций по ее изменению

Руководство ОАО "НОВОСИБИРСКЭНЕРГО" готово оказать всемерную поддержку проекта со стороны работников АО, гарантирует доступ к необходимой информации

ОАО "НОВОСИБИРСКЭНЕРГО" согласно на тиражирование положительного опыта при условии сохранения коммерческой тайны

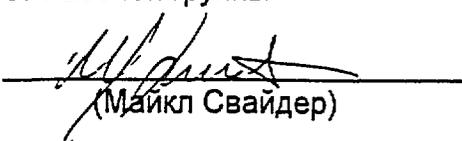
Подписи сторон

от ОАО "НОВОСИБИРСКЭНЕРГО"



(Томиллов В Г)

от Рабочей группы



(Майкл Свайдер)



А К Т И В	Код стр	на начало года	на конец года
1	2	3	4
II ОБОРОТНЫЕ АКТИВЫ			
Запасы	210	205622	224152
в том числе сырье материалы и другие аналогичные ценности (10 15 16)	211	180325	206912
животные на выращивании и откорме (11)	212	1772	1842
малоценные и быстроизнашивающиеся предметы (12 13 16)	213	14558	16278
затраты в незавершенном производстве (издержках обращения) (20 21 23 29 30 36 44)	214	172	1177
готовая продукция и товары для перепродажи (40 41)	215	8328	7322
товары отгруженные (45)	216		1
расходы будущих периодов (31)	217	467	621
Прочие запасы и затраты	218		
Налог на добавленную стоимость по приобретенным ценностям (19)	220	88733	114856
Дебиторская задолженность (платежи по которым ожидаются более чем через 12 месяцев после отчетной даты)	230		
в том числе покупатели и заказчики (62 76 82)	231		
векселя к получению (62)	232		
задолженность дочерних и зависимых обществ (78)	233		
авансы выданные (61)	234		
прочие дебиторы	235		
Дебиторская задолженность (платежи по которым ожидаются в течение 12 месяцев после отчетной даты)	240	1313138	1608767
в том числе покупатели и заказчики (62 76 82)	241	793162	1111308
векселя к получению (62)	242		
задолженность дочерних и зависимых обществ (78)	243		
задолженность участников (учредителей) по взносам в уставный капитал (75)	244		
авансы выданные (61)	245	16483	11480
прочие дебиторы	246	503493	485979
Краткосрочные финансовые вложения (55 58 82)	250	48918	74233
в том числе инвестиции в зависимые общества	251		
собственные акции выкупленные у акционеров	252		
прочие краткосрочные финансовые вложения	253	48918	74233
Денежные средства	260	4432	6691
в том числе касса (50)	261	211	97
расчетные счета (51)	262	930	851
валютные счета (52)	263		172
прочие денежные средства (55 56 57)	264	3291	5571
Прочие оборотные активы	270	22	21
Итого по разделу II	290	1660865	2098721
III УБЫТКИ			
Непокрытые убытки прошлых лет (88)	310		
Непокрытый убыток отчетного года	320	x	
Итого по разделу III	390		
БАЛАНС (сумма строк 190 290 и 390)	399	8558739	0970552

ПАССИВ			
1	2	3	4
IV КАПИТАЛ И РЕЗЕРВЫ			
Уставной капитал (85)	410	15075	15075
Добавочный капитал (87)	420	6077967	60899-8
Резервный капитал (86)	430	11083	337
в том числе резервные фонды образованные в соответствии с законодательством	431		
резервы образованные в соответствии с учредительными документами	432	11083	337
Фонды накопления (88)	440	532509	533531
Фонды социальной сферы (88)	450	349187	349547
Целевые финансирование и поступления (96)	460	11407	70096
Нераспределенная прибыль прошлых лет (88)	470	21520	21520
Нераспределенная прибыль отчетного года	480		60455
Итого по разделу IV	490	7018748	7149509
V ДОЛГОСРОЧНЫЕ ПАССИВЫ			
Заемные средства (92 95)	510	420	375
в том числе кредиты банков подлежащие погашению более чем через 12 месяцев после отчетной даты	511	420	375
прочие займы подлежащие погашению более чем через 12 месяцев после отчетной даты	512		
Прочие долгосрочные пассивы	520	32139	45169
Итого по разделу V	590	32559	45544
VI КРАТКОСРОЧНЫЕ ПАССИВЫ			
Заемные средства (90 94)	610	846	768
в том числе кредиты банков	611	846	768
прочие займы	612		
Кредиторская задолженность	620	1500926	1760057
в том числе поставщики и подрядчики (60 76)	621	608246	340085
векселя к уплате (60)	622	207276	130734
задолженность перед дочерними и зависимыми обществами (78)	623		
по оплате труда (70)	624	61518	87436
по социальному страхованию и обеспечению (69)	625	68369	68237
задолженность перед бюджетом (68)	625	269085	331176
авансы полученные (64)	627	85959	66845
прочие кредиторы	628	200473	235546
Расчеты по дивидендам (75)	630	5595	14598
Доходы будущих периодов (83)	640	3	3
Фонды потребления (88)	650	11	13
Резервы предстоящих расходов и платежей (89)	660		
Прочие краткосрочные пассивы	670	51	60
Итого по разделу VI	690	1507432	1775499
БАЛАНС (сумма строк 490, 590 и 690)	699	8558739	8970552

Руководитель предприятия _____

Главный бухгалтер _____

1 ОРГАНИЗАЦИОННАЯ СТРУКТУРА

1.1 В составе Акционерного общества открытого типа "Новосибирскэнерго" входят и находятся на отдельном балансе 23 структурные единицы: управление ОАО "Новосибирскэнерго", Новосибирские ТЭЦ-2, ТЭЦ-3, ТЭЦ-4, ТЭЦ-5, Барабинская ТЭЦ, ГЭС на базе имущества РАО "ЕЭС России", строящаяся ТЭЦ-6, производственно-ремонтное предприятие, специализированное ремонтное предприятие, "Новосибирскэнергоспецремонт", автотранспортное предприятие, Тепловые сети, Восточные, Городские, Приобские, Черепановские, Чулымские, Западные, Татарские, Карасукские электрические сети, Энергонадзор, Энергосбыт, "Новосибирскэнергоснабкомплектоборудование (НЭСКО)

2 ХАРАКТЕРИСТИКА МОЩНОСТИ, СОСТОЯНИЕ ОБОРУДОВАНИЯ

2.1 Данные об установленной, располагаемой и рабочей электрической мощности на начало и конец 1996 года приведены в следующей таблице

Предприятия	МВт					
	Установленная мощность		Располагаемая мощность		Рабочая мощность	
	на начало 1996 г	на конец 1996 г	на начало 1996 г	на конец 1996 г	на начало 1996 г	на конец 1996 г
ТЭЦ-2	340,0	340,0	321,0	321,0	259,3	249,0
ТЭЦ-3	464,0	464,0	345,0	341,5	307,5	300,0
ТЭЦ-4	368,5	368,5	316,5	316,5	246,4	248,0
ТЭЦ-5	900,0	900,0	841,4	841,4	603,2	619,9
ВТЭЦ	113,0	113,0	87,0	87,0	39,9	32,8
ТЭС	2185,5	2185,5	1910,9	1907,4	1456,3	1449,7
ГЭС	455,0	455,0	350,0	350,0	240,5	245,0
Энергосистема	2640,5	2640,5	2260,9	2257,4	1696,8	1694,7

Установленная электрическая и тепловая мощность энергосистемы в 1996 г не изменилась. Ввода, перемаркировки и демонтажа основного оборудования не было. Снижение располагаемой мощности на 3,5 МВт произошло из-за снижения тепловой нагрузки противоаварийных турбин на ТЭЦ-3

Рабочие мощности по Новосибирской системе на начало и конец 1996 г. находятся на одном уровне. Снижение рабочей мощности на ТЭЦ-2, ТЭЦ-3, БТЭЦ по сравнению с прошлым годом произошло из-за увеличенных ремонтов оборудования и дефицита топлива. По ТЭЦ-4, БТЭЦ и ГЭС рабочая мощность увеличена.

Количество основного оборудования и его мощности на конец 1996 года представлено в таблице

Наименование электростанций	Количество турбин	Мощность турбин (МВт)	Количество котлов энергетических	Паропроизводительность (т/час)
ТЭЦ-2	7	340	8	2340
ТЭЦ-3	11	464	13 ^{х)}	3640 ^{х)}
ТЭЦ-4	6	368,5	12	2660
ТЭЦ-5	5	900	7 ^{хх)}	3400 ^{хх)}
БТЭЦ	4	113	6	1140
Итого по ТЭС	33	2185,5	46	13180
Котельная т/с (бывшая ТЭЦ-1)	-	-	2	50
Новосибирская ГЭС	7	455,0	-	-
Итого по энергосистеме	40	2640,5	48	13230

х) - в балансе паровой мощности учтен опытно-промышленный котел ст. № 15 типа ТПЕ-427 паропроизводительностью 320 т/час

хх) - учтены 2 паровых котла собственных нужд ДЕ-25 производительностью 25 т/час

Подробная характеристика оборудования, число часов использования среднегодовой установленной мощности представлены в формах 6-ТП по каждой станции энергосистемы

Износ в процентах активной части котельного и турбинного оборудования электростанций с поперечными связями "Новосибирскэнерго" по состоянию на 01 01 97 представлен в таблице

(в процентах)

Наименование оборудования	ТЭЦ-2	ТЭЦ-3	ТЭЦ-4	БТЭЦ	ТЭС
Котельное оборудование на параметры 30-90 кгс/см ²	88,3	100,0	97,35	100	97,07
130 кгс/см ²	95,1	79,6	97,35	-	90,68
Котельный цех	93,9	82,8	98,07	100,0	93,28
Турбинное оборудование на параметры 30-90 кгс/см ²	100,0	100,0	100,0	100,0	100,0
130 кгс/см ²	38,8	87,1	97,8	-	77,7
Турбинный цех	45,3	89,6	98,3	100,0	69,5
ТЭС	73,9	84,8	98,1	100,0	85,7

(Износ активной части оборудования - отношение начисленных амортизационных отчислений (в рублях) на полное восстановление к первоначальной стоимости оборудования)

Состояние активной части тепловых сетей по годам строительства представлено в таблице

Год прокладки	Длина в км	%
свыше 25 лет	95,37	29,8
до 25 лет	53,09	16,6
до 20 лет	60,47	18,9
до 15 лет	44,30	13,8
до 10 лет	40,41	12,6
до 5 лет	26,00	8,3
Итого	319,64	100

Отчет о командировке в АО "Новосибирскэнерго" в рамках первого этапа проекта "Hagler Bailly - РАО ЕЭС"

Новосибирск

7-8 июля 1997г

В работе принимали участие

- Майкл Свайдер -- "Hagler Bailly "
- Александр Козлов -- Sarala Corp

Целью данного этапа являлось знакомство руководителей Новосибирскэнерго с проектом и оценка перспектив возможного сотрудничества в рамках его реализации

В течение двух дней проведены встречи со специалистами Новосибирскэнерго

- Генеральным Директором (Гомилов Виталий Георгиевич)
- Заместителем Председателя Совета Директоров (Меламед Леонид Борисович)
- Главным бухгалтером (Новоселова Галина Владимировна)
- Директором по экономике (Жарков Юрий Викторович)
- Начальником планово-экономического отдела (Буровникова Татьяна Ивановна)
- Начальником производственно-коммерческого отдела (Осовский Альфред Семенович)
- Начальником отдела АСУ (Быстров Сергей Николаевич)
- Заместителем Директора «Энергосбыта» (Подчасова Татьяна Николаевна)
- Начальником финансового отдела (Давыдов Александр Викторович)

- Директором инвестиционно-финансовой компании (Журба Дмитрий Геннадиевич)

Общая характеристика Новосибирскэнерго

(со слов специалистов энергосистемы)

- АО Новосибирскэнерго – одна из немногих энергосистем, в которой РАО не имеет контрольного пакета
- АО Новосибирскэнерго обслуживает Новосибирскую область. В состав Новосибирскэнерго входят 23 обособленных структурных подразделения: 5 ТЭЦ, 8 предприятий энергосетей, 1 теплосеть, "Новосибирскэнергобыт", ремонтные, строительное, снабженческое и другие вспомогательные предприятия
- В целом регион энергодефицитен: около 70% электроэнергии, потребляемой в регионе производит АО Новосибирскэнерго на своих ТЭЦ и взятой в аренду у РАО Новосибирской ГЭС, остальное закупается у РАО. Закупая электроэнергия дешевле чем средняя себестоимость собственной, однако с учетом абонентной платы эта стоимость поднимается выше производственной себестоимости
- Реализацией энергии и сбором денежных средств занимается только Энергосбыт (сетевые предприятия выполняют только транспортную функцию), бартерные операции переданы в ведение снабженческого подразделения НОСКА
- Последнее время активно ведется (достаточно успешно) работа по ликвидации перепродавцов. Результатом подобной работы стал рост объемов денежных поступлений
- Информационная система в настоящее время больше ориентирована на вопросы диспетчеризации и контроля за реализацией. Проблемам управления финансами уделяется значительно меньше внимания и эта информация разрознена

Главные проблемы Новосибирскэнерго (со слов специалистов энергосистемы)

- Одна из серьезнейших проблем - нехватка денежных средств. Только 9% от реализации оплачено в 1996 году денежными средствами. 8% не было оплачено вообще. Это связано в первую очередь, со спецификой региона, в котором 85% -- предприятия военно-промышленного комплекса федерального подчинения. Существует огромная (свыше 1 трлн руб.) задолженность бюджетов всех уровней, не считая долгов предприятий, сельского хозяйства, населения.
- Еще один больной вопрос - высокий уровень износа оборудования ТЭЦ. Больше половины всех энергоблоков имеют износ свыше 80%, а на ТЭЦ-3 - даже 100%. Высокий уровень износа приводит к росту затрат на поддержание работоспособности оборудования, что несомненно, значительно увеличивает себестоимость продукции и, соответственно, без того высокие тарифы.
- В связи с нехваткой денежных средств образовалась большая (до 9 месяцев) задолженность по заработной плате. В настоящее время руководство прилагает серьезные усилия для ликвидации этой задолженности (по некоторым данным началась погашение долгов за 4 месяца). Большую роль в этом процессе играют профсоюзы.
- Решением Правительства РФ из тарифа на энергию была исключена инвестиционная составляющая. Следовательно, Новосибирскэнерго не в состоянии вкладывать средства в реконструкцию и развитие, а инвестиционная политика РАО далеко не всегда соответствует интересам энергосистемы.

Общие впечатления от работы в Новосибирскэнерго

В ходе нашего визита руководством Новосибирскэнерго неоднократно было высказано бóльшее желание работать в рамках проекта. Об этом может свидетельствовать и тот факт, что в ходе двухдневного визита были организованы две встречи с Генеральным Директором и две - с Заместителем Председателя Совета Директоров, на высоком организационном уровне происходили интервью со специалистами.

Руководство энергосистемы уже обращалось за помощью к консультантам и имеет некоторый опыт сотрудничества с ними.

По итогам работы в Новосибирскэнерго был подписан протокол, в котором еще раз была подчеркнута готовность руководства к сотрудничеству, а также сформулированы основные направления возможной деятельности консультантов в ходе проекта.

ВЫВОД По нашему мнению, Новосибирскэнерго может быть одним из наиболее вероятных участников «пилотного» проекта, поскольку наряду с готовностью руководства к сотрудничеству хорошо видна и большая самостоятельная работа по поиску выходов из тяжелой ситуации.

DIAGNOSTIC EVALUATION OF PERMENERGO

Dates Visited July 7-8, 1997

Attachments Trip Report - Bob Alexander
Trip Report - Vladislav Khominsky

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	5/5
2 Macro-Economic Environment	4
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	5
5 General Financial Situation	3
6 Magnitude of Sales	3
7 Organizational Structure	4
8 Information Management System	4
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	2
12 Financial Analysis and Planning	4
13 Investment Projects	3
14 Potential Benefit to Energo	5
15 Willingness to Share Cost	5

Recommendations and Summary Type 1

Permenergo was very hospitable and enthusiastic about joining the program. They had a surprisingly strong management understanding of the importance of financial management functions, and were implementing a plan to restructure along financial lines. They were also quite vocal as to their opinions as to the proper directions for the reform of the energos and the power sector, and see participation in the program as a way to influence those reforms and determine their own future.

Permenergo's management is quite active in trying to solve their non-payments crisis, both by enforcing disconnections and establishing an office to sell securities received for payment. The economy of the region is strong enough to support a commercialization of the energo, with many exporting, profitable companies that are large energo customers. Permenergo feels they can raise cash payments up to the fifty percent level if they can influence the REC to allow them to force the collections issue.

They are recommended for classification as a Type 1 energo.

Suggested Scope of Work

- 1 Additional training in financial management and budgeting
- 2 Assistance in cost management, and corresponding assistance in tariff setting and collection policies with the REC staff
- 3 Assistance with organizational structure and particularly the implementation of the Financial Department's proper role
- 4 Assistance in modernizing accounting, customer information and service, and developing a system for billing and collections

TRIP REPORT FOR PERMENERGO

Perm
July 7-8, 1997

Prepared by Robert Alexander
Hagler Bailly Consulting/Moscow

THE ENERGO

The Joint-Stock Company Permenergo is the major distributor of electricity and heat in the Perm Region, which is located in the Northern Urals. Peak load is now much reduced to about 2100 MW, with about 87 percent of the load being industrial (including the railroad and some small municipal), seven percent agricultural, and only six percent residential (some through resellers). Permenergo generates about 60 percent of the load using CHP's and buys the rest from RAO. Some 40 percent of the generation is gas fired at present, the rest is fueled by varying percentages of coal and oil. They have some advantage in that their boilers are designed to burn all three fuels. Permenergo during reorganization lost some of their cheapest generators to RAO, including two hydro plants of 500 MW each, and also Perm Thermal Plant, a three unit plant with a nominal rating of 800 MW for each unit, although each operates now at half capacity at best due to lack of fuel.

Permenergo also supplies most of the municipal central heating, although the distribution of heating in the city of Perm itself and some other cities is through resellers. The energo is divided into some thirty subsidiaries (the usual structure), including, among others

- 12 CHP's (not all of which are presently operating)
- Transmission network
- Repair
- Training
- Automotive
- Social Services
- Agricultural

Permenergo is part of the "Urals Pool", which is composed of six regional energos. This group was apparently set up a number of years ago to actually operate as a power pool and regional market, but RAO (they claim) prevented this from happening. Permenergo claims all the members are still committed to this approach.

The Perm region offers the energo a potentially strong economic base, with many industries successfully exporting their products. Major industrial customers include oil recovery and refining, forest products, mining and processing of specialty metals (titanium, magnesium), fertilizers, and certain high tech industries (such as the Perm jet engine factory) which have attracted foreign investment.

MANAGEMENT

The management at all levels was very open and cooperative, and with the exception of the accounting department expressed strong interest in participating in the program. There is a recognition of the importance of financial management in the senior management, and the energo had recently reorganized to stress the financial function, including hiring a new manager.

from the banking sector. The General Director (Yuri V. Lapin) came off vacation specifically to meet us.

The Deputy General Director Sergei Kuznetsov, who was our host, had 'used the opportunity' of the General Director's absence last week to disconnect for a few days a number of the large non-paying customers the energo thought could and should be paying. As his staff put it, he had "disconnected half the industry in the region." They were reconnected shortly after political pressure from the Regional Governor's staff, but he believed he had made his point. There will be an "emergency" situation declared by the Governor to study the energy supply situation, and the energo hopes to influence new legislation to force payments where possible.

TARIFF SETTING

Permenergo stated that as in other regions, tariffs set by the REC are politically determined. In the residential sector, the REC has set a two-part tariff of 130 R/kwh for consumption below 60kwh (below their claimed generation cost of 220 R/kwh) and 240 R/kwh for higher consumption. Since the residential load is only six percent, the problem is not too great. But since there is no meter reading, they expect many consumers will fill out the paperwork to bill themselves the lower rate for all consumption in any event.

Tariffs for the industrial sector are all over the map, with the REC giving certain industries and customers special tariffs. The tariffs that are set are based on the cost of burning gas only. Due to the non-payments problem, gas is now in short supply, so the energo is being hurt by having to burn the more expensive coal and oil.

NONPAYMENTS

Nonpayments is the most serious concern, with only 14% of payments received in cash. An additional 14% is received in securities, and the remainder by mutual cancellation of debts. Permenergo will not complete barter deals with customers at all. Some thirty percent of receivables are estimated to be uncollectable under any conditions.

Perenergo feels that there are a large number of industries in their region that could pay in cash, if they were forced to do so. They claim a large number of companies have export earnings in hard currency, but right now the money "stops in Moscow." They claimed that if they were allowed to disconnect, they could get cash payments up to fifty percent of total payments. Permenergo is opening a "securities" sales office, where the securities received in payment will be sold for cash, and promissory notes will be bought and sold.

The worst non-payers are the so-called direct "budget" establishments - military bases, prisons, etc. who pay nothing. Permenergo is prevented by various laws and decrees from disconnecting these customers, so they say nothing can be done here, although they are owed over 400 Billion rubles by these customers.

The military industrial complex owes some 800 Billion rubles, and once again there is almost nothing the energo can do to force payment. Permenergo was particularly upset by the fact that due to such non-payments, they owe some 340 Billion rubles in taxes and penalties, which they can no longer offset against these "budget" company receivables.

Perenergo claims the major task is to change the psychology of the consumers, residential and industrial. Right now, electricity and heat are not seen as a commodity that has to be paid for.

The energo says they are told to "live by Western market economy principles" but that right now they are regulated as a social service

ACCOUNTING AND FINANCE

Permenergo is a joint stock company, with 49% of the shares owned by RAO and the rest by others. "Foreign entities" hold 16% and most of the rest is held by employees or past employees of the energo.

The accounting department described the financial status of the energo as getting worse and worse, with receivables and payables both continually increasing. Receivables are still greater than payables but liquidity is described as non-existent. Until 1996, the utility showed a paper profit, but is now showing "losses", although they still make a 'profit on sales'. There is an account for 'expenditure of profit', and if they spend more than planned, it causes a "loss". Receivables and payables are now basically in balance, at about 3.5 Billion rubles each. Their main creditors are the fuel supply companies, mainly gas. Their purchase for energy from RAO is paid thirty percent in cash, mostly in securities.

The main problem of the accounting department was described as "paper flows", particularly with regard to mutual debt cancellation. The tax authorities apparently require hard copies of all such transactions which is difficult to handle given the size and number of these offsets.

The accounting department indicated that they kept two different sets of books: one for taxes where revenues are booked after delivering the product, and one for where and management of the energo, where revenues are booked only after getting paid. They did not understand the question when asked if any of the accounting departments reports accurately provided a picture for management of the energo's true financial situation.

When asked what assistance the program could give to accounting, the staff asked for assistance in obtaining software to follow the Russian accounting methodologies. When asked about IAS accounting, the accounting staff indicated they were already too busy and didn't see why they would want to undertake yet another form of accounting.

RESTRUCTURING

The Financial Department has submitted a plan to the General Director for restructuring the energo to stress the Financial function. The first step, taken last year, was to organize a separate Finance Department separate from accounting. The second step was for the new Finance Department to take over all financial flows. All expenditures must now be approved by the Financial Department.

The next planned step is to establish a budgeting system for the entire organization, and a group is presently being established to do so. The Finance Department also hopes to 'commercialize' the sales or customer service sectors, including collections. Right now, the "energy sales" department is responsible for all customer contact, including negotiations concerning non-payments, and the feeling is that they are not coordinating with the rest of the energo.

MAIN MANAGEMENT INTERVIEWED

General Director Yuri V. Lapin
Deputy General Director Sergei Fedorovich Kuznetsov

Deputy Director Power Sales Valentina I Shalnikova (Energosbyt)
Financial Director Andrei R Kalmakov
Deputy Chief Accountant Olga Ustryuzhnatreva
Director of Automation Systems Vladovslov I Dudin

DIAGNOSTIC EVALUATION OF ROSTOVENERGO

Dates Visited May 26 - 28, 1997

Attachments Trip Report - Michael Swider
Trip Report - Vladislav Khominski and Margarita Zaitsev
Agreement of Cooperation Protocol, signed on May, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	5/5
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	4
5 General Financial Situation	3
6 Magnitude of Sales	3
7 Organizational Structure	4
8 Information Management System	3
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	4
12 Investment Projects	3
13 Potential Benefit to Energo	5
14 Willingness to Share Cost	4

Recommendations and Summary: Type 1

The management at Rostovenergo is well organized and competent. When we arrived we were met by all the senior management, who were already organized into work groups by the General Director to answer questions on the issues that we had indicated on our introductory letter. No other energo that we visited was so well prepared for the initial diagnostic. At the end of our visit we signed a protocol that requested assistance in the following areas:

- 1 Develop management and customer information systems
- 2 Analyze production costs and make recommendations for cost cutting measures
- 3 Assist in transition to international accounting standards
- 4 Improve financial management, budgeting, and investment planning procedures

The negatives at this energo are similar to most others, weak financial controls and no clear interest in operating the company as a commercial business. But with the quality of the management we believe that consultants working within Rostovenergo would receive sufficient cooperation from to achieve positive results. Another advantage is the relatively good political/economic environment in the region.

As the management of Rostovenergo is ready, willing and able to work towards the goals of the Commercialization project, we categorize this energy as a Type 1 - recommending it to be included in the program

TRIP REPORT FOR ROSTOVENERGO

Rostov-on-Don
May 26 - 28, 1997

Michael Swider
Hagler Bailly Consulting

SUMMARY AND RECOMMENDATIONS

On May 26 - 28 Michael Swider of Hagler Bailly Consulting, along with Vladislav Khominski and Margarita Zaitseva of Carana Corporation, and Natalya Trekhleb of the IFC visited AO Rostovenergo to perform a short diagnostic of the energo's capacity to participate in the Commercialization program. Rostovenergo is plagued by the usual problems of a Russian regional power company

- Lack of commercially focused management
- Poor metering and control systems
- Low Collections

All of these lead to the weak financial condition that Rostovenergo is currently suffering from, making it all the more difficult to pay for the restructuring that the energo requires

The positive side of Rostovenergo is that the management is well organized and competent. When we arrived we were met by all the senior management, who were already organized into work groups by the General Director to answer the issues that we had indicated on our introductory letter. No other energo that we visited was so well prepared for the initial diagnostic. At the end of our visit we signed a protocol that requested assistance in the following areas:

- 1 Develop management and customer information systems
- 2 Analyze production costs and make recommendations for cost cutting measures
- 3 Assist in transition to international accounting standards
- 4 Improve financial management, budgeting, and investment planning procedures

As the management of Rostovenergo appears to be generally ready, willing and able to work towards the goals of the Commercialization project, we recommend that this energo be included in the program. We believe that consultants working within Rostovenergo would receive sufficient cooperation from management to achieve positive results. Further information is contained in this trip report, and the attached report prepared by the Carana Corporation.

THE ENERGO

AO Rostovenergo is the monopoly supplier of electricity and heating to the city of Rostov-on-Don and the region of Rostov, which is located at the mouth of the Don river on the Azur Sea in Southern Russia. Major industries in the region include agricultural machinery, power equipment, locomotives, aerospace, transportation (port and railhead) and agricultural. Before the fall in the Russian economy, peak load in the region was 3,600 MW. Last winter peak load was 2,450 MW, a drop of 32%.

Rated capacity at the energo, which is 64 percent owned by RAO UES Russia, is 929 MW with 3518 million kWh sold in 1996. Most of the additional power in the region was produced by the Novochoerkaskaya State Regional Electric Power Station (GRES), which is rated at 2,245 MW and generated 11,056 million kWh in 1996. The Novochoerkaskaya GRES was rented and managed by Rostovenergo until 1995 when it was returned to RAO because expense fuel coal supply makes it uneconomic to operate.

Rostovenergo currently has 30 Affiliate companies in its group including regional heat and electricity distributors. There is a total of 17,000 employees in the company, with 13,000 working in production enterprises and the remainder working in various social services.

SALES AND COLLECTIONS

In Rostovenergo the sales company, Energosbyt, relies on local affiliates to manage customer relations. It is the affiliate's managers who decide whom to disconnect. But as in other energos, metering is insufficient and enforcement is weak. At the beginning of this year the collections problem was at its worst and they were only collecting 60% of energy sold. Since then they have been able to raise the collections rate to 86%. But only 10% of collections are in cash, the rest in barter and mutual debt cancellations. For example, 76% of all payment for taxes are in the form of off-sets.

Accounts receivables total 1,500 billion rubles, or about \$ 260 million, as of 1 April 1997. Days sales outstanding (the measure of average collect rate) is nearly six months. Of this amount, about \$50 million is considered past due. The breakdown of accounts receivables is approximately:

- 42% Budget Organizations (mostly regional government which has not been paying for heat)
- 23% Industrial Customers
- 20% Resellers
- 10% Agricultural Customers
- 5% Other

The energo believes that a large part of the problem with budget (i.e. government) organizations is the lack of control over government outlays. A village will receive budget funds to pay for their power expense, but the money does not make it to the energo, nor can it be tracked.

Much of what the energo does collect is in barter. 70% of their power sold is purchased from the wholesale market, and almost all from the Novochoerkaskaya GRES. Most of the power purchased is paid in barter, which they arrange through their debtors. Their arrangement with Novochoerkaskaya is to send enough cash to meet salaries. They also use barter to pay the fees owed to RAO. Although RAO insists that all bills are paid with a minimum of 30% cash, Rostovenergo does not have the cash available to meet this demand. Other than salaries and the pension fund, all cash goes toward capital construction.

To get payments up they have started a system of sanctions, or penalties, against non-payers. But as most of the non-payers are protected consumers there is little they can do on enforcement. And according to the Sales department they don't have a policy on cash collections "or at least one that makes sense."

