PN. ACB 527
95612

RUSSIAN FEDERATION
WATER AND WASTEWATER PROJECT

Russian Water Loan Feasibility Assessment: Votkinsk Municipal Communal Enterprise "Water and Wastewater Communal Enterprise," Republic of Udmurtia

Prepared for the United States Agency for International Development
USAID/PADCO Contract No. CCS-0008-C-00-2057-00, Task Order 87
August 1997

FOREWORD

This report on the Votkinsk Municipal Enterprise "Vodokanal" represents a single volume of a 9 volume series. The series contains 8 individual vodokanal reports (including this one) and an "Overview" Report. The series was produced in support of the Russian Water and Wastewater Project with financing from the United States Agency for International Development (USAID) under the Shelter Sector Reform Program for the Newly Independent States. The effort was carried out during the first half of 1997.

Like the other individual vodokanal reports, this report presents the results of institutional and financial assessments related to the Votkinsk Vodokanal's ability to contract debt. The report's institutional and financial recommendations are presented to assist vodokanal decision makers improve the Votkinsk Vodokanal's operational and financial autonomy in order to enhance its debt repayment capabilities.

This report was written by Samuel Coxson, Chief of Party - Finance and Institutional Specialist, Alexander Krishtop, Institutional Specialist, Kirill Sivolapov, Financial Specialist, Michael Sinclair, Privatization Legal Specialist and Ernest Slingsby, Technical Manager. Accounting and financial data management and analysis assistance was provided by Sunil Perera. Additional legal research, analysis and commentary was provided by Anton Litvinov. Additional commentary was provided by Alexander Gamota, Economist/Institutional Specialist, Michael Schaeffer, Financial Specialist and Eugene Gurenko, Tariff Specialist. All these individuals are with PADCO, Inc.

We would like to thank Anvar Shamuzafarov, First Deputy Chairman of the Russian State Committee for Housing and Construction Policy, for his supportive oversight of our work and Valeria Sergeeva, Project Manager of the Project Preparation Unit for the Russian Federation Water and Wastewater Project (RUSWATER), for her active participation in our effort. In addition, our work could not have been accomplished without the support of Valeriy Borodin, Deputy Mayor for Communal Services and Alexander Kokorin, Director of the Vodokanal, with whose staff we worked daily and whose facilities we called "home" for the entire time of our stay in Votkinsk.

We would also like to thank William Krause and Dmitry Borsukov of RUSWATER, and Walter Stottman and Loup Brefort of the World Bank, for their insight, support and comments. Special mention goes to Igor Butchkovsky, of the Institute of Housing and Communal Economy, Moscow, Russia, who provided timely and essential legal and institutional guidance.

Finally, we would like to thank Stephen Giddings, Hugh Winn, Joel Heisey, and Valentin Stobetsky of USAID for their continued support and encouragement for projects related to housing and communal service reform in the Russian Federation.

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY . . . 1
   Financial Conditions . . . 1
      Reduced Financial Assistance . . . 1
      Increase in Non-cash Transactions . . . 1
      Basic Service Only in the Tariff . . . 2
      Depreciation should be fully incorporated into the Tariff . . . 2
   Institutional Reforms . . . 2
      Change the Organizational Structure . . . 2
      Establish a Demand Management Program . . . 2
      Establish a Targeted Subsidies Program . . . 3

2. INSTITUTIONAL/REGULATORY ASSESSMENT . . . 5
   2.1. Assessment of Institutional/Regulatory Environment . . . 5
   2.2. Assessment of Vodokanal Management and Operations . . . 5
      2.2.1. Organization and Management . . . 5
      2.2.2. Human Resource Management . . . 5
      2.2.3. Operations and Maintenance . . . 6
      2.2.4. System Description . . . 7
      2.2.5. Finance and Administration . . . 9
      2.2.6. Subsidiaries . . . 9
   2.3. Billing and Collecting . . . 9
   2.4. Accounting And Management Information System . . . 11
   2.5. Tariff Approval Process . . . 11
   2.6. Recommendations for Institutional/Regulatory Reform . . . 12
      2.6.1. Organizational Structure and City Relationship . . . 12
      2.6.2. Organization Operations . . . 13
      2.6.3. Tariff Related Reform . . . 14

3. FINANCIAL REVIEW AND TARIFF STUDY . . . 15
   3.1. Introduction . . . 15
   3.2. 1997 Water and Wastewater Tariffs . . . 15
   3.3. Financial Overview . . . 16
      3.3.1. Present Financial Management Policies and Systems . . . 17
         Organization of the Accounting Department . . . 17
         Financial Policies and Principles . . . 17
            Accounting . . . 17
            Depreciation . . . 17
      3.3.2. Financial Systems and Controls . . . 17
         Billing and Collection . . . 17
   3.4. Votkinsk Vodokanal Profit and Loss . . . 18
   3.5. Profit and Loss Statement Analysis . . . 19
      Sales Revenues and Cost of Sales . . . 19
   3.6. Balance Sheet Analysis . . . 20
      3.6.1. Accounts Receivable . . . 20
      3.6.2. Bad Debt Estimate . . . 20

3.6.3. Accounts Payable 21
3.6.4. Financial Analysis Summary 21
3.7. Recommendations 21
3.7.1. Billing and collection system 21
3.7.2. Financial Review Recommendations 22
2.7.3. Loan Feasibility 23
3.8. Loan Potential 23
Cash Collections 24
Total Collections 25
Profitability 25
3.8.1. Reforming Current Tariff-Setting Practices 26
Cost-Recovery Pricing 26

4. EXPLANATORY NOTES TO BALANCE SHEET 28
Note 1. Fixed Assets 28
Note 2. Accumulated Depreciation 28
Note 3. Capital Investment 28
Note 4. Intangible assets 29
Note 5. Long term financial investment 29
Note 6. Inventories 29
Note 7. Main production 29
Note 8. Auxiliary Production and Workshop 29
Note 9. Sales of goods and services 30
Note 10. Bank Accounts 30
Note 11. Settlements with suppliers and contractors 30
Note 12. Settlements with buyers 30
Note 13. VAT 30
Note 14. Other Taxes 30
Note 15. Settlements with other debtors and creditors 30
Note 16. Profit and Loss 31
Note 17. Additional Contributed Capital 31

APPENDIX I 32
Section 1. Loan Scenarios and Tariff Requirements 33
Section 2. Restated Financial Statements and Accompanying Tables . . 33

EXECUTIVE SUMMARY AND ACTION PLAN

1. EXECUTIVE SUMMARY

Financial Conditions

Reduced Financial Assistance

Capital improvement grants from the City, the Republic and the Federal Governments have been considerably reduced in recent years. As the primary source of capital improvements for the Votkinsk Vodokanal, the lack of traditional funding puts extreme pressure on the repair and maintenance budget of the Vodokanal. Additionally, the 70 percent subsidy of population customer tariffs that the City states it will provide is not paid in full, leaving the cost to be born by other consumers or Vodokanal reserves.

Although, the City should permit residential tariffs to rise to the point that they fully recover costs, in the interim, it must either pay the 70% subsidy agreed to in its tariff agreements with the Vodokanal. As a better strategy, the City should permit population tariffs to rise to the level of average costs and institute a targeted subsidy program to meet the needs of lower income households who cannot afford the full tariff.

Increase in Non-cash Transactions

If the Votkinsk Vodokanal is to become financially viable, steps must be taken to increase cash receipts. Direct billing of population customers is one step that should be taken since the population pays in cash. The Vodokanal could also impose surcharges on barter payments to cover the administration, handling costs and potential discounts the barter process entails.

In 1996 the Votkinsk Vodokanal operated on 15 percent cash receipts as the total amount billed.[1] PADCO estimates that a typical vodokanal needs approximately 50 percent cash receipts in order to pay taxes that can not be offset, pay that portion of the electric bill that can not be offset, pay salaries and to buy items from outside the area when emergencies so dictate. Although the Vodokanal has been able to operate at a lower cash collection rates, it loses the opportunity to bid for items and generally loses some portion of barter payments due to the inherent nature of the barter process.[2]

---

[1] In order to account for prior year payments, PADCO accounting consultants developed a procedure to adjust for the payment. The collection amount is divided by the amount billed plus the beginning balance for accounts receivable.

[2] It is acknowledged that there may be situations where a barter may actually bring a profit but these are rare. However, if the barter was such a good deal why did not the payee sell the item in the first place and pay cash?

5

Basic Service Only in the Tariff

The Votkinsk Vodokanal includes several non-operational cost items in its tariff that should be directly charged to customers at the point of sale or when a service is rendered. For example, the Vodokanal includes charges for meter installation, testing and certification in its tariff which should be part of a separate rate structure or negotiated each time the service is provided. In addition plumbing repairs within customer buildings are included in the tariff. If the Vodokanal undertakes such repairs, they should be directly charged to the customer rather than included in costs charged to all customers.

Depreciation should be fully incorporated into the Tariff

As a means of reducing the tariff, depreciation expenses have been arbitrarily reduced by the Vodokanal and Duma. This practice should cease immediately. The net result of not charging the full depreciation expense is to have depreciation that could be applied to equipment and buildings that have long since ceased to function or alternatively operate at only a fraction of their needed capacity.

The structure of the basic tariff should accurately reflect the cost of providing that basic service on financial and economic considerations and not dictated by political expediency or temporary solutions to short range problems only to push the problem into the future. If there is concern that the revaluation of assets calculations supplied by the Ministry of Finance at the start of 1996 resulted in excess depreciation assets, the Vodokanal should hire a qualified appraiser to conduct an actual revaluation of Vodokanal assets based on standard accounting practices.

Institutional Reforms

Change the Organizational Structure

Organized as a municipal enterprise in 1992, the Votkinsk Vodokanal should be reorganized as either a municipal unitary enterprise or an open joint stock company in accordance with the newly passed Civil Code. This process would require redrafting the Charter and agreements for economic management of city-owned assets and would also afford an opportunity to negotiate a service agreement that would define much more accurately the obligations and authority of the Vodokanal and the City.

The Service Agreement would address those areas of concern in more detail such as quality of service, interruption of water supply, etc. in concrete measurable terms and provide rewards as well as sanctions for not meeting stated performance objectives.

Establish a Demand Management Program

Through a publicity campaign and other informational distributional methods, the Vodokanal should undertake a program to explain its demand management program. The backbone of the demand management program should be metering at the building level and direct billing of population customers. This coupled with an effective and incentive program of repairing sanitary

equipment (toilets, sink and bath spigots) would give consumers incentives to reduce consumption and may reduce or eliminate the need for capacity expansion.

Concurrently, the Vodokanal should implement a system-wide water loss reduction program by metering production and determining the areas for transmission and distribution loss are highest. While this process may reduce the volume of consumption initially, it will also reduce some Vodokanal's cost. The City or tariff approval body will need to cooperate with the Vodokanal to implement these programs by permitting tariff increased to cover the revenue shortfall resulting from lower consumption.[3]

Establish a Targeted Subsidies Program

During the transition to consumption based billing and increased tariffs that would accommodate full cost recovery and debt service, the City should prepare for an increase in assistance to those who qualify for income based assistance. PADCO consultants have determined that the need for income based subsidies will increase significantly as the tariff increases. However, the total subsidy requirements are likely to be less than those currently being granted to the entire population resulting in a net savings to the City.[4]

[3]Though more costly apartment metering may ultimately reduce consumption to the point where new pumping stations are not needed. PADCO estimates that an apartment metering program might cost $7 million.

[4]See PADCO Report, "Communal Service Pricing--Novgorod Teploenergo and Pskov Vodokanal: Towards a new Model of Communal Service Provision", USAID/PADCO Contract No. CCS-0008-C-002057-0, Task Order 84, April 1997.

Figure 1
VOTKINSK ACTION PLAN FOR FINANCIAL AND INSTITUTIONAL/REGULATORY REFORM

ACTION ITEM	RESPONSIBLE PARTY	APPROXIMATE DATE TO BE COMPLETED
Institutional Reforms		
1. Establish the Votkinsk Vodokanal as a municipal unitary enterprise or open joint stock company	Vodokanal and City	December 31, 1997
2. Negotiate a service agreement that will provide detailed performance targets for the Vodokanal and the City	Vodokanal and City	December 31, 1997
3. Establish a strategic plan to incorporate cost accounting and a management information system	Vodokanal	December 31, 1997
4. Review services that may be contracted out or privatized	Vodokanal	December 31, 1997
5. Publicize and implement a loss reduction program in the Vodokanal system and in apartment buildings	Vodokanal and City	December 31 1997
6. Implement a cost savings program where employees who develop cost savings share in the cost savings	Vodokanal	December 31, 1997
7. Establish an independent tariff approval body in order to make the tariff approval process transparent and more accessible	City, and Republic governments	December 31, 1998
8. Meter at the whole building level and evaluate the feasibility of metering each apartment	City and Vodokanal	December 31, 1998
Financial Reforms		
1. Require the proper and full amount of asset depreciation expense to be included in the tariff	Vodokanal and City	Immediately
2. Request legislation that would include bad debt expense and capital improvements interest cost in the tariff	Vodokanal, Republic and Federal governments	December 31, 1998
3. Decrease the level of bartering and other non-cash transactions. The Vodokanal should have a goal of attaining 50 percent cast receipts by the time a loan is consummated.	Vodokanal	July 1, 1998
4. The City should prepare for increased participation in the income based subsidy program with greater computerization and methods of identifying people qualified for the assistance	City	December 31, 1997

2. INSTITUTIONAL/REGULATORY ASSESSMENT

2.1. Assessment of Institutional/Regulatory Environment

The Votkinsk Vodokanal Enterprise was established in March 23, 1992 as a municipal enterprise (See Appendix I for a copy of the translated Charter). The Charter creates the Vodokanal and lists its duties, responsibilities, authority to act and the limits of control over asset use and disposition. As a juridical person, the Vodokanal can enter into contracts, sue and be sued and generally conduct its business as any other enterprise would. Through its Charter, the Votkinsk Vodokanal has the rights of economic management of city-owned assets and as such can incorporate depreciation for these assets in its tariff structure.

Although there is no contractual relationship between the Vodokanal and the City, a draft agreement has been negotiated and is in the process of being ratified. According to Vodokanal officials the relationship with the City has improved since the negotiation of the agreement since it clarifies the Vodokanal's duties, responsibilities and general performance requirements. As in many other Russian vodokanals, the Votkinsk Vodokanal Director has an agreement with the City that was signed in 1992 and runs for five years. A new agreement is being negotiated.