Metering, or the lack of it, is one of the most significant hindrances to increasing collections. As in most regional energy systems in Russia, it barely exists. Rostovenergo has discussed developing a program for new metering but only theoretically. They have not done a serious study. The lack of metering at the reseller level makes it difficult to manage them. The resellers are only interested in collecting enough cash to meet their own needs and the energy is left in the dark as how to collect from the other customers.

TARIFF POLICY

As in all regions tariffs are set by the Regional Energy Commission (REC). Currently tariffs are set by customer class.

- Residential (City) 160/kWh
- Residential (Rural) 112/kWh
- Agricultural 194/kWh
- Industrial (<750kv) 481/kWh
- Industrial (>750kv) 362/kWh plus a fixed charge of 4,670 rubles per kilovolt
- Average tariff 328/kWh

Currently the REC requires that the industrial customers subsidize residential, especially rural customers who have their energy priced as 0.7 of city residential customers even though the cost of service is greater. The energy claims to have come to an agreement that would allow them to raise and equalize residential tariffs. Industrial tariffs for the largest consumers will be lowered and the average tariff will remain about the same at 325 - 328/kWh.

The new tariff structure should look like the following before the end of the year.

- Residential 160/kWh
- Agricultural 265/kWh
- Industrial (<750kv) 478/kWh
- Industrial (>750kv) 287/kWh plus a fixed charge of 4,628 rubles per kilovolt

They expect most government organizations to pay the highest rate, at 478/kWh. The average cost of electricity is 290/kWh. They are moving toward making the tariffs for all customers at least 290/kWh so that residential customers will at least pay the average cost. Rostovenergo wants to raise the tariffs on rural customers to 308/kWh, which they believe is the all-in cost of service to these customers.

The cost of service is calculated by standard FEC measures. It includes fuel cost, which is calculated on a normative basis, and may not accurately reflect true value. The Ministry of Economy issues deflators to price the materials used in production (something akin to GAAP LIFO method of inventory accounting). Other allowable costs include payroll, amortization and insurance. Many of the "other" costs are set on a normative basis, such as 1.5% of the cost for "research," regardless of the actual expenses. Rostovenergo told us that they are working to reduce costs as it will increase demand and profit. But it is doubtful that any energy will make serious cost cutting methods as long as tariffs are set on a cost-plus basis.

ACCOUNTING

The Russian accounting system is very complex in the opinion of Rostovenergo's accounting department, with over 3,000 individual forms and regulations in use, many of them contradicting each other, and over one hundred taxes. They believe it would be in their best interest to move to a Western accounting system, and that it would not be overly difficult as the Russian system is fundamentally the same as the western system. But it would be of no use for a single energo to start using a western accounting system. There needs to be a single accounting system for the entire electric power system. This is certainly true as all tariff setting methodology needs to be based on a standardized system of accounts.

Even though full implementation is probable years away, there is an interest in Rostovenergo to begin training on western accounting systems sooner rather than later. Though western accounts could not be used in rate cases or for tax purposes, they could help the management better operate the company. There could be a more immediate purpose in developing western accounting standards, as foreign investors evaluating the company have requested accounts that meet IAS standards.

Besides training and seminars, the accounting department is also interested in receiving help on developing an MIS system. Currently the accounting department has very little automation. They wish to develop a system where information flows are fully computerized, networked, and available to all key staff and management.

FINANCE DEPARTMENT

The functions of the finance department are

- 1 Profit planning for tariff setting
- 2 Banking and securities operations

There is no rate of return analysis for profit planning or for analysis of capital investments. In fact, the finance department is hardly involved in capital investments as the engineering and construction departments plan capital construction, with no thought to profitability. The "planned profit" is negotiated with the local administration and that number is factored into the tariff. The current planned profit is a 5% return on assets. But if you factor in the inflation, the real rate of return for the energo (even if it was collecting its bills) would be negative 6%.

The finance department does not do the normal functions of a corporate finance department. There is no least-cost analysis done, or capital budgeting. Securities operations are more or less limited to doing risk analysis on short-term commercial paper (veksels). Rostovenergo does not issue bank veksels anymore as they found them too unprofitable. The bank veksels would be purchased at a discount by cash paying customers, effectively reducing the energo's cash flow. They do occasionally sell barter (tovarnii) veksels for special purposes.

One measure that they are taking to reduce the cost of production is unloading social assets and turning them over to the local government. The impetus for this is that they can no longer expense most of these social assets and include them in their tariff calculations. Already they have disposed of two kindergartens and a large portion of their housing. They tell us that only 10% of their former social assets remain on the books.

ECONOMICS DEPARTMENT

We asked the director of economics what they are doing to increase collections. The answer was that when the problem first appeared in 1995 they used barter as a substitute. Mostly it is

viewed as an external problem caused by the Federal Government. He believes that 70% of the Russian economy operates on barter now, so the energo is not unusual in this situation. There is no concrete plan to get collection rates back up other than by eliminating resellers who are capturing what little cash there is in the system. The other mistake in the system is the skewing of the tariffs to have industrial customers subsidize residential.

It is recognized that the problem is partly technical. There is not enough metering equipment in the system. Another reason for the lack of cash is corruption. Agricultural companies are among the worst in paying for electricity even though they earn cash for their goods. But the grain is sold on the black market and the money does not return to the agriculture collective, leaving it unable to pay its bills. This is well known in Rostov even the governor is aware of it, but there are no measures taken to stop these practice because of corruption throughout the system.

We ask whether Rostovenergo had considered setting up escrow or "transit" accounts for debtors so that the energo could capture at least part of the cash flow. We were told that the Central Bank of the RF and the Ministry of Economy were looking into the possibility of allowing transit accounts where by 80% of all cash through the account is reserved for creditors. To date no such law has been adopted.

Rostovenergo believes it is not practical to offer cut rates for cash payers. This is because tax must be paid by the energo for the full "regulated" cost, making it costly to give price breaks. We also inquired as to whether there was a collections committee that was trying to solve the collections problem at the energo. The chief of economics saw this as a problem of their sales affiliates and suggested that they were preparing a decree to the affiliates to set up credit committees to determine who are the better debtors. It is unlikely though that this will have much of an effect unless there is an policy of disconnecting high risk, or simply recalcitrant, customers.

INFORMATION SYSTEMS

For dispatch the energo has a real time system for information analysis. The head engineer runs the automation department and decisions are driven by the needs of production engineering. The entire system is designed and driven by the production side of the business.

Where they are weak is in financial and economic information. A better system is needed for sales accounting. Currently, even where they are metered, nobody is monitoring the meters. A massive upgrade is needed to include an accounting and financial package, including a hardware upgrade.

An MIS system is needed, although it should not be done alone by Rostovenergo, but standardized among the entire energy system. Siemens, for example, already offered their MIS system, but for the energo it was too expensive. As purchasing turn-key information systems is considered too expensive, the general director has requested that all information systems be developed internally. The cost-effectiveness of this strategy is certainly questionable. The MIS group at Rostovenergo is interested in seeing what off-the-shelf customer service programs are available.

It would probably be more cost-effective to select and adopt a single MIS system (or standard) for the entire Russian power system. One problem with installing an MIS system is that laws and regulations are still changing every month. Another problem is that the current Russian accounting system is designed to maximize taxes, not to show useful financial/economic data. For the head accountant it is also questionable how much an automated accounting system would assist her as documentation would still require signatures. Again, these are all issues.

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that need to be addressed at the national level. The commercialization program should identify the issues that are hindering the development of MIS systems in the energos.

CONCLUSION

At the conclusion of our visit our general impression was that the management of Rostovenergo was interested and supportive of the Commercialization project. We were also impressed by the general ability of the management to articulate their issues, and to consider their options for improving the commercial viability of Rostovenergo. As the energo is in no worse financial condition than most energos, and the management supportive, we recommend that this energo be included in the commercialization project. To define the issues that would be addressed through the Commercialization program, we signed a protocol (attached) with the General Director.

MANAGEMENT INTERVIEWED

Kushnarev, Fedor Andreevich, General Director
Aneshenko, Tatiana Aleksandrovna, Head of Finance
Berikov, Igor Leonidovich, Director of Energosbyt
Riskina, Valentina Mitrofanovna, Head Bookkeeper
Tolmachev, Head of Planning Department
Pashenko, V. A., Deputy General Director of Technical Resources
Benadskii, Y. V., Deputy General Director of Economics

ATTACHMENTS

- 1 Protocol
- 2 Organizational Structure of AO Rostovenergo
- 3 Balance Sheet as of 1 April 1997
- 4 Carana report on Rostovenergo

PROTOCOL OF INTENTIONS
with regard to operation of Hagler Bailly Consulting Company
to develop recommendations for OJSC Rostovenergo

Rostov-On-Don

May 28, 1997

Following the request by RAO EES Rossi, dated April 18, 1997, a group of Hagler Bailly Consulting (USA) represented by

- 1 M Swider
- 2 N V Trekhleb
- 3 V N Khominski
- 4 M N Zajtseva
- 5 O N Gorshevski

reviewed the information by proposed lines of operation presented by specialists of OJSC Rostovenergo from May 26 through May 28, 1997. The meetings to review the information were attended by leaders and members of working groups organized in accordance with the Order No 76, dated May 22, 1997, of OJSC Rostovenergo.

The following lines of operation were reviewed

Management information systems
Tariffs setting
Dispatching based on economic principles
Payment collection/Non-payments
Transition to international accounting system
Financial management, budgeting and investment planning
Restructuring of OJSC Rostovenergo

OJSC Rostovenergo agrees to implement the pilot project, shall provide access to financial information and shall ensure cooperation. OJSC Rostovenergo is interested in the efforts to be undertaken in the following lines of operation

Management information systems and customer information systems
Analysis of electric and heat energy production cost for different modes of operation of the energy systems
Transition to international accounting system
Financial management, budgeting and investment planning

OJSC Rostovenergo shall be liable to provide any necessary data at the request by Hagler Bailly Consulting Company

Signed by

F A Kushnarev,

M Swider,

OJSC Rostovenergo, General Director

Hagler Bailly Consulting

П Р О Т О К О Л

о намерениях по направлениям работы компании "Хеглер Байи Консалтинг"
в разработке проекта рекомендаций для ОАО "Ростовэнерго"

г Ростов-на-Дону

28 05 97 г

В соответствии с поручением РАО "ЕЭС России" от 18 04 97 г
группа специалистов компании "Хеглер Байи Консалтинг" (США) в составе

- 1 Свайдер М
- 2 Трехлеб Н В
- 3 Хоминского В Н
- 4 Зайцевой М Н
- 5 Горшевского О Н

в течение 26-28 мая 1997 г рассмотрела представленную специалистами
ОАО "Ростовэнерго" информацию по предполагаемым направлениям работы
В рассмотрении вопросов приняли участие руководители и члены созданных
приказом ОАО "Ростовэнерго" от 22 05 97 г N 76 рабочих групп

Были рассмотрены следующие направления работы

Информационные системы управления
Формирование тарифов на электроэнергию
Диспетчирование на основе экономических принципов
Расчеты/неплатежи
Переход на международную систему бухучета
Управление финансами, составление бюджета и планирование инвестиций
Реструктуризация "Ростовэнерго"

ОАО "Ростовэнерго" согласно на проведение демонстрационного проек-
та, предоставит доступ к финансовой информации и обеспечит рабочее
взаимодействие ОАО "Ростовэнерго" заинтересовано в проведении работы
по следующим направлениям

Информационные системы управления и системы сбора информации о
потребителях
Анализ себестоимости электро- и теплоэнергии при различных режимах
работы энергосистемы
Переход на международную систему бухучета
Управление финансами, составление бюджета и планирование инвестиций

ОАО "Ростовэнерго" обязуется представлять все необходимые данные
по запросу компании "Хеглер Байи Консалтинг"

Протокол подписали

от ОАО "Ростовэнерго"

от компании "Хеглер Байи Консалтинг"

генеральный директор



(Ф А Кушнарев)



(Свайдер М)

Генеральный директор - *Кушнарев Ф.А.*

Первый зам генерального директора по производству главный инженер - *Федорченко Т.С.*

Камышко В.И.
Зам генерального директора по материально-техническим ресурсам

Бернгардский Ю.В.
Зам генерального директора по экономике

Ибрагимов В.Я.
Зам генерального директора по строит. и ремонту зданий и сооружений

- Референт
- 1 отдел
- 2 отдел
- Штаб ГО
- Юридический отдел
- Группа внутреннего аудита
- Отдел организации труда и заработной платы
- Бухгалтерия
- Финансовый отдел
- Отдел кадров

- Топливо-транспортная служба
- Административно-хозяйственный отдел
- Группа планирования и учета работ ПСХ
- Отдел социальных вопросов
- Столовая
- Детские сады

- Планово-экономический отдел
- Отдел ценных бумаг
- Департамент по реализации и сбыту энергии

- Отдел капитального строительства
- Служба эксплуатации и ремонта зданий и сооружений

Зам гл инженера начальник тепло-технической службы

Теплотехническая служба

- Служба надежности и технич. безопасности
- Центрально-диспетчерская служба
- Служба перспективного развития
- Производственно-технический отдел
- С-«ел» автоматизирован. системы управления
- Метрологическая служба
- Инженер по пожарно-техническим вопросам

Зам гл инженера по электрической части и электрическим сетям

- Служба релейной защиты и противоавар. автоматики
- Электротехническая служба
- Служба средств диспетч. и технологического управления
- Служба электрических сетей

Начальник ООТЗ

И.Тамбов

ЛД Гамова

БУХГАЛТЕРСКИЙ БАЛАНС

		Коды	
		Форма № 1 по ОКУД	0710001
на 1 апреля 1997		Дата (год месяц число)	
Организация	ОАО РОСТОВЭНЕРГО	по ОКПО	00104024
Отрасль (вид деятельности)	энергетика	по ОКОНХ	19900
Организационно-правовая форма	ОАО	по КОПФ	47
Орган управления государственным имуществом		по ОКПО	
Единица измерения	млн руб	по СОЕИ	0372
		Контрольная сумма	
Адрес			
		Дата высылки	
		Дата получения	
		Срок представления	
Актив	Код стр	На начало года	На конец года
1	2	3	4
I ВНЕОБОРОТНЫЕ АКТИВЫ			
Нематериальные активы (04 05)	110	3 594	3 595
в том числе			
организационные расходы	111	-	3
патенты лицензии, товарные знаки (знаки обслуживания), иные аналогичные с перечисленными правами и активами	112	3 594	3 592
Основные средства (01 02 03)	120	6 080 275	6 030 960
в том числе			
земельные участки и объекты природопользования	121	-	-
здания машины оборудование и другие основные средства	122	6 080 275	6 030 960
Незавершенное строительство (07, 08, 61)	130	413 243	408 402
Долгосрочные финансовые вложения (06, 56 82)	140	31 272	33 888
в том числе			
инвестиции в дочерние общества	141	-	-
инвестиции в зависимые общества	142	-	-
инвестиции в другие организации	143	17 974	21 217
займы предоставляемые организациям на срок более 12 месяцев	144	-	-
прочие долгосрочные финансовые вложения	145	13 298	12 671
Прочие внеоборотные активы	150	65	64
ИТОГО по разделу I	190	6 528 449	6 476 909
II ОБОРОТНЫЕ АКТИВЫ			
Запасы	210	167 267	169 832

в том числе сырье материалы и другие аналогичные ценности (10 15 16)	211	106 497	98 463
животные на выращивании и откорме (11)	212	21 603	19 491
малоценные и быстроизнашивающиеся предметы (12 13)	213	11 743	14 396
затраты в незавершенном производстве (издержках обращения) (20, 21 23 29 30 36 44)	214	6 373	13 850
готовая продукция и товары для перепродажи (40 41)	215	18 938	21 142
товары отгруженные (45)	216	-	
расходы будущих периодов (31)	217	1 761	2 490
прочие запасы и затраты	218	352	
Налог на добавленную стоимость по приобретенным ценностям (19)	220	68 240	112 675
Дебиторская задолженность (платежи по которой ожидаются более чем через 12 месяцев после отчетной даты)	230	3 532	2 993
в том числе			
покупатели и заказчики (62 76 82)	231	1 769	1 233
векселя к получению (62)	232	-	
задолженность дочерних и зависимых обществ (78)	233	-	
авансы выданные (61)	234	1 681	1 681
прочие дебиторы	235	82	79
Дебиторская задолженность (платежи по которой ожидаются в течение 12 месяцев после отчетной даты)	240	935 821	1 497 790
в том числе			
покупатели и заказчики (62 76 82)	241	852 994	1 299 270
векселя к получению (62)	242	4 738	6 250
задолженность дочерних и зависимых обществ (78)	243		
задолженность участников (учредителей) по взносам в уставной капитал (75)	244		
авансы выданные (61)	245	4 286	9 932
прочие дебиторы	246	73 803	182 338
Краткосрочные финансовые вложения (56, 58, 82)	250	6 240	6 042
в том числе			
инвестиции в зависимые общества	251	-	-
собственные акции, выкупленные у акционеров	252	-	-
прочие краткосрочные финансовые вложения	253	6 240	6 042
Денежные средства	260	106 653	44 514
в том числе			
касса (50)	261	145	151
расчетные счета (51)	262	6 603	8 612
валютные счета (52)	263	129	34

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прочие денежные средства (55 56 57)	264	99 776	35 717
Прочие оборотные активы	270	-	40
ИТОГО по разделу II	290	1 287 753	1 833 886
III УБЫТКИ			
Чепокрытые убытки прошлых лет (88)	310	-	-
Непокрытый убыток текущего года	320	X	-
ИТОГО по разделу III	390		
БАЛАНС (сум строк 190 + 290 + 390)	399	7 816 202	8 310 795

ПАССИВ	Код стр	На начало года	На конец года
1	2	3	4
IV КАПИТАЛ И РЕЗЕРВЫ			
Уставной капитал (85)	410	1 001 793	1 001 793
Выделенное имущество	413	-	-
Добавочный капитал (87)	420	5 243 266	5 247 010
Переданный добавочный капитал	421	-	-
Резервный капитал (86)	430	-	-
в том числе			
резервные фонды образованные в соответствии с законодательством	431	-	-
резервы образованные в соответствии с учредительными документами	432	-	-
Фонды накопления (88)	440	97 424	97 716
Фонд социальной сферы (88)	450	407 996	408 749
Целевые финансирования и поступления (96)	460	132 436	235 191
Нераспределенная прибыль прошлых лет (88)	470	141 645	141 645
Нераспределенная прибыль отчетного года	480	X	118 715
ИТОГО по разделу IV	490	7 024 560	7 250 819
V ДОЛГОСРОЧНЫЕ ПАССИВЫ			
Заемные средства (92 95)	510	-	-
в том числе			
кредиты банков подлежащие погашению более чем через 12 месяцев после отчетной даты	511	-	-
прочие займы подлежащие погашению более чем через 12 месяцев после отчетной даты	512	-	-
Прочие долгосрочные пассивы	520	-	-
ИТОГО по разделу V	590	-	-
VI КРАТКОСРОЧНЫЕ ПАССИВЫ			
Заемные средства (90 94)	610	4 896	4 896
в том числе			
кредиты банков	611	-	-
прочие займы	612	4 896	4 896
Кредиторская задолженность	620	740 034	1 003 054

в том числе поставщики и подрядчики (60 76)	621	413 584	578 371
векселя к уплате (60)	622	600	600
задолженность перед дочерними и зависимыми обществами (78)	623		
по оплате труда (70)	624	17 324	24 931
по социальному страхованию и обеспечению (69)	625	8 021	10 873
задолженность перед бюджетом (68)	626	74 685	82 102
авансы полученные (64)	627	178	724
прочие кредиторы	628	225 642	305 453
Расчеты по дивидендам (75)	630	25 405	32 720
Доходы будущих периодов (83)	640		-
Фонды потребления (88)	650	21 307	19 306
Резервы предстоящих расходов и платежей (89)	660	-	-
Прочие краткосрочные пассивы	670		
ИТОГО по разделу VI	690	791 642	1 059 976
БАЛАНС (сум строк 490 + 590 + 690)	699	7 816 202	8 310 795
	399	7 816 202	8 310 795



[Handwritten signature]

May 26-28, 1997
Moscow - Rostov-on-Don

**REPORT ON NEGOTIATIONS WITH AO (JSC) ROSTOVENERGO
ON THE PROJECT
"COMMERCIALIZATION OF POWER NETWORKS"**

GENERAL INFORMATION ON THE POWER NETWORK

This is the large power network with approximately 3,5 billions rubles sales per year. The capacity of its proper stations is about 900mW, which covers 25-30% of the power demand in the region, the rest being purchased at the wholesale market from mainly Novocherkasskaya GRES (Regional Electric Power Plant), that is located on the territory of Rostovskaya region and belongs to RAO (Russian Joint Stock Company "United Power System of Russia")

Rostovenergo affiliates 30 branches with 17,000 employees. The financial standing of Rostovenergo is estimated as one of the most stable of all the power systems making part of RAO. Accounts receivable make approximately 1,1 billion rubles (turnover period - 110 days), of which 42% - 460 billions rubles - are receivables from budget organizations. Accounts payable are less than receivables and make 800 billions rubles (turnover period - 80 days), with no indebtedness to the budget.

The serious problem for Rostovenergo is decline in electric and heat power consumption (first of all in agricultural sector), due to recession of production level in the region and high level of prices for electric power.

The receipts from sales amount to 15% and are mainly spent for payment of wages and small payments to Novocherkasskaya GRES for the purchased electric energy and also for payment of wages.

A 4000mW nuclear power plant is now under construction on the territory of Rostovskaya region. Rostovenergo is engaged in construction of several small heat-electric generating plants of 50 -100 mW each.

Rostovenergo pursues a rather successive policy with REC (regional energy economy commission) on improvement of tariffing regulations. A decision was adopted to increase the rates for population up to 250 rubles, for agriculture - up to 265 rubles and for small business up to 487 rubles, as well as, to reduce the rates for large industry - up to 287 rubles. It was also decided to increase, by the end of the year, the rates for population and agriculture up to the production cost of electric energy (approx 330 rubles).

GENERAL IMPRESSION

The negotiations showed that Rostovenergo is a well organized structure. We negotiated directly with the working groups, that were set up on all the suggested issues, by the time of our arrival, and that had studied proposals during the negotiations. The General Director was the obvious leader and organizer in Rostovenergo. He personally participated in the negotiations and expressed great interest in project implementation. During our first meeting in Rostovenergo, we could not notice any managers or employees who were expressly not interested in the project, or were making obstacles in its way. The professional level of managers may be judged as a good one, although there is a perceptible lack of economical background.

The sales system is decentralized, and these are the local electrical networks who directly deal with the customers, and whose managers are responsible for collection of monetary means from their customers. The function of mutual settlements and barter is devised among the financial department, sales department and supply department. Such structure of sales ensures better financial results as compared with other power systems. The good point about Rostovenergo is that its executives are ready to introduce changes in their organization, in spite of the fact that RAO has not yet determined its concept of energy economy development.

ANALYSIS OF THE SUGGESTED LINES OF COOPERATION

- **Information control systems and customers data gathering system**

Software development is performed by the local MCS department, the level of software may be considered as pretty low. Only several accounting operations are computer managed. Top management understands the necessity of an integral computer aided information system, but they believe, that MCS department will cope with the task by themselves.

Analysis of the ready software products was never performed, due to the opinion that only the company's own software may be adjusted for all habits and needs of the customers, which is not possible with a ready product. Besides it is assumed that it will never be possible to set up ready software products for all specific functions of the power network.

Both accounting department and financial services are strongly dissatisfied with the software level and number of PCs(?). As far as employees of the accounting department and financial services do not participate in the problems definition, MCS department imposes its own understanding of the software functioning. The chief engineer - immediate superior of the MCS department is the main "generator" of ideas. The General Director is presently led by the MCS department and attentively listens to its opinion, although the increasing dissatisfaction of the financial services as well as lack of real information provided to the General Director, gradually diminish this influence and that is why development of information systems was declared by the General Director as a priority problem.

We suggested carrying out of an analysis of ready products, that could be offered for implementation to the power system and to compare advantages and disadvantages of such solution as compared to the company's own developments. Later on, after adoption of a strategic decision on development of information system, we could take part in the problem definition on software development for the MCS department or to take part in preparation of implementation of a computer aided information system as well as in its implementation.

The significant task in development of the information system is organization of the customers data gathering and analysis system.

- **Transition of accountability to GAAP standards**

Switching of accountability to GAAP standards looks like a fixed idea of the executives who have no clear understanding of what such transition serves to, most likely they just follow the fashion and RAO requirements. During the talks with the General Director and the top management we could not reveal any consumers of such information - accountability based on GAAP principles.

The General Director believes that GAAP will allow him to have information

required for management of the power system. Our efforts to persuade him that this is the management accountability that is more important for management, and GAAP is only required for submitting accountability to external foreign customers, were useless.

One of the reasons for transition to GAAP, is a plan of transition of the whole Russian accounting system to such standards.

The conversation with the Chief Accountant proved that at present moment the accounting department is absolutely not ready for simultaneous keeping of accounts based on Russian and GAAP standards. Such procedure will require significant increase of the qualified personnel.

Our proposal was to restrict the matter to a series of seminars on GAAP system and to postpone implementation until such transition of Russian system to GAAP principles is declared or until a specific user of such information appears - a foreign bank, an investor, or an investment fund.

- **Financial management and planning of investments**

The major problem of financial management is to increase the ratio of collecting of funds. Despite of the fact, that solution of this problem strongly depends on external, objective factors - the main defaulter is the state the management of Rostovenergo believes possible to improve situation with receipts through the following measures:

- reduction of barter transactions and mutual settlements,
- formulation of policy of dealing with energy resellers,
- formulation of policy motivating payments of electric energy

A task was also set to analyse possibility of exchanging barter transactions and mutual settlements for turnover of "energy" bills, using experience of those regions where such work is already performed.

The second problem of financial management is availability of management reporting at the company, and organization of financial planning on the basis of the data, contained in such reporting that is management financial planning. This problem may only be solved by implementation of computer aided reporting system.

The third problem, that is directly connected with the management reporting - is to determine the structure of reporting coming from branches and cost centers of the power network, so that to ensure reception of full and real information, required for analysis of operation of these cost centers.

As for the investments planning matters, discussion was held on the methods of evaluation of investment projects on construction of new stations and lines, on reequipment of heating and power plants, as well as on various promising development projects, including organization of information system.

- **Analysis of heat and electric energy cost of production in various states of power system**

It is the opinion of the management of Rostovenergo, that the given line of work is strongly interrelated with the previous one, as far as, the results of the cost of production analysis, are first of all required for planning of investments, adoption of decisions on putting into operation of new facilities and on required reequipment. The major problem here is the analysis of the production cost behavior under various management decisions, e.g. variations of the ratio of purchased and produced energy, variations of electric-heat output ratio.

The results of the production cost analysis and planning are also important for establishing more optimal policy of tariffing, so that to ensure energy cost reduction, which will presumably result in increase of its consumption

CONCLUSIONS

Rostovenergo is a favorable power system for implementation of the "Commercialization of power networks" project. The AO (JSC) management is strongly interested in the project implementation, and the organizational level, that was demonstrated during the talks will undoubtedly contribute to a more efficient work of the consultants.

The major problems, that were emphasized by the Rostovenergo management, are common and important for the entire energy economy: lack of information required for management of the company and insufficient receipts - the problems, that the company expects to solve by the above mentioned methods.

An important point is that the Rostovenergo management is ready for changes and accepts them.

The main problems in the course of implementation of the project, will be development of information system, as far as the analysis of situation will more likely result in the necessity of offering ready software products, and the management will not readily accept such important investments into information systems (estimated cost is approx 500,000 - 800 000 USD). In any case the analysis that had been made would be useful for Rostovenergo.

The level of personnel and management competence, is sufficient to ensure that the project will be useful, the new methods of work will be perceived, and will be used later on.

May, 30, 1997

Consultants of "Carana" Corp
Zaitseva M N
Kozlov A A
Khoinskiy V N

DIAGNOSTIC EVALUATION OF ORELENERGO

Dates Visited May 19 - 20, 1997

Attachments Trip Report - Bob Alexander, David Thornton
Trip Report - Alexander Kozlov, Vladislav Khominsky
"Agreement on Cooperation" dated May 20, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	NA/5
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	5
5 General Financial Situation	3
6 Magnitude of Sales	1
7 Organizational Structure	3
8 Information Management System	1
9 Accounting and Reporting System	2
10 Tariff Establishment	2
11 Customer Service/Billing	3
12 Investment Projects	3
13 Potential Benefit to Energo	5
14 Willingness to Share Cost	5

Recommendations and Summary Type 2

Orelenergo was the most welcoming and hospitable energo we visited. They had a surprisingly competent and reform-oriented middle management and staff. Unfortunately we did not meet with the General Director, but the two Deputy General Directors we met were extremely open in the discussions, and very much supportive of Orelenergo participating in the commercialization program.

Orelenergo's biggest problem has been its relationship with the local authorities and how the local REC sets tariffs. About fifty percent of Orelenergo's load is agricultural and residential consumers, categories of consumers which are the most costly to supply due to the low voltage taken. Correspondingly, these are also the categories of consumers with the lowest set tariff structure, causing major problems for the energo in recovering its costs. The energo's staff has undertaken to educate and work with the REC, and has gotten some tariff relief lately. Collections still remain a major problem, however, as they are prohibited from cutting off virtually all residential and agricultural customers.

The main argument against including Orelenergo in the program is their very small size of only 500 MW total load, by far the smallest we visited. They are recommended for classification as a Type 2 energo.

Suggested Scope of Work

- 1 Additional training in financial management and budgeting
- 2 Assistance in cost management, and corresponding assistance in tariff setting with the REC staff
- 3 Assistance in developing a computerized management information system
- 4 Assistance with organizational structure and particularly the inclusion of a financial department
- 5 Assistance in modernizing accounting, customer information and service, and developing a system for billing and collections

TRIP REPORT FOR ORELENERGO

Orel

May 19 -20, 1997

Prepared by Robert Alexander
Hagler Bailly Consulting/Moscow

THE ENERGO

The Joint-Stock Company Orelenergo is the major distributor of electricity and heat in the Orel region, which is located about 400 kilometers southwest of Moscow close to the Ukrainian border. Orelenergo is one of the smallest in the system, with peak load of about 500 MW. The energo has two CHP's (Orel at 330 MW and Livni at 12MW) that also produce about sixty percent of the regional district heating. Orelenergo buys on average an additional 200 MW from RAO to make up their deficit. The remaining central heating is provided by municipal owned boiler houses. Orelenergo expressed their firm desire to begin again construction of another long-planned CHP to eliminate the need to buy from RAO.

The industrial sector represents only about twenty percent of the energo's load. Residential and agricultural enterprises represent almost fifty percent, with the remaining being municipal organizations and services. There is one municipal owned reseller that supplies many residential customers in the City of Orel, that has not been privatized. Orelenergo is trying to acquire this reseller from the municipal authorities.

Orelenergo has eight affiliates as follows:

- Orel CHP
- Three electric networks
- Heat distributor
- Maintenance
- Energy Supervisory (regulatory) - being transferred to regional administration
- Training center

These are basically the cost centers, with all administration, accounting, etc. from Orelenergo in the center.

Sales volume for 1996 was about 400 Billion Rubles. This represents 2.4 billion KWh sold, of which Orelenergo itself produced about 1.2 billion KWh (buying the rest from RAO) and 1.5 million gal of heat sold. There are 2,700 employees.

Orelenergo is a joint-stock company, with about 3000 shareholders (mostly employees and former employees). RAO owns 49% of the stock. There is a board of directors with seven members, two appointed by RAO.

We did not have a chance to meet with the General Director of Orelenergo. The two Deputy General Directors we interviewed (Economics, Chief Engineer) were extremely hospitable and expressed a strong desire to be included in the commercialization program. They indicated that in their opinion the two main problems facing the energo were tariff setting and the nonpayments problem.

TARIFF SETTING

Orelenergo's load is about 50% residential and agricultural, with industrial enterprises representing only about 20% and the rest various municipal and government entities. In 1996 Orelenergo claimed that the tariffs set by the REC, under pressure from the local administration, did not even cover their demonstrated costs of producing, purchasing and distributing the electricity. These groups are the most costly groups to serve due to their need to take power at low voltages, and they enjoy the lowest tariffs under the existing structures. There are also heavy subsidies on top of the already low tariffs, with all "veterans of labor" (workers with more than 25 years experience), war veterans, etc. entitled to up to fifty percent discounts from their electric bills.

During all of 1996, Orelenergo lost money since the REC refused to set tariffs based on actual costs of service, despite a strong effort by Orelenergo to get them to do so. They gave us detailed charts and graphs where they had plotted the tariffs, costs, and the corresponding shortfall for use in making their case to the REC. Orelenergo has gotten some tariff increases for 1997 but tariffs continue to be set politically ("what people can pay to keep agriculture competitive, etc.") and have no relationship to Orelenergo's real costs.

NONPAYMENTS

Nonpayments is a serious problem, with only 15 percent of payments received in cash. This makes the shortage of funds and cash flows the overriding concern of any decision. Offset payments represent some 60 percent of payments received, 20 percent is received in notes or securities, and barter accounts for the small remaining amount. Some 50 percent of the accounts receivable are, in the staff's opinion, simply uncollectable. Orelenergo has made some effort to improve collections, but is hindered by the fact that they are restricted from cutting off most customers (residential, municipal reseller, agricultural) by regional or federal restrictions.

ACCOUNTING AND FINANCE

Accounting is done manually although the department does have some PC's which are used mainly for word processing and data presentation (Excel, WP) for reports to management.

Orelenergo lists 118 Billion Rubles in charter capital, net assets at 1.2 Trillion Rubles (90% fixed), accounts receivable are now at 320 Billion Rubles, and accounts payable at 365 Billion Rubles. About 50% of these payables are for fuel, mainly gas, and 20% is for purchased power. All capital improvements are financed through depreciation, as now capital costs are allowed in tariff setting. They owe taxes of 10.6 Billion Rubles based on revenues, there is no profit tax since they showed a paper loss last year. In 1996, they showed a net paper loss of 20.9 Billion Rubles if calculated on "revenues earned" and 12.5 Billion Rubles if calculated on "revenues collected." It was not clear what these numbers really meant.

They blamed the following for the "paper" loss:

- Low tariffs
- Large fuel price increases
- Two increases in RAO purchase power price
- Revaluation of fixed assets caused increased depreciation charge

They again stated the regional administration is simply unwilling to change the tariff structure to allow the energo to be profitable.

BUSINESS PLANNING

Orelenergo has a business plan submitted to RAO's department of economics, and to the REC. It is composed mostly of energy balance estimates and the amount of power they expect to purchase from RAO. They stated again they plan to try to construct a new CHP to make up the shortfall they presently buy from RAO. They say they expect large future RAO price increases, since market reforms seem to be geared to helping the generators at the expense of the regional energos. They expressed great concern at the attempt to separate the remaining generators from the energos, saying this will destroy the energos as a possibly viable business.

Orelenergo gave the following information as to their costs of purchase power and their own production costs:

Orelenergo's production costs were much lower in winter, since they could run the CHP's at a higher capacity, they have only limited resources for dumping the heat in the summer - 4th qtr 1996 - 104r/kwh 1st qtr 1997 - 100r/kwh 2nd qtr 1997 - 162r/kwh 3rd qtr 1997 - 214r/kwh. For 1996, the trend was the same, but Orelenergo's average cost of production was 120r/kwh. The present RAO purchase price they pay is 160r/kwh, and that the price had increased twice in the last year. They expect a large price increase from RAO for the second half of 1997.

INFORMATION SYSTEMS

Everything is pretty much done manually, including accounting. There is some use of PC's by individuals, mainly for word processing and data handling (Excel, WP) and for some financial analysis. Certain staff members are PC literate through their own efforts.

MANAGEMENT INTERVIEWED

Deputy General Director (Economics) Dmitri Alexandrovich Bournashov
Deputy General Director (Chief Engineer) Vitaly Petrovich Fomichev
Chief Accountant Maria Ivanova Schekotikhina

**Report on a Business Trip to JSC "Orelenargo"
within the Framework of the First Stage of
"Hagler Bailly - RJSC UES" Project**

Orel

May 19 - 20, 1997

Participants are as follows

- Robert Alexander - "Hagler Bailly"
- David Thornton -- "Hagler Bailly"
- Alexander Kozlov - Carana Corp
- Vladislav Khominsky - Carana Corp

At this stage the objective was to acquaint the directors of Orelenargo with the project and to appraise the possible collaboration perspective within the framework of its implementation

Within two days the following persons were interviewed

- Deputy Director General for Economics (Dmitri Alexandrovich Bournashov)
- Chief Accountant (Maria Ivanovna Schekotikhina)
- Chief Engineer - First Deputy Director Deneral (Vitalii Petrovich Fomichev)

**General Features of Orelenargo
(according to the words of energy system specialists)**

- JSC Orelenargo is one of the smallest energy systems of Russia
- JSC Orelenargo consists of 1 heat power plant, 3 network enterprises, Orel heat network (distributor) as structural units, and repair works and educational complex. In fact the units are the expenditure centers, and the administration of Orelenargo is the center of earnings. Accounts of the most part of JSC's enterprises are frozen and merely all of their activities are being conducted via administrative office account
- The region, as a whole, is experiencing power deficit. About 60% of electricity is being produced by JSC Orelenargo, the rest is being bought from RJSC through the energy/commercial clearing system. The purchased electricity is more expensive than the average cost of their own one
- As per the results of 1996, Orelenargo has incurred losses amounting to Rb 20 mlrd

The Main Problems of Orelenergo
(according to the words of energy system specialists)

- The most complicated problem of the current activities of JSC Orelenergo is its relationship with the local public authorities and, accordingly with Regional Energy Committee (REC) In 1996 the tariff rates set by REC under the pressure of regional authorities has not even covered their own expenditures on producing, purchasing and transferring the energy
- One of the most serious problems is shortage of funds The share of payment made with securities makes up 20%, offset payments – more than 60% The volume of barter transactions is insufficient Only 15% were received in cash
- Among the consumers the significant specific weight is related to the population and farming enterprises (together they make up to 48% of all electricity consumption) Such structure of consumers – taking into consideration that they consume the most costly energy (because of the lowest voltage in the net) and enjoy the lowest /even lower than the cost/ tariff rates – creates big difficulties in conditions of current system of tariff rating
- Approximately one half of debtor indebtedness has been considered dead debt by the specialists

As a result of the activities undertaken, the agreement (Appendix 1) about readiness to cooperate within the framework of the project “HB – RAO” has been signed As the primary lines along which it would be appropriate to guide the further activities, the following directions were approved

- ⇒ **Improve analysis systems and cost management of the energy system and tariff rating**
- ⇒ **Optimize accounting and control over sales systems, gathering and processing the information on consumers, and encourage payment due for the sold products**
- ⇒ **Providing assistance in organizing the financial service, identifying the objectives and functions of a department, and its place within the organizational structure of the company**
- ⇒ **Setting the goal in respect of developing the task for the unified managerial information system within the organization**

55

General Opinion about the Activities Undertaken at Orelenergo

Despite the short term of a visit (2 days), we have arrived at a conclusion that the specialists of the following energy system are ready for co-operation and able to grasp, understand and implement new ideas. According to our reckoning, Deputy Director General for Economics (Dmitriy Alexandrovich Bournashov) is able to provide the sufficient level of support for development of the project on the part of Orelenergo.

CONCLUSION To our opinion, Orelenergo may be selected for conducting a pilot project related to commercialization of power engineering, because Orelenergo provides conditions for its successful implementation.

Соглашение о Сотрудничестве
Между ОАО "Орелэнерго" и Hagler Bailly Consulting, Inc.,
контрактором Агентства США по Международному Развитию

20 05 1997

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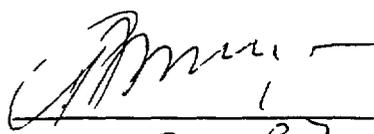
Настоящее соглашение заключено между ОАО "Орелэнерго", юридическим лицом Российской Федерации и Hagler Bailly Consulting Inc, юридическим лицом США

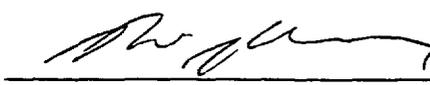
С учетом взаимных намерений Сторон в отношении этого Соглашения Стороны согласились выполнять следующие обязательства предоставлять следующие услуги в соответствии с настоящим Соглашением
ОАО "Орелэнерго" согласно на проведение демонстрационного проекта для осуществления согласованной программы предоставит доступ к необходимой финансовой информации и обеспечит рабочее взаимодействие с руководителями предприятия и предоставит помещение, административную поддержку и возможности контактов с руководителями предприятия, с тем чтобы гарантировать успех проекта

Компания Hagler Bailly Consulting, Inc согласна предоставить ОАО "Орелэнерго" следующие услуги

- 1) Совершенствование систем анализа и управления затратами энергосистемы и тарифообразования
- 2) Оптимизация системы учета и контроля продаж, сбора и обработки информации о потребителях и стимулирование оплаты за проданную продукцию
- 3) Содействие в организации финансовой службы, определение целей и функций отдела и его места в организационной структуре компании
- 4) Постановка задачи на разработку единой управленческой информационно-системы в организации

В соответствии с данным Соглашением ОАО "Орелэнерго" не будет нести обязательств по финансированию проекта за исключением оплаты работникам предприятия, участвующим в работе по этому проекту


20 05 97
ОАО "Орелэнерго"


Hagler Bailly Consulting, Inc



**Agreement on Cooperation Between
JSC Orelenergo and Hagler Bailly Consulting, Inc ,
USAID contractor**

05/20/1997

Orel

This agreement is made between JSC Orelenergo, the legal entity of the Russian Federation, and Hagler Bailly Consulting, Inc , the legal entity of the USA

Subject to mutual intentions of the Parties in respect of this Agreement, the Parties have agreed to assume the following liabilities and to render the following services under the present Agreement

JSC Orelenergo agrees to conduct the demonstrational project for implementation of the agreed upon program, and shall provide an access to any necessary financial information and operative co-operation with the enterprise management, and a working space, administrative support and opportunity to contact the enterprise management, all for the purposes of securing the project success

The company Hagler Bailly Consulting, Inc agrees to provide JSC Orelenergo with the services as follows

- 1) Improvement of the analysis systems and cost management of the energy system and tariff rating
- 2) Optimization of the accounting and control over sales systems, gathering and processing the information on consumers, and encouraging the payment to be made for the sold production
- 3) Providing assistance in organizing the financial service, identifying the objectives and functions of a department, and its place within the organizational structure of the company
- 4) Setting the goal in respect of developing the task for the unified managerial information system within the organization

Pursuant to this Agreement JSC Orelenergo shall not be liable for financing the project, except the payments to be made to employees of the enterprise participating in the work on the said project

JSC Orelenergo

Hagler Bailly Consulting, Inc

DIAGNOSTIC EVALUATION OF NIZHNOVENERGO

Dates Visited February 24-25, 1997
 May 5-7, 1997
 May 15-20, 1997

Attachments Trip Report - Bob Alexander, Michel Swider
 Trip Report - Alexander Kozlov, Vladislav Khominsky
 Trip Report - Bob Alexander, Michael Swider

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	3/3
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	4
4 Competency and Capability of Staff	4
5 General Financial Situation	3
6 Magnitude of Sales	3
7 Organizational Structure	3
8 Information Management System	2
9 Accounting and Reporting System	2
10 Tariff Establishment	4
11 Customer Service/Billing	3
12 Financial Analysis and Planning	3
13 Investment Projects	3
14 Potential Benefit to Energo	5
15 Willingness to Share Cost	3

Recommendations and Summary Type 2

There was a lot of attention given to Nizhnovenergo during the diagnostic stage of this program. This was initially due to the attempt to find some synergy with the ongoing efforts of USEA and IRIS in the region, and because of the reputation of Nizhni-Novgorod as being in the forefront of the reform efforts in Russia. Later, with the establishment of the "reform management" at RAO, additional emphasis was placed on Nizhnovenergo as per RAO's instructions.

Since then, we have been notified that Nizhnovenergo will be a pilot energo under a program to be funded by the British Know-How Fund and implemented as an IFC project, but with some assistance to be provided under our commercialization program. We have therefore completed the diagnostic under the hope that our information provided herein and in the attachments will be of some use in scoping the work for that effort.

Nizhnovenergo is recommended to be classified as a Type 2 energo (rather than Type 1) because of the weak industrial customer base to support the energo as a commercial enterprise, and because of the low level of "commercial" competence of both the senior and most of the middle management. Both were seen as large impediments to a successful pilot effort there, and it is felt that other energos that are better options are available.

Suggested Scope of Work

- 1 Assistance in determining and analyzing costs, and cost optimization
- 2 Assistance in developing a computerized management information system
- 3 Assistance with organizational structure and particularly the inclusion of a financial department
- 4 Assistance in modernizing accounting, and transfer to IAS standards
- 5 Assistance in non-payments, and developing a system for billing and collections
- 6 Assistance in analyzing proposed capital investments
- 7 Assistance in developing a strategy for optimizing purchases and sales of electricity including the wholesale market

TRIP REPORT

Nizhnovenergo, Commercialization Project
Robert Alexander with Michael Swider
Hagler Bailly Consulting, Inc

Prepared by Michael Swider
24 February 1997

SUMMARY AND RECOMMENDATIONS

The purpose of this trip was to get familiarized with Nizhnovenergo (NNE) in Nizhny Novgorod for consideration of participation in the Commercialization project. This trip coincided with trips to NNE by Illinois Power and IRIS as organized by Gene Fominykh of USEA. USEA has sponsored an exchange between NNE and Illinois Power for the last two years.

This energo is trying to restructure its management and operations procedures for a competitive environment and find investment to increase capacity. NNE is receptive to participating in the Commercialization project as they recognize a lack of financial and technical control mechanisms is hindering their ability to operate the company. The most pressing issue at the energo is collections. Currently, only 77% of energy sold is collected, and most of that in barter. The lack of cash at the energo has created an interest in obtaining external financing but there is little possibility of this until the energo fixes its collections problem.

The trip ended in a final meeting with Andre Remayev, Commercial Director, and our main liaison. He prepared a list of what he thought were their most pressing needs that could be addressed in the commercialization program. Excluding investment promotion, they fall in to generally three categories:

- 1 Organizational Structure
- 2 Accounting and controls systems
- 3 Customer relations

We agreed to follow up on these, and return to work out the details of our project with NNE once we had received approval from RAO to begin implementing the Commercialization project. At end of this trip report is the full list of items for which NNE is requesting assistance.

A schematic of the management at NNE and financial reports are also attached.

REGIONAL ENERGY COMMISSION

The first meeting was with **Mr Andre Zadernyuk**, the Regional Energy Commissioner, together with Illinois Power and Mary Webster of IRIS. According to Mr Zadernyuk

The Nizhny Novgorod Oblast is planning to develop a regional wholesale market, where all customers in the region will be able to choose from whom they will buy their electric power

They plan to implement several electric power projects both within NNE and without - that is, in the form of independent power projects (IPPs). The hope is to have several new power plants constructed in the region as Nizhny is a deficit region

RAO UES is interested in participating in the construction of their new power plant, which will replace capacity that is reaching the end of its useful life. Several manufacturers of power equipment are also interested in participating (i.e. Siemens and ABB). NNE is looking for additional equity investors in this project and are expecting to make lease arrangements for the equipment. This will be a combined heat and power (CHP) plant that will provide district heating along with thermal energy for the local oil refinery

In the region they are also developing a program to attract small energy companies. For this purpose they are developing a pilot program with the local automobile engine manufacturing plant to develop small power plants. They have identified 35 facilities in the region that could be reconstructed for power delivery

In the Nizhny region in the last two weeks several investment companies have proposed investment into the local energy business. To have construction that is not paid for by consumers until the plant went on line would be a great break for our customers."

GENERAL DIRECTOR

The next meeting was with the General Director of Nizhnovenergo, **Mr Aleksandr Yevdokimov**. According to Yevdokimov NNE is moving to restructure the way that electric energy is sold in Nizhny

Already an agreement has been signed between Dyakov of RAO UES and Boris Nemtsov, Governor of Nizhny Novgorod Oblast, to create a competitive market for electric energy in the Oblast. As part of this scheme RAO UES will begin to divest itself of NNE (It currently owns 62%) and set up its own company in the Oblast to compete directly against NNE for customers. The details of this plan are still being worked out

As part of its restructuring, NNE is planning on investing in new power generation. Already they have an agreement with Siemens to replace a power block at their Derzhinskovo station with a 150 MW twin cycle gas turbine power plant. The total Siemens contract on this project is 104 m DM (\$ 63 m). Siemens has already delivered 52 m DM of equipment, and NNE has paid 30 m DM of the costs. They are expecting an agreement with the EBRD for a \$50 m credit to complete this project

NNE is also planning to construct a completely new power station in Novobinskaya. Mr Yevdokimov expects that this project will be in the form of an IPP ("Zakrytaya Aktsionernaya Obshchestvo [ZAO], i.e. Closed Joint-Stock Company). They expect the Novobinskaya project will be a low cost producer and have less staff than a modern General Electric power station. Overall, this is part of their plan to reduce electricity tariffs in the region

When asked about collections, the General Director explained that until recently they collected directly from customers. But this created problems as many clients were able to get protection from collection. Now NNE sells its receivables to their partner bank, Nizhnovgorod Bankers House (NVD). The rationale is that the bank can be tougher in collecting bad debts, and is more willing and able to take debtors to court to attach their property.

Mr. Yevdokimov referred us to his "right-hand man" on financial issues, Andre Remayev, to work with us on the Commercialization project.

COMMERCIAL DEPARTMENT

Met with **Andre Remayev**, head of the financial-commercial department. Mr. Remayev came to NNE in 1995 as an outsider to the electric power industry, having formerly worked in the Ministry of Heavy Machinery and most recently as a commercial businessman. He struck us as being much more in tune with commercial realities. When asked what were priorities for NNE, the reply was:

1. Increase the value of the company's shares
2. Raise the collection rates on receivables - possibly through increased use of commercial paper for cash-strapped clients
3. Change the company's accounting procedures
4. Planning for generator optimization - cutting generation costs
5. Rebuild generators

NNE has started to contract with several companies, including Price Waterhouse to consult on investment promotion, and Putnam, Hayes, and Bartlett (PHB) to advise on restructuring. They are moving to restructure because RAO EES has decided to create "trade houses," including one in Nizhny Novgorod. This "trade house" would compete with NNE in their region. On 20-21 February RAO will take a final decision on this plan.

Right now NNE has two power projects in development. One is the Derzhanskaya project with Siemens. The other is to build a new CHP in Novobinskaya.

In 1994 NNE showed a balance sheet profit of 350 billion rubles. But in reality the company has no profits or cash, and has paid no dividends to shareholders. He thinks that the head accountant is ready to change their accounting system. They need to restructure and computerize their accounting and control systems "all in this year."

ENERGONADZOR (Electric Sales)

Sat in on meeting between **Boris Aleksandrovich Kurganov**, the head of NNE's Energonadzor department, and Hodson Thornburg of PHB. This meeting was also attended by Yevdokimov and Remayev. Hod was there to examine NNE for the task of improving their operating procedures and financial condition. Of principal interest to Hod was NNE's policy in terminating service to customers who did not pay their bills. [Note: PHB was hired by Nizhnoenergo after this was made a requirement to their partner bank, NVD, as a condition to being accepted in the World Bank's twinning program.]

Mr. Yevdokimov explained that the biggest problem in cutting off customers for non-payments is the social issue. Most factories are connected to housing, schools, hospitals, etc. Also, many of these companies collect the electricity tariffs in their local service area, and then don't remit this money to the energo.

We were told the governor decides who gets on the list of "uninterruptable" customers. The general procedure is that NNE informs the local department of fuel and energy who they are planning to cut off or restrict. But if this department says, "don't cut that customer off" then they don't.

He went on to say that many large customers now claim that the electricity tariffs are too high. But this is not true, according to Mr. Yevdokimov. The customers are "lying" - especially the large industrial customers. In Nizhny the average electricity tariff is only 5 cents/kWh for industrial customers. The problem is that for Russian industrials energy intensity is twice that of their US counterparts.

Mr. Kurganov went into more detail on the following topics:

Shut-off Policy

If they have a problem with maintaining the frequency at safe levels they will shut off users without warning in an emergency. The standard contract with customers stipulates in what cases the power may be cut off. The customers must be prepared for curtailments so that there would be no accidents or damage in case of a power outage. Therefore the customer participates in energy management.

Sanctions for non-payers

NNE has the right (unfortunately with large limitations) to curtail or completely shut off power to customers. With warning they can cut power down to most customers to "emergency" levels.

In the case of a company not meeting its payment obligations for two months they have the right to cut that enterprise off (with government approval, as mentioned above). NNE uses a wide array of curtailment measures for non-payers. At the moment they have over 20 customers who are on emergency supply status. Last year they completely cut-off several customers, including the television factory, and the vitamin factory. But most of the companies that have been cut off had first shut down because they lacked the funds to buy raw materials, not because of actions by the power company.

Most of the major factories in the area were built as small towns with an entire social infrastructure, therefore they can not completely cut these companies off. In 1996 especially, with the presidential elections, there was political pressure not to cut off any customers. The governor tells them to supply the energy, regardless of whether the customer is paying. And many industrial customers hide behind the backs of the social sphere to get free electric power.

Mr. Yevdokimov used the Nizhny Paper Mill as an example of a problem customer. The Mill currently owes NNE \$17-20 million. Several years ago the Mill went through a restructuring and got a foreign partner to install a modern paper manufacturing line. The Mill negotiated with NNE to receive power on credit for two years until the new, high efficient equipment was on line. But even after the new line went into operation the Mill still claimed that it couldn't pay. Now the Mill has shut temporarily, and NNE is determined not to turn their power back on until they approve a credit workout plan from the Mill.

On pricing

NNE has a contract with customers for energy and capacity. They try to manage their

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capacity very tightly because they have a deficit of capacity. If a customer uses more capacity than agreed to in its service contract, without coming to a prior agreement with NNE they will pay a penalty of ten times the tariff for the excess capacity.

Nizhny has a broad industrial sector led by machine building, (there is the large GAZ automobile factory) Other sectors include

- gas pipeline and gas pumping station
- paper mills
- chemical factories
- oil refinery
- shop building
- military industrial complex

The military industrial complex is the worst non-payer, along with agricultural customers

The presence of the gas pumping station allows NNE to use offsets (barter) for the supply of gas. It started 4 years ago as a simple offset procedure on the books but then it became more complicated with the new accounting rules on barter, and is less profitable now and they want to move toward cash clearing.

Collections

NNE is trying to improve their rate of collections with promissory notes. In their view, these notes called Veksels are a good, "civilized" form of money. NNE has therefore decided to try to convert all bad debt into promissory notes.

As processing these notes is time consuming they have made an agreement with their bank, NVD, to handle this service for them for a 2% fee. They claim to have raised their collection rate significantly through this process. One company cleared their debt with a 33 billion ruble promissory note issuance, and this enterprise was able to pay off on the notes. In 1996 a total of 100 billion rubles in promissory notes was accepted as payment for electricity.

The advantage to securitizing receivables in this way, according to NNE, is that it is easier to take a company to arbitration court over failure to meet obligations on the notes, than it is to take them to court over electricity bills. Also, promissory notes are used to clear much of their barter transactions.

If the customer claims that they cannot pay in cash, then by contract they have the right to pay with promissory notes, if NNE accepts them. NNE analyzes the credit worthiness of the customers applying for credit through acceptance of notes. NNE claims that they know their clients well so they know who is a good credit risk. [The commercial director later refuted this assertion, admitting that Energonadzor, being a group of engineers, had no idea how to do credit analysis, and grants credit purely on faith.]

For bad debtors NNE will first take their case to arbitration court. If the debt cannot be satisfied then they will attach the property of the debtor and attempt to sell it to clear the debt. They have already used this approach, although they admitted that it was a "very difficult" procedure. [The collections procedure recounted by the head of Energonadzor is different from what the General Director described. He claimed that NBD was collecting all bad debts. This will require more research on the next visit.]

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FINANCE (NBD Bank)

This meeting was with the bank's President, **Boris Brevnov**. The bank is close to closing a deal to sell a share of its equity to the EBRD for \$15 million. It is also trying to get accepted into the World Bank's twinning program. His bank has a major stake in Nizhnovenergo and is eager to have us work with them.

Brevnov, who sits on the Board of Directors at NNE, explained that PW (which has been their auditor for the last 4 years) was invited to do work on project financing questions for NNE. PHB was invited to consult on technical and engineering questions.

When asked what he thought was the most important thing we could do for NNE, he stated that the company needed AIS conversion and a management accounting system.

ACCOUNTING

Ms Tatiana Ikhsanova, Head Accountant for Nizhnovenergo, was very open with us, and promised a copy of their annual report when it is completed in a few weeks time. She described NNE as a company with 20 divisions, each with its own accounts. The final accounts are consolidated. The accounting system is still only on the Russian standard, and still not computerized. Some of the book keeping has been automated, such as bank accounts, payroll settlements, and tax accounts. But this it is not integrated.

Energonadzor handles the customer accounts and collections. The money collected is transferred into 3 accounts:

- 1 Nizhnovenergo's main account
- 2 Tax debtor account ("schyot nedayomchika")
- 3 Energonadzor's account

At this time the main account is blocked by the state tax service. All moneys should be going directly into the tax debtor account, where they are collected by the State. But in fact much of the money goes into the Energonadzor account, which is illegal. Ms Ikhsanova explained that if it were not for their illegal account they would not be able to pay salaries or any other expenses.

Their tax debts are 143 billion rubles, owed by NNE to the Federal and regional governments.

Their outstanding receivables from government are,

110 billion rubles	owed by the Federal government
80 billion rubles	owed by the Oblast and regional cities
46 billion rubles	owed by the City of Nizhny Novgorod
<hr/> 136 billion rubles	Total

They are planning to cross cancel debts with all the branches of the government by the 1st of April. She hopes that this will allow them to close their tax books and get the block off their bank account. But besides the tax debts, they also have to clear their debts to equipment, fuel and service suppliers, as well as to RAO UES (NNE purchases about one half of their electric power needs from the wholesale market).