Under an agreement with the Udmurt Republic Association for Housing and Communal Services, Votkinsk Vodokanal provides materials, equipment and technical support to the association. The Association works as an intermediary between communal service providers and the Udmurt Republic Administration. Requirements for financial support through the grant of materials, equipment and technical support from the Vodokanal is significant, in 1996 it amounted to 3.9 billion rubles.

Vodokanal management and supervisors communicate regularly with other vodokanals of the Udmurt Republic to keep abreast of developments in the sector. In doing so, the management shares information, procedures and, occasionally, spare parts with its counterparts in other cities.

2.2. Assessment of Vodokanal Management and Operations

2.2.1. Organization and Management

Votkinsk Vodokanal's organization structure is similar to that of other Russian water and wastewater utilities. Its departments are organized according to function. Recently the Vodokanal added personnel who have separated from a military plant who have demonstrated a higher levels of education and technical proficiency, some even possessing engineering degrees.

2.2.2. Human Resource Management

The Votkinsk Vodokanal employs 354 personnel (one employee for every 268 persons served by the Vodokanal). Of this number, 58 are management and administrative, 86 are involved with the production of water, 82 are involved with wastewater collection and treatment, 54 work in support shops and transportation, and 54 work as emergency water and wastewater line repair

teams. Vacant positions are filled based on a manpower list approved by the City as part of Vodokanal's tariff negotiations. As a result, the Vodokanal must get City Administration approval for additional manpower if the cost for this manpower is to be included into the tariff as production expenses. If it fails to get City Administration approval for personnel additions, the payment of these personnel must come out of profits as opposed to being included into water production costs (*sebestoimost*) of the tariff.

When a vacancy is to be filled, the Director determines who will fill it. There is no board appointed to competitively fill the position. Competition to fill the position does not take place. As long as the City has allowed the position, the Director of the Vodokanal may appoint the candidate he chooses.

In Votkinsk, the average vodokanal employee has worked for the Vodokanal approximately five years. This is a relatively short time frame compared to some of its vodokanal counterparts. Many of the relatively short-term personnel are former military or production enterprise personnel who have been unemployed as a result of the downturn in the economy shortly after the demise of the Soviet Union. The average salary at the Vodokanal is 787,000 rubles per month (511,000 without bonuses), a wage that is somewhat higher than the average in Votkinsk.[5]

2.2.3. Operations and Maintenance

Operational efficiency is negatively affected by the decentralized locations of the various departments of the Vodokanal. The Administration department is in one building while the Chief Engineer and technical department is in an office about a ten minute walk away and the support shops are in yet another location approximately 20 a minutes away from the Administration office. The Vodokanal had begun construction of a new Administration Building to house all office functions but construction has been slowed down by the lack of financing from the City. Pending funding availability, the new office building is anticipated to be completed by the end of 1997.

During 1996, the water distribution system suffered approximately 250 breaks. Three emergency repair teams respond to water breaks and two other teams repair wastewater line break. Response time and efficiency of repair are slowed down by the need to check with the other underground service providers (gas, telephone, heat lines, etc) for the location of their lines so as to avoid service disruption in those services. Determining the location of the other service lines may take up to two days!

Unreliable shut-off valves and the absence of back-flow or check valves add time and cost to the process of routine and emergency repairs. Replacement of faulty or unreliable valves and the installation of check valves is high on the Vodokanal's priority maintenance needs. However, the lack of funds prevents all but the emergency replacement of valves.

Yet another problem in emergency response efficiency is the fact that the Vodokanal does not have rubber tired backhoes. All of its backhoes and other digging equipment are tracked vehicles

[5] According to the Votkinsk Vodokanal director of Economic Planning, the average salary for all enterprises in the city was 629,000 rubles per months as of the end of June 1997.

and can not use paved roads to reach emergency sites. Therefore, backhoes must be loaded on trailers to move from one line break site to the next. Additionally, none of the emergency response teams have leak detection equipment making the detection of leaks much more manpower intensive and very substantially adding to the time it takes to repair leaks that are not visible. Finally, emergency teams do not have adequate line flushing equipment to clean and sanitize lines after a repair has been completed. Not only does the inadequacy of the line flushing equipment add time to the repair process, it also adds uncertainty to the safety of the water. Many customers allow the water to run much longer after a line break to get clear, and safer water (safer in the sense that the chlorine residual will increase as the water runs from the storage facility to the site of the break).

2.2.4. System Description

Water for the Votkinsk Vodokanal is abstracted from surface intakes from a large man-made lake created by damming the river that runs through the city. Additionally, the Vodokanal operates 23 artesian wells. The total daily production of lake intakes and wells is approximately 36,000 cubic meters of water per day. There are three water storage holding tanks with a total storage capacity of 6,800 cubic meters of water.

One hundred fifty-four kilometers of transmission and distribution lines vary in size from 800 millimeters to 200 millimeters in diameter. The system has 348 street taps throughout the city for individual houses and 190 fire hydrants, none of which are metered. Generally, transmission and distribution lines are in very poor condition although much of the system is a little over twenty years old. Vodokanal staff stated that the larger diameter pipes are being weakened by corrosion of the pipes. Also, the construction of the original lines was haphazardly done causing problems with valve and joint leakage.

Previously, the Republic budget provided funding for approximately 4 kilometers of transmission and distribution pipe per year. In 1996, funding diminished to the point that only 600 meters of line replacement was constructed.

Water is treated using a 2-stage chlorination system and coagulation at the water treatment plant. When necessary, flocculent is used to speed up the process of coagulation. During the spring floods, the Vodokanal is forced to reduce the amount of water supplied to the city because of the low temperature of the source water and high content of solids in it. The facilities need modernization because the water treatment plant is using old and outdated equipment and must use more manual labor.

In 1989 construction of the new second stage pumping station and water treatment plant with capacity 49,000 cubic meters of water per day were started. According to Vodokanal officials, the new project is about 35 percent complete. Another 128.3 billion rubles to complete the project. The superstructure is in place, walls, roofs, etc. Vodokanal hopes that construction of the treatment plant will resolve its problems of water supply. The Vodokanal intends to keep the old pumping station as an operating reserve and back up source of water.

Currently water services are not rationed in city. However, several years ago, due to the higher consumption by local industry, water service to some residential areas was rationed at certain times of day.

The Vodokanal serves 91,000 people, which consume about 74 percent of the total consumption, or 26,640 cubic meter a day or about 290 liters per person per day. Information about system loss is not available. Even though production of water may be estimated roughly by the outdated water meters using pump specifications, this process of extrapolation will not provide an accurate estimate of losses since there is no metering at the consumption end.

Not being able to determine accurately the system's losses creates a dilemma for the Votkinsk Vodokanal. The Vodokanal has started a new water treatment plan, using production and consumption parameters that have changed very substantially, since many of the production enterprises that were the larger water consuming customers have drastically reduced or terminated their operations and consumption of water. Therefore, the Votkinsk Vodokanal currently faces the problem of whether to complete the new larger water treatment plant, or to modernize the existing water treatment plant, possibly expanding its capacity but not to the extent that the original new plant would have expanded capacity. Given the current estimate of consumption and the fact that demand will likely not increase rapidly, investments in modernization of the existing water treatment plant along with the water conservation measures may be sufficient to avoid completing the new, much larger plant.

The Votkinsk wastewater transmission and distribution system has about 77 kilometers of pipe that vary from 150 to 1200 millimeters in diameter. There are three sewer pumping stations in the city and one main sewer pumping station with capacity 50,000 cubic meters of wastewater per day approximately two kilometers from the treatment plant outside the City. In 1996 there were four major breaks in the wastewater system lines.

Votkinsk has no storm drainage system in the city and, therefore, no storm drainage flowing into the wastewater treatment plant. During the heavy rains the inflow of the wastewater into the sewer lines increases, primarily from storm water entering the sewer pipelines trough the lids of the manholes or infiltrating trough the ground at the pipe joints and other places. The sewer treatment plant has an existing capacity of about 30,000 cubic meters per day operates at its maximum capacity which during a rains. There are no meters installed at the sewer treatment plant. However, operators of the facility estimate the amount of flow knowing the cross-section of the channel (so called Porshal Channel) and measuring the flow rate of the wastewater as it flows on its way to the grit removal and aeration chambers. Sludge extracted from the wastewater treatment process is deposited at a nearby storage area. According to Vodokanal's officials, although the sludge contains a certain amount of heavy metals, the local Environment Committee allows the sludge to be used for agricultural purposes. During 1996, the Vodokanal did not pay any fines for effluent violations.

There are no facilities to test and repair water meters in Votkinsk. The Vodokanal and its customers usually test and repair water meters in Izhevsk, which is 80 kilometers from Votkinsk.

The Vodokanal must test water meters at the second stage pumping station level per Federal regulations. These meters are certified by the state control agency in Izhevsk. Primary pump meters can not be checked because there is no back-up or alternate flow system. Checking these meters would require the shutting down of the water supply system.

Presently, no water meters exist in the residential buildings. Although the Russian construction code calls for metering cold water at the building level, this requirement has not been met in Votkinsk. Votkinsk has 91 individual houses equipped with water meters. Also, there are diaphragm type water meters at the 20 out of total 23 heating substations for the cold water which is used to provide domestic hot water.

Although production enterprises and the private houses have meters, there is no officially registered company in Votkinsk, which installs water meters.

2.2.5. Finance and Administration

Of the 98,000 residents living in Votkinsk, about 57,000 people or 54 percent of the total Votkinsk population resides in apartments served by the municipal housing maintenance company, KommunServis. Another 14,000 residential customers are served by the municipal company Uyut, another 13,000 people reside in the enterprise housing and about 7,000 people reside in the individual housing. The rest of the population, 7,000 people, are not served by Vodokanal, but have their own wells.

2.2.6. Subsidiaries

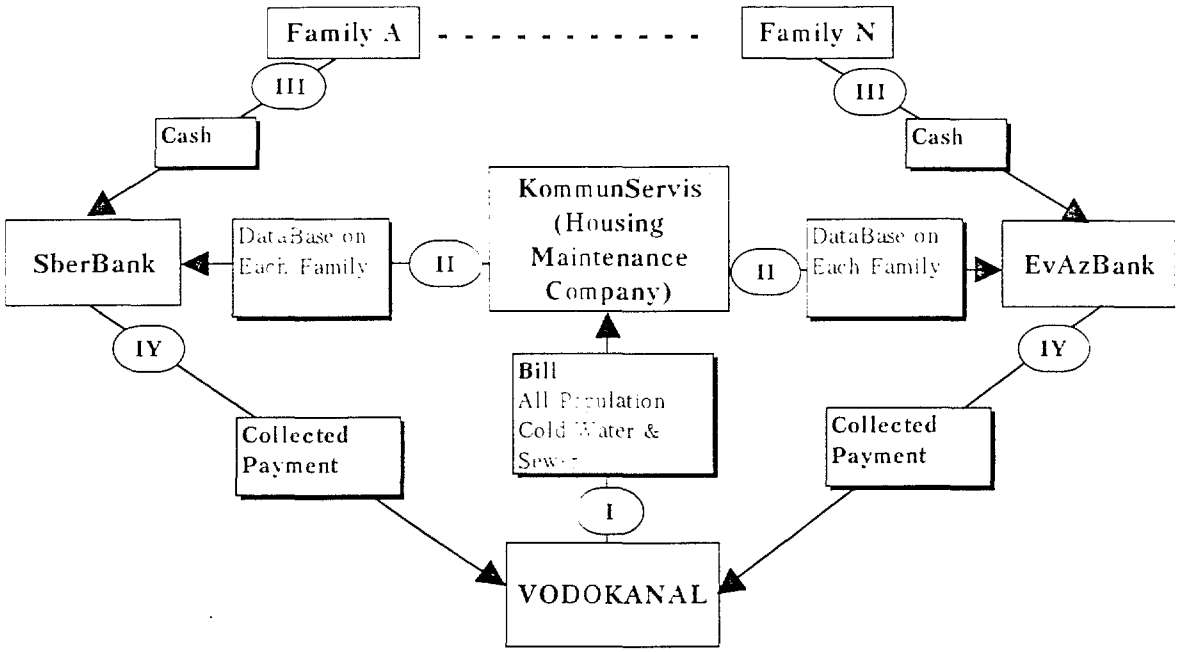
In 1995, the Votkinsk Vodokanal created a wholly owned subsidiary or "affiliated company", Ekovodsnab, empowered to collect fines from enterprises who violated environmental standards. Its three person staff levy fines on production enterprises and collect payments for environmental violations.

2.3. Billing and Collecting

At the start of 1997, the Vodokanal set up an agreement with a bank and housing maintenance company for collection of communal services payments from population residing in apartments served by the KommunServis. Under this agreement, KommunServis supplies its residential customer database to the bank and the bank collects money from residential customers. Each week the bank transfers the amount collected to the Vodokanal. This procedure was adopted by Votkinsk Mayor Resolution #1556 dated December 18, 1996, after numerous complains from the Vodokanal that the municipal housing maintenance company, KommunServis, which previously had been collecting money from the Vodokanal's residential customers, failed to forward collections to the Vodokanal. According to KommunServis information, the 1996 collection rate for the population residing in its housing was 68%, a collection rate much lower than that 90% of billed that was collected by the other housing maintenance companies.

13

Figure 1. Current Billing and Collection Procedure



The billing and collection process shown in Figure 1 implements Resolution No. 1556 by removing intermediaries to make the collection much more efficient. Through this process, the Vodokanal receives payments directly from residential customers. Since two banks are participating in the process, bill payment is much more convenient for residential customers. The process also creates competition between the banks, thus, keeping the service fee that the banks charge as low as possible. This bill collection model could become a model for other Russian vodokanals to follow, especially if they have evaluated the cost of collecting directly from the residential customer and decided that the expense is too great. Currently all of the banks in Votkinsk charge a two percent commission to the Vodokanal for collecting Vodokanal customer payments.

One problem of this procedure is that residential customers are not billed monthly. This has resulted in late fees and angered many of the residential customers. Since the new collection procedure has just been implemented, many improvements will necessarily be worked out. Monthly billing with due dates is an improvement that would reduce customer complaints.

Residential customers residing in a apartments served by the municipal housing maintenance company Uyut pays their bills to Uyut directly. Uyut then forwards the cash payment on to the Vodokanal. Residential customers living in individual houses pay directly at the cashier window of the Vodokanal. The collection rate for both these groups is approximately 90 percent.

A problem related to the services and collection of payments is the maintenance of the pipes in the residential buildings which are maintained by the housing maintenance companies. The Vodokanal must charge its residential customers for maintenance of the pipes in the buildings and then pay the housing maintenance companies for repairs. It would be more efficient for the

housing maintenance companies to bill for the services themselves. If this is not done, the Vodokanal should consider bidding the maintenance of the meters and take over the response directly. This may also combine into a program of loss reduction in the buildings. However, the current system must be changed to have the responsible party be responsible for the maintenance and charging for that maintenance.