Revenue collection is NNE's biggest problem. A full 90% of all companies in their territories also have their accounts blocked by the state tax service, so they would have trouble paying.

cash for electricity even if they wanted to Therefore, 85% of all sales are paid in barter, notes, or "countertrade "

They have been audited the last few years by a local company, Soyuz Auditorov Nizhny Novgorod Because of the way the old Gosplan reporting system is structured they have been showing a profit on their balance sheet every year, when in fact they are losing money Much of the reason for the paper profits is all the "social" funds that they have to keep on their books A percentage of their non-existent "profits" are transferred (on paper) into these accounts, where they are keep on the asset side of the balance sheet In reality they are unfunded liabilities

Ms Ikhsanova who does not even have a PC in her office, was enthusiastic about the idea of developing an integrated MIS system for NNE

ECONOMICS DEPARTMENT

Mr Venjamin Yastrebov, who is both Economics Director and Deputy General Director, has an excellent reputation within NNE as an analyst, but as he is retiring this year the general feeling from Remayev and the head accountant was that he was thinking more about retirement than restructuring NNE at the moment and wouldn't be much of a help to us

When asked about the state of NNE's MIS system Mr Yastrebov stated that at the moment they do not have the kind of information that they need to do economic analysis Real financial data is non-existent, and they have little hard data to use for analysis

The accounting department is too loaded with routine paper pushing to provide any useful information or analysis NNE needs to change the entire structure of its statistical and accounting reports The current figures that they use for economic analysis and planning are abstract and of little use

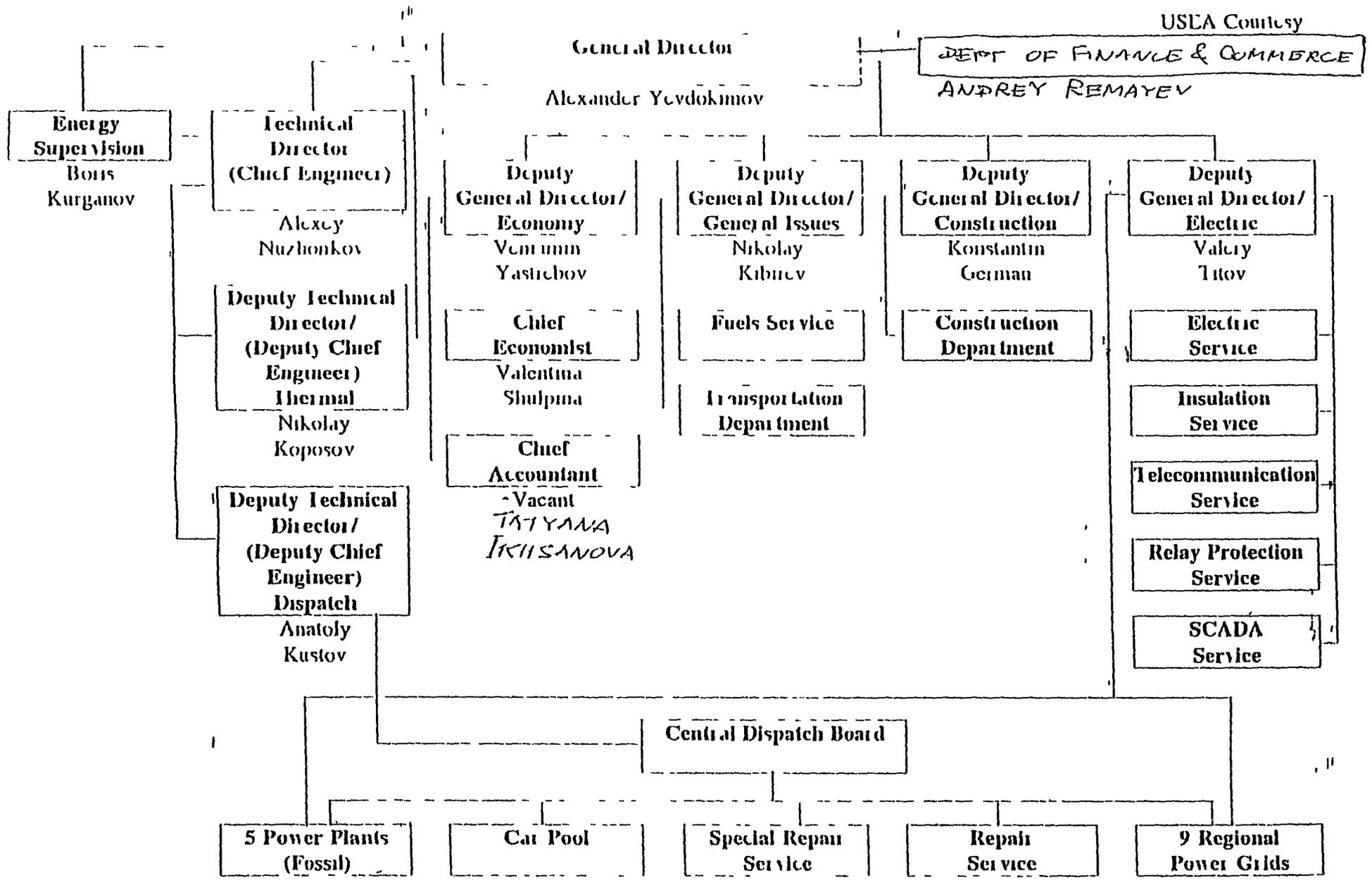
ВОПРОСЫ К КОНСУЛЬТАНТАМ

- 1 Структура АО "ННЭ" и предложения по ее совершенствованию
- 2 Схема и структура управления финансами - детальная, организация финансовыми потоками
- 3 Совершенствование бухгалтерского учета и перевод на международный стандарт
- 4 Техничко-экономическое планирование
 - оптимизация производственный затрат
 - оптимизация налогов
- 5 Анализ финансовых вложений и предложения
 - в т ч затраты на реконструкцию уже произведенные
 - предложение по техническому перевооружению
 - поиск финансовых источников
- 6 Анализ капитала АО (акционерного) и предложения по работе с ним
 - увеличение/переоценка
 - раскачка цены акций и т д
- 7 Привлечение инвесторов (возможен программно-целевой метод)
- 8 Оптимизация получения электрической энергии по перетокам
- 9 Продажа электрической энергии потребителям в условиях свободного рынка
 - в т ч взаимосвязь выработки электроэнергии на тепле и отпуск их для потребителей
- 10 Структура потребителей и технология их обеспечения электрической энергией (абоненты и суб абоненты)

QUESTIONS TO CONSULTANTS

- 1 Organizational structure of AO-NizhnovnovEnergo and proposals how to improve it
- 2 Detailed scheme and structure of finance management
 - cash flows' organization
- 3 Accounting improvement and transfer to international accounting standards
- 4 Technical and economic planning
 - optimization of production costs

- taxes optimization
- 5 Analysis of capital investments and proposals relating to them
 - including effected investments for modernization
 - proposals on refurbishment
 - search for investors
- 6 Analysis of stock capital and proposals on
 - its increase and re-assessment
 - increase of stock liquidity, etc
- 7 Investment promotion (possibility of using pricing methodology)
- 8 Optimization of receiving electric power through interregional flows
- 9 Sales of electricity to end users under free market conditions
 - including CHP s electricity generation based on heat load and its delivery to customers
- 10 Structure of customers and methods of supplying electricity to them (customers and sub-customers)



Trip Report (Supplemental)
IFC Mission to Nizhnovenergo
May 15 - 20

Prepared by Michael Swider

SUMMARY

The International Finance Corporation (IFC) was asked by RAO UES Rossi to investigate Nizhnovenergo (NNE) for possible investment/financing opportunities. NNE was chosen as it may become part of a larger IFC role to support restructuring in the electric power sector in general and to specifically support Boris Brevnov. Michael Swider and Robert Alexander were asked to assist with the IFC mission.

While the IFC does on occasion provide technical assistance through grants, the mission to Nizhnov was specifically searching for a bankable investment project only. What the IFC found is what we had found on our initial trip: that NNE is under onerous social obligations, poorly managed with no thought to standard commercial management practices, and buried under a mountain of debt. In the opinion of the IFC loan officers, the only possibility for lending to a power project would be through a company independent of NNE and free of its debts. In addition, a firm power purchase agreement (PPA) would need to be signed with a reliable local customer as NNE's energy sales department was clearly not sufficiently capable of managing collections.

At the end of the mission it was sufficiently clear that a financing could not be done in Nizhnov Novgorod with the energo as the client, due to conflict of interest problems. The key conflict of interest is that another department in the IFC had already made a major loan to one of NNE's largest debtors.

In addition to financial support, NNE also requested technical support, much the same as requested in our initial fact-finding mission in February.

1. Review and reform of the energo's organizational structure
2. Assistance with correcting the non-payments problem
3. Introduction of accounting and management information systems

For additional information on Nizhnovenergo, refer to the Trip Report for the Commercialization Project, dated 24 February, 1997.

about \$2 million to RAO 2 months prior RAO insisted on payment, and as NNE shows a profit on its 96 income statement (attached) they are obliged (according to Remaev) to pay a dividend, even though they are nearly bankrupt As RAO received their dividends, the same must be paid to the other shareholders, and now Remaev is scrambling to raise that money

According to Remaev the largest internal problem at NNE is the management Firstly outside shareholders are limited to 0.5% of the votes This allows the board of directors to run the company as a family business The board even goes so far as to override the functional managers in NNE on even technical questions

None of the functional departments in NNE coordinate with each other Each has their own finances and their own agenda This creates a situation where the department in charge of selling energy does not coordinate with the department buying energy, or with accounting and collections

Investment projects are also mismanaged The Derzhinski project is 30% completed, but it is not clear where the money will come to finish the project No cost/benefit analysis was done to even evaluate whether it is profitable for NNE to build more capacity And while more efficient power stations sit idle for lack of fuel, RAO pumps money into a new power plant that they really don't need

He also feels that NNE has been hurt by its alliance with the NBD bank because of all the fees that the bank is able to collect The energo has helped fund the growth of the bank, while continuing to flounder in bad debt Besides the poor collections rates, and an unequal relationship with their bank, Mr Remaev feels that the other main problems are a lack of management interest in changing the way they do business, and interference from the local government which forces the energo to finance local government programs

REC (Andrei Zadernyuk)

According to Mr Zadernyuk, the REC, after two years, has begun to work as a professional organization There is a commission counsel that sets energy policy The local administration chooses who will sit on the counsel based on their energy demand Rate setting is done rationally, with all energy companies submitting uniform applications for rate cases

Electric energy supply is produced by the following suppliers

RAO EES Rossi (FOREM)	50%
Nizhnovenergo	40%
Industrial generation (GAZ)	10%

This year they expect to introduce some competition into the local market A draft regulation was already submitted to Boris Nemtsov for approval Part of the plan is to set a regional tariff on electric power transit (wheeling) The GAZ plant can currently sell energy on a three-way contractual basis through the energo So far this power is only being sold to its subsidiaries and company housing

Competition should first of all benefit the customers, with the most consistent payers getting the lowest energy costs They allow a discount of up to 20% for those that pay in cash But only a few medium sized companies have taken the discount Only one large company has taken the discount (although according to NNE there is no large consumers paying fully in cash The paper factory agreed to the discount, but didn't pay none the less)

... to have an ISO in the region that will purchase, on a bidding basis, all the electric energy needed in the region. Any generator would be able to compete to sell to the ISO. The ISO would not be taking title of the energy - for tax purposes. The ISO would be formed by all the generators in the market. The plan is to move to half-hour bids, but they will start with once monthly bidding. All trading will be cleared by a financial institution and collections proportioned out to sellers based on their share of the sales.

Although Mr. Zadernvuk understands marginal pricing, he prefers to keep the system on an average tariff basis because he sees marginal pricing as driving tariffs too high. I did not ask him what he thought the effects of averaging tariffs would be on competition.

The REC discussed the non-payments problem, which he described as being less serious than NNE's description. His idea to fix the non-payments problem is to outlaw barter, as he sees it as a mechanism to make middlemen rich.

ENERGONADZOR 'ENERGY SALES' (Boris Kurganov)

To tackle the non-payments problem, they are taking such measures as cutting supply to emergency loads and charging a 10x penalty for using more than the contracted. Taking a debtor to bankruptcy court is unprofitable, because even after getting a judgment there is a 18-month moratorium on collecting the assets.

Of the 250 largest industrial customers, almost none pay 100% of their power bill. Maybe 5 out of total come close. In his opinion, 95% of these companies have no money, so they all settle through barter. As an example, they started offering 10-20% discounts to those who paid in cash. To date, only one company has accepted these terms.

For the last 4 months, NNE has received payment for only 77% of energy sold. And very little of this was settled in cash. Barter arrangements are generally done through their creditor's middlemen. A debtor will offer a good, and NNE will try to find a creditor to accept it (on the creditor's terms).

The government must solve the problem of agricultural and residential customers who receive power at only 50% of the cost. The agricultural and military customers never pay, and in general, the government companies are the worst debtors. The municipal heating company owes NNE 68 billion rubles. This represents 6 months of payments that they are behind in paying the energo. For heating, the residential customers receive a 70% government subsidy in their tariff. But the government has no money to pay this subsidy. The agricultural sector owes another 300 billion rubles for electricity that the State obligates the energo to pay. Kurganov called this "hidden taxation." The federal government subsidizes the military, internal police, institutes, hospitals, etc. These groups owe 100 billion rubles.

For direct social costs, NNE has a farm that they took on during the last food crisis, and also a lot of employee housing on the balance sheet.

ACCOUNTING (Tatiana Iskhanova)

As only 77% of sales are currently collected, the business is inherently unprofitable under the cost-plus system, non-collections are not counted as losses, but as sales instead. It takes three years before an uncollected debt can be written off. NNE receives only 7.5% of its collections in cash. Therefore, they barter to settle with most suppliers. For accounting purposes, there is no loss from barter, as they pass along to collections from debtors to creditors an account for the full value of the goods on both transactions.

Barter needs to be eliminated in the whole economy simultaneously. The government needs to do this, but instead they encourage barter by holding companies' accounts in special escrow (schvot nedoyomshuka) for tax purposes. As the government doesn't meet its own obligations, nobody wants to pay cash to the government. Instead, they barter for goods and pay the government in bartered tax write-offs.

The energy barterers with the federal and regional governments for tax debts. Profits for companies are based on gross margin rather than profit to keep the tax rates up. On top of "profit" tax, the other main taxes are VAT and the Pension Fund. There are about 72 taxes in total, some based on profit, others on turnover, and still others on payroll. Only about 10% of the taxes can be included on the cost base for the tariff and recovered. The rest come out of "profit."

When asked about the success of the collections activities the NBD bank has taken over for the energy in an effort to increase collection rates, Ms. Iskranova stated that she didn't see any results. The largest part of accounts payable is the debt for imported energy. The breakdown is:

Energy purchases	40%
User fees (RAO)	15%
Taxes	15%
Subcontractors	10%
Other	20%

The total debt is:

As of January 1 1997	1.7 trillion rubles
As of April 1 1997	2.0 trillion rubles (\$360 million)

NNE's Accounts Receivable is about the same total.

ENGINEERING (Valerie Fedorovich Titov)

In the NNE system there are more than 60,000 km of transmission, 15,000 transformers and 260 substations. Voltage on the system is 220 - 0.4 kV. Transmission lines that are 500 kV and higher belong to RAO UES Rossi. NNE has electric distribution companies servicing 56 districts, and employing about 4,500 people. The 0.4 kV net is serviced and repaired by the distribution companies; the remainder of the network is serviced by NNE's repair companies. NNE Energosbyt has affiliates at each of the territorial distribution companies, and all control over the system is centralized.

Outside of NNE there are also some specialized maintenance companies to do contract work. Capital construction work is usually carried out by subcontractors also. At the moment plans for capital construction have halted because the government has revoked the "investment" tariff.

Trips were also organized to two power plants, one owned and managed by NNE, the other owned and managed by the local GAZ automobile factory. The contrasts at the two power plants were significant. The NNE plant was old, dirty and disorganized. The GAZ plant, while also old, was clean and efficiently run, with much less personnel. Also, the management at the power plant owned by GAZ knew their cost of production, while at the NNE plant they didn't seem to care.

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ECONOMICS (Yastrebov)

The shareholder breakdown of NNE is close to the following

RAO	49 0%
Workers	21 3%
Workers fund	10 0%
Management	05 0%
Sold at auction	08 3%

Currently there are 4.9 million shares outstanding, with a nominal value of 85,000 each. Charter capital of the company is 425,555 million rubles. After the latest reevaluation of the company's assets they plan to increase book value by five times. Increasing the share capital will be on the agenda at the June shareholder's meeting.

This year they will pay dividends, despite their losses. Losses are coming mainly from non-payments and barter. They lose about 15-20% on barter transactions, and Mr. Yastrebov wishes that NNE would not barter at all. None of the 250 largest customers pay in cash only - and only about 20% of these firms pay with a mixture of cash and barter. The rest pay in barter or nothing.

When asked about future restructuring at NNE, Mr. Yastrebov explained that the company would be, on paper at least, functionally divided along its three lines of business, generation, transmission, and distribution. But the assets of the company would stay with NNE and all would be centrally controlled as before (that is, it appears that any restructuring will be only cosmetic). Mr. Yastrebov feels that as CHP's must be run for heat, there can be no competitive market.

INVESTMENT

Three years ago a project to refit one of the power blocks at the Novogorkovskaya power station with a 52MW ABB turbine was begun. The general plan was to raise \$25 million for the installation, with \$16 million coming from the EBRD, \$7 million from ABB, and \$2 million from NBD bank. NNE would contribute equipment to the independent leasing company. The IPP was to then sign a power purchase agreement (PPA) with a major client. But as they could not get a guaranteed PPA, ABB has for the time being been pulled out of the project. There was a similar scheme for an investment in refitting a power plant with Siemens participation, but Siemens also put a stop to the project also because of payment problems.

NNE is desperate to get the two power projects going again, as well as an investment in metering, both for their need to maintain the reliability of their power system and for their prestige. The IFC was sent out to Nizhny to try to save the investment programs that have stalled as the non-payments problem has grown. But as noted in this report, and the previous, the non-payments problem must be overcome before an investment could be rationally made. The IFC saw this very clearly.

In addition, there is a conflict of interest problem for the IFC to invest in NNE. One of NNE's biggest debtors, AO Volga, a paper company, has borrowed from the IFC for its own restructuring. Because of falling prices for paper products, and the IFC's strict loan covenants, AO Volga is not receiving enough cash flows to pay the energy NNE (and by extension NBD) wants the IFC to release funds from their AO Volga escrow account to NNE.

TECHNICAL ASSISTANCE

The following areas of technical assistance were requested from NNE. Although the request was to the IFC, as the lead delegation on this trip, of these areas could fall under the aegis of the Commercialization project

- 1 Review the organization structure of NNE, and redefine the role of NNE in the regional power system, and assist in the amending of federal and regional legislation to allow NNE to reorganize along lines of business
- 2 Work to reform the system of subsidies and correct the non-payments problem, and by extension work with government organs to shift social subsidies from the energo to the proper government organs
- 3 Introduce an accounting and information management system at NNE, so that they would be able to manage costs, track expenditures, and monitor customers

PARTICIPANTS

From the IFC

Arthur Levi, Principal Investment Officer, Privatization and Advisory Group
Rimas Puskorius, Investment Officer
Garth Hedley, Engineer
Luis Rodriguez, Consultant

From Hagler Bailly

Robert Alexander
Michael Swider

Balance (1996)
AO Nizhnovenergo

ASSETS	Code	12 31 1995	12 31 1996
I FIXED ASSETS			
Goodwill (04 05)	110	1123	5439
including			
organizing expenditures	111	0	0
patents licenses trade marks etc	112	1123	5439
Fixed assets (01 02 03)	120	3881710	3890965
including			
land property and facilities	121	0	0
buildings machines equipment	122	3881710	3890965
Unfinished construction projects (07 08 61)	130	1099922	1303520
Long terms investments (06 82)	140	8592	13674
including			
investments in subsidiaries	141	0	0
investments in affiliates	142	0	0
investments in other organizations	143	8592	13674
loans granted for more then 12 months	144	0	0
other long terms investments	145	0	0
Other non-circulating assets	150	0	0
TOTAL on I	190	4991346	5213598
II CURRENT ASSETS			
Stocks	210	59829	139118
including			
raw materials materials etc (10 15 16)	211	52638	120637
livestock (11)	212	1341	3636
expendable assets (12 13 16)	213	4514	10469
costs of unfinished production (20 21 23 29 30 36 44)	214	886	1285
finish products (40 41)	215	359	473
shipped goods (45)	216	0	0
deferred charges (31)	217	91	2888
other stock and costs	218	0	0
Value added tax on goods purchased (19)	220	98525	159201
Accounts receivable beyond 12 months	230	197255	219226
including			
customers (62 76 82)	231	156580	218132
notes receivable (62)	232	3000	0
subsidiaries and affiliates debts (78)	233	0	0
advances paid (61)	234	37428	0
other debtors (63 77)	235	247	1094
Accounts receivable within 12 months	240	1025274	1663827
including			
customers (62 76 82)	241	1008388	1166258
notes receivable (62)	242	4520	356252
subsidiaries and dependent companies debts (78)	243	0	0
founders debts on nominal capital (75)	244	0	0
payments on account (61)	245	5940	27179
other debtors	246	6426	114138
Short-term investments (56 58 82)	250	22	362
including			
investments in subsidiaries	251	0	0
own shares redeemed from holders	252	0	0
other short-terms investments	253	22	362
Cash and equivalents	260	8534	5355
including			
cash (50)	261	56	18
demand deposits (51)	262	7850	4493
foreign currency account (52)	263	527	608
other resources (55 56 57)	264	101	236

Other current assets	270	0	0
TOTAL on part II	290	1389439	2187089
III LOSSES			
Uncovered losses of the previous years	310	0	0
Uncovered losses of the current year	320	x	0
TOTAL on part III	390	0	0
BALANCE (sum of rows 190+290+390)	399	6380786	7400687
LIABILITIES			
	Code	12 31 1995	12 31 1996
IV CAPITAL AND RESERVES			
Shareholders equity (85)	410	423547	423547
Paid-in capital (87)	420	3631076	3649402
Settlements on allocated property	423	0	0
Reserve capital (86)	430	0	0
including			
reserve funds created in accordance with legislation	431	0	0
reserve funds created in accordance with constitutive document	432	0	0
Accumulation funds (88)	440	161242	246371
Social sphere fund (88)	450	669636	693277
Purpose inflows and finance (96)	460	299747	378225
Retained earning of the previous years (88)	470	58799	56066
Retained earning of the current year	480	x	13163
TOTAL on part IV	490	5244047	5460051
V LONG-TERM LIABILITIES			
Loans (92 95)	510	0	0
including			
bank credits repayable in more then 12 months period	511	0	0
other credits repayable in more then 12 months period	512	0	0
Other long-term liabilities	520	0	0
TOTAL on part V	590	0	0
VI SHORT-TERM LIABILITIES			
Loans (90 94)	610	11730	2193
including			
bank credits	611	11730	200
other credits	612	0	1993
Accounts payable	620	1107005	1911695
including			
merchandise creditors (60 76)	621	765510	1240255
notes payable (60)	622	0	0
liability for subsidiaries and dependent companies (85)	623	0	0
salaries and wages (70)	624	21723	10396
social insurance (69)	625	11195	14094
arrears (68)	626	259267	568870
advances (64)	627	217	30714
other creditors	628	49093	47366
Dividend payment (75)	630	8	0
Prepaid income (83)	640	0	0
Consumption funds (88)	650	17991	26748
Reserves of future expenditures and payments (89)	660	5	0
Other short-term liabilities	670	0	0
TOTAL on part VI	690	1136739	1940636
BALANCE (sum of rows 490+590+690)	699	6380786	7400687

Income statement (1996)
AO Nizhnovenergo

INDICATOR	Code	Current period	The same period of the previous year
Net proceeds (with the exception of value added tax, excises etc)	010	3784416	3090638
Cost price of goods, products services sold	020	3459513	2737180
Commercial expenditures	030	5	0
Administrative expenditures	040	0	0
Earned income (rows (010-020-030-040))	050	324898	363458
Accumulated interest	060	262	50
Interest charges	070	0	0
Income from participation in other businesses	080	220	88
Other operating income	090	93014	54095
Other operating expenditures	100	147799	81829
Operating profit (loss)	110	270595	325862
Other non-sales income (rows (050+060-070+080+090-100))	120	132883	27946
Other non-sales expenditures	130	71487	11755
Profit (loss) (rows (110+120-130))	140	331991	342053
Profit tax	150	76944	118410
Distributed profit	160	241884	164844
Undistributed profit (loss) of the current period (rows (140-150-160))	170	13163	58799

**Report on a Business Trip to JSC Nizhnovenergo
within the Framework of the First Stage of the Project
"Hagler Bailly – RJSC UES"**

Nizhny Novgorod

05 05 – 05 07 1997

Participants are as follows

- Robert Alexander – "Hagler Bailly"
- David Thornton -- "Hagler Bailly"
- Alexander Kozlov – Carana Corp
- Vladislav Khominsky – Carana Corp

At this stage the objective was to identify the main directions for the subsequent activities at Nizhnovenergo

Generally, the undertaken activities were reduced to unstructured interviewing the leading specialists of JSC Nizhnovenergo

Within three days the following persons were interviewed

- Chief of finance-commercial department (Andrej Vladimirovich Remayev)
- Chief accountant (Tatyana Semyonovna _____)
- Assistant chief accountant (Tatyana Lvovna _____)
- Deputy general director for economic matters(Venyamin Borisovich Yastrebov)
- Deputy general director for reconstruction and development (Konstantin Sergeevich German)
- Assistant chief supervisor (_____)
- Director of "Energonadzor" (Boris Alexandrovich Kourganov)
- Chief economist (Valentina Mikhailovna Shoulpina)
- Director of AMS (Azat Khamidovich Khamidoulin)

In the course of interview-taking the main attention was paid to the main problems of Nizhnovenergo, the specific features of relationships with RJSC UES, Regional Energy Committee, internal and external electricity and heat suppliers both within and without Nizhnovenergo, and with consumers, debtors and creditors

**General Features of the Enterprise
(according to the specialists of Nizhnovenergo)**

- The structural integral units of JSC Nizhnovenergo are 5 principal heat power plants, several power distributors (networks), energy supervisor, as well as special repair works, motor carrier and farming enterprise Settlement accounts of the most part of enterprises within JSC are held blocked and merely all of their activities are being conducted via the account of the management office
- The territory subject to services provided by Nizhnovenergo also comprises such large power providers as hydro-electric power station, owned by RJSC UES GAZ

- The region as a whole is experiencing power deficit about 50% of electricity is being manufactured by JSC Nizhnovenergo 10% - UES GAZ the rest is being bought from RJSC through the energy/commercial clearing system The purchased electricity is more expensive than the average cost of their own one
- 51% stake in Nizhnovenergo is held by RJSC UES, although RJSC does not set any profitability goal for Nizhnovenergo
- RJSC UES is planning to locate its Clearing-Supervisory House and RJSC Trading House within the region Their system of relationship with Nizhnovenergo remains unclear RJSC attempts to force Nizhnovenergo to switch several large sound clients to the federal wholesale market thus making Nizhnovenergo's activities more complicated to carry on
- RJSC is restraining electricity output of Nizhnovenergo through imposition of sanctions both in top-down and bottom-up directions
- JSC Nizhnovenergo is planning to implement investment projects concerning construction of 2 new principal heat power plants and reconstruction of several running ones, which are presently at various stages of development and preparedness RJSC displays an interest in several such projects
- Cost of electric energy is subject to seasonal variations reflecting the level of technological necessity for heat production
- There are projects approved by Regional Energy Committee concerning the differentiation of the tariff rates for individual consumers (six-rate tariff) and concerning the provision of incentives (through discounts) to pay for electricity

**The Main Problems of Nizhnovenergo
(according to the specialists of Nizhnovenergo)**

- The main problem is – arrears Barter payments make up a 70% share and offset payments make up 20% in addition Only 8% were received in cash
- The most complicated problem of the current activities of Nizhnovenergo is the system of relations with the Gosbudget (State budget) The budgetary organizations cease to pay, most of them are immune to the energy cut-off and are not subject to interest charges The state does not want to redeem the debts Meanwhile the amount of interest on past due budgetary payments is growing on Arrears of budgetary organizations make up Rb 112 mlrd, unpaid taxes due to budget amount to Rb 150 mlrd, plus Rb 200 mlrd of interest on past due payments
- The clear and worked out system of accounting and planning of production cost is lacking Because the table of rates is cost-based Nizhnovenergo does not have a sufficiently clear mechanism of tariff rating
- The cost of electricity for individual consumers is at maximum level (because of low voltage in electrical network) but such consumers enjoy lower tariff rates
- Though operating activities of separate units (SU) are being carried on at-the-spot, such units are subject to financing from the management Because of arrears their settlement accounts are blocked, therefore even the current financing priorities are being arranged by the management of Nizhnovenergo

- RJSC specialists have borrowed the tariff rating methods from the Americans. However, in the USA the cost accounting is based on GAAP standards. Very high discrepancy between Russian accounting system and GAAP standards makes the tariff rating too complicated.

Key Guidelines for Activities at Nizhnovenergo

(Approved by A V Remayev /Chief of finance-commercial department/, coordinator from Nizhnovenergo and submitted to the top management of JSC Nizhnovenergo for approval and arrangement of priorities)

1 INFORMATION SYSTEM

Information system at Nizhnovenergo is still at its initial stage. For the time being Nizhnovenergo possesses about 300 computers at the management office; this equipment forms a local network, also there is some software (developed independently and with the assistance from local computer firms) which handles some bookkeeping problems. The bookkeeping process still is not automated in full. The issues concerning the managerial accounting are not being handled within such information system. The shortage of management information hampers the decision-taking process on the part of the management. In the course of joint discussion it was agreed upon an extreme necessity for an automated information system (at JSC) which will be able to handle both bookkeeping and managerial accounting problems.

The main technical problems are the remote units within the JSC structure and the necessity to include such units into a unified information area.

The financial support to the development of information system is included into the plans of Nizhnovenergo and our task within the framework of this project could be setting the task concerning the development of information systems and making the analysis of various offerings in the information system market. In case that any particular software product is bought, we would be able to provide assistance in adjusting such software to the specific functions of JSC. It should not be excepted that involved in the project may be the company (manufacturer of such software) as a subcontractor, inserting changes and add-ons into the software in compliance with the task developed by our company. This may prove useful when using the experience received in the course of implementing information systems at other regional energetic systems.

2 COST ANALYSIS

Cost analysis at Nizhnovenergo needs to be conducted in order to solve the following problems:

- rates adjustment: in order to prevent reduction of the rates it is necessary to know the real cost of energy and to possess the real figures for subsequent negotiations with REC
- the necessity to compare one's own costs to the electricity wholesale market prices and to the prices of local suppliers in order to choose the optimal policy for the energy/commercial clearing system (wholesale market activities)
- it is necessary to analyze the costs when putting into service the new manufacturing capacities (new principal heat power plants – investment projects) for identifying the necessity and advantage of bringing new capacities into service.

The main problems in calculating the cost for today are:

- the cost is entered only as per appearing of expenses de facto and the fact, that not all expenses incurred during the fiscal period refer to the costs during the same period, is not taken into account
- the cost is recorded only as of the date when the cash is placed into the settlement account but not as of the date of sales
- there are problems in posting the indirect spending on heat and electricity
- the cost does not undergo any simulation against various operating modes of power plants

3 FINANCIAL POSITION DIAGNOSTICS

This task is being considered not only from the standpoint ruled by the necessity to obtain information about the JSC's financial position but also in order to have a visual example of using the financial analysis methodology and the results of managerial accounting in the process of studying the company's position and effective management decision taking

One of the main problems is providing assistance in implementation of financial planning and budgeting methodologies and linking them to the managerial accounting

Activities at the securities market and in the field of corporate financing may be considered to be a separate line. Nizhnovenergo is planning to intensify its activities concerning the promotion of its own stocks into the market and making the company more investment-attractive by means of proper dealing with its own stocks

4 ORGANIZATIONAL STRUCTURE, MANAGEMENT SYSTEM, PERSONNEL MANAGEMENT

This line has gained the most interest on the part of the energy system's management and the range of the task concerning this line is very wide from working out the system of wages and premiums for the employees to preparing the new JSC's organizational structure (consisting of economically independent units managed by the main company)

Because of uncertainty in the power engineering development concept and as a result inability to determine the way to set the task, the decision on global restructuring of JSC seems to be improbable to take. Solving the problems concerning small structural changes and developing various methods of assessment of work and incentives for employees is most likely to be included – by the energy system's management – into the list of priority lines of activities

It seems possible that in the nearest future the power engineering development concept will be determined, and this will enable to formulate the task concerning the JSC's restructuring, which is unavoidable under the new working conditions

5 BUSINESS-PLAN DEVELOPMENT

JSC Nizhnovenergo has three investment projects concerning building the new plants and adapting the running ones by means of contemporary energy equipment. One project is already under way, and the rest two are at the stage of investment proposals

The main problem, as JSC sees it, is very simple: the lack of funds and the required amount makes up several trillions rubles

The JSC's directors hope to attract foreign investments though they are much afraid that "the foreigners will buy everything". HB offers financial assistance through "the American Depositary Receipts"

From our point of view, the discussion concerning the investments within the framework of the present power engineering concept lacks any sense, because the state considers the power plants to be executing a social-political order, but not to be commercial enterprises

How will the investments be returned in such circumstances of systematic arrears? Which way the cost of investments will be entered into the tariffs set by the local authorities and REC? These questions are still hard to answer

6 IMPLEMENTATION OF GAAP STANDARDS

The idea to implement the GAAP standards gains no understanding on the part of directors of JSC "it should be implemented, because it is something they constantly talk about in RJSC, and it is a crucial factor in obtaining the investments". Which way such accounting will be used by the directors themselves still remains unknown. That is why the primary goal within this line is to explain what kind of information the implementation of GAAP standards will make available to the directors

It is a pity that the directors do not clearly understand, that implementation of the said standards will significantly increase the flow of information both from the remote units of JSC and within the main office

itself Today the bookkeeping department ceases to process even the current information. The expenses need to be analyzed as to implementation and support of a new accounting system. HB expects all the issues regarding GAAP to be dealt with by "Price Waterhouse".

7 SALES MANAGEMENT

- Methodology of accounting – system of gathering information on consumers and analyzing such information, tracking the information on offset payments and barter transactions.
 - Methodology of working with the consumers – analyzing the system of sanctions to be imposed on defaulters and enforcement for timely payments.
 - Automated system of gathering information on sales and consumers. HB reckons himself a specialist in handling such problems and proposes to consider several ready-made systems. The western systems are unlikely to fit Russia because of a specific access to the information on consumers. The services of the companies dealing with information technologies (program and system makers) are likely to be required to solve this problem.
-

CONCLUSIONS We consider the implementation of a pilot project at Nizhnovenergo to be very useful. The friendly atmosphere in general, interest shown on the part of many directors, good mutual understanding between us and A. V. Remayev – an educated and sufficiently influential within the energetic system person, enjoying good support from RJSC (Brevnov) – may contribute to successful implementation of the project at Nizhnovenergo.

DIAGNOSTIC EVALUATION OF TYUMENENERGO

Dates Visited 30 November - 1 December, 1995

Attachments Trip Report - Tom Sherwood, Levi Hanson
Letter dated 19 May, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	NA/3
2 Macro-Economic Environment	5
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	4
5 General Financial Situation	4
6 Magnitude of Sales	5
7 Organizational Structure	3
8 Information Management System	3
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	3
12 Financial Analysis and Planning	3
13 Investment Projects	4
14 Potential Benefit to Energo	4
15 Willingness to Share Cost	3

Recommendations and Summary Type 2

Tyumenenergo appears at first glance to be a good candidate for a pilot energo, due to their apparent potential for being very profitable due to the low cost fuel in the region (oil and gas production) and their relatively new facilities. They appeared quite interested in the program during the Phase II visit.

The General director has written a letter welcoming a new visit to discuss participation in the program, however, they unexpectedly canceled our visit twice in the last month and we were unable to schedule the visit in the time allotted for completion of these diagnostics. They presently have invited us again to visit next week.

We have therefore temporarily categorized them as a Type 2 energo. Hagler Bailly recommends, however, that a new visit be scheduled next week to obtain updated information so as to complete a more thorough diagnostic.

13 Gorkholsky Pereulok
Moscow
Tel 7-503-956-2685
Fax 7-503-956-2680

MEMORANDUM TO FILE

SUBJECT Visit to Tyumenenergo
AUTHORS Levi Hanson
Thomas J Sherwood
DATE 30 November and 1 December, 1995

OVERVIEW

Consistent with the objectives of Task 4(a) to assist in the commercialization of the Russia Unified Power System we visited Tyumenenergo in Surgot

We visited with the following individuals

- 1 Mikhail Vadimovich Krashennnikov - Deputy General Director on Economic Issues
- 2 Vadim Borisovich Paikov - Head of Sales (Subscription) Service
- 3 Alexander Georgievich Alsufvey Head of Commercial Department
- 4 Vladimir Mikhailovich Desnitski Assistant of Director on Legal Issues
- 5 Antonina Fedorovna Knyazeva Acting Head of Personnel department
- 6 Alexander Valdevich Stebenev - Head of Automated Control and Management Systems Department

This enterprise is one of the newest and largest in Russia with about 9660 MWe of installed capacity. Sixty seven percent (67%) of this capacity is being utilized at a 92% availability rate and are basically constantly operated in a 'base load' mode. In 1994 they produced about 57x10⁹ KWhr and sold 25 to 30% of what they produced. Fuel is exclusively gas about 50% is head gas and 50% is natural gas.

This Energo is owned 100% by RAO

The following is a list of their major facilities

- Surgot TPP 1 3300 MWe total 16x200 plus 2x12 produces 18x10⁹ KWhr and 630 Gcal/hr of heat
- Surgot TPP 2 4800 MWe total 6x800 26x10⁹ KWhr, with no heat production except internal and local industries
- Nizni Vartov 1x800 MWe 3 8x10⁹ KWhr and 600 Gcal/hr heat
- Urinquav 2x12 MWe (under construction) 134x10⁶ KWhr and 400 Gcal/hr heat
- Tabalska CHP 452 MWe 2 4x10⁹ KWhr and 2400 Gcal/hr heat
- Tyumen CHP 1 310 MWe 2 4x10⁹ KWhr and 1290 Gcal/hr heat
- Tyumen CHP 2 755 MWe, 4x10⁹ KWhr and 1410 Gcal/hr heat

Three main energos buy 80% of the electricity they export. On a monthly basis RAO sends "settlement documents and informs them which Energo owes them how much. They must then go out and obtain collection, which recently has been only about 30% of what is owed, and all in barter. For this reason they are not very interested in increasing their sales outside of the Energo.

KEYPOINTS

Because of the present cash flow situation they are about 4-5 months behind in debt and are not now paying for gas purchased. Of the electricity sold in the Energo, 80% is being paid for.

The Tariff structure is broken down as follows

Fuel	46.2%
Payroll	5.9%
Social	2.3%
Depreciation	3.3%
Major Repair	7.3%
Other	8.0%
Profits before tax	27.0%

Note They pay the same price for gas as the rest of the country, even though they are at the source

Although they would like to contract directly with large users outside the Energo region, RAO will not allow it

They have very good relations with the local Regional Energy commission which consists of the following members

- First Deputy of the Oblast
- Two from the Autonomous regions
- The Energo
- Surgot Gasprom
- Tobalsk Oil Refinery

Their input from RAO is to the effect that the program for Commercialization only involves the separation of the individual Gencos as J S Companies They feel this would be a serious error to do before the problems with Accounts Receivable are solved since this break up would mean the losing of central collection efforts They have the opinion that perhaps after the Accounts Receivable issue is solved, the break up would be good for competition

The scaling down of employees that the break up would necessitate is a very large social problem They have about 26 000 employees 6 7000 of which are in non core enterprises It is not possible to fire these people without extensive relocation and re-training

Break down of their sales is as follows

- 80% Industrial customers (primarily oil production and they are the largest debtor)
- 5% to Agriculture
- 10% Residential
- 5% Other

The Director requested assistance in the following areas

Help in accounting systems management systems and particularly information gathering and processing systems specific for utility sector The area of the territory means special needs and this software must be in Russian

The Sales Department has the following duties

- Monitors sales of electricity and thermal heat
- Makes contracts with consumers---some of these contracts are with the central Energo, and some are with internal smaller distribution company divisions
- Controls and monitors sales of electricity and heat to markets, both quantities and money owned both inside and outside the energo
- Accounts for quantities sold by evaluating meter readings, documents and invoice moneys
- Monitors losses in the system both electrical and heat and if it is too high recommends procedures to solve the loss
- Maintains the condition of meters---and is evaluating automatic metering systems
- Supervises small "Distribution Centers" Networks? that are of the size 800 to 2000 MWe
- Contracts include quantity quality and time frame for payment

Commercial Department

- Created one year ago due to lack of cash and non-payment problem

- Their prime duty is to arrange settlement of payments by barter debt cancellation or otherwise This is done by helping their enterprises identify companies with materials or supplies they need and then arranging to take these products in exchange for electricity sold
- There are three levels of tax and each receives about a third
 - Local Region
 - Autonomous Region
 - Federal
- Monitoring of payments and receipts is about 60% computer and 40% manual Communication with peers and other energos is by email and Fax
- RAO is attempting "bills of exchange" as settlement vehicle, but not now in place
- Fuel contracting is done by the Fuel and Fuel Transport division but the Commercial Division works with them for debt cancellation
- A major problem is the quality of data channels to obtain information Have tried to rent satellite channels but did not finish the work RAO is now working on a project called 'Energy' which will hook all energos to satellite communications Should have ground stations in place by 1996, complete by 2005

Legal and Personnel

- The legal department works with contract issues between for consumers and suppliers, gives legal advice and tries to prevent conflicts
- Monitors the content and the enactment of contracts, sanctions for breach interest on debt lawsuits and arbitrage of criminal and civil suits
- Historically they have about 360 lawsuits per year 250 they file and 110 filed against them
- Legal is divided as follows
 - Main attorney
 - Lawsuit documentation attorney
 - court attorney
- Electronically connected to Moscow with information company UCS to obtain information on new laws status etc
- Training is primarily done in Moscow or St Petersburg
- They also study tax legislation with input of information company
- Recently have worked on transferring their tax debt to other firms in exchange for electricity
- Commercial arbitrage is becoming increasingly difficult because of continued flux of commercial law
- The main attorney spent three weeks in Arlington in 1993 at George Mason University Thought this was very helpful and gave a perspective of legal issues as well as practical methods particularly in business and partnership dealings He would send all legal specialists for similar training if given the chance
- Area of interest for the Legal Department is learning to deal with securities

Personnel Departments main tasks are as follows

- Hiring for specific positions
- Pension paperwork
- Paperwork for awarding titles and honors
- Analysis of numbers hired and leaving
- Register those hired and transferred
- Handle discipline issues
- Insure the observation of all labor laws
- Give hiring and firing orders
- Make decisions on bonus structure
- Work with Accounting Labor, Salaries and Legal
- Sign some management contracts, that give special benefits and authority
- Mostly paperwork and legislative issues related to workers
- NO employment information on computer, all paperwork
- Do training in Moscow or St Petersburg
- Labor and Salary department does payroll

MIS (Automation Specialist) Division

- Have 80% of information on SCADA type systems, but there is a large variability in equipment types and capabilities
- Two types of control systems all operating in "Real Time"

- Generation is Russian Mini computer, not IBM compatible
- Dispatch is IBM compatible
- Other computer system is for management information use Novell 3.11, two networks now active one specifically for accounting. Planning on integrating control information on these machines
- Last (fourth) system is accident prevention system that is Russian Mini computers
- No standards on S/W or systems but RAO is instigating some standards. Now communicate all on email. Right now each energo is looking for their own system
- Have bought a special Russian Accounting program
- RAO does tell them what software involving planning and personnel to use
- Have 15 programmers using Foxpro, and have three week local training seminars on its use
- Introducing Windows 95, use Excell and Lotus office media systems, and have ordered MS office for Windows 95
- Each department is assigned programmers, and the department is trying to unify the S/W
- Now sending programmers to the MS office in Moscow---but very interested in advanced training and seminars

The duties of the Labor and Salaries Department are as follows

- Monitors the conditions of work and amount paid
- Maintains standard pay rates by grade
- Evaluate salaries outside the power plant to see if they are maintaining equitable rates
- No federal regulation of salaries
- Evaluate inflation and attempt to adjust payroll rates
- Pay incentives and bonuses
- Calculates what portion of the tariff should include payroll rates
- There is a norm for number of employees in the industry i.e. workers/kw and they are at 80% of this norm
- This division is basically an agent for the worker
- They recalculate salaries quarterly
- Standards are given them by RAO for incentives and bonuses and standard grades -- however this is very complicated and they would like to see it simplified
- Payroll calculation is becoming increasingly complicated. Their programmers have developed some software but they would like to see simplification of the methods for calculations
- Pension is presently paid by the state but they are working on independent pension plans for workers and it should be in place after 5 years
- Very interested in the method America uses for Payroll calculations, and I gave them a brief rundown

Planning Department

- Production program development
- Cost of production
- Material Costs
- Equipment costs
- Repair and maintenance
- Reporting and analysis of economic performance
- Calculate 'Requested' tariff for presentation to RERC on a quarterly basis
- A major problem is the increased complexity of laws, constant changes, and lack of timely information. There are too many instructions/decrees/rulings and contradictory laws-----this makes transition very difficult
- Salaries are a factor of the minimum set by the Duma which is very low. Adjustments for inflation is done by figures given them by the state which are also very low
- The legal department does not get all decrees---no timely notification of changes. They sometimes find out about retroactive changes from the newspaper

OBSERVATIONS

This Energo has the potential for being one of the most profitable Energos in the system. This is due to the location with low cost fuel and the relatively low age of the installations. They are somewhat limited in the

amount of electricity they can export due to Transmission issues. However the main reason for not exporting electricity out of the Energo is because of non-payment

It is interesting to note that the oil and gas industry which should be the most profitable enterprise they serve is their biggest debtor

Serious planning will be necessary before the large generators could be separated from the Energo. Besides the obvious debt issue, personnel issues are great, and pricing of fuel need to be addressed relative to its actual cost. Although there appears to be a method for maintaining production records at individual facilities, no real cost accounting system is now in place. They know overall cost of production at each enterprise but do not track individual profit.

Without accountability and tracking of the cash in individual enterprises, commercialization of these entities as separate joint stock companies will be very difficult.

This Energo although 100% owned by RAO feels that little assistance is given them to solve the Receivables issue. They are working this very well themselves but only because they have the strength of the entire Energo behind them.

They also need guidance in the area of standardizing accounting, finance and management software.

From Mr Bogan, General Director of TyumenEnergO
To Mr Robert Alexander, HBC

This is to confirm that TyumenEnergO agree to invite Hagler Bailly's experts to examine possibilities of cooperation on the following issues

- ▶ Information management systems,
- ▶ Energy pricing,
- ▶ Economic dispatch,
- ▶ Calculations/nonpayments,
- ▶ Transfer to IAS
- ▶ Financing management, budgeting and investment planning

Please notify in advance the names of people and the date of arrival

Mr Bogan,
General Director

Российское акционерное общество
энергетики и электрификации
Акционерное общество открытого
типа

“ТЮМЕНЬЭНЕРГО”

626640 г. Сургут Тюменской обл.
ул. Маяковского, 31
Р/счет № 3467835 Сургутский РКЦ
Корреспондирующий счет 700161609
Телефон (3462)22-38-63, 77-63-59
Телегайн 235599 “Алмаз”
Факс (3462)77-66-77

№ 01/1109
“ 19 ” 05 1997г

На Ваш № _____

**HAGLER BALLY
CONSULTING, INC.**

Роберту Александеру

Факс: 7 503 956 2682

ОАО “Тюменьэнерго” не возражает принять Ваших специалистов для рассмотрения возможности сотрудничества по вопросам:

- информационных систем управления,
- формирования тарифов на электроэнергию,
- диспетчирование на основе экономических принципов,
- расчеты/неплатежи,
- переход на международную систему бухучета,
- управление финансами, составление бюджета и планирование инвестиций.

Предварительно просим согласовать дату прибытия и персональный состав прибывающих.

Генеральный директор

В.Ф. Боган.

С. С. С.

DIAGNOSTIC EVALUATION OF SARATOVENERGO

Dates Visited March 31 - April 1, 1997
May 12 - May 15, 1997

Attachments Trip Report - Bob Alexander, Mike Swider, David Thornton
Trip Report - Alexander Kozlov, Vladislav Khominsky
"Working Agreement" dated April 1, 1997
Letter from Saratovenergo dated May 28, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	4/2
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	2
4 Competency and Capability of Staff	2
5 General Financial Situation	3
6 Magnitude of Sales	3
7 Organizational Structure	3
8 Information Management System	3
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	3
12 Financial Analysis and Planning	3
13 Investment Projects	3
14 Potential Benefit to Energo	5
15 Willingness to Share Cost	3

Recommendations and Summary Type 2

Saratovenergo was probably the most conservative energo we visited, with management philosophy appearing almost unchanged from Soviet times. From our discussions with a member of the regional energy commission, this seems to represent the approach of the regional administration as well. Both the management of the energo and the REC continue to regard the delivery and pricing of electricity strictly as an instrument of public policy. There is no support for the concept of operating the energo as a regulated business, with management making decisions based on profits, return to investors, etc. They were obviously distrustful of such concepts. This was reflected in the rather unfriendly reception we received and the lack of openness and reluctance to give information during the discussions.

Despite this, General Director Vladimir Kayl did sign a protocol to be included in the commercialization program during the visit, and has followed up with a letter asking for

our assistance as well. It appeared he wanted (and certainly needs) our assistance, but wants it only on specific areas (mainly help in seeking investment, and MIS upgrading) but is certainly not committed to the concept of "commercializing" the energo.

Saratovenergo could definitely benefit from the program and any exposure to commercial business practices would be useful. It is therefore recommended that Saratovenergo be categorized as a Type 2 energo. They should be considered for a limited, narrow scope of work, with the hope that they will become more amenable to further reform as work continues. There should be definite milestones to be strictly met, however, in the preliminary program before any additional resources would be committed for a more comprehensive program.

Suggested Scope of Work

- 1 Initial Training in financial management and budgeting
- 2 Initial Training in IAS accounting and creation of example financial statements
- 3 Assistance in their efforts to upgrading management information system for accounting
- 4 Assistance with creation of a business plan for Saratovenergo
- 5 Assistance in analyzing potential investment projects, and assistance in writing proposals for EBRD and other investment financing, if warranted

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TRIP REPORT FOR SARATOVENERGO

Saratov

March 31 - April 1 and May 12 - 15

Prepared by Robert Alexander, Michael Swider, and David Thornton
Hagler Bailly Consulting/Moscow

Saratovenergo was originally visited at the suggestion of Louis Berger, International which is managing another USAID project (energy efficiency, land reform) in the Saratov region. It was thought that there could be possible synergy between their two programs. After this first visit was completed a second more detailed diagnostic visit was undertaken after Saratovenergo was included by RAO on the new revised list of potential participants in the Commercialization program.

THE ENERGO

The Joint-Stock Company Saratovenergo is the major distributor of electricity and heat in the Saratov Oblast, which is located about 900 kilometers southeast of Moscow on the lower Volga. The Saratov Oblast has 6,862 MW of electric generation capacity, including a 4,000 MW Atomic power station (Balakov) owned by Minatomenergo and the 1,360 MW Saratovskaya hydroelectric station owned by RAO and which sells to the Federal wholesale Market. Saratov Oblast is highly industrial, with a large concentration of chemical, aerospace (Yakovlev) and defense facilities.

Saratovenergo has capacity of 1,502 MW, consisting mainly of CHP's, and generates about fifty percent of the electricity required for the Oblast. The rest Saratovenergo purchases from RAO through the wholesale market. These stations produced an output of 4,800 million kWh in 1995. They were built in the 1950's and have already surpassed their expected useful lives. Fuel for these stations is a mix of both gas (90%) and fuel oil (10%). There are 64,000 kilometers of power lines in the system. The entire company employs 11,500 persons. They also feed a large and complex district heating system in Saratov.

DISCUSSIONS WITH GENERAL DIRECTOR (Vladimir Kayl)

According to Mr. Kayl, the most pressing problem for Saratovenergo is their need to retool and refit their thermal generating units and transmission system. Their assets are aged and unreliable, and it will require considerable investment to update their systems. It is recognized that the current generators, all built in the 1950's, would need to be replaced by modern, fuel efficient equipment.

Mr. Kayl had some strong opinions concerning the collections issue. He stressed in discussions that in his opinion the "non-payments" problem could not be solved using the what he called the "American" model of putting pressure on consumers to force collections. He stated that in Russia use interruption of service as motivation for customers to pay their bills. But he had no clear solution to the problem to offer as an alternative. He feels the problem needs to be solved as part of the improvement of the Russian economy as a whole. The General Director is also an elected official in Saratov, and expressed some ambitions to run for Governor of the region, which may affect his position on this issue.

Concerning tariffs Mr Kayl's opinion is that the system is too inverted in favor of residential customers. He stated that residential customers should be paying the full cost of a kilowatt hour and not be subsidized by industrial customers. In fact, he stated that industrials should even be subsidized and pay less than the cost of a kilowatt hour to make their production more competitive and improve the local economy. As it is now, he indicated the residential sector pays only 30% of their costs, and the industrial customers must make up the difference.

Saratovenergo currently has about a 1 000 MW shortfall in generation capacity which is purchased from the federal wholesale market. Mr Kayl believes that the current relationship between RAO and the energos, which cost Saratovenergo its hydroelectric station, is unfair. He claims that the cost of buying from the Federal wholesale market (136 R/kwhr) are too high, and that when transmission costs are added, causes Saratovenergo to lose money in the sales made to rural areas. Mr Kayl believes the health of the energo can be restored by reducing the cost of the electricity they sell. He wants to invest money to rebuild and modernize their own generators, so as to cut their fuel costs, and build new generation themselves to avoid having to buy from the wholesale market. As the thermal generators also provide district heating, there may be some justification to his argument, but no economic studies or evaluations have been performed to justify this belief.

The General Director chose to spend a considerable amount of our meeting on criticisms of the United States power system. As this is not relevant to the commercialization project we assume that Mr Kayl was voicing some of his misgivings about the direction of our reform efforts. Not having full management support would, of course, make working at Saratovenergo difficult. Later on, however, he was quite supportive and insistent on wanting to be in the program and has signed letters and protocols to that effect.

COLLECTIONS

The energo's main customers are large industrial concerns and federal and municipal "budget" enterprises which make up 70 - 75% of their sales. At this time a large portion of these sales are collected only in barter, with Saratovenergo in the middle of a larger barter chain between industrial enterprises. They currently collect only 10 - 15% of their billings in cash. The amount owed Saratovenergo by these "federal budget" supported enterprises is 1.5 times the amount owed by Saratovenergo in taxes, etc. Likewise the local budget claims to be owed more than twice its own arrears. Saratovenergo cannot disconnect any of these enterprises. Two of the biggest in arrears are the agricultural sector and the railroad and trolleybus systems.

Saratovenergo's policy on enforcing collections is therefore to negotiate. They do not disconnect any customer, unless that client "will not cooperate in any way". They have disconnected about 100 MW of their load, but these are totally defunct industries. Their policy is to never disconnect residential customers.

Because of the collections problem, the energo has built up receivables totaling 4.5 trillion rubles, although they make no effort to measure the quality of these receivables or to write off any as uncollectable. The corresponding accounts payables is only 3 trillion. As we did not receive a copy of the energo's balance we do not know how the energo maintains this imbalance in current assets and liabilities. It was claimed that Saratovenergo has paid all its debts to the government. All liabilities are said to be to fuel and service suppliers.

ACCOUNTING AND FINANCE

We were provided the following financial information

Current Receivables - 1.5 Trillion Rubles

1996 Revenues - 3.1 Trillion Rubles

65% of payables in 1996 were handled by mutual debt cancellation

Debt as of 1/97 was 60.5 Billion Rubles, of which 13.5 BR represents unpaid interest accrued
26BR of short term loans, and the rest longer-term loans

They were not willing to give us copies of their financial statements

There is no real financial analysis or planning done. Quarterly accounting reports are prepared and submitted as required to RAO, the REC, etc. All divisions are run as separate cost centers. They have no knowledge or experience with International Accounting Standards or GAAP accounting and have no understanding of the need to implement it.

Saratovenergo wants to receive an EBRD credit for some of its capital investment plans in upgrading existing or building new generation. They are required to submit a business plan for this and have hired a local consulting company to assist them. None of this work has yet been completed.

ORGANIZATIONAL STRUCTURE

The management structure and all human resources functions remain unchanged from Soviet times.

INFORMATION SYSTEMS

Saratovenergo does have a program to improve the automation of information systems. At this time almost all accounting and management systems are automated. The problem is that none of them are integrated. They are therefore currently evaluating commercial packages for integrated bookkeeping and MIS systems. Systems that they are currently evaluating are SAP and R3. Because of the high cost of these programs there is an interest in receiving advice during the selection process.

MANAGEMENT INTERVIEWED

General Director Vladimir Kayl

Deputy General Director Victor Roud

Deputy General Director Sergey Anisimov

Assistant Chief Accountant Svetlana Schmidt

Director of Energosbit Alexander Ourekin

Director of Tsentraiy Energosety Lev Zaretsky

Chief Engineer of Tsentraiy Energosety Yuri Yatsenko

**Report on a Business Trip to JSC "Saratovenergo"
within the Framework of the First Stage of a Project
"Hagler Bailly – RJSC UES"**

Saratov

05 12 – 05 15 1997

Participants are as follows

- David Thornton -- 'Hagler Bailly'
- Alexander Kozlov – Carana Corp
- Vladislav Khominsky – Carana Corp
- Natalya Trekhleb -- IFC

At this stage the objective was to identify the main directions for the subsequent activities at Saratovenergo

Generally, the undertaken activities were reduced to unstructured interviewing the leading specialists of JSC "Saratovenergo"

Within three days the following persons were interviewed

- Deputy general director on energy network matters (Victor Demyanovich Roud)
- Deputy general director for economic matters (Sergey Petrovich Anisimov)
- Assistant chief accountant (Svetlana Fridrikhovna Schmidt)
- Director of "Energosbit" (Alexander Ivanovich Ourekin)
- Director of "Tsentralny Energosety" (Lev Ivanovich Zaretsky)
- Chief engineer of "Tsentralny Energosety" (Yourij Arsenyevich Yatsenko)

In the course of interview-taking the main attention was paid to the main problems of Saratovenergo, the specific features of relationships with RJSC UES, Regional Energy Committee, structural units of Saratovenergo, as well as with consumers, debtors and creditors

**General Features of Saratovenergo
(according to the specialists of Saratovenergo)**

- Integral parts of Saratovenergo are 6 principal heat power plants, 1 state regional power station, 7 energy network enterprises special repair works, motor carrier, other auxiliary enterprises
- Saratovenergo produces about 56% of electricity necessary for the region Within the region also located are Saratov hydro electric power station owned by RJSC, and Balakov nuclear-electric power station subject to Minatomenergo
- Among the energy systems Saratovenergo is the only one to use the new rating methodology, which is the most close to the real demand
- The bookkeeping department uses software program Infosoft – Integrator, which enables to have the real-time accounting information The present program fully satisfies the bookkeepers' needs, but the task concerning the consolidation of bookkeeping departments of JSC's management with the same of the structural units remains pending

**The Most Serious Problems of Saratovenergo's Activities
(according to the specialists of Saratovenergo)**

- 1 The problems of arrears which are traditional for the current economic situation. Only 7%-share of electricity is paid off in cash.
- 2 The problem of settlements with the budget. It should be noted that arrears of the Federal budget is 1.5 times the amount credited to it. The amount of past due payments to the local budget is 2 times higher than its (budget's) own arrears. Saratovenergo can not cut off the energy supply to the most of consumers and can not impose any fine on them, although the amount of penalty fees due to the budget keeps growing. Total creditor indebtedness (1.5 trln) makes up a half of the annual sales volume.
- 3 The most part of solvent consumers (population, part of merchants) enjoy the low tariff rates. At the same time the share of energy component in the cost of products manufactured by industrial enterprises is unreasonably high (20% - 40%).
- 4 By restraining through Regional Energy Committee the growth of rates for individual consumers on the grounds of political considerations, local authorities eliminate the opportunity to make the rating policy structurally logical. Besides, with the tacit consent from the local administration most industrial enterprises do not pay for electricity, even when they are able to provide for such payment.
- 5 Obl-gor-communenergo electricity subpurchasers benefit from such low rates. They are not considered to be monopolists and they may build the mark-up for their services at their own discretion.
- 6 The separate units (electric power stations, networks, etc.) display no interest in the results of their work. They are only able to provide for their own activities and the rest can be obtained through the management only.