2.4. Accounting And Management Information System

Votkinsk Vodokanal's accounting and administration departments have 12 computers. Although the other four are used by management of the Vodokanal, there is not management information system in place. Cost accounting has not been established but the existing system is not far from being able to implement such an information system if funds were available for additional computers and training. Primarily, a system of work order cost allocation (labor, materials, overhead) to cost centers is needed to make the information system more functional.

To control the quality of wastewater from industrial pre-treatment plants Vodokanal organized a specialized Ecology Affiliate authorized to check the wastewater discharges into the Vodokanal system and collect fines from those enterprises which do not comply with established standards. In 1996, industrial enterprises were fined about 480 million rubles. These funds are forwarded on to the oblast ecological agency that would normally collect the fines.

2.5. Tariff Approval Process

The Votkinsk Vodokanal receives tariff approval from the Head of the City Administration. Prior to the Head of City Administration review, the City Housing and Communal Committee reviews the proposal. The cost items in the tariff structure are adjusted to inflation using the inflation index of the previous quarterly period. The index is established by the Udmurt Republic Statistics Committee. An Udmurt Republic resolution sets the maximum level of profitability (*rentablenost*) that a vodokanal may receive. This profitability level is set at 25 percent.[6] However, this profit level applies only to production enterprises. The tariffs for budget organizations and population customers are set at 10 percent profitability.

Population customers pay only 30 percent of the full cost of water and wastewater services. The other 70 percent is supposed to be subsidized by the City. However, the full amount of the 70 percent subsidy is not always paid by the City which forces the Vodokanal to defer maintenance, and utilize reserve funds for emergencies depleting its contingency funds.

The Votkinsk tariff approval history is presented in Table 1. It should be noted that while cross subsidies exists, these are less than many other Russian Cities because the City has elected to pay the difference between the billed amount and what it is supposed to pay based on City legislative action.

---

[6] Udmurt Republic Government have made this decision based on the Resolution of the Government of RF dated October 7, 1995, #239.

Table 1. Overview of Votkinsk Vodokanal Tariffs (Rubles/m3)

Date of Tariff Change	Residential Customers		Budget Organizations *		Other Customers	
	Water	Sewer	Water	Sewer	Water	Sewer
April 1997	435	409	2,190	2,434	2,488	2,766
January 1997	263	234	2,190	2,434	2,488	2,766
November 1996	263	234	2,190	1,666	1,726	1,892
October 1995	263	234	877	781	1,018	906
June 1995	202	173	671	578	778	468
January 1995	46	46	na	na	na	na

Note: All tariffs include VAT.
* Includes local bakeries.

2.6. Recommendations for Institutional/Regulatory Reform

2.6.1. Organizational Structure and City Relationship

Recommendation 1
Create either a municipal unitary enterprise or open joint stock company where the Director of the Enterprise has as much autonomy as is feasible, given the organizational structure established. Under either corporate option an elected Board of Directors consisting of qualified personnel from the biggest customers of Vodokanal, Vodokanal itself and other relevant organizations or individuals should have oversight over the Vodokanal operations. The Director of the Vodokanal would be answerable only to the Board of Directors.

Estimated time frame: December 31, 1997

Recommendation 2
The City should critically review the current level of services provided by the Vodokanal and define, clarify and strengthen those areas of specific performance that are not clear or need to more clearly assign responsibility and authority. A service agreement should be negotiated that spells out specific performance targets for all major functions of the Vodokanal, sanctions for not meeting performance, financial remuneration to Vodokanal (here full cost recovery including bad debt expense and debt service can be addressed), sanctions for the Vodokanal for non-payment by the city or budgetary organizations.

Estimated time frame: December 31, 1998

Recommendation 3

Establish a goal oriented strategic planning program for upper management and relate it to greater integration of a management information system that is computerized. The fully integrated

management information system should allow management to assess production efficiency, aid in planning and relate it to cost centers based on cost accounting programs.

Estimated time frame: December 31, 1997

Recommendation 4

City and Vodokanal should support the formation of the private companies, for the installation, servicing and testing of water meters.

Estimated time frame: December 31, 1997

2.6.2. Organization Operations

Recommendation 5

Review the entire operations in an effort to out-source as many functions that can be done by competitive bid to increase efficiency and reduce costs, including manpower. The following operations should be considered as candidates for outsourcing: billing and collections, motor pool servicing, meter reading, and water and sewer line maintenance.

Estimated time frame: December 31, 1997

Recommendation 6

The Vodokanal should exclude indoor plumbing costs from its water tariffs. Housing maintenance companies which are doing this job should bill residential customers directly for these services rather than finance them through the Vodokanal. (e.g., KommunServis or Uyut)

Estimated time frame: December 31, 1997

Recommendation 7

Establish a demand management program which will include:

- installation of water meters for budget organizations and billing according to metered consumption
- Installation of water meters in all residential buildings should be undertaken by the City/Vodokanal to determine actual consumption. The installation of water meters should make provisions for those buildings with insufficient water supply (complaints from population, low pressure heads) or excessive water supply (high pressure heads). This way actual consumption by all the residential customers may be more efficiently evaluated in a shorter period of time by averaging the consumption in all buildings. After installation of water meters, the Vodokanal should start billing residential customers according to the average metered consumption.

Estimated time frame: December 31, 1998

Recommendation 8

Currently in Votkinsk gas suppliers shut off the block of a residential building (generally about one fourth of the building) if some of the tenants in this block do not pay their gas bills. This same tactic should be used by the Vodokanal by shutting off the valve on the riser that supplies water to the block of apartments with a common entrance to the building.

Estimated time frame: Immediate--after a reasonable publicity campaign is conducted.

Recommendation 9

Establish a fully integrated cost accounting system and provide training to personnel for its implementation. This system would set up cost centers and monitor the operations of the various departments and cost centers as well as spread overhead to those cost account relating to production or specific functions.

Estimated time frame: December 31, 1998

Recommendation 10

Vodokanal should conduct thorough inventory of the system. All faulty equipment should be identified and a database compiled. All required, but currently not installed, equipment should be listed. Costs of the replacement and new equipment installation should be estimated.

Estimated time frame: December 31, 1997

2.6.3. Tariff Related Reform

Recommendation 11

City of Votkinsk should establish a centralized department to provide targeted subsidies for low income families. The information about the number of families receiving subsidies at a time should be analyzed each time a proposed increase of tariff for population is under consideration. This procedure should help the City and the Republic to provide the social protection required by Federal and Republic legislation.

Estimated time frame: December 31 1998

Recommendation 12

City, together with Udmurt Republic Authorities, should consider establishing a Commission for tariff approval at the Republic level. Specialists in the provision of water and wastewater service should be given voting seats on this commission. This will allow for a professional evaluation of the tariff increase proposals. The Commission should hold public hearing on the proposed tariffs in order to get consumer responses to proposed tariff increases.

3. FINANCIAL REVIEW AND TARIFF STUDY

3.1. Introduction

The Votkinsk Vodokanal has, as many other Russian vodokanals, received reduced levels of financial support from the City, the Oblast and the Federal Government. This has met that a new water treatment plant that has been under construction for eight years has not been completed. Added to this decrease in financial assistance for new construction and rehabilitation, the reduced payments from the portion of the residential customer's bill that the City is to pay and the lack of payment by the Oblast and Federal government for their consumption of water and wastewater services have complicated the Vodokanal's financial management.

In 1996, the collection rate decreased slightly. Added to this negative trend of total collections is the negative trend in cash collections. Cash collections have decreased from 30 percent in 1995 to 18 percent in 1996.

Additionally, the City wants to reduce the tariffs residential customers because the City Administration claims that the tariff was increased too much the last time it was increased. Costs such as installation and testing of meters and providing service to new buildings were included in the tariff and not charged separately to contractors or the owners of the meters. The City is correct in objecting to the adjunct services being included into the basic cost of providing water. The Vodokanal should develop a separate rate schedule for these services and bill them directly to customers requiring the service rather than including these costs in the base tariff.

Although the proposed reduction in tariff has not yet passed, the City plans to approve a new tariff making the charge for water and wastewater service the same for all classes of customers. However, the problem of cross-subsidization from production enterprises to residential customers may not be eliminated because the amount paid to the Vodokanal by the City and residential customers does not cover actual costs of providing residential service.

3.2. 1997 Water and Wastewater Tariffs

Table 2 shows water and wastewater tariffs as of March 1, 1997 for different categories of customers. The tariff history for the past four years is presented in appendices. These tariffs do not contain all the costs that a full cost recovery tariff would require as there is no provision for bad debt expense or debt service interest.

Table 2. Customer Tariffs as of March 1, 1997 -- Includes VAT (Rubles/m3)

Customer Category	Water	Wastewater	Combined
Population	435	409	844
Budget Organizations	2,190	2,434	4,624
Production Enterprises	2,488	2,766	5,254

Source: Votkinsk Vodokanal Chief Economist

Under an agreement with the City, residential consumers receive a 70% subsidy borne by the City Administration. However, due to budgetary problems, the City has been slow in paying this subsidy. As of the end of 1996, the Vodokanal has not received 28% of the subsidy due from the City.

Consumption is not metered except for production enterprises and some budget organizations. Residential units, except individual houses, and most of the budget organizations are billed base on norms. Additionally, water losses are very difficult to quantify since neither consumption nor production are metered. Table 3 presents estimated consumption (billed volume) by customer category.

Table 3. Billed Volume by Customer Category for 1996

Category	Water (000 m3)	%	Sewage (000 m3)	%	Total (000 m3)	%
Population	7,567	68%	8,137	80%	15,704	74%
Industrial Enterprises	3,259	29%	1,553	15%	4,812	23%
Budget Organizations	379	3%	444	4%	823	4%
Total	11,205	100%	10,134	100%	21,339	100%

Source: Votkinsk Vodokanal Chief Economist

3.3. Financial Overview

Cash collections are a crucial element in our review of the revenues of Vodokanals. From Table 4, the decline in the Vodokanal's cash position is evident, cash collection as a percent of billed declined from 30% in 1995 to 18% in 1996. Receivables and their aging are further discussed later in this review.

Table 4. Cash versus Non-Cash Collections as a Percent of Billed (in 000's rubles)

Year	Billed *	Collections							
		Cash	%	Barter	%	Off-set	%	Total	%
1995	7,140,818	2,152,495	30%	3,340,632	47%	0	0%	5,493,127	77%
1996	12,068,964	2,148,051	18%	6,218,356	52%	407,045	3%	8,773,452	73%

Source: Votkinsk Vodokanal * Billed plus beginning balance of accounts receivable to account for prior year payments.

3.3.1. Present Financial Management Policies and Systems

Organization of the Accounting Department

Votkinsk's accounting department is headed by a chief accountant who is assisted by a deputy chief accountant. Each division of the accounting department has an accountant in charge. The divisions of the accounts department are: payroll, payments, warehouse and stores, and tax payments.

Financial Policies and Principles

Accounting

The Vodokanal follows the Russian system of accounting. Accounting codes used by the Votkinsk Vodokanal are the same as those required by the Russian Accounting Regulations. The Vodokanal maintains adequate documentation and formats to comply with Russian Accounting Regulations and other official financial reporting requirements. The accounting reports and financial statements are generally consistent from one year to another. Where they are not, the deviation is pointed out in the relevant sections of our report.

Depreciation

During 1996, the Votkinsk Vodokanal voluntarily reduced its depreciation expense by using a reduction factor of 0.75 applied to normal depreciation coefficients. For example, if the asset coefficient was 2.5% for calculating annual depreciation expense, the Votkinsk Vodokanal used 0.025 times 0.75 resulting in a coefficient of 0.01875. This procedure was applied to the oldest assets of the Vodokanal in all asset categories. The net impact of this procedure was to reduce overall depreciation expense for the year by approximately, 20%. This reduction is shown in the restated financial statements and is footnoted. However, the City Finance Department has issued a request that the Vodokanal use a factor of 0.5 times the Ministry of Finance coefficient for 1997. As of July 1997, the Vodokanal had not carried out this request.

Arbitrary reduction of depreciation in this manner should cease if the Vodokanal is to report accurately the cost of providing water and sewer services. Such reductions do not provide proper matching of costs to the provision of services in the period incurred. Secondly, the practice of reducing the depreciation based on political considerations of tariff level does not help the Vodokanal evolve into a financially sound company.

3.3.2. Financial Systems and Controls

Billing and Collection

Budget organizations and production enterprises are billed directly at 100 percent of the tariff. Residential customers, however, are treated differently according to where they live. Those residential customers living in apartment buildings maintained by the housing maintenance

companies are billed through the housing maintenance companies. The other category of private residential customers living in individual houses. In 1996, the Vodokanal served about 10,000 private residential customers.

The subsidy to residential customers (70 percent of the total amount billed to the residential customer) is calculated at the beginning of the year and submitted to the City Administration. The City Administration in turn submits the claim with their recommendations to the Local Duma for approval. Often the amount approved is different from the claim. Further the amount actually received by the Vodokanal is often substantially less than the amount claimed. Additionally, the part of the approved amount that is not received from the City Administration at the end of the year is not carried over as an accrued receivable in the accounts of the Vodokanal.

As is shown in Table 5, the amount of subsidy not received from the City dramatically increased in 1996 where it equaled 55% of the total subsidy due at the end of the year. This increase suggests the need for the City to adopt a policy of targeted subsidies rather than the general subsidy policy presently employed. Introduction of targeted housing subsidies for needy households is further discussed in the General Chapters to the report.

Table 5. Subsidy from the City Administration for Residential Customers (in 000's Rubles)

	Subsidy	1995	1996
1	Amount claimed at beginning of year	6,745,000	8,559,300
2	Approved by Local Duma	4,545,000	8,600,000
3	Subsidy calculated at the end of the year to take account of tariff increases	7,146,853	10,537,348
4	Amount actually received	5,294,221	4,741,810
5	Amount received as a % of amount calculated at the end of the year	74%	45%
6	Subsidy not reimbursed (3-4)	1,852,632	5,795,538
7	Amount not received as a percent of Year end Calculation (6/3)	26%	55%

Source : Votkinsk Vodokanal accounting records.

3.4. Votkinsk Vodokanal Profit and Loss

Our review has, thus far, looked at Votkinsk Vodokanal's customers and the nature of its operating revenues. In the near-GAAP restatement of financial statements, the Profit and Loss Statement reviews the Vodokanal's overall financial activity for the year. However, many aspects of the Profit and Loss Statement should be noted.