General Opinion about the Activities Undertaken at Saratovenergo

As a whole at Saratovenergo the members of the group HB – Carana – IFC enjoyed rather unfriendly reception. That could be the result of internal contradictions (for example, between the recently appointed officers /General director, Deputy general director, the chief sales manager/ and the earlier working managers). Among the reasons standing behind this also might be treating our group as the representatives of RJSC who provides no assistance in work, but constantly restrains the opportunities for normal activities.

The most part of managers were not ready for any constructive dialog.

As per the results of our work, we failed to find any person who could clearly understand the objectives, goals of the project and the ways to achieve them at Saratovenergo who could have assumed the role of conductor of the project ideas among the top management of the given energy system.

The document has been prepared upon completion of an interview and submitted /except the notes/ to V. A. Kyle, the general director for approval.

Possible Guidelines for Activities at JSC Saratovenergo within the Framework of the Project HB – RJSC (the priorities should be designated by the management of Saratovenergo)

1 Information System

- Determination of information flows and demand for information for the purposes of running the enterprise establishment of a unified information area.

- Analyzing the current information system both as a whole and its individual components and preparing proposition concerning its development
- Introducing the managerial accounting

Notes. Despite the presence of the automated bookkeeping and established computer network the management of Saratovenergo experiences the problems of comparability of the data coming from different units, the well thought-out system of preparing the data for management decision taking is lacking too. Above all the information systems of Saratovenergo and all of its separate units need to be consolidated.

1 Sales Management System

- Analyzing the methodology of sales accounting and supervision
- Assessment of the system of gathering and processing the information on consumers
- Improving the policy of sanctions to be imposed on defaulters
- Linking to the unified information system

Notes. In the course of interviewing the specialists of Saratovenergo talked about insufficient opportunity taking in respect of dealing with consumers on the settlement issues. There is no established system of incentives for immediate payment for electricity and sanctions against the untimely payers. The issues of rating differentiation for individual consumers (for example by volume of consumption) have been worked out insufficiently.

1 Organizational Structure Diagnostics

- Determination of the role and position for separate units (principal power plants, energy networks) in the organizational structure
- Identifying the criteria for assessment of separate units' activities
- Determination of functions of JSC's management departments
- Identifying the earnings expenditure and investment centers
- Developing the recommendations for step-by-step transition from power management to economic management

Notes. According to the administrators of various levels, the present structure does not contribute to the effective activities of the company, quite the contrary. Some functions are being doubled (sales, payment collection, supervision over defaulters), some functions are lacking or being carried out by inappropriate units. Some structural units (energy networks) actually receive the payment not for carrying on their primary functions (electricity transferring), but for their selling activities and in respect of those consumers, which were reserved for such purposes by Saratovenergo.

1 Personnel Management

- Developing the decision taking system the system of watching over the orders execution, system of incentives for and appraisal of employees
- Policy in the field of personnel career-making
- System of personnel deployment

1 Training Programs

- marketing,
- securities market (*note* Probably, in respect of corporate financing),
- finance management

Notes. According to the managers of Saratovenergo, power engineering as an industry has become quite attractive from an office-capacity stand point. Very good results in increasing the effectiveness of JSC Saratovenergo's activities may be achieved by optimal deployment of and training the personnel.

1 System of Current Assets and Inventory Management

Notes According to the top managerial officers, the directors of separate units do not always possess a sufficient knowledge in the field of working capital management. It would be quite appropriate to work out the methodology of more effective disposition of current assets particularly in respect of inventory holdings and dealing with barter

Conclusion It may appear necessary to refuse to work at Saratovenergo at the first stage (the pilot project), because at the present moment the environment for its successful implementation is still lacking (see General Opinion about the Activities Undertaken at Saratovenergo)



Российское акционерное общество энергетики и электрификации "ЕЭС России"
Открытое акционерное общество энергетики и электрификации
"САРАТОВЭНЕРГО"

ENERGY AND ELECTRIFICATION JOINT STOCK COMPANY "SARATOVENERGO"

Дата 28.05.97 № 01/12.97
На № _____ от _____

«Ханглер Байи Консалтинг, Инк.»
Москва, 129010, Грохольский пер., 134
этаж, ком. № 5
Руководителю Группы консультантов
Г - ну Дэвиду Торнтону

Уважаемый Господин Торнтон!

Мы рассмотрели предложенные Вами возможные направления работы в рамках проекта коммерциализации электроэнергетики, финансируемого Агентством США по международному развитию

Мы считаем, что в ходе предварительного анализа ситуации, проведенного специалистами вашей фирмы совместно со специалистами «Саратовэнерго» 12 - 15 мая 1997 года, были выявлены наиболее важные сферы деятельности, где помощь ваших консультантов была бы наиболее целесообразна

Мы выражаем нашу заинтересованность в дальнейшей работе с вашей фирмой и готовы продолжить ее в июне сего года на этапе подготовки совместного рабочего плана.

Мы так же заинтересованы в развитии нашего сотрудничества по программе энергосбережения и управления электроспросом на основании нашего соглашения от 1 04 97 года.

С уважением

Генеральный директор

Кайль В А.

To Hagler Bailly Consulting, 13 Grokholsky per , room #5, floor #4, Moscow
David Thornton

From Saratovenergo
Date 05 28 97

Dear Mr Thornton

We have reviewed your proposals on performing activities under the USAID-sponsored commercialization project

We think that during the preliminary screening carried out by your consultants and Saratovenergo staff during May 12-15, 1997, major activities where the assistance of HBC consultants are most expedient have been determined

We express our interest in further cooperation with your company and we are ready to continue our work this June on working out a joint work plan

We are also interested in our cooperation in the energy conservation and demand-side management project based on our agreement dated 04 01 97

Sincerely yours,

V A Kayl
General Director

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Соглашение о Сотрудничестве
Между "Саратовэнерго" и Hagler Bailly Consulting, Inc ,
контрактором Агентства США по Международному Развитию

01 04 1997

г Саратов

Настоящее соглашение заключено между АО "Саратовэнерго", юридическим лицом Российской Федерации и Hagler Bailly Consulting, Inc , юридическим лицом США

С учетом взаимных намерений Сторон в отношении этого Соглашения, Стороны согласились выполнять следующие обязательства, предоставлять следующие услуги в соответствии с настоящим Соглашением

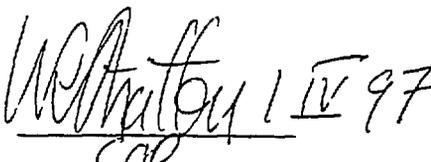
АО "Саратовэнерго" согласно на проведение демонстрационного проекта для осуществления согласованной программы предоставит доступ к необходимой финансовой информации и обеспечит рабочее взаимодействие с руководителями предприятия и предоставит помещение административную поддержку и возможности контактов с руководителями предприятия с тем чтобы гарантировать успех проекта

Компания Hagler Bailly Consulting Inc согласна предоставить "Саратовэнерго" следующие услуги

- (1) Помощь в развитии бухгалтерской системы отчетности с возможностью конвертации в международные стандарты бухгалтерского учета (МСБУ)
- (2) Содействие в разработке Бизнес Плана для "Саратовэнерго", создание которого дает возможность предприятию привлечь необходимые инвестиции Российских и Западных инвесторов, включая инвестиции международных финансовых институтов, таких как ЕБРР и Всемирный Банк
- (3) Техническое содействие для получения инвестиций в соответствии с пунктом (2)
- (4) Содействие в создании информационной системы управления для соответствия бухгалтерским требованиям (1)

В соответствии с данным Соглашением "Саратовэнерго" не будет нести обязательств по финансированию проекта за исключением оплаты работникам предприятия, участвующим в работе по этому проекту


10497,
АО "Саратовэнерго"


Hagler Bailly Consulting, Inc

Working Agreement
between "Saratovenergo" and "Hagler Bailly Consulting, Inc"
within the program of US Agency for International Development (USAID)

01 04 1997

Saratov

This agreement is concluded between "Saratovenergo", legal entity of Russian Federation and "Hagler Bailly Consulting, Inc", legal entity of USA

Taking into account mutual intentions of Sides regarding this Agreement, the Sides agreed to fulfill the following commitments, to provide the services mentioned below in accordance to this Agreement

"Saratovenergo" enterprise accepts realization of the pilot project for implementation of coordinated program, will provide with all the necessary financial information, cooperative relations with the enterprises' management, accommodation, administrative support and possible contacts with management of enterprises, with the purpose of guaranteeing the project successful realization

"Hagler Bailly Consulting, Inc" company agrees to provide the following services to "Saratovenergo"

- (1) Promotion of accounting report system with the possibility of converting to international standards of accounting (ISA)
- (2) Assistance in working out the Business Plan for "Saratovenergo", creation of it gives to the enterprise an opportunity to attract essential Russian and Western investments, including investments of international financial institutions, such as EBRD and World Bank
- (3) Technical assistance for getting investments in accordance with item (2)
- (4) Assistance in creation of managing information system for accounting availability
(1)

In compliance with this Agreement "Saratovenergo" will not incur the liabilities on project financing except payments for enterprise employees who participate in this project

"Saratovenergo"

"Hagler Bailly Consulting, Inc"

DIAGNOSTIC EVALUATION OF SVERDLOVENERGO

Dates Visited December 4-5, 1995
 July 3-4, 1997

Attachments Trip Report - Tom Sherwood, Levi Hanson
 Trip Report - Vladislav Khominski
 Letter dated 19 March, 1997

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	NA/2
2 Macro-Economic Environment	4
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	4
5 General Financial Situation	4
6 Magnitude of Sales	5
7 Organizational Structure	3
8 Information Management System	3
9 Accounting and Reporting System	3
10 Tariff Establishment	3
11 Customer Service/Billing	3
12 Financial Analysis and Planning	3
13 Investment Projects	3
14 Potential Benefit to Energo	3
15 Willingness to Share Cost	3

Recommendations and Summary Type 2

Sverdlovenegro's staff continues to express some interest in the program, but neither the General Director nor any of the Deputy General Directors were available for interviews during the last recent visit concerning the program. Sverdlovenegro has hired Price Waterhouse commercially to undertake IAS audit work and to assist them in issuing ADR's, and Sverdlovenegro has specifically asked (see attached letter) to be included in the program to support that work.

Sverdlovenegro is not really interested in being a candidate for a commercialization pilot as it is presently envisioned, but simply wants specific IAS conversion assistance and training under Task 8(a).

They are therefore categorized as a Type 2 energo

13 Grokholsky Pereulok
 Moscow
 Tel 7-503-956-2685
 Fax 7-503-956-2680

MEMORANDUM TO FILE

SUBJECT Visit to Sverdlovenergo
 AUTHORS Thomas J Sherwood
 Levi Hanson
 DATE December 4/5 1995

OVERVIEW

Consistent with the objectives of Task 4(a) to assist in the commercialization of the Russia Unified Power System we visited Sverdlovenergo in Yakaterinburg

The enterprise was organized in 1942. It is one of the largest energos in the Ural's Pool. It supplied 95% of the load, the balance is covered by the NPP and local customer plants. Average purchases from RAO are zero (sometimes they buy and sometimes they sell to RAO however) also in the spring they receive power from a hydro plant under the control of Permenergo.

Installed capacity is 8000 MW and they are running at only 45% of capacity. There are 10,000 km of voltage lines of 110 kv and up. Total consumption for the first nine months of this year has been 20 bn kwh which is only 70% of the prior year's output for the comparable period. This reduction is attributed to the fall in demand which they now see stabilizing and which they forecast as increasing slightly in 1996.

KEYPOINTS

Management Development & Training. This is the most capable and sophisticated operation we have seen to date. The company is engaged in a battle between production oriented management and those within the management structure who believe that the goals of the organization have to be re-focused on its financial viability. The Planning and Economics Division desperately wants the tools to convince top-most management of the necessity to mandate the adoption of financial criteria for all decision making.

The Wholesale Market. We asked why they don't deal with Nizhnovenergo which "imports" 50% of its power requirements from RAO and abuts Sverdlovenergo. They stated that RAO would not allow this, and since RAO controls dispatching, it simply wouldn't happen. Furthermore, they had no faith in receiving payment were they to sell outside the bounds of their energo.

They dismissed merit order dispatching of RAO operated plants because RAO does support its plants. As an example they cited the Troitska (sp?) plant which is loaded based solely on the amount of fuel available, not on any other criteria. They stated that "where RAO operates a plant it is impossible to talk about merit order dispatch because of fuel constraints." On the other hand, they claim this wouldn't happen to plants inside the energos because the energos work for the market and maintain a balance within it. They repeated that if they sold outside the market, they won't get paid.

They went on to point out that RAO operated plants are at a further disadvantage because it was undefined as to who the wholesaler actually was. Because no one guaranteed settlement when payment was not forthcoming by the original obligor, there was no market maker and thus no wholesale market. Currently, they went on the state RAO only takes on the pose of an intermediary. Finally, they confirmed what we heard at the generators, i.e. they admitted that they the energos did not pay the generators.

The management believes that there are six natural regional markets where there is a balance between generation and consumption, and where collections (i.e. settlements) could be effected so as to permit the establishment of regional wholesale markets. They advocate the reintegration of the generators within the energoes. They claim to have had "informal" discussions about just such an arrangement. They stated that

"Given the will to create a wholesale market within the pool, it could be done very fast. The plan is to create one settlement agency within the pool thereby eliminating duplication among the separate energos and increasing the likelihood of collection.

In fact, the six regional energos tried to set up a central clearing organization ('Uralsenergo') four years ago. Each energo in the region contributed to the company's foundation. RAO subverted the effort by subsequently taking over the company. RAO then gutted the company at least as to its original function and purpose. To repeat this set-up now, the contracts between Central Dispatch and the energos would have to be nullified and new contracts would have to be created between the regional dispatchers.

OBSERVATIONS

Organization

The company is made up of 27 enterprises of which

- 12 are generators,
 - i) three leased from RAO (also heat loaded)*
 - ii) nine CHP plants
- 7 are transmission/dispatch companies
- 1 is a thermal distribution company in Yakaterinburg
- 3 are repair enterprises
- 1 is a logistics enterprise (dealing with fuel supplies)
- 1 is a sales organization
- 1 is a transport company and
- 1 is the HQ (accounted for as if it were separate though in fact it is not)

* All of their generators are loaded for heat though they would not give us these figures claiming that this was a commercial secret.

Total employment is 26 000 of which 4 000 are involved in non core activities and 6 000 are employed at the RAO owned/energo operated plants.

Relationship with RAO

'RAO currently does nothing only creates an internal taxation system.

RAO Owned Gencos/Operated by Sverdlovenenergo

Three of the energo's newest and largest generators are owned by RAO and leased by the energo. These three plants have capacities of 3800, 1500 and 1200 mw respectively, and account for 60% of the energo's installed capacity. The fuel mix is gas and coal at a 50/50 mix on average. It is management's belief that RAO will terminate the leases in the near future. It should be noted that energo management were less than enthusiastic about giving RAO the plants in the first place, but they bowed to a Presidential decree. Management expects that the RAO plants will be converted to joint stock companies once the leases are terminated. Energo management are against any such reorganization, for reasons which are detailed later in this memo.

The plants are run, staffed and maintained by the energo at its own expense. The lease payment for the largest plant (the figures for the others weren't given) is 68 bn roubles per year netted against the costs of operation which are estimated at 60 bn roubles annually. So the net rent for the largest plant is the nominal amount (which is so far unpaid) of 8 bn roubles/year. The lease payments are based on three components: a ruble per kwh charge, property taxes actually levied and "other minor components".

Another interesting fact we learned is that RAO has a very close "subjective relationship" with Mosenergo, which management wryly described. It seems that Mosenergo pays no rent on the generation capacity it "leases" from RAO.

Management believes that there are three options with respect to the RAO owned plants. They are:

1. preserve the status quo
2. stop maintaining the plants, return them to RAO and buy power from the grid, or
3. exchange shares in the energo thus buying the plants back from RAO.

The generating plants don't want to become independent they feel that fuel supplies and payments which are all now done by the energo, will be jeopardized

Governance

The company is controlled by a Board of Directors and day to day activities are overseen by a Management Committee RAO is represented on their Board, and in turn, they have representation on RAO's Management Committee through their General Director, who once was the head of one of the six zonal companies of RAO Relations with RAO are not enthusiastic, however

The company was converted to a joint stock company in 1992 At that time, ownership was divided as follows

- workers - 47%
- RAO - 49%
- market - 3.4%

Total shares outstanding are 2 661 000

Since incorporation, workers have been selling off their shares to outside investors including some foreign funds such as the Swedish company Braunschweig (sp?) which is an investment manager This fund manager purchased 5 000 shares from workers The UK investment bank Flemings has also held preliminary talks with the energo and evidently there has been some agreement that Flemings will help the energo commercialize Management regards the stock as 'blue chip

Tariffs

Heretofore the energo had enjoyed a close working relationship with the REC however that commission was dissolved earlier this year and a new and less sympathetic REC is now being formed Foreseeing that this change was imminent management got the old REC to pass an inflation adjusted tariff structure, which evidently is working quite well so well, in fact that they are not going to ask the new REC for a rate adjustment in 1996 The energo is not represented on the new REC (as they had been in the past) and the management feels that the new REC is heavily skewed to favor consumers

The tariff covers

- Fuel 55.60%
- Payroll 4.5-5%
- Materials 2-3%
- Repair 6-11%
- Deprec 2%
- Profit 20-25% (net after tax = 10%)

Costs

Coal is now cheaper than gas by about 15% Coal is sourced from Kazakhstan, and, including transport, it costs them about \$25/ton on a fuel equivalent basis (actual figures are \$7.50 FOB, and \$7.50 for transport) This year the cost was paid for 80/20 electricity/cash Next year this figure will rise to 50/50, a trend which is being pushed by the energo

Management Priorities

Structural While historically the focus of development has been on generation management believes its main task is to strengthen sales, finance and operational management Thus attention has shifted to the development of management systems

Operational Management puts its payment priorities as

- taxes,
- fuel
- salaries, (twice average Oblast employer rates)

- RAO and
- "the rest"

They admit that they are not paying the generators which are being identified by RAO as requiring settlement. They are extremely strapped for cash, since the government has enacted a new settlement account at the banks so that anywhere from 70-90% of what they collect in cash goes immediately to pay taxes.

Revenues

The new presidential decree is being used by their customers to defer or avoid payment altogether. They claim that bad debts have been only 20% (of which 75% is attributable to the government). Now, as a consequence of the decree, they themselves are slowing or halting payments for their gas.

As indicated above, the energo is only producing at 45% of capacity. They are technically capable of selling to the grid, but they will not do so because they have no assurance of payment. They have no faith in the 'wholesale market'. Currently they have a leveled load and they intend to keep it that way.

Planning and Economics Department

Organizes work for all the enterprises affiliated with the Energo. Its functions include the definition and defense of tariffs, the coordination of planning, the control of costs in the production and generation sectors, and the establishment of labor policies and remuneration levels.

Management Information Systems Department

This department views its functions as divided between traditional and new activities. The traditional activities include the control of dispatch and the technical management of services. The new function is to integrate the management of the organization.

The objective of this department, as they enunciated it, is to develop and present non-redundant, sufficient information in real time for the purpose of control. To the extent that this is not done yet, management believes that it costs them money, and they also believe that if they rise to the challenge it will result in being able to forego the installation of additional capacity. Therefore they are trying to automate production, inventories, material flows, fuel supplies, and customer interfaces.

Because of cost constraints, management has decided to adopt a systematic approach to the adaptation of new technologies. Management is taking a new look at what constitutes the power system. Their general idea is to view the organization as integrated and use information technologies to accomplish that goal. Thus they have developed a program for creating an automated information network on an energo-wide basis with LANs in each enterprise connected to a corporate network. Eventually they also see this network interfacing with customers. Their articulated objective is to make each enterprise self-sustaining from a commercial point of view, and then to integrate them into the whole.

They claim to have solved, i.e. computerized, payroll, inventory, their asset schedule, and "financial calculations" at each enterprise. However, they are dissatisfied because the system still doesn't allow them to make "fast decisions". To this end they have purchased an R3 System from a German software company (SAP). This system has standard packages for finance and accounting, cost accounting, material flow management, production planning, maintenance and repairs, and project management. In June of this year Sverdlovenargo and SAP gave a seminar for eight other energos, demonstrating the R3 system.

Finally, the last problem the MIS Department wants to solve is the real time monitoring of equipment operations so objective criteria can be developed to optimize production efficiencies. For this they will require the installation of sophisticated monitoring equipment.

It should be noted that Sverdlovenargo has looked at the software RAO and is contemptuous of its capabilities.

Training

The training center has been in operation for 20 years. They have their own facilities, including dorms. Annually they train 2,500 people for periods of one to six weeks. The objective is to improve worker

qualifications and maintain proficiency levels. They employ company managers and instructors from technical universities and other institutions outside the energy structure. Software is not used in training but they would like information on what is available and asked our assistance. Moreover, they are extremely interested in obtaining an electrical utility partner and asked us to intercede with USAID on their behalf in this regard.

Management training programs have been curtailed recently because of the expense involved. Support from USAID in this area would be very useful for them. Currently they can only afford to train about 20 management personnel annually. Management personnel are generally sent to St. Petersburg or Moscow but it is now recognized that those centers do not have the necessary curriculum to develop the expertise needed to commercialize. Money is the primary constraint however. They are spending 3% of payroll on training which is high by comparison to the other enterprises we have reviewed to date.

Energy Inspectorate

The function of this group is to

- a) sell electricity and heat
- b) inspect users equipment and meters
 - i) review and approve plant design as it pertains to load and technical layout
 - ii) check on installation and issue final approval
- c) negotiate with consumers
 - i) prices
 - ii) availability
 - iii) payment terms

They have been thinking about instigating peak rates but they haven't addressed the issue yet because they do not have the legal authority from the REC. They doubt the issue will be resolved soon because the new REC is heavily made up of consumers who will oppose any such change.

There is much to do in the area of energy conservation and the energy management recognizes this. Specifically, wherever possible they have pushed the installation of new metering technologies with their customers. The incentive to use these new meters has been growing. Historically the cost of electricity was from 2-10% of the final costs of their customers' products. Today the figure has grown to 20-50%. At present, however, they estimate that only slightly more than 1% of their customers have installed new meters.

Dispatch Department

The objective of this department is to provide a reliable and economic regime for distribution. The department handles the entire operation and maintenance of transmission and it coordinates flows between RAO, the Ural dispatch centers and the other energies to which they are connected.

There are five 500 KV lines which belong to RAO but are rented by the energy. The 220 KV lines and below are the property of Sverdlovenenergy. In some cases 220 KV transformers belong to their customers (e.g. the railroad). In any event, RAO pays for the maintenance of the lines and the energy pays for their use.

Dispatch takes care of the 110 KV lines and higher, and there are seven smaller distribution centers which are owned by the energy. The largest load on any one of these distributors is 1600 MW. Heat distribution is handled by Sverdlosk Thermal Networks which reports to the Dispatch Center. The thermal network uses 25,000 tons/hr in Yekaterinburg. It was at this point that we were told that all the thermal plants were heat loaded. They considered the percentages, however, to be a "commercial secret."

Legal

The legal department supervises the contracting activities that occur between the 28 departments of the various enterprises and the outside world. There are, however, only two people employed in this capacity. (The Energy Inspectorate Department, it should be noted, takes care of its own contracting.) They cooperate with the new legal department of RAO and they subscribe to a local service in Yekaterinburg that provides updated regulatory information on disc every 2 weeks. (Company is called "Taxes of Russia" and is a private company.)

In general, the characteristics of the contracts entered into are

- not fixed price,
- signed for periods of up to one year only
- contracts specify amounts to be delivered and schedule of deliveries
- while the contracts contain sanctions for non performance, these penalties are not enforceable as a matter of course (We asked if they had considered the use of standby letters of credit to guarantee performance, and it was clear by their response that they had not)

Their problem, they claim, is that there are lots of laws but no mechanisms for enforcement

Non-core Activities

These are mostly related to construction, and management has not yet decided what to do about them. The activities that are unrelated will be divested, they believe, however,

Management Reporting/Budgeting

The company still does not have a budget in the traditional sense of the word. They are driven by a plan. The economics department has begun to develop the methodology for a budget and the finance department will become subservient to the department in the future. They expect to have a separate budget for each of the 27 enterprises.

Quarterly reports are made to upper management. They are technically driven but there is increasing emphasis being put on financial criteria. The quarterly report (which we weren't allowed to see) was divided up as follows:

Technical

- Reliability/safety
- Fuel supply
- Major equipment specifications and comparative analysis
- Repairs

Technical & Economic

- Generation
- Chemical
- Thermal automation and metering
- Environmental

Financial & Economic Parameters

- Installed capacity
- Dynamics of used capacity for the last ten years
- Fuel ratios
- Electricity rates
- Consumption structure
- Fixed costs
- Purchases and sales to the grid
- Labor vs production parameters
- Comparisons of repair costs
- Financial stability
- Liquidity and balance sheets

An attempt has been made to develop "best industry standards" by the Energy Inspectorate, which handles customer relations. For example they track response times to deal with customer complaints.

CONTACTS

Sverdlovenego

- Sergei Mikhailovich Vlasov - Head of Economic Division,
- Leonid Viktorovich Komarov - Head of Planning and Economic Department
- Pavel Nikolavevich Potapov - Senior Specialist on Contracts,

- Iosif Semenovich Gluz - Head of Automated Control and Management Systems Department
- Yuri Konstantinovich Shornin - Chief Engineer of the Energy Inspection
- Alexei Anatolyevich Kuznetsov - Head of Central Dispatching Service,
- Valentina Alexandrovna Selyunina - Attorney
- Dmitri Olegovich Bogomyagkov - Head of Analysis and Information Technologies department

Internet address

Mr Bogomyagkov dima@po.pssr.e-urgsu

Telephones

Mr Vlasov (343-2) 58-14-45

Mr Komarov (343-2) 58-17-56

Mr Kuznetsov (343-2) 58-13-70

Mr Bogomyagkov (343-2) 58-12-12

Fax (343-2) 58-12-19, 58-12-22

Note It is very probable that the second digit in these telephone and fax numbers will change from 8 to 9 in early 1996



Ордена Ленина
**СВЕРДЛОВ
ЭНЕРГО**

620219 г Екатеринбург ГСП-850 пр.Ленина 38
ТЛР 221445 ЭНЕР
Тел ком 591-215 факс 591-222 564-126
Р/счет № 2467276 кор счет 700161287
Уралтрансбанк Орджоникидзевский РКЦ
МФО 253716 ИНН 6608003408

19 марта 1997 г № _____

На № _____ от _____

г. Рико Хоуну

Партнёру
«Прайс Уотерхаус»
109240, Россия
г. Москва
ул. Николоямская, 13

Уважаемый господин Хоув!

АО «Свердловэнерго» намерено разработать программу привлечения российских и зарубежных инвесторов. В связи со стоящими перед нами задачами, мы заинтересованы в углубленном понимании Международных стандартов бухгалтерского учёта (МСБУ) и подготовки бухгалтерской отчётности на основе МСБУ, а также в использовании опыта предприятий, функционирующих в условиях рыночной экономики.

Чтобы помочь нам в выполнении стоящих перед нами задач, мы просим «Прайс Уотерхаус» совместно с «Хяглер Бейлдер» включить нашу компанию в число участников программы коммерциализации, разработанной Агентством международного развития США (AMР США). Как мы понимаем, в рамках этой программы «Прайс Уотерхаус» обеспечат подготовку и инструктаж руководства и персонала АО «Свердловэнерго» в области применения МСБУ, а также подготовят рекомендации по использованию методов финансового управления в условиях рыночной экономики.

АО «Свердловэнерго» уже принимает шаги на пути осуществления своей программы выпуска депозитарных расписок, и мы полагаем, что включение нашей компании в число участников программы коммерциализации AMР США станет для нас в этой связи хорошим подспорьем.

С уважением,

Белоусов Владимир Степанович
Заместитель генерального директора

19 March 1997

Rhico Hove
Partner
Price Waterhouse
Nikoloyamskaya Ulitsa, 13
109240 MOSCOW RUSSIA

Dear Mr Hove

A/O Sverdloenergo is committed to developing a program to attract Russian and international investors. As part of our objectives, we are interested in improving our understanding of International Accounting Standards ("IAS") and preparing financial statements on a basis consistent with IAS as well as adopting practices of enterprises operating in market based economies.

To assist us in achieving our goals we request that Price Waterhouse in conjunction with Hagler Bailly, include our company in the USAID commercialization program. We understand that as part of this program Price Waterhouse will provide the management and staff of A/O Sverdloenergo with training and instruction on applying IAS and recommendations to adopt financial management practices for market economies.

A/O Sverdloenergo is already moving forward with its American Depositary Receipts program and we believe our efforts would be enhanced through inclusion in the USAID commercialization program.