The Votkinsk Vodokanal showed a profit but before depreciation of 3.2 billion rubles in 1995 and 2.2 billion rubles in 1996. Depreciation in 1996 increased by 165 percent primarily due to the revaluation of fixed assets and resulted in a net profit (loss) of minus 2.7 billion rubles.

Table 6. Votkinsk Vodokanal Profit and Loss Statement - 1995 and 1996

Revenues	**1995**	**1996**
Water and Wastewater Revenues	5,470,943	8,549,036
Other revenues	699,889	933,180
Total Revenues	**6,170,832**	**9,482,216**
Subsidies	5,294,221	4,741,810
Total Revenues	**11,465,053**	**14,224,026**
Expenses		
Production Expenses		
Energy	1,656,591	2,747,980
Salary	638,477	1,153,626
Labor costs	324,331	478,593
Chemicals and Materials	381,714	312,139
Repairs (materials and subcontractors work)	1,208,508	886,888
Workshop	1,584,108	2,813,582
G&A	343,840	745,026
Others	2,077,061	3,287,967
Total Production Expenses	***8,214,630***	***12,425,801***
Net profit before depreciation	**3,250,423**	**1,798,225**
Depreciation *	1,838,354	4,876,323
Net profit after depreciation **	***1,412,069***	***(3,078,098)***

* 1996 depreciation expense includes the 20% reduction described in the text.
** Since it had no taxable income, the Vodokanal paid no profits tax in 1996.

3.5. Profit and Loss Statement Analysis

Sales Revenues and Cost of Sales

The increase in water and wastewater revenues is due to the tariff increases in 1995 and 1996. Revenue from water and wastewater in 1996 increased by 56 percent. Net profit before depreciation went down by 32 percent in 1996 as a result of an increase in expenses of 51 percent and the reduction in the subsidy received from the City Administration in 1996. In 1996, there was a net loss after depreciation because of the 165 percent increase in depreciation due to the revaluation of fixed assets. Table 7 gives the major expenses for both years along with the percentage increase in expense categories.

Table 7. Votkinsk Total Expenses for 1995 and 1996

Expense	1995		1996		Increase From 1995 to 1996
	(in 000 Rubles)	Percent of Total	(in 000 Rubles)	Percent of Total	
Salaries	638,477	6%	1,153,626	7%	81%
Taxes and Mandatory Labor Payments	324,331	3%	478,593	3%	47%
Electricity	1,656,591	17%	2,747,980	16%	66%
Materials and Chemicals	381,714	4%	312,139	2%	(18%)
Repairs and maintenance	1,208,508	12%	886,888	5%	(27%)
Depreciation	1,838,354	18%	4,876,323	28%	165%
General & Administration	343,840	3%	745,026	4%	117%
Support Shop Expenses	1,584,108	16%	2,813,582	16%	78%
Other Costs*	2,077,061	21%	3,287,967	19%	58%
Total Expenses	**10,052,984**	**100%**	**17,302,124**	**100%**	**72%**

Source: Votkinsk General Ledger and restated Profit and Loss Statement.

* Includes taxes other than labor mandated and profit tax.

3.6. Balance Sheet Analysis

3.6.1. Accounts Receivable

The total accounts receivable as of January 1, 1997, was 3.3 billion rubles. This amount represents 32% of the total amount billed during the year. Of this amount, approximately 35 million rubles or less than one percent of the total billed is over one year in arrears. The accounts receivable between six months and one year in arrears is 447 million rubles or 4% of the total billed. Accounts receivable less than six months old amounted to approximately 2.8 billion rubles which represents 27% percent of the total billed for 1996. The average collection period in 1996 was three months; which is quite satisfactory when compared with average collection times of Vodokanals of other cities.

3.6.2. Bad Debt Estimate

The Vodokanal does not currently write-off or put into a reserve account a percentage of its accounts receivable as bad debt expense. However, a review of accounts receivables for all customer categories in 1996 shows that only one percent of accounts receivables is over one year old. The accounts receivable for all customer categories over six months is 15%. Discussions with the Customer Service Department of the Vodokanal revealed a very high level of expected payment, though late in receipt. Additionally, since the Vodokanal began direct billing and collecting from population customers, there may be some increase in accounts receivable. PADCO anticipates that three percent of the total amount billed for all customer categories may become overdue. This is a conservative estimate based on recent collection history. The Votkinsk

Vodokanal has been very successful in using barter, offsets and promissory notes to secure payment for outstanding receivables.

The amount of accounts receivable over one year old from production enterprises may be bartered or offset as well as paid in cash. The same is true of the amount owed by the budget organizations. Hence, the amount that is actually considered uncollectible is relatively small. As of December 31, 1996, the amount owed by the population which are over one year old is 4.2 million rubles. As indicated earlier, this should be written off as uncollectible or at the least put into a reserve account as bad debt expense.

3.6.3. Accounts Payable

In 1996, accounts payable (including salaries and social taxes payable) grew by 178 percent from 704 million rubles at the beginning of the year to 1,920 million rubles at the end of the year. Total amount of accounts payable in 1996 is less than six months old. The average settlement period for 1996 is two months which is considered quite satisfactory. There were no profit tax in 1995 and 1996. VAT payable was offset against VAT on materials purchased to a large extent.

3.6.4. Financial Analysis Summary

The Votkinsk Vodokanal could be in a position to be financially self-sustaining based on the tariffs that have been approved as long as 100 percent of the 70 percent subsidy for residential customers is received from the City Administration. However, even the profitability and apparent self-sustain ability may be at stake if the cash collection is not increased. Certainly carrying debt service for loans is questionable when cash receipts are less than our recommended limit of 50 percent of total revenue. The other issues in the financial management and policies of the Votkinsk Vodokanal that we feel need to be addressed and are incorporated in the recommendations listed below.

3.7. Recommendations

3.7.1. Billing and collection system

Recommendation 1

Barter transactions need to be minimized and discouraged. Offsets from State enterprises may be acceptable because they exchange ruble for ruble payments. Bank wire transfers are the legal and the most acceptable method of settlement of accounts in Russia. The Vodokanal should insist that production enterprises (these are non-governmental) pay in cash through wire transfers. Since the housing maintenance units collects the 30 percent billed to population living in units under their control in cash, the Vodokanal should insist that the housing maintenance units pay that 30 percent in cash.

3.7.2. Financial Review Recommendations

Recommendation 2. Segregate costs for different Functions

The Vodokanal includes the cost of installing meters, tap-ins and meter certification in the basic service tariff. These costs need to be segregated into their own functions and the costs developed and charged separate from the basic service charge.

Recommendation 3. Implement an Accounting Computerization System

The Vodokanal should undertake a comprehensive computerization of the management and accounting/financial functions. A cost accounting subsystem could be installed to address basic charges versus services usually charged for separately.

Recommendation 4. Establish an Independent Tariff Approval Body

As was pointed out in the financial analysis above, the City or the Vodokanal changed the depreciation coefficient when it deemed it politically desirable as opposed to the longer term well being of the Vodokanal assets. A separate body should be appointed by the Mayor and Duma to approve, modify, or reject tariff increase proposals base on economic considerations. The body should be composed of professionals who know the water and wastewater process as well as consumer representatives from each consumer category. The tariff increase proposal should go through a hearing process where individuals can state their support or opposition to the increase.

Recommendation 5. Increase Cash Collections

The Votkinsk Vodokanal has received lower levels of cash for its services over the last two years. It should insist on cash payment whenever possible. Where barter must be used for payment, the Vodokanal should impose a surcharge on the payment to cover the carrying costs, discount, if any, and additional administration effort the barter process requires. Conversely, the Vodokanal can offer a discount for cash payment and/or payment within a specified time from the due date of the bill.

There several steps that could improve the cost allocation to the proper services. This steps will ultimately lead to establishing the same cost of services for all categories of the customers. Below are some of them:

- Open a special account to allocate the costs of the other types of the services besides water supply and wastewater treatment.
- Before approving the tariff for next period of time require a mandatory audit of Vodokanal with verification of the cost allocation system.
- Involve in the process of tariff approval and capital repair plan and capital investment plan independent consultants or representative of the customers.
- Develop a cost-saving system in Vodokanal with allocation cost of every single work to a special department.

To improve collections, the process of tariff approval and the process of local budget approval should be linked so that there will be funds available in the budget for subsidies. Financially it is also helpful:

1. To include the funding for *lgoti*.
2. On the basis of contract agreement between Vodokanal and Local Administration to bill Local Administration monthly for the City funding for lgoti due. And keep the unpaid balance as an account receivable carrying forward the debt over multiple years if necessary.
3. On the basis of data for 6 months or 1 year determine the amount of bad debt from the population customer category and include in it into the tariff.
4. In contracts with industrial and budget customers agree that if the customer pays on time or in cash a special discount would be applied to the bill. The amount of the discount should not be greater than the profit component included into the payment. And if the customer pays later a penalty should be automatically applicable to the bill.
5. Set up the equal tariff for different types of the customers. The profit component in the tariff should be the same.

2.7.3. Loan Feasibility

Under current conditions, the Votkinsk Vodokanal is NOT in a position to service debt at any significant level. However, if several criteria are met, the maximum loan level indicated by the PADCO loan feasibility model of $3 million dollars may be borrowed by the Vodokanal. The loan amounts are arrived at by assuming a collection rate approaching 95 percent. Further, the model inherently assumes a 50 percent cash collection rate. More importantly, the interest on the capital investment loan is financed "out-of-profit" thereby imposing a soft ceiling on the Vodokanal's borrowing. Additionally, the profit tax credit is assumed up to the 50 percent of tax when appropriate. These are relatively stringent financial criteria. The Votkinsk Vodokanal currently is not able to satisfy these financial prerequisites. It is recommended that it meet all the following priority action items in order to become financially self-sustaining and capable of carrying the loan projected.

3.8. Loan Potential

Once the Votkinsk Vodokanal meets the priority conditions enumerated above it would be able to borrow for capital improvements. Below a U.S.$3 million loan. However, this loan projection is considered feasible only if the criteria above are met. That is, 50 PERCENT CASH COLLECTION, A TOTAL COLLECTION RATE OF 95 PERCENT AND A BAD DEBT EXPENSE OF 5 PERCENT. With a loan of $3 million, the combined tariff would have to increase to 4,753 rubles per m3 by the year 2004 as shown in Table 10 below.. Since the interest from the loan is "out of profit", the interest outlays would drive the net after tax position of the Votkinsk Vodokanal into negative cash flow for a loan greater than the $3 million. If the allowable profit were 25 percent, the amount the Vodokanal could borrow would be $7 million US dollars. Provided the 95 percent total collection, 50 percent cash collection and 5 percent bad debt expense criteria were met.

Table 8. Estimated Combined Tariff For U.S. $ 3 million loan (in Rubles)

Votkinsk	Estimated Full Cost Recovery			
	1996	1997	2000	2003
Estimated Total Expenses ('000s)	17,586,605	19,878,475	30,232,676	50,444,813
Average Cost per m3	824	932	1,929	3,033
Profitability of 10% of Average Cost M3 (including VAT)	1,137	1,286	2,662	4,186

Table 9. Estimated Combined Tariff for US $7 Million Loan, Assuming Profit Were Increased from 15% to 25% (In Rubles Unless Otherwise Stated)

Votkinsk	Estimated Full Cost Recovery			
	1996	1997	2000	2003
Estimated Total Expenses (in 000 rubles)	17,586,605	19,878,475	30,232,676	56,397,736
Average cost per m3	824	932	1,929	3,391
Profitability and VAT–Average Cost per m3	1,236	1,397	2,894	5,087

Cash Collections

The PADCO review of the sampled vodokanal's financial requirements indicate that the average current level of cash collections (19 percent) is extremely low. Votkinsk's is 18 percent for 1996. In order to make timely debt repayments, and necessary operating expense payments, the vodokanal will need to dramatically increase its level of cash collections to at least 50 percent. The minimum 50 percent cash requirement assumes the following:

- Federal taxes must be paid in cash. Some VAT payable can be paid via offset arrangement.
- Payroll and other mandatory payments must also be made in cash.
- At a minimum, 70 percent of the electricity outlay must be in cash.
- Emergency costs and purchases of items outside the local area would require at least 40 percent cash payment. Expenditures tied to repairs and contracting service are assumed to be at a very minimum 50 percent in cash.
- All debt service (interest plus principle) must be repaid in cash.

Total Collections

The 67 percent level of average total collections is significantly deficient from the PADCO tariff/loan forecast model's 95 percent level of total collections. At 73 percent collection of billed, Votkinsk must significantly increase its collection rate to reach the 95 percent level. Further, the composition, quality and timing of collections is a major limitation in the current vodokanal's financial environment. As a result, it is recommended that the Votkinsk Vodokanal total collections improve to at least 95% before any significant level of borrowing begins.

Profitability

The average level of the sampled group's 1996 profitability is -8.9 percent. Five of the 10 vodokanals showed significant negative profitability. Votkinsk was one of those vodokanals with a negative -18.1 percent actual profit as a percent of expenses. Three of the five showed only modest profitability. The actual financial status of all surveyed utilities is more dire than these profitability percentages indicate. The abovementioned profitability figures are calculated on an accrual billed revenue and billed expense basis. On average, the sampled group of utilities was able to collect 67% of what it billed. None of the vodokanals write-off or have established bad debt reserves. Receivables are on average 4.7 months of billings and expanding. The Votkinsk Vodokanal average is 4 months of billings.

In connection with the Russian Federation Water and Wastewater Project loan implementation schedule, the following table outlines priority actions and implementation time line for each vodokanal to satisfy before long-term borrowing can realistically be initiated:

Table 12.Vodokanal Debt Service Priority Actions and Implementation Time Line

Vodokanal Priority Action	Implementation Date	Corresponding Project Activity
Collect at least 50 percent of all user charges in cash[1]	October 1997	Loan Appraisal
Collect at least 80 percent of all billings.[2]	December 1997	Board Presentation
Bill full-cost tariffs	December 1997	Board Presentation
Meter at least 40 percent of all consumption.[3]	February 1997	Negotiations
Eliminate cross subsidies	August 1998	Loan Effectivity
Expand the Housing and Allowance Subsidy Program ("HASP") to incorporate the participation of at least 20 percent of all local families[4]	August 1998	Loan Effectivity

3.8.1. Reforming Current Tariff-Setting Practices

This section presents a set of recommendations and action plan for the Votkinsk Vodokanal corporate management and local/regional government policy-makers. A preferred tariff structure is described, followed by a description of other water/wastewater related charges that need to be introduced or modified.