Sincerely

Mr Vladimir Belousov
Deputy General Director

DIAGNOSTIC EVALUATION OF DALENERGO

Dates Visited June 2-6, 1997

Attachments Trip Report - Michael Swider, Bob Alexander, David Thornton

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	3/3
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	1
4 Competency and Capability of Staff	3
5 General Financial Situation	2
6 Magnitude of Sales	3
7 Organizational Structure	3
8 Information Management System	2
9 Accounting and Reporting System	2
10 Tariff Establishment	2
11 Customer Service/Billing	3
12 Financial Analysis and Planning	3
13 Investment Projects	3
14 Potential Benefit to Energo	5
15 Willingness to Share Cost	3

Recommendations and Summary Type 3

Dalenergo's management was welcoming and hospitable, but they really had little interest in the program as such. They saw us simply as representatives of the new RAO reform management, and were welcoming us as the "politically correct" approach, a result of the strong pressure from the federal government to reform the energy structure in the region.

The ongoing energy crises in the region appeared to be politically caused, and without any resolution of the political battle between the federal and regional governments, and between the regional governor and the mayor of Vladivostok over control of the region's energy sector, there is little likelihood of a successful pilot at Dalenergo.

Dalenergo is therefore recommended as a Type 3 energo until the political situation is resolved.

TRIP REPORT FOR DALENERGO

Vladivostok
June 2 - 6, 1997

Prepared by Michael Swider, with Robert Alexander and David Thornton
Hagler Bailly Consulting/Moscow

SUMMARY AND RECOMMENDATIONS

On June 2 - 6, 1997 a delegation consisting of consultants from Hagler Bailly Consulting (the prime contractor), Carana Corporation and the International Finance Corporation visited AO Dalenergo. The purpose was to evaluate the operations of the Energo and make recommendations in what areas Hagler Bailly and its subcontractors could assist Dalenergo, under the aegis of Task 8B of the Commercialization program, sponsored by USAID. In the course of our discussions with Dalenergo, it was clear that the four main problems with maintaining a reliable energy supply at a reasonable cost are

- 1 Lack of metering equipment, little direct customer contact, and few legal rights to enforce collection
- 2 Tariff structure which has not allowed Dalenergo to fully recover production costs
- 3 Low quality and high cost fuel supply
- 4 Inefficiency, poor management controls, over-staffing and a bloated corporate structure

As with all the other AO Energos that we have visited, all the parties interviewed at Dalenergo blamed the lack of cash as the number one problem. But the cash collection problem is a symptom rather than the source of the problem. The energo behaves in a non-commercial fashion and is required to operate as a government institution whose main purpose is to support the social-welfare system through free energy and at the same time keep the maximum number of citizens employed in the region. Collection rates are low because the Energo has insufficient power to collect. Fixing the problem, which in the end cannot be avoided, will require difficult political decisions. Coal mines may need to be shut. Dalenergo's staff must be reduced, and customers that don't pay must be disconnected. There is little that any consultant can do to make this happen.

There are basic, management support issues that can, and need to be addressed if Dalenergo is to one day operate as a commercial company. From our discussions with Dalenergo's management we have identified the following areas which we could effectively support within our current contractual constraints:

- 1 Accounting reform, cost accounting, and training in international accounting standards
- 2 Assistance in the design and implementation of a management information system
- 3 Development of new customer service procedures and guidelines
- 4 Guidelines for and assistance in cost/benefit analysis in metering, control systems, fuel purchasing, and capital investment

If these areas are acceptable to the management of RAO UES Rossi (the parent company), AO Dalenergo and USAID, Hagler Bailly will return to Dalenergo to make detailed plans for the work to be done at AO Dalenergo over the next 6 to 15 months. Critically to the relationship with UES, Mr. Brevnov has advanced an urgent request that additional resources be dedicated to Dalenergo for activities that are currently beyond the scope of Task 8B, and will require USAID approval. These activities are outlined in the attached memorandum to RAO UES Rossi on "Specialized Scope of Work for Dalenergo."

THE ENERGO

The Joint-Stock Company Dalenergo provides electric and heat power to Primorski Krai, a region of 165 9 thousand square kilometers, with a population of 2 3 million. The territory shares borders with China and North Korea. Its Northern neighbor is Khabarovsk Krai. Dalenergo maintains transmission connection with Khabarovsk energo, and is a net importer of electric energy.

Dalenergo generation assets consists of three thermal power plants, totaling 1,191 MW

Name	Type	Capacity
Artyomsk	CHP (TETS)	404 MW
Partizansk	TPP (GRES)	212 MW
Vladivostok	CHP - 2	575 MW

In addition, Primorski GRES, a 1 495 MW power plant located in Northern Primorski Krai provides a large portion of the electric energy to the region. Primorski GRES is owned by RAO UES Rossi Dalenergo, nevertheless assumes a large portion of the operating costs of this facility, including fuel and payroll. All of the power plants are designed to be coal fired with local coal. The current shortage of coal in the Primorski region has been covered with coal imported from other regions.

Energy consumption in the Krai was 9166 6 million kW/hours, and energy output 7711 6 million kW/hours. The deficit of 1455 million kW/hours was covered by inflows from Khabarovskenergo.

SALES AND COLLECTIONS (Dalenergosbyt)

In the view of the General Director, all problems with Dalenergo are related to non-payment and low tariffs. Dalenergo's 1996 sales figures were

QUARTER	in billions of rubles
1 ST	840
2 nd	518
3 rd	540
4 th	1,170
Total	3,072*

* where number so not properly sum in this report is due to errors in the information that was reported to us

Of total electric sales in 1996, only 82% was collected. Cash collections were much less, amounting to only 10 8% of sales. Only 74 7% of heat sales were collected. For all sales 80 3% was collected, with 11 8% paid in cash. The remainder was paid in some form of barter or mutual debt cancellations. Almost all barter was of two types:

- 1 50% - 60% was barter for materials, equipment, fuel, services, and taxes for Dalenergo
- 2 the remainder was barter passed through to creditors (for which it was suggested there are tax benefits for the creditors)

The barter operations are not profitable for the energo because every transaction has at least one middleman, and the spiral of middlemen drives up the cost. One of the most common forms of barter is for the mutual offset for taxes. For a while Dalenergo received large amounts of Federal Tax write-offs in the form of tradable notes (gosudarstvenni kaznochaiski

nalog osvobozhdenia.) But these were unprofitable for the energo because government debts to the energo were larger than their tax liability Extra tax securities could be traded, but generally at a 50% discount, creating large losses

Barter and offsets have many hidden costs Much of barter can only be done through Moscow, creating extra expenses and delays Even for local offsets with the city and Krai administration, it can take up to 4 sides to conclude an agreement, and up to 8 signatures on every document for a single offset

In general, purchased items have three costs

- 1 Cash
- 2 Barter 10-15% costlier
- 3 Mutual cancellations 15 - 25% more

For example if they can pay in cash then they have more freedom to chose their supplier and can receive the best price By using barter the supplier will charge a higher fee for receiving non-cash payment In mutual cancellation they have no choice of supplier and know that they will be otherwise unable to collect their receivable, and therefore must pay a higher price for the goods needed The barter issue is particularly acute with fuel If the energo had cash they could buy cheaper coal from other suppliers (assuming that they were not forced to buy local coal for political reasons), but in the current situation they are forced to buy local coal with local barter and mutual debt cancellation for electric power receivables from the coal companies

To relieve the cash crises in 1996, 55 billion rubles in veksel (commercial paper) where sold But this was unprofitable because the notes could only be sold at a discount and were quickly bought up by their few cash paying customers, resulting in a net loss of cash income As a result veksel are not being sold in 1997

The accounts receivable/payable ledger is the following as of 1 April 1997 (in billions of rubles)

Accounts Receivable		Accounts Payable	
Federal Budget	259	Loans	996
Local Budget	959	Suppliers	1,806
Resellers	809	Notes payable	30
Metals	87	Payroll	60
Agricultural	43	Ins , med , pension fund	121
Transport	64	Budget	48
Coal mining	26	Pre-paid	12
Chemical	15	Other	482
Construction	29		
Machme building	22		
Timber	22		
Service	10		
Small business	2		
Other	29		
Total	2,667	Total	3,557

Of total debts to suppliers, 725 billion is owed for power purchases The remainder is for fuel, construction, supplies, etc Much of the "other" is VAT (373 of the 482 billion) Per VAT instructions they only get refunded for VAT when they submit invoice documents But as much of their sales are not paid, and the invoices not completed, they build up a large VAT

debt The amount owed by resellers (809 billion) is only for electric energy Another 475 billion is owed for heat energy Of all supplier credits, 191 billion of this is owed to RAO UES Rossi

When asked what percent of their accounts receivable are uncollectable, Dalenergo answered only 1% On their books all the debt is recorded as collectable The Finance department estimates 25% as being uncollectable (see below), which we believe is a more accurate estimate given the depth of the debt problem over the last three years

To finance the losses from selling energy at below cost, and collection problems large amounts of credit has been borrowed from banks and the Russian government The breakdown by year is as follows

Year borrowed	Sources	Principle and interest owed, in billions of rubles
1994	Primugolbank Electrobank Evrobank Vostokinvestbank	52
1995	MinFin RF	395
1996	Mintopenergo	462
1997 (as of May 1)	Mintopenergo Sberbank	90
Total		999

To pay off this debt they can try to force collections through the courts Addressing the issue in arbitrage court usually results in a judgment in favor of the energo But the court's decisions are generally ignored by the debtors Bankruptcy proceedings are too slow, as they protect the assets of the debtors for two years

Disconnecting customers to force payment does not appear to be widely used at Dalenergo Many customers (30%) are protected, for either social or political reasons Dalenergosbyt believes that some of their non-paying customers have the money to pay, and choose not to There is no mechanism to determine which customers cannot pay, and which customers simply don't want to There are ten subdivisions at Dalenergosbyt, each with a specific number of customers Internally all customers are allocated among different staff who are then responsible for that customer Their employees are not effective in customer relations, and getting the customers to pay

Part of the problem may be that there is no motivation Employees do not receive any pay incentive for increasing collections "Bonuses" are paid for basically minimal effort - such as attendance - and are not even considered bonuses by the employees, but as part of salary There has been no research done on how to motivate customers to pay, or the relationship between discounts for cash payments, metering and other cost/benefit analysis of measures that could be used to increase collections

There are only 9 staff at the Vladivostok division of Dalenergosbyt, with only 2-3 persons working with customers (An organization chart of Dalenergosbyt is attached) Although it was claimed that there is a "system" for disconnecting non-payers it does not appear to be very well organized. Customers threatened with a disconnection of service come to the office and negotiate a payment schedule for debts based on their ability to pay But there is no credit analysis performed Therefore, power load is allocated based on "agreements" rather than on financial analysis and contracts based on realistic payment potential

Another enormous problem is the lack of meters and meter readers (controllers) This problem is especially acute for residential customers The system has been for the customer to read the meter themselves and pay the appropriate amount Dalenergosbyt told us that they are planning to begin sending out controllers to read the meters quarterly Many of the houses though are cooperatives and have only one meter for all the residents There are no plans for solving this problem At the moment, it is estimated that only 50 - 60% of residential customers are paying their bill

Many commercial customers are also non-metered The director of Dalenergosbyt explained they would provide tariff incentives to make it profitable for the customer to install a meter themselves The details were not given, and it is difficult to imagine that all customers could be "induced" to pay for their own meters in a situation where a third simply do not pay at all

As for managing their collections data, Dalenergosbyt purchased a low-level financial management program, that they currently wish to update They do collect daily data on collections, but their system is not integrated with affiliates to keep track of Dalenergo's system-wide sales figures

RESELLERS

There are 22 resellers in the territory of Dalenergo Three resellers are military, one is district heat, and of the remaining 18, nine are private and nine are municipal All the major resellers are municipal Vladivostok represents 66% of all power demand in the Krai and 80% of all of the power sold in Vladivostok is sold through the municipal resellers The resellers represent a major portion of the non-payments problem because a large part of the collections for Dalenergo must pass through the resellers The resellers collect enough cash to meet their needs, and pass along whatever is left over to the energo As cash collection is only about 10%, there is very little cash flowing into Dalenergo from the resellers They estimate that 50 - 60 % of residential customers pay (in cash), but residential customers represent only 40% of the municipal resellers sales

The problem is heightened by the resellers unwillingness to selectively disconnect their customers for non-payment as the non-payments get passed along to the energo There is no motivation for the resellers to better enforce collection discipline as they are receiving sufficient funds to finance themselves, and the energo is barred from disconnecting them There is a government resolution that disallows disconnecting residential customers Dalenergo claims to have no access to the collections data of the resellers, and doesn't know which customer are paying, and who should be disconnected Dalenergo suggested that there should be a federal law that forces resellers to divulge information on their customers and their own financial condition

When asked why they don't reduce the load to the resellers, and let the resellers decide whom to disconnect, Dalenergo claimed that they are trying to reduce the load to resellers, but that there is little legal support for this type of action, and many political problems The local administration has blocked attempts to manage the load

The proposed restructuring for resellers only envisions changing the collections flow from bottom up, to top down In contracts with the resellers, they will be guaranteed 100% of the costs of maintaining the lines and equipment Although given Dalenergo's own cash demands it is difficult to envision that this contract will be honored unless collection rates are drastically raised But at this point there is no other restructuring envisioned for resellers, so there will still be no individual payment verification for residential customers, and 30+% of customers

will maintain a preferential status. These are areas that still must be addressed. The director of Dalenergosbyt told us that collection rates were 3-4 times higher in districts that they manage, but we saw no data to corroborate this claim.

In the transfer of the operations of the resellers to Dalenergo all the debts of the reseller will also be passed along. Because of the difference in accounting for tariffs there is a 1,370 billion ruble difference between the debt that is owed to the resellers, and the debt that is owed to Dalenergo. But according to Dalenergo the FEC has ruled that Dalenergo's accounting of the tariffs is correct and all customers will owe the full price of electricity. The difference in the accounts payable will be charged to the resellers. To balance the books, assets will be taken from the resellers and put on the books of Dalenergo. Dalenergo informed us that they have already won this case in court but are waiting for the local administration to agree to the court's decision before they take action to transfer assets. Unfortunately, in the short term this will do nothing to help Dalenergo's cash position as the assets being transferred as a substitute for collections are illiquid (mainly transmission equipment).

It should be noted here that Dalenergo's response to a court decision (to ask the administration to give their approval) is typical in what we seen in all the energos. The management of the energos do not view their companies as legal entities with a legal right to operate in their own interests. Instead they are viewed as State organs that take their instruction from the government and the main obligation is to meet social needs. And this is true whether or not the local government giving the orders is a shareholder in the company or not.

Unfortunately the municipal resellers were not responsive to our request to meet with them. We were able to meet only with the municipal heat reseller. The collection of heat sales suffer from the same problem as electric, and possibly even more so. There is no metering of residential heat sales in Vladivostok. To the advantage of Dalenergo, the Mayor of Vladivostok has allowed payments to be made directly to the energo (through Sberbank.) But it is dubious that Dalenergo collects anywhere near their costs as there is no enforcement of collections for residential customers. Only 67% of households paid in April. And even when they do pay, they only pay 35% of the cost. The remainder should be subsidized by the city.

The municipal heat reseller has begun putting in meters in some small business, but large customers are still billed based on "designed" demand. As in most Russian cities, the municipal heating system operates with very little thought to the actual cost of providing service and collecting sufficient revenues to meet the costs. Heat supply will continue to be a drag on Dalenergo's revenues and profits even if electric power sales are rationalized and run in a commercial fashion.

PLANNING AND TARIFFS

The main function of the planning department is justifying tariff policy, although there are other functions, such as planning production levels and managing the "social" assets of the company. Much of the work is in the preparation of financial indicators: fuel costs, expenses, collections, etc. They also plan for the maximization of generation to minimize costs. Currently generation is only running at 50% of capacity. According to the planning department, tariffs could be cut by 12 - 15% if there was sufficient fuel to run all of Dalenergo's plants.

Dalenergo cannot buy enough local fuel (only 70% of that required at the moment) to keep their generators running to full capacity. To make up for their deficit they import electricity from the wholesale market (without paying.) Part of the local fuel shortage problem is the lack of funds to keep the mines operating. Earlier the government subsidized 95% of the costs of operating the coal mines, but as government subsidies have dropped, so has coal output.

Importing coal from other regions of Russia is more expensive due to the high transportation costs. Imported coal costs only 81,000 rubles/ton, as opposed to 141,000 rubles/ton for local coal. But with transportation costs of 160,000 rubles/ton the imported coal becomes more expensive. What was not clear was the Kcal/ton (Btu/pound) cost as it appears that these calculations are not made. The local coal's actual calorie content is significantly less than its 'planned' content, making the planning department's comparison suspect.

Because of the poor quality of the local coal, it is more profitable to burn fuel oil. But there is no infrastructure to carry and store fuel oil as all the power plants were planned to burn the local coal only. There is some fuel oil used though, as we were told that because of the exceedingly poor quality of the local brown (lignite) coal, it must be mixed with heavy oil to be burned. [Note lignite coal has not been burned in the US for decades because of its high sulfur and ash content, making the cost of meeting environmental regulations prohibitive. To make the lignite coal generators in Primorski Krai economical, Russian environmental regulations are simply ignored.] Two of the four regional plants burn hard (bituminous) coal, but the mining industry for this type of coal is dying in Primorski Krai due to the extremely low efficiency of the mines and lack of resources.

Tariffs are calculated, as in the rest of Russia, on a cost-plus basis. All generation and related costs are included in the tariff and a "profit" added on top. The "profit" is a planned amount that is allocated toward social costs, such as maintaining the company's hospitals, schools, farms, and rest-homes. For the two years prior to April 1 of this year the allowed tariff was below the cost of service. It was the decision of the Krai's governor to keep the price of electricity down so as to increase local output and sustain the industrial sector, which did not come to pass.

In the opinion of the REC, the tariff system needs to be changed because it has no mechanism to promote efficiency and cost reduction. To improve efficiency it is recognized that the plants should be separated from Dalenergo and allowed to compete to supply the lowest cost energy. At this time in Primorski Krai the generators are run nowhere near maximum efficiency. Dispatch is based instead on fuel supply, and fuel supply is based on the political need to keep coal miners employed. Also the Primorski GRES is kept running even though it is inefficient, because of the number of people they keep employed. If they wanted to reduce tariffs they would need to shut down this generator.

There was an attempt by the Nakhodka city administration to bring in an independent generator for their free economic zone. But so far this project has not been able to move forward because of Dalenergo's refusal to allow the IPP to use its distribution network. The REC claimed that they have no legal authority to remedy the situation.

The REC is at the point of starting to do economic analysis of load management and generation costs. They are also starting to do elasticity analysis of electric prices. It has been proposed to provide preferential tariffs to those who pay regularly, or who have demand for their products (sounds like potential political interference) but no decisions have been made. The Krai has decided that they can no longer support companies through cross subsidies. Yet from viewing the current tariff structure (attached) it is clear that many "preferential" customers are being cross subsidized. The only difference with the new tariff scheme is that it no longer has the energy providing the subsidies.

Interestingly, the REC claims that there is no local list of preferred customers, that is, organizations, that the local administration has granted non-disconnection privileges. The impression that we received from the sales department is that there are "protected" companies.

One of the major inefficiencies of the system that increases tariffs is the amount of line losses, both technical and non-technical ("black" losses, i.e. theft). Technical line losses are estimated at 7-8%, while non-technical losses are 5-7%. We heard another estimate of 25% in total losses which may be more accurate. Much of the technical losses are to regions where there is no metering. By using a stricter definition of black losses, which specify that a black loss is whenever somebody does not pay for electricity, the loss numbers would be much higher than 25% - closer to 50%. Unfortunately, the accounting system used in Russia accounts for anything invoiced as income, rather than recognizing non-payments as losses. By adopting IAS accounting standards at Dalenergo, it would be much clearer what actual losses were, and the effect on tariffs.

FUEL

In Primorski Krai fuel costs are about 70% of generation costs. Of the four electric power plants 2 burn hard (bituminous) coal, and two burn brown (lignite) coal. Brown coal accounts for 67% of all energy produced. The brown coal has only one third the Kcal/ton as the hard coal.

Primorski GRES is designed to take the brown coal. When they run out of coal they have to import, buying from one of three sources: Khabarovsk, Kuzbass, Irkutsk. The imported brown coal costs 50% more than the local because of the transportation costs. Artyemskaya CHP and Partizanskaya GRES burn hard coal. The hard coal is hardly mined in Primorski Krai now so the coal is imported. As the coal mined outside of Primorski is more efficiently mined, and because it has a high calorie content, the cost is about the same to import as to buy locally.

Their Energo's policy is to maximize the use of local coal, and import only when necessary. They admitted that this policy was not based on economics but on the local administration's desire to keep as many miners working as possible. The administration does not know what it would do with all the coal miners if the highly inefficient local coal industry was allowed to collapse.

Before the local coal mines were subsidized, but with the subsidies disappearing it is getting too expensive to operate, and imported coal becomes less expensive. At least in the short term they expect the local administration to force them to purchase local coal, no matter what the cost. Dalenergo has looked at the possibility of importing coal from China, but it is politically impossible.

One of the reasons for the shrinking local fuel supply is the lack of capital at the coal mines to pay for equipment. The amounts paid to the mines are barely sufficient to meet salaries. Dalenergo claims that it pays 80% of its fuel costs (which are about 300 billion rubles/month), but regional boilers pay only 30-40%, which caused the last fuel crisis. Even though the mayor of Vladivostok organized a payment scheme for some of the miners to get their pay on a more regular basis, they all decided to strike this year to get all their back wages. On April 30th the coal miners stopped supplying fuel and for ten days the Energo used its reserves only.

The monthly fuel expenses at this time are

<u>Total coal purchases</u>	<u>300 billion rubles</u>
Local coal	120 billion rubles
Imported coal	70 billion rubles
Transportation of coal	110 billion rubles

180

There is no interest within the energo to manage the fuel mix so as to minimize fuel costs. The focus is on increasing collections so that all the fuel, no matter how expensive, will be paid for.

PERSONNEL AND ORGANIZATIONAL STRUCTURE

There are 23 companies within Dalenergo, employing 13,000 persons. These companies comprise three CHP stations, four electric power distribution networks, 1 heat distribution company, 2 repair companies, a design institute and a multiple of companies with little relation to power production and distribution.

In the opinion of the personnel director, Dalenergo is over-staffed, and the number of employees could be reduced by 50%. But instead of reducing the number of employees over the last several years, the number of employees has increased. This was explained as being caused by the lack of qualified personnel today. "If it took 600 people to run a power plant before, now it takes 1000." About one-half of the employees at some companies are pensioners and they won't leave because they know they can't live off a pension. But as they stay on it makes it impossible to hire a younger employee who would actually do the work required that the pensioner is now too old to perform. Therefore the output per employee has fallen drastically. We received no hard data on trends in output per employee, but by all indications it has fallen drastically.

There is no formal system within Dalenergo for evaluating employees. Therefore there is no reward system to keep the best employees, and no system for removing incompetent or ineffectual employees. Salaries are paid on the basis of RAO UES formulas for compensation and are not related in any way to performance. The average salary in the company is 2.5 million rubles for a plant employee, with a top engineer receiving as much as 4 million per month. Three weeks prior to our visit the employees were paid their February wages.

When we asked how many of Dalenergo's companies could be spun-off and successfully run independently we were told that none could, except for the repair companies. A management organizational structure is attached.

ACCOUNTING

For 1996 Dalenergo reported an accounting loss of 39 billion rubles. In the first quarter of 1997 the company shows a profit of 198 billion. Dalenergo usually shows a profit in the winter as they do not pay for coal at that time, and do not use an accrual system of accounting that would more accurately indicate their true fuel expenses for the quarter. As fuel buying is seasonal, the company shows a paper profit in the winter and a loss in the summer. The lack of "prudential" accounting also means that losses are not properly accounted for and overstate the profits of the company.

Therefore, despite their accounting profit of 189 billion for the first quarter of 1997 there is no money to pay salaries. What cash that is received is so precious that it is managed by a committee to determine to whom it should be paid. Another oddity of the Russian accounting system is that last year Dalenergo was obligated to pay 170 billion rubles for social costs that were to come out of "profit." As these costs are not discretionary they should be accounted for as liabilities, and not profit distribution.

We had asked to receive a copy of Dalenergo's financial statements, and were told that we would receive them. We received nothing. Our general impression is that the accounting department is poorly organized, lacks computerization, and is woefully short of information on the financial condition of Dalenergo - especially affiliates and subsidiaries.

There is an interest in improving the capacity of the accounting department and the qualifications of the staff. They have looked at the possibility of adopting a computerized accounting system, but at the moment they feel the cost is prohibitive at 22 million rubles not including the hardware. They use some basic software, but there is no intercompany system and affiliates are not even using compatible software. A network accounting system for consolidating financial reporting would be very useful for the cash management of Dalenergo.

Because of poor collections and poor information systems the management at Dalenergo spends an inordinate amount of time managing the company's cash position. At least once a week a committee of the top management meets to decide how to distribute the company's meager cash resources. And much of the accounting departments time is spent shuffling mutual debt cancellations.

FINANCE

The main function of the finance department is to find credits, deal with banks, do financial analysis and prepare financial reports. Analysis includes balance sheet analysis and credit analysis, as well as the availability of current assets to meet current obligations. They have prepared a business plan (which we did not see) and are preparing to start a financial plan. At this moment they have nobody assigned to financial analysis, but are looking to hire two people as soon as possible. They currently have only 6 persons in the finance department.

On the question of insufficient accounting information, the financial director answers that it was a major problem, especially the lack of information from affiliates and subsidiary companies. Dalenergo very much needs to develop its information systems. For example, all subsidiary companies have certain obligations, such as making payments to the pension fund. The head finance office takes responsibility for ensuring that these payments are made but lacks accounting information and has no control over the actual payments.

On investment, we were told that the finance department is only involved with assessing capital investments when management makes a request. They do not analyze the effectiveness of capital investments, payback period, return on assets, or other financial measures. The head of development, together with the head on capital construction make the decisions. When the financial department is involved in the analysis their findings are generally negative, which makes them unpopular with the construction department. But usually the finance department's recommendations are ignored and projects started despite their rejection. It is very limited what can be actually financed right now because the energo has no access to external finance other than the investment portion of the tariff, loans, and supplier credits.

On the subject of where the energo could cut costs we were told that the place to start is in managing fuel purchases. If Dalenergo were to begin verifying fuel purchased and reject fuel that was not up to standards, they could save billions of rubles in fuel costs. Right now the brown coal price is based on a specific heat content rating of 2005 kilo-calories/Kg, when the actual heat content is 1600 kilo-calories/ton.

But insisting that the coal purchased meets the required standard is not the way the company is run. A legal basis is required to begin operating in a commercial manner. If Dalenergo collected all the fees and penalties that it should receive then there wouldn't be a need to raise tariffs. As a state company, Dalenergo has few legal rights. They need to triple the number of lawyers on staff to fight its court battles.

We were told that if the energo was allowed by the government to use all its legal rights it could eventually be able to collect up to 75% of its outstanding debts (25% non collectable).

debt probably a more realistic figure than the 1% suggested by the planning department) But the energo must be able to use all the government decrees that have been enacted to enforce collections Right now that is politically unpopular

When asked whether Dalenergo could benefit from the Commercialization program, the finance director answered that they could especially use help with financial and managerial accounting They need financial information that they can trust The energo needs help in organizing accounts that reflect the activities of a business concern, and not the activities of an organ that is an extension of the government

Specific problems are that they get financial data on a consolidated basis from their affiliates so they can't see all of their creditors and debtors And the fuel division even has its own separate accounting Accounting should be able to keep track of production, fuel and transportation, but it doesn't

This is not a major problem for the management though, because profits are maybe fifth on the list of importance Even though their charter specifies that Dalenergo is a for-profit company, they continue to supply energy to those who will never pay, and pay for services that they don't need The only reason that they can operate in this fashion is because they are not required to pay their suppliers in kind All these problems originate with the policies of the Krai to provide electric power at low or no cost Though the Krai is now seeing the negative effects of this policy it initiated telling local companies not to pay for power, and has understood its mistakes, now the city is seeing the tariffs rise and telling the local population to pay their bills to bail out the energo from the previous failed policies of the governor

The damage from the previous Krai policy has left Dalenergo with a lot of debt and a bad credit history This makes it difficult to receive new credits The company is carrying 1 trillion rubles worth of debts that it will probably never recover With all the debt problems the finance director believes it is not time to begin restructuring the energo, but instead concentrate on recovering the previous losses from current payers This would seem to contradict his earlier position that the company needs to begin behaving in a commercial fashion if it is every to recover

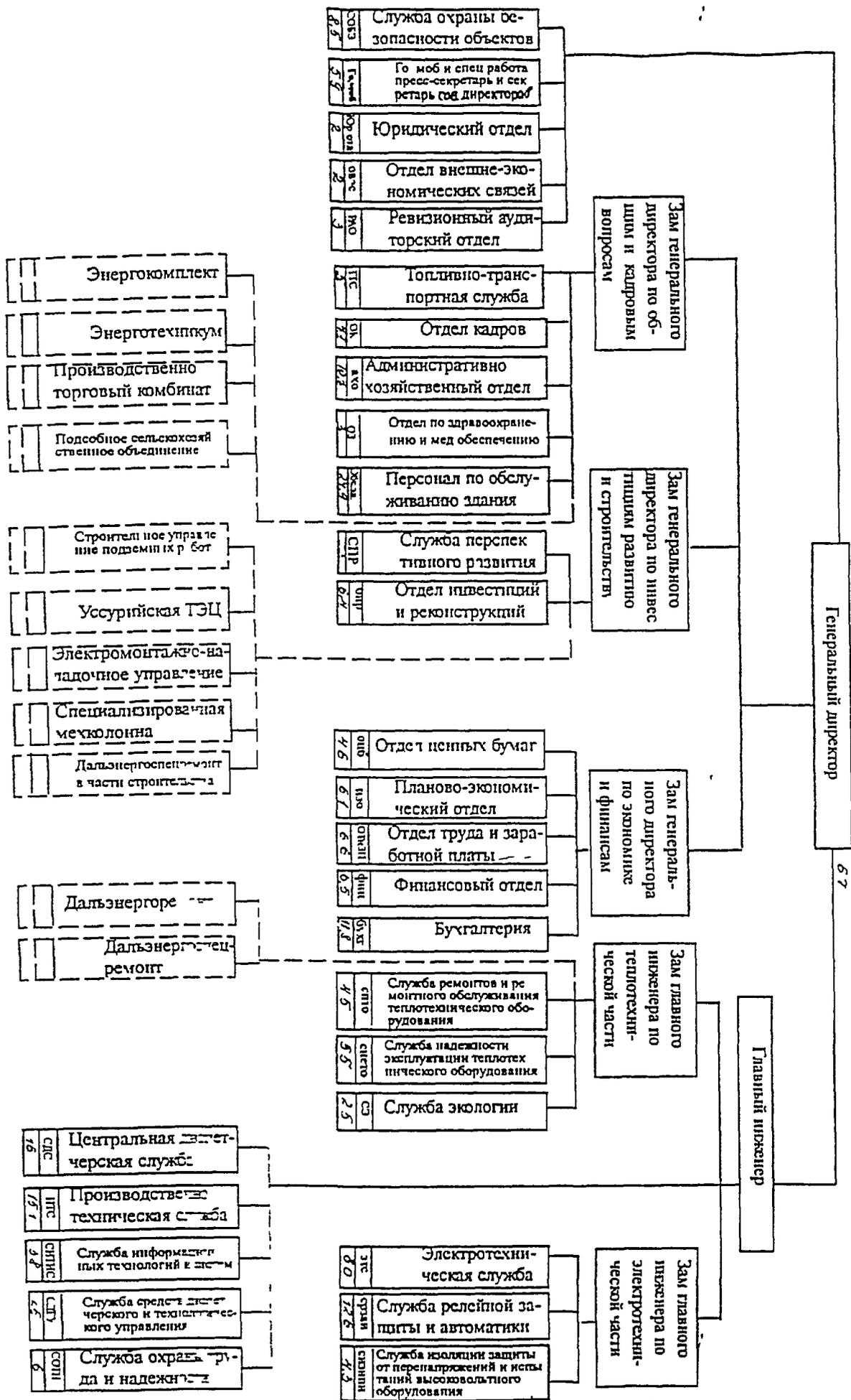
MANAGEMENT INTERVIEWED AT DALENERGO

Poleshuk, Vasily Grigorievich - General Director
Byeschastnov, Vladimir Mikhailovich - Deputy General Director
Davydov, Aleksandr Victorovich - Finance Director
Kirilina, Lidya Kuzminicha - Head of Planning Department
Tyurina, Yelena Yurievna - Personnel Director
Valentina Vladimirovna - Head Accountant
Natalya Dmitrievna - Deputy Head Accountant
Savchenko, Mikhail L'vovich - Director of Dalenergosbyt
Zaitsev, Vladimir Nikolaevich - Commercial Director of Dalenergosbyt
Maevskii, Sergei Veniaminovich - Deputy Head Engineer of Dalenergosbyt
Iuc, Alekandr Alekseevich - Director of Fuel Supply
Yegorov - Municipal Heat Company
Burlutskaya, Olga - REC
Kudryavy, Victor V - Deputy Minister of Mintopenergo

ATTACHMENTS

- 1 Dalenergo Organizational Structure
- 2 Regional Tariffs
- 3 Line Losses

Организационная структура Дирекции
 ОАО "Дальэнерго"
 рекомендуемая ЦОТэнерго



Attachment 1
to the Resolution
of the REC No 45
dated April 1, 1997

ELECTRIC ENERGY

S/N	Consumer categories	Tariff Rbl/KWH
1	Consumer category w/adjustable tariffs	
1 1	Discounted tariffs (see Attachment 2 paragraph 1)	415
1 2	Other tariffs (see Attachment 2 paragraph 2)	1 000
1 3	MIC enterprises with the state order greater than 50 % (see Attachment 2 paragraph 3)	1,000
1 4	Commercial consumers (see Attachment 2 paragraph 4)	1 700
1 5	Other consumers include industrial enterprises ITU UIN UVD Territory	566 5
2	Agriculture (see Attachment 2, paragraph 5)	374
3	Residential sector including residential areas of ITU UIN UVD Territory	250
4	Populated areas	218 8
5	Sanitary needs of energy system	6
6	Electric energy for heating and hot water supply system	
6 1	Electric heaters of up to 31 KW capacity	same as consumers
6 2	Electric heaters of 31 KW capacity and greater - the rate is adjusted by the coefficient	
6 2 1	Night time minimum consumption	254
6 2 2	Rest of the day	K=2
7	Electric energy used by residents for heating	
7 1	Electric heaters of up to 10 KW capacity	250
7 2	Electric heaters of greater than 10 KW (in the event different day parts are accounted for energy metering)	
7 2 1	Night time minimum consumption	130
7 2 2	Rest of the day	566 5

Note Discounts (escalations) of tariffs on electric energy to compensate reactive capacity and energy have been based on tariffs calculated in accordance with the Procedure for settling accounts related to electric energy and heat registered by the Ministry of Justice of the Russian Federation No 449 dated December 28, 1993

V Rud'

Chairman of the REC

Приложение № 4
к постановлению
РЭК № 45
от 1 апреля 1997 г

Потери в сетях энергосистемы и оптовых предприятиях-перепродавцов

	% потерь
ПЭС ТОФ	10
ВПЭС	13
Михайловка	19
Артем	18
Находка	19
Партизанск	19
Хасан	16
Шкотово	15
Дальнереченск	19
Лесозаводы	16
Спасск	19
Черниговск	17
Хороль	18
Кировка	19
Арсеньев	16
Кавалерово	18
Дальнегорск	18
Уссурийск	19
Пограничное	16
ИТОГО	15,3
АО "Дальэнерго"	10,34
Тепловые сети АО "Дальэнерго"	10,48
ВПТС	5

Председатель РЭК

В. П. П.

В Рудь

*Академик Витя
= 25%*

138

DIAGNOSTIC EVALUATION OF KRANOYARSKENERGO

Dates Visited June 17 - 20, 1997

Attachments: Trip Report - Michael Swider
Trip Report - Vladislav Khominski, Margarita Zaitsev

Diagnostic Criteria	Ratings
1 Management Interest in Program- General Dir/Staff	na/3
2 Macro-Economic Environment	3
3 Regulatory and Political Environment	3
4 Competency and Capability of Staff	3
5 General Financial Situation	2
6 Magnitude of Sales	5
7 Organizational Structure	1
8 Information Management System	3
9 Accounting and Reporting System	2
10 Tariff Establishment	1
11 Customer Service/Billing	1
12 Investment Projects	3
13 Potential Benefit to Energo	1
14 Willingness to Share Cost	3

Recommendations and Summary Type 3

Kranoyarskenergo is the third largest regional power system in Russia. With two of the World's largest hydroelectric power stations in the region, the 6,000 MW Krasnoyarskaya and the 6,400 MW Sayanno-Shusheskaya, there is a large surplus of electric power. This alone makes the energo a very interesting candidate for any market restructuring program. The company's collection procedures, financial and accounting controls are weak as in most other regions. This leads to large line losses and large financial losses from barter and other mismanagement of assets.

While mid-level management was relatively hospitable and open with us, we did not meet with the most senior management, including the General Director. Without expressed interest from the General Director of the energo it is questionable whether it should be considered for participation, regardless of the unusual client relationship in this case.

What is unusual about Krasnoyarskenergo is its large dependency upon one client, Krasnoyarsk Aluminum Factory (KRAZ). About 50% of all of the energo's sales are to this one customer. The relationship with the aluminum factory is such that it appears that they have taken management control of the energo, despite not owning shares in the

company This has been confirmed by the recent disclosure that the director of Krasnoyarskenergo has sold controlling interest in the Krasnoyarsk hydroelectric station to KRAZ for a very favorable price, and without the consent of the energo's shareholders. Given the current cloud of corruption and mismanagement that is hanging over Krasnoyarskenergo we believe that it is not possible to work with them, which is why we strongly recommend that this energo not be included in the Commercialization program at this time.

TRIP REPORT FOR KRASNOYARSKENERGO

Krasnovarsk
June 17-20, 1997

Michael Swider
Hagler Bailly Consulting

SUMMARY

On June 17-20 Michael Swider of Hagler Bailly Consulting, together with Vladislav Khominski and Margarita Zaitseva of Carana Corporation, and Natalya Trekhleb of the IFC visited AO Krasnoyarskenergo for a short diagnostic. The purpose of the diagnostic was to familiarize ourselves with the management and operating condition of the energo to evaluate whether it would be an appropriate candidate for the Commercialization program.

Krasnoyarskenergo is in many ways typical of what we have seen at other regional energy systems

- Collections are poor at only about 85%, with cash representing only 11% of collections, and the remainder in veksel and barter. Estimated that 10 - 12% will never be collected. Government enterprises, mostly military, are the worst non-payers.
- High account receivables: \$389 million on \$739 million in sales. Days Sales Outstanding = 27.5 weeks.
- High account payables: \$591 million.
- Large tax debt: \$76 million.
- No metering in for residential customers, and inadequate metering of industrial customers.
- High technical and non-technical losses: 22% of heat and 25% for electric.
- Low tariffs: Average tariff 161 rubles/kWh. Residential customers cross-subsidized at 100 rubles/kWh, while actual cost of service is 248 rubles/kWh. Residential customers also pay only 40% of heating costs.
- Large amount of staff: 21,500 employees, with a large number of pensioners on the payroll. Salaries about 6 months in arrears.
- Indifferent management, which sees itself as a provider of social services and not as a business.
- Financial reports show a phantom net profit for 1996.

Krasnoyarskenergo is atypical in several ways

- Large amount of hydro-electric capacity: 6,762 MW, (6000 MW from the Krasnoyarsk hydro-electric station) plus another 6,400 MW in the region from the Sayano-Shushenskaya hydro-electric station, which is owned by the autonomous republic of Khakasia.
- While Krasnoyarskenergo is capacity short after losing the Sayano-Shushenskaya hydro-electric station to Khakasia, and two thermal plants to RAO, the region as a whole is surplus in power.
- Energy from the FOREM is purchased at a cost lower than the normal FEC tariffs through a special arrangement with the Sayano-Shushenskaya hydro-electric station.
- While RAO is a 51% owner of Krasnoyarskenergo, the local administration controls 50% of RAO's voting rights, limiting RAO's control over the company.

- 50% of all electric power sales are to one customer - Krasnoyarsk Aluminum Factory (KrAZ)
- KrAZ receives electricity at a special tariff of about 60 rubles/kWh while Krasnoyarskenergo's average cost of producing electricity is 79 rubles/kWh through a special arrangement with the Krasnoyarsk hydro-electric station

The most disturbing aspect of Krasnoyarskenergo is its relationship with the aluminum factory. This is, understandably, a very touchy relationship and there were difficulties learning details about it. For example, the tariff that KrAZ pays for electricity is not firm. When the price of aluminum falls in London we were told, KrAZ tells the energo to drop its price. To increase its operational control over the energo, KrAZ has placed one of its own people as the Director of Finance at Krasnoyarskenergo.

We asked how it was that KrAZ could receive electricity at less than the cost of production when selling at below cost is illegal in Russia. We were told that it is a special arrangement where the aluminum factory is not buying directly from Krasnoyarskenergo but from the Krasnoyarsk hydro-electric dam, where the cost of production is officially 10 rubles/kWh. The tax authorities simply look the other way in regards to this "special" arrangement. I suspect that it is this relationship, and the fact that it is based on official slight-of-hand, that is leading the push towards a regional "market" for electric power. We were not made privy to the plans for this market but were told that we would get a copy. I suspected that the market will be a plan to officially unbundle the hydro-electric station from Krasnoyarskenergo to allow KrAZ to continue to buy low cost electricity but without breaking the tax laws.

My suspicions were later confirmed when I learned that the Director of Krasnoyarskenergo had conspired to transfer controlling interest in the Krasnoyarsk hydroelectric station to the Krasnoyarsk Aluminum Factory without the shareholders knowledge and for a price of one fifth the nominal value. It is clear that the management of Krasnoyarskenergo is working in the best interests not of their own company, but of the aluminum factory.

FUNCTIONAL DEPARTMENTS

We had good meetings with the accounting department. They were open with us and freely shared financial and accounting information. They also took the time to fully explain how barter is accounted for. They were somewhat skeptical on the need for introducing IAS accounting at this time, but were interested in learning more about the system.

We had an equally productive meeting with the person in charge of developing an information management system at the energo. This person was brought in from outside the company with experience in developing the MIS system at KrAZ. At this moment he is analyzing the information flows at the energo and plans to put together a team of experts to develop an MIS system tailored to the energo's needs.

The meeting with the head of the energy sales (energosbyt) department was also productive in that he freely discussed their problems with collections and lack of metering in the system. We doubt that we would be able to assist directly in the collections issue, as it is political, but we could possibly assist in developing a plan to install new metering. The head of energosbyt seems particularly interested in solving problems with metering system design and installation.

All these areas relate directly to the development of an improved MIS system. As Krasnoyarskenergo seems to be genuinely interested in improving their information system I believe a project in this area could be successful, provided there was enough support from management to follow through on recommendations. We suggest that it would be useful for the electric system as a whole to concentrate efforts to develop MIS systems at two or three

energос, and then have the lessons learned distributed throughout the system. There is no need for every energo to develop a tailored MIS system.

RECOMMENDATION

In regards to areas where we could work under the aegis of the Commercialization project we believe there are a few potential projects. We did not meet with the General Director despite his presence in the building for most of our visit. This indicates a general lack of interest in the Commercialization project.

Most importantly, the management is working for the interest of the Krasnoyarsk Aluminum Factory and not the energo. There is no point in trying to introduce financial and commercial controls in such an environment. The level of corruption at Krasnoyarskenergo is such that there would be little point in trying to waste our resources there.

The attached report from Carana has recommends that we work with Krasnoyarskenergo. This report was based on initial impressions, which were generally favorable. But in following up on Krasnoyarskenergo, and their sale of the Krasnoyarsk Hydroelectric Station, we have come to the conclusion that the management at this energo is not ready to introduce commercial management into their company. We strongly recommend against the inclusion of Krasnoyarskenergo in the Commercialization project.

ATTACHMENTS

- Carana Report
- 1996 Balance Sheet
- Tariffs on electric and heat energy for the second quarter of 1997

1-7

June, 17-20, 1997
Krasnoyarsk
JSC "KRASENERGO"

**REPORT ON NEGOTIATIONS WITH AO KRASENERGO WITHIN
THE FRAMEWORK OF THE PROJECT
"KOMMERCIALIZATION OF POWER NETWORKS"**

Present at the negotiations

- Michael Swider - "Hagler Bailly",
- Natalia Trekhleb - IFC,
- Vladislav Khominskij - Carana Corp
- Margarita Zaitseva - Carana Corp

Representatives of "Krasenergo"

- Louchkovskij Alexandr Gngorievich - deputy financial director,
- Podberezkin Igor Vitalievich - head of CAM department,
- Valininivichute Alla Petrasovna - deputy Chief Accountant,
- Mokrova Ludmila Sergueevna - head of the payroll department,
- Shevchouk Valerij Fedorovich - deputy General Director,
- Baranova Svetlana Vladimirovna - head of the planning and economic department,
- Briazguin Vladir Dmitrievich - director of energosbyt (energy sales dept)

GENERAL INFORMATION ON THE POWER NETWORK

Krasenergo is one of the biggest power networks in Russia. Krasenergo affiliates 5 heat power stations and Krasnoyarskaya GES (hydroelectric power plant) which is a subsidiary of Krasenergo. The network also purchases energy from 2 large GRES (regional electric power plant), that belong to RAO.

Due to cheap coal and availability of hydroelectric power plants, the cost of production of energy is substantially lower, than the average one in Russia and makes 82 rubles per KW/h at the wholesale market and 110 rubles for the locally produced energy. Energy from Krasnoyarskaya GES is purchased by Krasenergo at a wholesale rate, while the energy production cost at GES makes about 16 rubles per KW/h.

46% of energy is consumed by the Aluminum plant (KRAZ), which approximately equals the level of energy production of Krasnoyarskaya GES (20 milliards KW/h per year). Besides, KRAZ purchases energy at a reduced rate, which is even lower than the wholesale one and makes 60 rubles per KW/h. This tariff value is due to the fact that KRAZ pays more than 50% in money and on timely basis.

Population (6%) and agricultural sector (5%) constitute insignificant portion in the scope of consumption and therefore the reduced rate for population (100 rubles per KW/h) and for agricultural sector (82 rubles per KW/h) do not have considerable impact on the regional industry.

A large GES and a city heating and power plant are now under construction on the territory of Rostovskaya region.

Putting the GES into operation should lead to reduction of the average cost of production in the region

As is the case of the whole Russian economy, one of the major problems of Krasenergo are defaults in payment, lack of funds. Money proceeds make only 14% of the total scope of sales (mainly owing to KRAZ). The rest consists of barter, mutual settlements and bills. The large number of bills, issued by Krasenergo, that Krasenergo is obliged to accept from the energy consumers in payment of accounts receivable, significantly complicates the financial standing of Krasenergo. The market price of the bill makes 19% of its par value. The companies that have funds, purchase the bills of Krasenergo and pay with them for electric energy thus reducing money earnings.

About 12% of accounts receivable are doubtful debts. There are no big problems as regards the settlements with the energy resellers.

GENERAL CHARACTERISTIC OF THE POWER NETWORK

A distinguishing feature of Krasenergo is that the company had initiated reorganization of its management system. A new organizational structure of the company had been elaborated, where significant importance was attributed to financial department. Financial Director is now the first deputy General Director. The structure of the financial department management is thoroughly elaborated, new regulations on other departments are being prepared.

Though the restructuring started only 1 month ago, the managerial staff had been significantly changed, a number of young executives started to work in the company. In connection with such large scale reorganization, Krasenergo faces a number of problems, related to proper distribution of functions, delimitation of functions, delegation of powers and enhancement of the system of control.

Krasenergo had initiated a program of development of the regional energy market, which is an alternative solution to the concept, suggested by RAO. The main idea of their proposal is that all the electric power plants in the Krasnoyarsk region should not be completely independent and should be owned by Krasenergo as subsidiaries. Then Krasenergo itself would solve the matters related to sales of energy to other regions (that is competition on the level of regions, and not plants).

Krasenergo has shown an active interest in the project implementation, representatives of Krasenergo exhibited activity and openness during the talks with our commission. It is a pity that neither General Director of Krasenergo, nor Financial Director did not wish to meet with our group, though in words they were interested in the project.

Due to dominant position of the KRAZ in the Krasnoyarsk region and strong dependence of KRAZ from the cost of electric energy, the Krasnoyarskaya GES, as well as Krasenergo are being gradually taken-over by KRAZ. First of all KRAZ buys up the shares of both Krasnoyarskaya GES and Krasenergo and, secondly, KRAZ delegates its people to the management of Krasenergo. A number of Krasenergo executives, had come to work there from KRAZ, including all major managers of the financial department.

MOST INTERESTING LINES OF WORK

Development of information system

The level of the existing information system may be considered as pretty low. Only several accounting operations and settlements with the energy consumers in energy sales department are computer aided. Various accounting programs are not linked with each other, many operations are performed in parallel, the programs interfaces are not friendly, as a rule. Financial services do not have access for analysis of information on settlements with the buyers and, specially on mutual settlements on barter transactions. Due to poor quality of information, certain assets and settlements may not be efficiently controlled, which creates a fertile field for abuses. We could also witness lack of information for adoption of management decisions. Several typical problems that are common in many companies that develop software by their own could also be noticed:

- lack of cooperation between the programmers and economists,
- financial and economy services do not participate in the problem definition while software development,
- The programs are developed in such a way as to increase the importance of programs as indispensable employees

In connection with the restructuring, Krasenergo had organized a new group of specialists which works on development and implementation of the information system. The group consists of specialists, who have long time experience in implementation of various automated information systems. The specialists mainly came to Krasenergo from KRAZ, where they had been engineering the plant CAM system. The group on information system is subordinated to the Deputy Financial Director.

At present, Krasenergo elaborates the strategy of the information system development. To put it shortly, its main issues are as follows:

- restructuring of Krasenergo,
- analysis of documents handling system,
- system simulation of the company operation as regards information flows and functions,
- choosing a kernel (system of data base management or an open ready-to-use software system), as a basis of automatization of information system,
- creating additional functions and customizing software, taking into consideration particular features of Krasenergo,
- provision with computer equipment for automation of information system,
- Personnel training

It is our opinion, that mutual work of consultants, experienced in management accounting, organizational arrangements and financial management, together with the group on information systems development, could be extremely useful for both Krasenergo and the consultants, participating in the project.

The following lines of cooperation were also discussed, though they have not aroused much interest from the part of Krasenergo.

The program of increase of funds collection ratio.

Personnel management

CONCLUSIONS

As a result of negotiations with Krasenergo representatives, we found out that there exist a great interest in the project implementation

The restructuring that was initiated in Krasenergo created a situation, when consultants assistance assumes greater significance, specially in the company management issues

A strong team experienced in information systems development and oriented by the planned information system towards the needs of financial services, will allow to successfully perform consulting work in the given direction. As this takes place, works on information system development will be tightly linked with management accounting matters, with managerial economics and optimization of organization structure. Working in this direction with Krasenergo will further allow to propagate the obtained expertise at other power networks

June, 24, 1997

Khominskij V
Zaitseva M N

БУХГАЛТЕРСКИЙ БАЛАНС

за 12 месяцев 1996 г

Форма N 1 по ОКУД
Дата (год, месяц, число)

Организация **АО "Красноярскэнерго"** по ОКПО
 Отрасль (вид деятельности) **промышленность** по ОКОНХ
 Организационно-правовая форма **ОАО** по ОКПФ
 Орган управления **государственным имуществом** по ОКПО
 Единица измерения **млн.руб** по СОЕИ

Контрольная сумма

КОДЫ	
0710001	
05783455	
11170	

Адрес **Красноярск, ул. Богграда 144 а**

Дата высылки
 Дата получения
 Срок представления

Handwritten mark

АКТИВ	Код стр	На начало года	На конец года
1	2	3	4
I ВНЕОБОРОТНЫЕ АКТИВЫ			
Нематериальные активы (04 05) в том числе	110	5 201	5 483
организационные расходы	111	1 941	17
патенты, лицензии, товарные знаки (знаки обслуживания) и другие аналогичные с перечисленными правами и активами	112	608	4 495
Основные средства (01, 02, 03), в том числе	120	10 522 040	10 521 517
земельные участки и объекты природопользования	121		
здания машины оборудование и другие основные средства	122	10 522 040	10 521 517
Незавершенное строительство (07, 08, 61)	130	3 271 883	3 519 386
Долгосрочные финансовые вложения (06, 56, 82), в том числе	140	20 133	25 2106
инвестиции в дочерние общества	141		
инвестиции в зависимые общества	142		
инвестиции в другие организации	143	3 504	31 390
займы предоставленные организациям на срок более 12 месяцев	144	74	2 025
прочие долгосрочные финансовые вложения	145	16 555	198 691
Прочие внеоборотные активы	150	169	54
<i>Итого по разделу I</i>	190	13 817 426	14 078 540
II ОБОРОТНЫЕ АКТИВЫ			
Запасы в том числе	210	420 935	705 838
сырье материалы и другие аналогичные ценности (10, 15, 16)	211	358 045	610 375
животные на выращивании и откорме (11)	212	1 889	3 780
малоценные и быстроизнашивающиеся предметы (12, 13)	213	18 897	40 258
затраты в незавершенном производстве (издержках обращения) (20, 21, 23, 29, 30, 36, 44)	214	2 080	3 544
готовая продукция и товары для перепродажи (40, 41)	215	39 109	40 389
товары отгруженные (45)	216		
расходы будущих периодов (31)	217	315	1 492
Налог на добавленную стоимость по приобретенным ценностям (19)	220	80 608	233 800
Дебиторская задолженность (платежи по которой ожидаются более чем через 12 месяцев после отчетной даты), в том числе	230	18 986	27 691
покупатели и заказчики (62, 76, 82)	231	17 725	27 227
векселя к получению (62)	232		
задолженность дочерних и зависимых обществ (78)	233		
авансы выданные (61)	234		
прочие дебиторы	235	1 261	464

АКТИВ	Код стр	На начало года	На конец года
1	2	3	4
Дебиторская задолженность (штатежи по которой ожидаются в течение 12 месяцев после отчетной даты), в том числе	240	1 320 718	2 150 843
покупатели и заказчики (62, 76, 82)	241	796 675	1 544 763
векселя к получению (62)	242	51 250	81 748
задолженность дочерних и зависимых обществ (78)	243		64 235
задолженность участников (учредителей) по взносам в уставный капитал (75)	244		
авансы выданные (61)	245	52 425	76 800
прочие дебиторы	246	420 368	383 291
Краткосрочные финансовые вложения (56, 58, 82), в том числе	250	3 079	28 779
инвестиции в зависимые общества	251		
собственные акции, выкупленные у акционеров	252		
прочие краткосрочные финансовые вложения	253	3 079	28 779
Денежные средства, в том числе	260	18 296	10 097
касса (50)	261	68	1 180
расчетные счета (51)	262	4 328	1 661
валютные счета (52)	263		
прочие денежные средства (55, 56, 57)	264	13 900	7 256
Прочие оборотные активы	270	8	180
<i>Итого по разделу II</i>	290	1 862 630	3 157 228
III УБЫТКИ			
Непокрытые убытки прошлых лет (88)	310	137	
Непокрытый убыток текущего года	320		64
<i>Итого по разделу III</i>	390	137	64
БАЛАНС (сумма строк 190+290+390)	399	15 680 193	17 236 421

1004

483

17

49

21 517

2 517

1 386

106

3 390

7 025

98 691

54

17 540

705 838

110 375

780

40 258

3 541

38

492

133 800

27 691

227

461

12

ПАССИВ		Код стр	На начало года	На конец года
1	2	3	4	
IV КАПИТАЛ И РЕЗЕРВЫ				
Уставный капитал (85)	410	1 085 397	1 085 041	
Добавочный капитал (87)	420	11 477 247	11 451 408	
Резервный капитал (86), в том числе	430	2 500	8 587	
резервные фонды образованные в соответствии с законодательством	431			
резервы, образованные в соответствии с учредительными документами	432	2 500	8 587	
Фонды накопления (88)	440	56 560	155 017	
Фонд социальной сферы (88)	450	802 335	712 391	
Целевые финансирования и поступления (96)	460	706 762	401 530	
Нераспределенная прибыль прошлых лет (88)	470	24 687	10 254	
Нераспределенная прибыль отчетного года	480		10 858	
Итого по разделу IV	490	13 955 488	13 855 072	
V ДОЛГОСРОЧНЫЕ ПАССИВЫ				
Заемные средства (92-95), в том числе	510	3 286	2 984	
кредиты банков, подлежащие погашению более чем через 12 месяцев после отчетной даты	511	3 286	2 984	
прочие займы подлежащие погашению более чем через 12 месяцев после отчетной даты	512	0		
Прочие долгосрочные пассивы	520			
Итого по разделу V	590	3 286	2 984	
VI КРАТКОСРОЧНЫЕ ПАССИВЫ				
Заемные средства (90, 94), в том числе	610	70 332	82 577	
кредиты банков	611	63 032	34 351	
прочие займы	612	7 300	48 224	
Кредиторская задолженность, в том числе	620	1 648 366	3 311 607	
поставщики и подрядчики (60, 76)	621	389 136	1 495 881	
вексели к уплате (60)	622	236 061	400 817	
задолженность перед дочерними и зависимыми обществами (78)	623		64 231	
по оплате труда (70)	624	56 962	161 591	
по социальному страхованию и обеспечению (69)	625	84 335	297 877	
задолженность перед бюджетом (68)	626	428 114	428 597	
авансы полученные (64)	627	098	1 331	
прочие кредиторы	628	453 060	461 261	
Расчеты по дивидендам (75)	630	2 230	2 26	
Доходы будущих периодов (83)	640	32	43	
Фонды потребления (88)	650	431	75	
Резервы предстоящих расходов и платежей (89)	660			
Прочие краткосрочные пассивы	670	28	13	
Итого по разделу VI	690	1 721 419	5 397 76	
БАЛАНС (сумма строк 490+590+690)	699	15 680 193	17 236 42	
	399	15 680 193	17 236 42	

Руководитель

А. В. В. В.

Главный бухгалтер

И. И. И.

И. И. И.

Тарифы на э/энергию по группам
потребителей

	Использование электрической энергии	Тариф по группам потребителей 1.02.87	Тариф соответствие с последними годами 121
I	2	3	4
Промышленность 750кВа и выше	5505,09	160, =	137,93
Э	4967,30		131, =
СН	597,07		191,71
Н	1,26		248,22
Промышленность ниже 750	324,41	274,3	193
Э	9,2		131, =
СН	250,28		191,71
Н	17,93		248,22
Электротранспорт	299,2	203,6	144,1
В	230, =	164,6	131,41
СН	62,8	274,3	191,71
Подсобные и прочие потребители	195,9	274,3	210,47
СН	278,6		191,71
Н	217,3		248,22
Промышленность с/х потребители	302,5	82	224,0
СН	136,2		191,71
Н	206,3		248,22
Население СН	657, =	83	248,22
" " с НДС	-	100	290
Всего	7705,1	100,7	161,7

Примечание: I Тарифы для населения будут вводиться поэтапно. О индексации тарифов по НК до 130 руб/кВтч с НДС.
 2. В соответствии с индивидуальными условиями договора на Р по электроснабжению по П № 19971. Вводятся новые тарифы на электроэнергию и теплоэнергию на 1,5%.