Cost-Recovery Pricing

Full cost recovery pricing should be the key of the Votkinsk Vodokanal's pricing policy. Tariffs should reflect the full marginal cost of water and sewerage service delivery and sustainability. Full cost pricing however, cannot be achieved unless bad-debt expenses, unaccounted for water, and the cost(s) of debt service are taken into account. Specific recommendations include:

1. *Identify a portion of accounts receivables as a bad debt expense.* Bad debt expense can initially be calculated by identifying the total value of accounts that are greater than six months or more overdue. Customer profiles should be individually reviewed to determine whether there is an ability to pay the Votkinsk Vodokanal. A certain percentage of the accounts receivables can be calculated and defined as "bad debt expense".[7] The "bad debt expense" percentage (or value) should be incorporated into the normal tariff setting process. Bad debt allowances should be periodically reviewed (i.e., every quarter) to determine which accounts are still collectable and those that should be written off as bad debt. Service to bad debtor's should be turned off.

2. *Improve User Charge Collection and Enforcement.* Some different ways in which collections can be increased include: notifying and then shutting off service for delinquent customers; reducing in-kind payments; establishing automatic payment procedures from the bank account of customers; and, designing and implementing a system of fines.

3. *Development More Efficient Cost Accounting Systems.* At present the Votkinsk Vodokanal has very good fundamental financial information. However, it is apparent that the system is relatively inefficient with respect to understanding the true cost of the individual water or sewerage operations. The Votkinsk accounting department needs to computerize all its financial transaction recording and to implement a cost account system concurrently. A positive byproduct of a more accurate cost accounting system would be the potential for more accurate tariff calculations.

4. *50% Minimum Cash Requirement* The PADCO review of the Vodokanal's financial requirements indicates that the current level of cash collection (about 19 percent) is extremely low. In order to make timely debt repayments, and necessary operating expense payments, the Vodokanal will need to dramatically increase its level of cash collections to around 50 percent. The 50% cash requirement level assumes the following:

    a. Federal taxes must be paid in cash. VAT can be paid via offset arrangement:.

[7] It is recommended that a thorough evaluation of accounts receivable proceed at least every quarter

b. Payroll and other mandatory payments must also be made in cash;
c. At a minimum, 70% of the electricity outlay must be in cash;
d. Emergency costs and purchases of items outside the local area would require cash payment. Expenditures tied to repairs and contracting service are assumed to be at a very minimum 50% in cash, and
e. All debt service (interest plus principle) must be repaid in cash.

5. *Discontinue Barter/Offsets to the Extent Possible.* The increased use of barter offsets is leading to the demonetization of the local (and national) economy. Barter/offsets involve relatively high transaction costs that are currently not being recouped by the Votkinsk Vodokanal. The Votkinsk Vodokanal should discontinue the practice of barter offsets or at the very minimum attach a surcharge for engaging in this practice.

4. EXPLANATORY NOTES TO BALANCE SHEET

The Balance Sheets of Votkinsk Vodokanal as of December 31, 1994 through 1996 were prepared from the relevant Trial Balances. Trial Balance and Balance Sheet are linked through a Connection Table that reflects the regrouping of existing accounts and traceable to the various Balance Sheet lines.

Note 1. Fixed Assets

Fixed assets increased by 111% in 1996 compared to 1994 primarily based on revaluations done according to the Ministry of Finance (MoF) instructions in 1995 and 1996. The revaluation has been done by applying a coefficient for each category of asset that was listed by MoF. A revaluation was long overdue because of significant depreciation of the Ruble in past years. However, due to the above described methodology the total value of the fixed assets might not reflect the actual value of the property. A realistic value of the fixed assets could be obtained if a physical valuation was made by a professional appraiser.

The Votkinsk Vodokanal is now considering the possibility of hiring an appraiser for the physical revaluation of its fixed assets, in order to determine correctly their value. The Votkinsk Vodokanal anticipates that the actual value of its assets is less that was determined through using MoF coefficients. Actual revaluation would also likely decrease depreciation as well, but using financially sound practices to do so. While some of the increase in the fixed asset value during 1994-1996 could be explained by the capital investments done by the Votkinsk Vodokanal with its own funds and grants from the Territorial Production Unity (TPU), the bulk was due to revaluation. The total value of the capital investment in 1994-1996 was 1,654,267,000 rubles.

Note 2. Accumulated Depreciation

Accumulated depreciation increased by 118% in 1996 compared to 1995, based on the revaluations done in 1995 and 1996. The depreciation of fixed assets is straight-line. In 1996, the Votkinsk Vodokanal used an arbitrary depreciation coefficient of 0.25 to decrease the tariff. For 1997, the City Administration suggested using a depreciation coefficient of 0.5.

The arbitrary reduction of the depreciation expense throws all the accumulated depreciation out of synchronization with the matching principle of costs for the period being charged to that period. By using these depreciation coefficients, the City causes the matching principle of accounting to be violated. As noted in the previous section, a better approach would be to conduct a physical valuation of the assets as a means of estimating the true value of the Vodokanal's assets.

Note 3. Capital Investment

The balance of this account represents the cost of the incomplete construction of the lab building contracted by the Votkinsk Vodokanal. This construction is done with depreciation reserve funds and granted funds by Territorial Production Unit. (See a c 02 and 87-3 respectively). The equipment for installation at these construction sites was previously booked in account 07. As

the equipment becomes operational it is booked to account 08. When the construction is completed, all assets are then recorded in account 01.

Note 4. Intangible assets

The balance of this account represents the value of the apartment that belongs to the Votkinsk Vodokanal and occupied by Vodokanal employees. Although a strange use of "intangible assets", the practice is allowed by Russian Accounting Regulations.

Note 5. Long term financial investment

The Votkinsk Vodokanal owns stock issued by other local companies. When the Vodokanal was making a profit it invested in these stocks. Today the value of this investment is insignificant and does not bring much revenue to the Votkinsk Vodokanal. The Votkinsk Vodokanal retains these shares for political rather than financial reasons.

Note 6. Inventories

The Votkinsk Vodokanal uses a whole set of accounts for keeping track of materials of the different kind (a/c 10-1 through 10-8) facilitating tracking different type of inventory. The Votkinsk Vodokanal does not use LIFO or FIFO valuation methods, rather it uses an approximation of weighted averages. To value inventory, deviations in prices are booked to account 16 and written off against production. In the trial balance all inventory accounts are summarized in account 10.

Note 7. Main production

There are two different accounts for the main production in the Votkinsk Vodokanal: one for water and one for wastewater. These eases tracking costs for each services. Unfortunately the actual cost of the water or wastewater services is hard to determine. Currently the Votkinsk Vodokanal is not interested in keeping costs down. Apparently some of the costs that are booked on these accounts does not really concern water and wastewater production. For example, the costs of other services produced by the Votkinsk Vodokanal are booked to these accounts (hooking the private housing to the utility lines, installation of the water meters, etc.)

Note 8. Auxiliary Production and Workshop

The structure of the accounts used for booking auxiliary production and workshop expenses is quite detailed and includes 15 accounts. Most of the workshop expenses such as pumping station and emergency crews are booked separately for water and wastewater. Others that are harder to track are kept together until the account is closed in the end of the year and then booked to both a/c 20's (50 by 50).

Note 9. Sales of goods and services

Two different accounts are used for booking sales, one for booking water and wastewater sales, and another one for interim booking of the carpentry department's production. Though most of the carpentry production is done only for internal use of the Votkinsk Vodokanal, the accounting department uses this account to determine the productivity of the department.

Note 10. Bank Accounts

The Votkinsk Vodokanal had 3 settlement accounts in different banks. In addition to that there are 2 budgetary accounts (for 96, for 95 it was only one account). One of them is used to pay employees Chernobyl compensation, and another one for transferring Local Administration donations to the Votkinsk Vodokanal. There is also a settlement account of Ekovodsnab an affiliate of the Votkinsk Vodokanal. Ekovodsnab does not have a separate accounting books, therefore all transaction is kept in the Votkinsk Vodokanal books.

Note 11. Settlements with suppliers and contractors

Most of the settlements with suppliers and contractors booked on account 60, though some insignificant amount appears on 76's.

Note 12. Settlements with buyers

Two settlement accounts are used to track all transactions between the Votkinsk Vodokanal and it's customers. One is used to book sales from 7,000 private residential customers, while the other is used for all other customers.

Note 13. VAT

Accounts 68-3 and 68-5 in 1995 repeat accounts for VAT for the purchased materials and services. This is sort of a misunderstanding of standard procedure for booking VAT. In 1996 these accounts were closed. Most of the VAT due is set off against VAT paid for purchases. This is possible because VAT due for the services provided to population calculated on the basis of the existing tariff that is about 20% of the cost. Therefore it is much less than VAT on the purchases, that calculated on the basis of the purchase price.

Note 14. Other Taxes

Separate account for each type of the tax makes the accounting very transparent and easy to read. However, there is no account for Profit Tax. This tax was not paid during last two years, because the Votkinsk Vodokanal claims there was no any profit at all.

Note 15. Settlements with other debtors and creditors

This accounts settlements with the debtors and creditors, that do not concern water and wastewater services provided by the Votkinsk Vodokanal. However some of the materials or

chemicals purchase, that is used in the direct water or wastewater production, might go through these accounts.

Note 16. Profit and Loss

Though called 'Profit and Loss Account', account 80 has little to do with the Vodokanal's actual profit, as the Votkinsk Vodokanal uses all possible ways to minimize profits. Due to the complication of taxation legislation, it is almost impossible to get the actual profits from account 80.

Note 17. Additional Contributed Capital

The cost of the materials or the sum of the money passed to the Votkinsk Vodokanal free of charge is shown on this account. This funds were granted from the Republican Budget and disbursed by the Territorial Production Unit (TPU). Usually TPU provides the Votkinsk Vodokanal with the materials for repairs before the winter season. The prices on these materials are a bit higher than on the market.

APPENDIX I

Section 1. Loan Scenarios and Tariff Requirements

1. Tariff Requirements for a Maximum $3 Million Loan
2. Assumptions related to the Loan
3. Required Tariff and Net Profit Graph
4. Tariff Requirements for a $7 Million Loan
5. Required Tariff and Net Profit Graph for the $ 7 Million Loan

Section 2. Restated Financial Statements and Accompanying Tables

Table 1	Trial Balance for 1995
Table 2	Trial Balance for 1996
Table 3	Connecting Table for Trial Balance and Balance Sheets for 1995 and 1996
Table 4	Balance Sheets for 1995 and 1996
Table 5	Profit and Loss Statements for 1995 and 1996
Table 6	Sources and Uses Statements for 1995 and 1996
Table 7	Revenue Analysis for 1995
Table 8	Revenue Analysis for 1996
Table 9	Accounts Receivable Analysis for 1995
Table 10	Accounts Receivable Analysis for 1996
Table 11	Aging of Receivables Analysis
Table 12	Accounts Payable Analysis for 1995
Table 13	Accounts Payable Analysis for 1996
Table 14	Aging of Accounts Payable
Table 15	Tax Payment Analysis for 1995
Table 16	Tax Payment Analysis for 1996
Table 17	Expenditure Summary for 1995
Table 18	Expenditure Summary for 1996
Table 19	Detailed Labor Costs for 1995 and 1996

Votkinsk Vodokanal

COMPUTATION OF TARIFF LEVELS

Scenario I #3 Million

(in thousands of Rubles)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Production Expenses:									
Personnel	2,747,980	3,160,177	3,634,204	4,179,334	4,806,234	5,527,169	6,356,245	7,309,681	8,406,134
Energy	1,632,219	1,877,052	2,158,610	2,482,401	2,854,761	3,282,975	3,775,422	4,341,735	4,992,995
Chemicals and Materials	312,139	358,960	412,804	474,724	545,933	627,823	721,996	830,296	954,840
Repairs	886,888	1,019,921	1,172,909	1,348,846	1,551,173	1,783,849	2,051,426	2,359,140	2,713,011
Taxes Other Than Profit (not Labor rela	2,046,081	2,250,689	2,588,292	2,976,536	3,423,017	3,936,469	4,526,940	5,205,981	5,986,878
Other Expenses	4,800,494	5,520,568	6,348,653	7,300,951	8,396,094	9,655,508	11,103,834	12,769,409	14,684,821
Billing and Collections	284,481	327,153	376,225	432,659	497,558	572,192	658,021	756,724	870,232
Depreciation (including)	4,876,323	5,363,955	6,168,549	7,093,831	8,157,906	9,381,591	10,788,830	12,407,155	14,268,228
Deprec. of Principal Debt Coverage	0	0	0	0	0	2,696,383	3,019,949	3,382,343	3,788,224
Deprec. of 10% VKO Match						269,638	301,995	338,234	378,822
Deprec. of Project VAT						593,204	664,389	744,115	833,409
Total Expenses	***17,586,605***	***19,878,475***	***22,860,246***	***26,289,283***	***30,232,676***	***38,326,802***	***43,969,046***	***50,444,813***	***57,877,594***
Volume of Water / Sewerage Sold (t	21,338	21,338	19,204	15,363	15,671	15,984	16,304	16,630	16,804
Average Cost per m3	824	932	1,190	1,711	1,929	2,398	2,697	3,033	3,444
Full Cost Combined Tariff per 1 m3 (Including 15% Profitability)	948	1,071	1,369	1,968	2,219	2,757	3,101	3,488	3,961
- with VAT	1,137	1,286	1,643	2,361	2,662	3,309	3,722	4,186	4,753
Gross Revenue	***20,224,595***	***22,860,246***	***26,289,283***	***30,232,676***	***34,767,577***	***44,075,823***	***50,564,403***	***58,011,535***	***66,559,233***
Bad Debt Write-Off	*1,011,230*	*1,143,012*	*1,314,464*	*1,511,634*	*1,738,379*	*2,203,791*	*2,528,220*	*2,900,577*	*3,327,962*
Debt Service Interest Payment			773,834	1,733,389	1,941,396	2,174,363	2,435,287	2,727,521	2,454,769
Gross Profitability	***1,626,761***	***1,838,759***	***2,114,573***	***2,431,759***	***2,796,522***	***3,545,229***	***4,067,137***	***4,666,145***	***5,353,677***
Estimated Profit Tax (After Capital Investment Credit)	***284,683***	***321,783***	***370,050***	***425,558***	***489,391***	***620,415***	***711,749***	***816,575***	***936,894***
Net Profit (Including Capital Improvement Interest Credit)	***1,057,395***	***1,195,193***	***871,480***	***272,812***	***365,735***	***750,451***	***920,101***	***1,122,049***	***1,884,291***

Notes:

1 Costs associated with billing and collection services are estimated to be 2% of general population billings.

2 Depreciation to cover principle debt coverage is assumed to be sufficient to carry out principle payments

3 The 10% match of the VKO and the VAT associated with the project expenditures are amortized over the life fo the loan

4 Gross revenue is calculated using the volume sold times the average cost per m3

5 Bad debt write off is assumed to be 5% of the total amount billed

6 An investment tax credit is assumed to be granted This amounts to one-half the profit tax or 18% of profit

Loan Assumptions

Votkinsk Vodokanal — *Scenario I #3 Million*

Vodokanal Revenue	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water Revenue	4,274,518								
Sewerage Revenue	4,274,518								
Other Income	5,674,990								
Ruble Exchange Rate	5100								
Vodokanal Profitability	15%	15%	15%	15%	15%	15%	15%	15%	15%
VAT	20%	20%	20%	20%	20%	20%	20%	20%	20%
10% VK - Matching	10%	10%	10%	10%	10%	10%	10%	10%	10%
Profit Tax	35%	35%	35%	35%	35%	35%	35%	35%	35%
Investment Tax Credit	18%	18%	18%	18%	18%	18%	18%	18%	18%

Expenses	1996 Value	1997	1998	1999	2000	2001	2002	2003	2004
Personnel	2,747,980	15%	15%	15%	15%	15%	15%	15%	15%
Energy	1,632,219	15%	15%	15%	15%	15%	15%	15%	15%
Chemicals and Materials	312,139	15%	15%	15%	15%	15%	15%	15%	15%
Repairs	886,888	15%	15%	15%	15%	15%	15%	15%	15%
Other Expenses	4,800,494	15%	15%	15%	15%	15%	15%	15%	15%
Taxes Other Than Profit (not Labor related)	2,046,081	15%	15%	15%	15%	15%	15%	15%	15%
Depreciation	4,876,323	10%	15%	15%	15%	15%	15%	15%	15%
Billing/Collection Fee	0	2%	2%	2%	2%	2%	2%	2%	2%
Total	17,302,124								

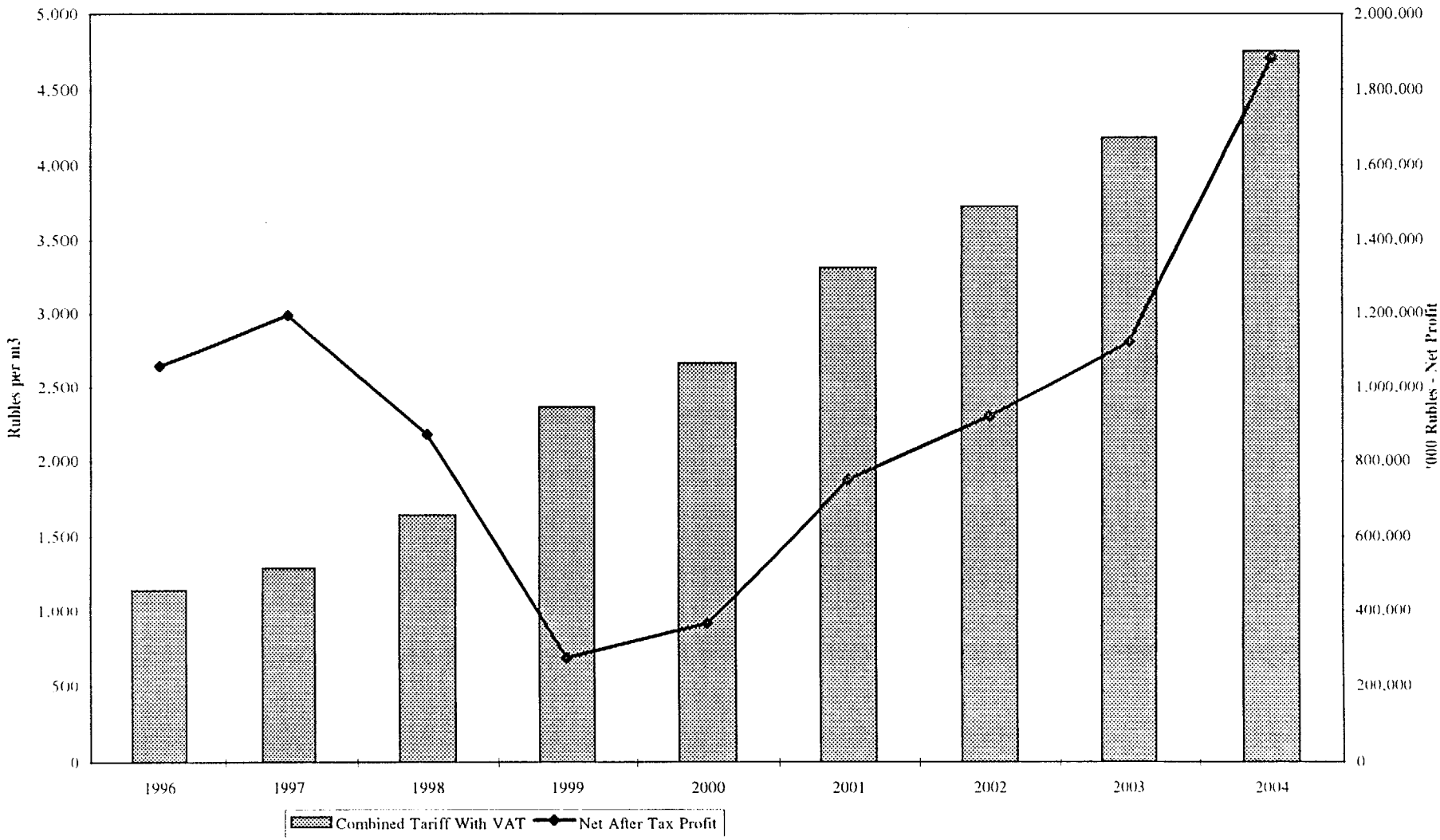
Exchange Rate:									
Ruble Exchange Rate	5,100								
Russian Inflation Forecast	15%	15%	15%	15%	15%	15%	15%	15%	15%
U.S. Inflation Rate Forecast	3%	3%	3%	3%	3%	3%	3%	3%	3%
Ruble Forecast		5,712	6,397	7,165	8,025	8,988	10,066	11,274	12,627

Volume of Water and Sewerage Sold (000 m3)	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water Volume	11,204	11,204	10,084	8,067	8,228	8,393	8,561	8,732	8,906
Sewerage Volume	10,134	10,134	9,121	7,296	7,442	7,591	7,743	7,898	7,898
% Change Water		0%	10%	20%	-2%	-2%	-2%	-2%	-2%
% Change Sewerage		0%	10%	20%	-2%	-2%	-2%	-2%	-2%
Bad Debt Reserve	5%								

Debt Multiplier	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Conversion Factor - '000 Rubles	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Prepared by PADCO, Inc.

Combined Tariff With Net After Tax Profit For Loan of $ 3 Million



Prepared by PADCO, Inc

Votkinsk Vodokanal

COMPUTATION OF TARIFF LEVELS

Scenario II $ 7 Million

(in thousands of Rubles)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Production Expenses:									
Personnel	2,747,980	3,160,177	3,634,204	4,179,334	4,806,234	5,527,169	6,356,245	7,309,681	8,406,134
Energy	1,632,219	1,877,052	2,158,610	2,482,401	2,854,761	3,282,975	3,775,422	4,341,735	4,992,995
Chemicals and Materials	312,139	358,960	412,804	474,724	545,933	627,823	721,996	830,296	954,840
Repairs	886,888	1,019,921	1,172,909	1,348,846	1,551,173	1,783,849	2,051,426	2,359,140	2,713,011
Taxes Other Than Profit (not Labor rela	2,046,081	2,250,689	2,588,292	2,976,536	3,423,017	3,936,469	4,526,940	5,205,981	5,986,878
Other Expenses	4,800,494	5,520,568	6,348,653	7,300,951	8,396,094	9,655,508	11,103,834	12,769,409	14,684,821
Billing and Collections	284,481	327,153	376,225	432,659	497,558	572,192	658,021	756,724	870,232
Depreciation (including)	4,876,323	5,363,955	6,168,549	7,093,831	8,157,906	9,381,591	10,788,830	12,407,155	14,268,228
Deprec. of Principal Debt Coverage	0	0	0	0	0	6,291,560	7,046,547	7,892,133	8,839,189
Deprec. of 10% VKO Match						629,156	704,655	789,213	883,919
Deprec. of Project VAT						1,384,143	1,550,240	1,736,269	1,944,621
Total Expenses	***17,586,605***	***19,878,475***	***22,860,246***	***26,289,283***	***30,232,676***	***43,072,436***	***49,284,156***	***56,397,736***	***64,544,868***
Volume of Water / Sewerage Sold (t	21,338	21,338	19,204	15,363	15,671	15,984	16,304	16,630	16,804
Average Cost per m3	824	932	1,190	1,711	1,929	2,695	3,023	3,391	3,841
Full Cost Combined Tariff per 1 m3									
(Including 15% Profitability)	1,030	1,164	1,488	2,139	2,412	3,368	3,779	4,239	4,801
- with VAT	1,236	1,397	1,786	2,567	2,894	4,042	4,534	5,087	5,761
Gross Revenue	***21,983,256***	***24,848,094***	***28,575,308***	***32,861,604***	***37,790,845***	***53,840,545***	***61,605,194***	***70,497,170***	***80,681,084***
Bad Debt Write-Off	*1,099,163*	*1,242,405*	*1,428,765*	*1,643,080*	*1,889,542*	*2,692,027*	*3,080,260*	*3,524,858*	*4,034,054*
Debt Service Interest Payment			2,063,558	4,044,574	4,529,923	5,073,514	5,682,335	6,364,216	5,727,794
Gross Profitability	***3,297,488***	***3,727,214***	***4,286,296***	***4,929,241***	***5,668,627***	***8,076,082***	***9,240,779***	***10,574,575***	***12,102,163***
Estimated Profit Tax (After Capital Investment Credit)	***769,414***	***869,683***	***1,000,136***	***1,150,156***	***1,322,680***	***1,884,419***	***2,156,182***	***2,467,401***	***2,823,838***
Net Profit (Including Capital Improvement Interest Credit)	***2,143,367***	***2,422,689***	***1,444,780***	***22,049***	***146,694***	***1,589,254***	***1,941,307***	***2,359,809***	***4,143,340***

Notes:

1 Costs associated with billing and collection services are estimated to be 2% of general population billings

2 Depreciation to cover principle debt coverage is assumed to be sufficient to carry out principle payments

3 The 10% match of the VKO and the VAT associated with the project expenditures are amortized over the life fo the loan

4 Gross revenue is calculated using the volume sold times the average cost per m3

5 Bad debt write off is assumed to be 5% of the total amount billed

6 An investment tax credit is assumed to be granted. This amounts to one half the profit tax or 18% of profit

7 Revenues reflect drops in volumes of water and wastewater as a result of efficiencies and metering 1998 10%

Loan Assumptions

Votkinsk Vodokanal — *Scenario II $ 7 Million*

Vodokanal Revenue	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water Revenue	4,274,518								
Sewerage Revenue	4,274,518								
Other Income	5,674,990								
Ruble Exchange Rate	5100								
Vodokanal Profitability	25%	25%	25%	25%	25%	25%	25%	25%	25%
VAT	20%	20%	20%	20%	20%	20%	20%	20%	20%
10% VK - Matching	10%	10%	10%	10%	10%	10%	10%	10%	10%
Profit Tax	35%	35%	35%	35%	35%	35%	35%	35%	35%
Investment Tax Credit	18%	18%	18%	18%	18%	18%	18%	18%	18%

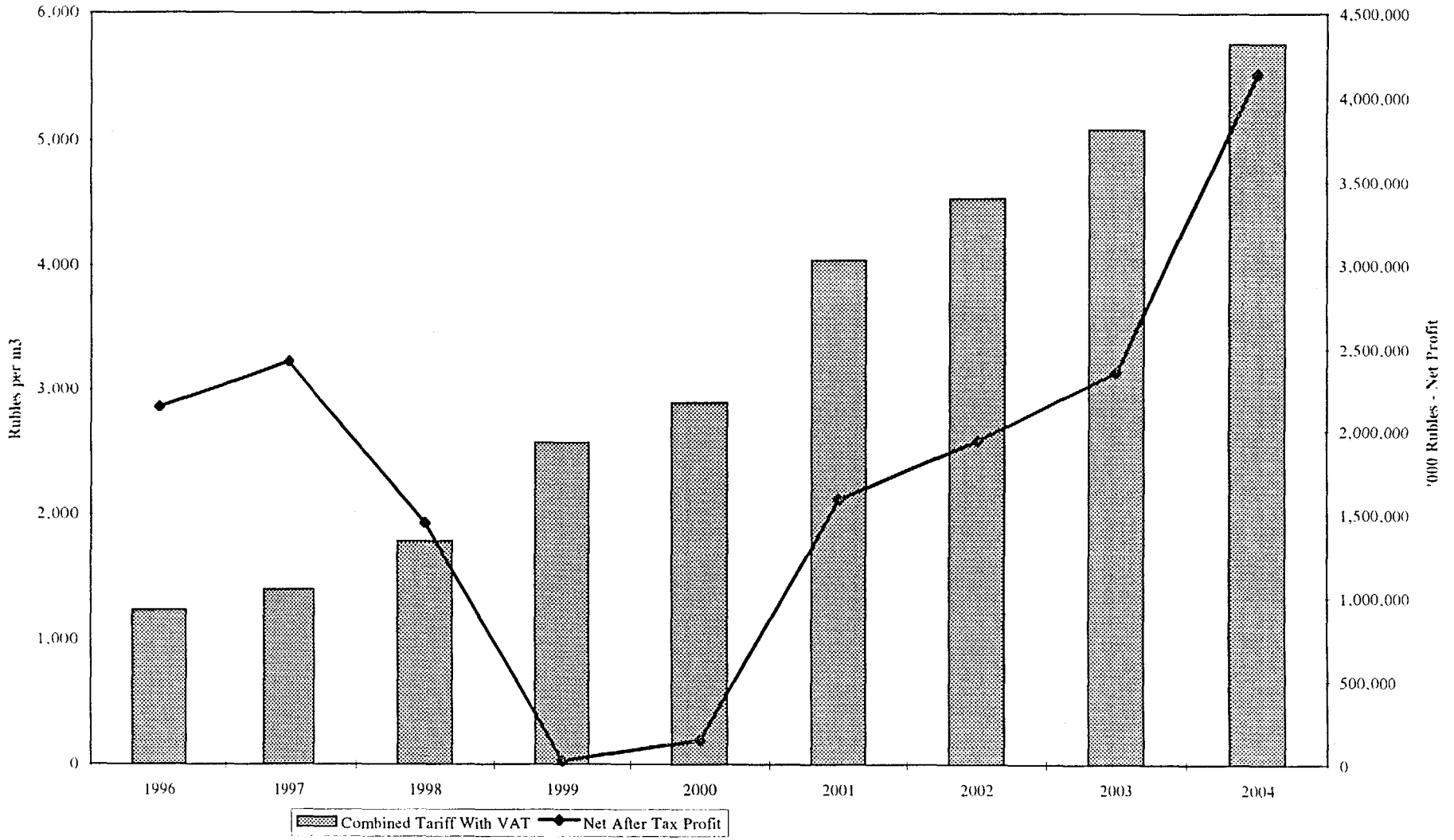
Expenses	1996 Value	1997	1998	1999	2000	2001	2002	2003	2004
Personnel	2,747,980	15%	15%	15%	15%	15%	15%	15%	15%
Energy	1,632,219	15%	15%	15%	15%	15%	15%	15%	15%
Chemicals and Materials	312,139	15%	15%	15%	15%	15%	15%	15%	15%
Repairs	886,888	15%	15%	15%	15%	15%	15%	15%	15%
Other Expenses	4,800,494	15%	15%	15%	15%	15%	15%	15%	15%
Taxes Other Than Profit (not Labor related)	2,046,081	15%	15%	15%	15%	15%	15%	15%	15%
Depreciation	4,876,323	10%	15%	15%	15%	15%	15%	15%	15%
Billing/Collection Fee	0	2%	2%	2%	2%	2%	2%	2%	2%
Total	17,302,124								

Exchange Rate:									
Ruble Exchange Rate	5,100								
Russian Inflation Forecast	15%	15%	15%	15%	15%	15%	15%	15%	15%
U.S. Inflation Rate Forecast	3%	3%	3%	3%	3%	3%	3%	3%	3%
Ruble Forecast		5,712	6,397	7,165	8,025	8,988	10,066	11,274	12,627

Volume of Water and Sewerage Sold (000 m3	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water Volume	11,204	11,204	10,084	8,067	8,228	8,393	8,561	8,732	8,906
Sewerage Volume	10,134	10,134	9,121	7,296	7,442	7,591	7,743	7,898	7,898
% Change Water		0%	10%	20%	-2%	-2%	-2%	-2%	-2%
% Change Sewerage		0%	10%	20%	-2%	-2%	-2%	-2%	-2%
Bad Debt Reserve	5%								
Debt Multiplier	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Conversion Factor - '000 Rubles	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Prepared by PADCO, Inc.

Combined Tariff With Net After Tax Profit For Loan of $7 Million



Prepared by PADCO, Inc

able 1

Votkinsk Vodokanal Trial Balance 1995
(000's Rubles)

Acc.	Description of Account	Initial Balance Debit	Initial Balance Credit	Account Activity Debit	Account Activity Credit	Closing Balance Debit	Closing Balance Credit
01	Fixed assets	16,721,465		51,393,844	95,979	68,019,330	
02	Depreciation of the fixed assets		8,992,211	59,618	28,661,978		37,594,571
04	Intangible assets	-		4,172		4,172	
05	Depreciation of the intangible assets	-			17		17
06	Long-term financial investments (shares)	2,472		2,660		5,132	
07	Equipment for installation	12,482		56,464	44,779	24,167	
08	Capital investment	29,548	-	1,373,736	1,112,557	290,727	-
10	Materials and chemicals	214,266	-	2,231,936	1,930,153	516,049	-
12-1	Low-value and short-life items	26,982		154,494	67,276	114,200	
13	Depreciation of Low-value and short-life items		13,424	2,763	39,801		50,462
16	Materials cost deviations	15,580		103,237	81,944	36,873	
19	VAT & special tax for fulfilled services & mate	45,185	-	1,205,594	1,105,988	144,791	-
20-1	Main Production Water	-		5,684,748	5,684,748	-	-
20-2	Main Production Waste Water	-		4,673,575	4,673,575	-	-
23	Auxiliary Production	-		33,087	33,087	-	-
25-1*	Direct water workshop	-	-	609,393	609,393	-	-
25-2*	Direct wastewater workshop	-	-	401,880	401,880	-	-
25-3*	Other workshop	-	-	949,285	949,285	-	-
26	General Maintenance Expenses	-		346,722	346,722	-	-
31	Expenses of the future periods	2,415		18,980	16,298	5,097	
40	Finished products	332		32,798	32,566	564	
46-1	Sales of goods and services	-		11,241,670	11,241,670	-	-
46-2	Sales of finished products	-		32,589	32,589	-	-
47	Sales and other disposition of fixed assets	-		93,080	93,080	-	
48	Sales of other assets	-		211,167	211,167	-	
50	Cash in cash desk	1,991		2,110,101	2,110,224	1,868	
51	Settlement account Euroasiabank	368,028		4,821,210	5,042,445	146,793	
51-1	Sberbank	-		327,145		327,145	
53	Budgetary account	-		4,899,112	4,899,112		
54	Current account (Ecovoksnab)	10,686	-	199,034	209,720	-	
55	Settlement account (Izhladabank)	-	-	835,919	834,640	1,279	
57	Transfers in the process	-	-	3,106,271	3,106,271	-	-
58	Securities	220,000		230,000	450,000	-	
60	Settlements with suppliers and contractors	43,219	476,932	10,162,211	10,050,964	173,618	496,084
62-1	Goods shipped to the enterprises	471,302	-	6,490,226	5,340,318	1,621,210	
62-2	Settlement with buyers (population)	6,532	0	173,711	153,762	26,481	
65	Property and individual insurance settlement	-	342	35,542	35,200	-	-
67-1	Tax for the road users	-	9,189	63,325	85,381		31,245
67-4	Tax from the vehicles owners	-	64	875	811		

ble 1

Votkinsk Vodokanal Trial Balance 1995
(000's Rubles)

Acc.	Description of Account	Initial Balance Debit	Initial Balance Credit	Account Activity Debit	Account Activity Credit	Closing Balance Debit	Closing Balance Credit
67-5	Property tax	-	-	-	42		42
68-1	Wage Excess Tax	-	37,650	**98,047**	80,702		20,305
68-2	Income tax	-	6,261	**176,578**	168,415	1,902	-
68-3	VAT for fulfilled services	-	-	**299,259**	299,259	-	-
68-4	Settlement with the budget for VAT	**30,632**	-	**1,284,375**	1,229,958	85,049	-
68-5	Special tax for fulfilled services 3%	-	-	**37,917**	37,917	-	-
68-6	Settlement with the budget for Special Tax	**3,413**	-	**113,604**	105,188	11,829	-
68-7	Transportation tax	-	577	**13,536**	14,966		2,007
68-8	Land tax	-	-	**24,799**	24,799	-	-
68-9	Tax for environment pollution	-	-	**559**	1,282	-	723
68-10	Tax for children food	-	168	**4,097**	4,964	-	1,035
69-1	Social Insurance Settlement	-	6,214	**82,593**	84,522	-	8,143
69-2	Pension Fund Settlements	-	15,593	**391,293**	433,876	-	58,176
69-3	Medical Insurance Settlements	-	2,076	**48,750**	53,878	-	7,204
69-4	Employment Fund Settlements	-	1,153	**27,072**	29,932	-	4,013
70	Wage Settlements	-	29,837	**1,653,764**	1,693,947	-	70,020
71	Settlements with accountable persons	**507**	60	**264,158**	263,983	839	217
73	Loans	**1,346**	5	**23,005**	13,091	11,255	
76	Settlements with debtors and creditors	**13,201**	4,283	**208,278**	217,196	-	-
76-1	Settlements for the executive papers	-	-	**8,460**	10,608	-	2,148
76-2	Settlements with debtors and creditors	-	-	**202,348**	88,399	**113,949**	-
76-3	Wages on deposit	-	-	**3,907**	4,177	-	270
76-6	Settlements with other debtors and creditors	-	-	**34,923**	37,121	-	2,198
80	Profit and Loss	-	-	**1,263,923**	1,263,923	-	-
81	Profit Allocation	-	-	**105,573**	105,573	-	-
83	Income of the future periods	-	-	**68,442**	127,719	-	59,277
84	Deficiencies and losses resulting from spoila	-	-	**838**	1,540	-	702
85-1	Authorized Capital	-	11,685	-	-	-	11,685
87-1	Additional Capital from Revaluation	-	8,138,320	**26,855,752**	50,405,529	-	31,688,097
87-3	Additional Capital granted	-	-	**32,652**	269,306	-	236,654
88-3	Saving fund	-	220,727	**10,000**	842,500	-	1,053,227
88-4	Social Fund	-	3,793	-	379	-	4,172
88-5	Consumption fund	-	215,321	**642,346**	612,593	-	185,568
89	Repair fund	-	60,000	**1,174,449**	1,232,120	-	117,671
96-1	Budget financing	-	-	**5,730,761**	5,730,761	-	-
96-2	Ecological penalty	-	-	**309,918**	309,918	-	-
96-3	Subsidies and other budget payments	**4,305**	-	**44,132**	26,841	**21,596**	-
	Total	**18,245,889**	18,245,885	**155,612,282**	155,612,304	**71,705,915**	71,705,933
	Difference		(4)		22		18

ble 1

Votkinsk Vodokanal Trial Balance 1995 (000's Rubles)							
		Initial Balance		Account Activity		Closing Balance	
Acc.	Description of Account	Debit	Credit	Debit	Credit	Debit	Credit
	Difference as %		0.00%		0.00%		0.00%

BEST AVAILABLE COPY

Votkinsk Vodokanal Trial Balance 1996
(000's Rubles)

Acc.	Description of Account	Initial Balance Debit	Initial Balance Credit	Account Activity Debit	Account Activity Credit	Closing Balance Debit	Closing Balance Credit
01	Fixed assets	68,019,330	-	119,126,726	1,320,090	185,825,966	
02	Depreciation of the fixed assets	-	37,594,571	1,121,935	69,198,646		105,671,282
04	Intangible assets	4,172	-	-	-	4,172	
06	Long-term financial investments (shares)	5,132	-	1,900		7,032	
07	Equipment for installation	24,167	-	17,033	41,200	-	-
08*	Capital investment	290,727	-	2,037,206	541,710	1,786,223	-
10*	Materials and chemicals	516,049	-	1,919,595	1,760,682	674,962	-
12-1	Low-value and short-life items	114,200	-	82,767	75,631	121,336	
13	Depreciation of Low-value and short-life items	-	50,462	11,126	18,383		57,719
16	Materials cost deviations	36,873	-	169,516	161,138	45,251	
16-1	Low-value and short-life items cost deviation	-	-	10,279	4,954	5,325	-
16-2	Intercompany off-set	-	-	241,392	241,392	-	-
19*	VAT & special tax for fulfilled services & materials	144,791	-	1,547,824	1,576,205	116,410	-
20-1	Main Production Water	-	-	9,387,613	9,387,613	-	-
20-2	Main Production Waste Water	-	-	8,104,902	8,104,902	-	-
23	Auxiliary Production	-	-	51,184	44,273	6,911	-
25-1*	Direct water workshop	-	-	1,357,061	1,357,061	-	-
25-2*	Direct wastewater workshop	-	-	772,977	772,977	-	-
25-3*	Other workshop	-	-	1,521,299	1,521,299	-	-
26	General Maintenance Expenses	-	-	103,227	103,227	-	-
26-1	General Maintenance Expenses	-	-	48,563	48,563	-	-
26-2	General Maintenance Expenses	-	-	18,983	18,983	-	-
31	Expenses of the future periods	5,097	-	10,058	6,772	8,383	-
40	Finished products	564	-	51,650	47,350	4,864	-
41	Goods	-	-	92,716	92,716	-	-
46-1	Sales of goods and services	-	-	19,048,857	19,048,857	-	-
46-2	Sales of finished products	-	-	44,548	44,548	-	-
46-3	Sales of goods	-	-	84,055	84,055	-	-
47	Sales and other disposition of fixed assets	-	-	1,417,322	1,417,322	-	
48	Sales of other assets	-	-	401,247	401,247	-	-
50	Cash in cash desk	1,868	-	2,894,935	2,889,578	7,225	-
51	Settlement account Euroasiabank	146,793	-	755,169	901,962	-	-
51-1	Sberbank	327,145	-	2,061,399	2,388,544	-	-
53	Budgetary account	-	-	2,147,497	2,147,497	-	-
53-1	Chernobyl compensation account	-	-	6,979	6,979	-	-
54	Current account (Ecovoksnab)	-		147,025	140,216	6,809	-
55	Settlement account (Izhladabank)	1,279	-	13,097	14,376	-	-
57	Transfers in the process	-	-	3,669,158	3,669,122	36	-
58	Securities	-	-	677,000	637,000	40,000	-
60	Settlements with suppliers and contractors	173,618	496,084	11,759,588	12,702,747	19,630	1,285,255
62-1	Goods shipped to the enterprises	1,621,210	-	10,144,644	8,504,282	3,261,572	
62-2	Settlement with buyers (population)	26,481	-	294,990	269,170	52,301	
62-3	Settlement with buyers for goods	-	-	84,055	80,732	3,323	
67-1	Tax for the road users	-	31,245	111,814	188,422	-	107,853
67-2	Territory cleaning	-		14,573	14,540	33	

BEST AVAILABLE COPY

Votkinsk Vodokanal Trial Balance 1996
(000's Rubles)

Acc.	Description of Account	Initial Balance Debit	Initial Balance Credit	Account Activity Debit	Account Activity Credit	Closing Balance Debit	Closing Balance Credit
67-4	Tax from the vehicles owners	-	-	11,225	11,225	-	-
67-5	Property tax	-	42	2,043	1,798	203	-
68-1	Wage Excess Tax	-	20,305	20,304	-	-	1
68-2	Income tax	1,902	-	285,421	301,215	-	13,892
68-4	Settlement with the budget for VAT	85,049	-	1,973,433	1,915,786	142,696	
68-6	Settlement with the budget for Special Tax	11,829	-	13,359	25,188	-	-
68-7	Transportation tax	-	2,007	13,768	26,961	-	15,200
68-8	Land tax	-	-	25,101	43,337	-	18,236
68-9	Tax for environment pollution	-	723	11,839	15,689	-	4,573
68-10	Tax for children food	-	1,035	10,115	9,048	32	-
69-1	Social Insurance Settlement	-	8,143	159,057	146,409	4,505	-
69-2	Pension Fund Settlements	-	58,176	741,467	809,945	-	126,654
69-3	Medical Insurance Settlements	-	7,204	49,566	134,476	-	92,114
69-4	Employment Fund Settlements	-	4,013	41,653	42,860	-	5,220
70	Wage Settlements	-	70,020	2,878,451	2,855,446	-	47,015
70-1	Wages not paid	-	-	146,641	376,551	-	229,910
71	Settlements with accountable persons	839	217	97,201	97,801	124	102
73	Loans	11,255	-	21,100	19,712	12,643	-
76-1	Settlements for the executive papers	-	2,148	32,982	36,915	-	6,081
76-2	Settlements with debtors and creditors	113,949		645,329	345,963	413,447	132
76-3	Wages on deposit	-	270	21,527	23,980	-	2,723
76-4	Settlements for pollution	-		508,334	371,792	136,542	
76-6	Settlements with other debtors and creditors	-	2,198	32,098	31,678	16	1,794
80	Profit and Loss	-	-	10,497,592	7,097,308	3,400,284	-
81	Profit Allocation	-	-	64,608	-	64,608	-
81-1	Profit Allocation	-	-	24,607	-	24,607	-
83	Income of the future periods	-	59,277	543,102	685,562	-	201,737
84	Deficiencies and losses resulting from spoilage of	-	702	1,970	1,178	90	
85-1	Authorized Capital	-	11,685	-	-	-	11,685
87-1	Additional Capital from Revaluation	-	31,688,097	63,060,865	113,755,779	-	82,383,011
87-3	Additional Capital granted	-	236,654	-	3,954,904	-	4,191,558
88-3	Saving fund	-	1,053,227	-	338,850	-	1,392,077
88-4	Social Fund	-	4,172	-	-	-	4,172
88-5	Consumption fund	-	185,568	490,544	400,788	-	95,812
89	Repair fund	-	117,671	721,004	743,332	-	139,999
89-1	Reserve for vacation	-	-	273,759	381,538	-	107,779
96-1	Budget financing	-	-	4,777,804	4,777,804	-	-
96-2	Ecological penalty	-		479,892	479,892	-	-
96-3	Subsidies and other budget payments	21,596	-	52,041	58,772	14,865	-
96-4	Chernobyl compensation	-	-	7,685	6,527	1,158	-
	Total	71,705,915	71,705,916	292,322,971	292,322,972	196,212,426	196,213,586
	Difference		1		1		1,160
	Difference as %		0.00%		0.00%		0.00%

BEST AVAILABLE COPY

Votkinsk Vodokanal Connection of the Trial Balance and Balance Sheet

Code	Name	Dec 31/94 '000 Rubles Dt	Dec 31/94 '000 Rubles Cr	Dec 31/95 '000 Rubles Dt	Dec 31/95 '000 Rubles Cr	Dec 31/96 '000 Rubles Dt	Dec 31/96 '000 Rubles Cr
Main Assets							
01	Fixed assets	16 721 465	-	66 019 330	-	166 826 966	-
02	Depreciation of the fixed assets		8 992 211		37 594 571		105 571 282
	Capital Investment						
07	Equipment for installation	12 482		24 167	-	-	-
08-1	Construction and procurement of fixed assets	29 548	-	-	-		
08-3	Construction of the fixed assets	-	-	290 727	-	1 764 372	-
08-4	Procurement of the fixed assets	-	-	-	-	21 851	-
Subtotal		42.030	-	314.894	-	1 786.223	-
Subtotal Main Assets		7,771.284		30 739.653		61 940.907	
Current Assets							
	Intangible Assets						
04	Intangible assets	-	-	4 172	-	4 172	-
05	Depreciation of the intangible assets	-	-	-	17	-	-
	Subtotal	-	-	4.155	-	4.172	-
	Inventories						
10-1	Raw materials	79 648	-	284 858	-	464 495	-
10-3	Gasoline	80.140	-	18 045	-	20 731	-
10-4	Packaging	12.130	-	11.823	-	13 209	-
10-5	Spare parts	14 877	-	45.162	-	49 283	-
10-8	Construction materials	27.471	-	156.161	-	127 204	-
12-1	Low-value and short-life items	26.982	-	114 200	-	121 338	-
13	Depreciation of Low-value and short-life items	-	13.424	-	50.462	-	57 719
16	Materials cost deviations	15.580	-	36 873	-	45.251	-
16-1	Low-value and short-life items cost deviation			-	-	5.325	-
16-2	Intercompany off-set			-	-	-	-
31	Expenses of the future periods	2.415	-	5.097	-	8 383	-
40	Finished products	332	-	564	-	4 864	-
	Subtotal	246.151	-	622.321	-	802.402	-
	Cash in Bank and at Cash Desk						
50	Cash in cash desk	1.991	-	1.868	-	7 225	-
51	Settlement account Euroasiabank	368.028	-	146 793	-	-	-
51-1	Sberbank	-	-	327.145	-	-	-
53	Budgetary account	-	-	-	-	-	-
53-1	Chernobyl compensation account	-	-	-	-	-	-
54	Current account (Ecovoksnab)	10.686	-	-	-	6.809	-
55	Settlement account (Izhladabank)	-	-	1.279	-	-	-
57	Transfers in the process	-	-	-	-	35	-
Subtotal cash		380.705	-	477.085	-	14.070	-
	Securities						
58	Securities	220.000	-	-	-	40 000	-
Subtotal		220.000	-	-	-	40.000	-
	Accounts Receivable						
62-1	Goods shipped to the enterprises	471 302	-	1 621.210	-	3 261.572	-
62-2	Settlement with buyers (population)	6.532	-	26.481	-	52.301	-
62-3	Settlement with buyers for goods	-	-	-	-	3 323	-
76-2	Settlements with debtors and creditors	-	-	113.949	-	413.447	-
76-4	Settlements for pollution	-	-	-	-	136.642	-
76-6	Settlements with other debtors and creditors	-	-	-	-	16	-
Subtotal A/C Receivable		477.834	-	1.761.640	-	3 867 201	-
	Accounts Receivable VAT on Purchases						
18	VAT & special tax for fulfilled services & materi	-	-	98.974	-	116 410	-
19-1	VAT on materials	16 898	-	-	-	-	-
19-3	VAT on gasoline	3.760	-	-	-	-	-
19-4	VAT on packaging	416	-	-	-	-	-
19-5	VAT on spare parts	2.062	-	(1)	-	-	-
19-7	VAT on equipment for installation	2.492	-	-	-	-	-
19-8	VAT on construction materials	4.450	-	(1)	-	-	-
19-9	VAT on fixed assets	5.770	-	42 184	-	-	-
19-11	Special tax on materials	2.025	-	-	-	-	-
19-12	VAT on low-value assets	3 731	-	1	-	-	-
19-22	Special tax on low-value assets	530	-	-	-	-	-
19-33	Special tax on gasoline	529	-	-	-	-	-
19-44	Special tax on packaging	56	-	-	-	-	-
19-55	Special tax on spare parts	311	-	1	-	-	-
19-77	Special tax on equipment for installation	364	-	-	-	-	-
19-88	Special tax on construction materials	648	-	-	-	-	-
19-99	Special tax on fixed assets	1 341	-	3 633	-	-	-
Subtotal		45.185	-	144.791	-	116.410	-
	Prepaid Expenses						
60	Settlements with suppliers and contractors	43 219	-	173.618	-	19 630	-
Subtotal		43 219	-	173.618	-	19 630	-
	Prepaid Salaries and Mandatory Payments						
69.1	Social Insurance Settlement		-			4 505	-
69.2	Pension Fund Settlements						
69.3	Medical Insurance Settlements						
69.4	Employment Fund Settlements						

BEST AVAILABLE COPY

Votkinsk Vodokanal Connection of the Trial Balance and Balance Sheet

Code	Name	Dec 31/94 '000 Rubles Dt	Dec 31/94 '000 Rubles Cr	Dec 31/95 '000 Rubles Dt	Dec 31/95 '000 Rubles Cr	Dec 31/96 '000 Rubles Dt	Dec 31/96 '000 Rubles Cr
70	Wage Settlements	-	-	-	-	-	-
71	Settlements with accountable persons	507	-	839	-	124	-
73	Loans	1,346	-	11,255	-	12,643	-
Subtotal		1,853	-	12,094	-	17,272	-
	Prepaid Taxes						
65	Property and individual insurance settlements	-	-	-	-	-	-
67-1	Tax for the road users	-	-	-	-	-	-
67-2	Territory cleaning	-	-	-	-	33	-
67-4	Tax from the vehicles owners	-	-	-	-	-	-
67-5	Property tax	-	-	-	-	203	-
68-1	Wage Excess Tax	-	-	-	-	-	-
68-2	Income tax	-	-	1,902	-	-	-
68-3	VAT for fulfilled services	-	-	-	-		-
68-4	Settlement with the budget for VAT	30,632	-	85,049	-	142,696	-
68-5	Special tax for fulfilled services 3%	-	-	-	-	-	-
68-6	Settlement with the budget for Special Tax	3,413	-	11,829	-	-	-
68-7	Transportation tax	-	-	-	-	-	-
68-8	Land tax	-	-	-	-	-	-
68-9	Tax for environment pollution	-	-	-	-	-	-
68-10	Tax for children food	-	-	-	-	32	-
Subtotal		34,045	-	98,780	-	142,964	-
	Total Current Assets	1,448,992	-	3,294,484	-	5,024,121	-
	Total Assets	9,220,276	-	34,034,137	-	86,965,028	-
	Liabilities						
	Accounts Payable						
60	Settlements with suppliers and contractors	-	476,932	-	496,084	-	1,285,255
76-1	Settlements for the executive papers	-	-	-	2,148	-	6,081
76-2	Settlements with debtors and creditors	-	-	-	-	-	132
76-3	Wages on deposit	-	342	-	270	-	2,723
76-4	Settlements for pollution	-	-	-	-	-	-
76-6	Settlements with other debtors and creditors	-	9,189	-	2,198	-	1,794
Subtotal		-	486,463	-	500,700	-	1,295,985
	Taxes Payable						
65	Property and individual insurance settlements	-	342	-	-	-	-
67-1	Tax for the road users	-	9,189	-	31,245	-	107,853
67-2	Territory cleaning	-	-	-	-	-	-
67-4	Tax from the vehicles owners	-	64	-	-	-	-
67-5	Property tax	-	-	-	42	-	-
68-1	Wage Excess Tax	-	37,650	-	20,305	-	1
68-2	Income tax	-	6,261	-	-	-	13,892
68-3	VAT for fulfilled services	-	-	-	-	-	-
68-4	Settlement with the budget for VAT	-	-	-	-	-	-
68-5	Special tax for fulfilled services 3%	-	-	-	-	-	-
68-6	Settlement with the budget for Special Tax	-	-	-	-	-	-
68-7	Transportation tax	-	577	-	2,007	-	15,200
68-8	Land tax	-	-	-	-	-	18,236
68-9	Tax for environment pollution	-	-	-	723	-	4,573
68-10	Tax for children food	-	168	-	1,035	-	-
Subtotal		-	54,251	-	55,357	-	159,755
	Salaries and Mandatory Payments Payable						
69-1	Social Insurance Settlement	-	6,214	-	8,143	-	-
69-2	Pension Fund Settlements	-	15,593	-	58,176	-	126,654
69-3	Medical Insurance Settlements	-	2,076	-	7,204	-	92,114
69-4	Employment Fund Settlements	-	1,153	-	4,013	-	5,220
70	Wage Settlements	-	29,837	-	70,020	-	47,015
70-1	Wages not paid	-	-	-	-	-	229,910
71	Settlements with accountable persons	-	60	-	217	-	102
73	Loans	-	5	-	-	-	-
Subtotal		-	54,938	-	147,773	-	501,015
	Total Liabilities	-	595,652	-	703,830	-	1,956,755
	Capital						
85-1	Authorized Capital	-	11,685	-	11,685	-	11,685
87-1	Additional Capital from Revaluation	-	8,138,320	-	31,688,097	-	82,383,011
87-3	Additional Capital granted	-	-	-	236,654	-	4,191,558
88-3	Saving fund	-	220,727	-	1,053,227	-	1,392,077
88-4	Social Fund	-	3,793	-	4,172	-	4,172
88-5	Consumption fund	-	215,321	-	185,568	-	95,812
89	Repair fund	-	60,000	-	117,671	-	139,999
89-1	Reserve for vacation	-	-	-	-	-	107,779
96-1	Budget financing	-	-	-	-	-	-
96-2	Ecological penalty	-	-	-	-	-	-
96-3	Subsidies and other budget payments	-	-	-	-	-	-
96-4	Chernobyl compensation	-	-	-	-	-	-
	Total Capital	-	8,649,846		33,297,074	-	88,326,093
	Total Capital and Liabilities	-	9,245,498		34,000,904	-	90,282,848
	Difference		25,222		33,233	-	3,317,820
	Difference as %		1.27%		[illegible]		3.67%

BEST AVAILABLE COPY

Votkinsk Vodokanal Balance Sheet Statement (000's Rubles)						
	1994		1995		1996	
Item	Debit	Credit	Debit	Credit	Debit	Credit
Assets						
Main assets						
Fixed Assets	16,721,465		68,019,330		185,825,966	
Less depreciation		8,992,211		37,594,571		105,671,282
Subtotal	*7,729,254*		*30,424,759*		*80,154,684*	
Capital Investments	42,030		314,894		1,786,223	
Subtotal main assets	**7,771,284**		**30,739,653**		**81,940,907**	
Current assets						
Intangible assets	0		4,155		4,172	
Inventories	246,151		622,321		802,402	
Cash in bank and at cash desk	380,705		477,085		14,070	
Accounts Receivable	477,834		1,761,640		3,867,201	
Account Receivable VAT on Purchase	45,185		144,791		116,410	
Financial investments						
Overpaid Taxes	34,045		98,780		142,964	
Prepaid salaries	1,853		12,094		17,272	
Prepaid Expenses	43,219		173,618		19,630	
Securities	220,000		0		40,000	
Subtotal current assets	**1,448,992**		**3,294,484**		**5,024,121**	
Total All Assets	**9,220,276**		**34,034,137**		**86,965,028**	
Liabilities						
Accounts Payable		486,463		500,700		1,295,985
Taxes Payable		54,251		55,357		159,755
Salaries and Mandatory Payments Payable		54,938		147,773		501,015
Total Liabilities		**595,652**	**0**	**703,830**	**0**	**1,956,755**
Capital						
Authorized Capital		11,685		11,685		11,685
Additional Capital from Revaluation		8,138,320		31,688,097		82,383,011
Additional Capital granted		0		236,654		4,191,558
Saving fund		220,727		1,053,227		1,392,077
Social Fund		3,793		4,172		4,172
Consumption fund		215,321		185,568		95,812
Repair fund		60,000		117,671		139,999
Reserve for vacation		0		0		107,779
Budget financing		0		0		0
Ecological penalty		0		0		0
Subsidies and other budget payments		0	0	0	0	0
Chernobyl compensation		0		0		0
Profit/Loss						-3,400,284
Total Capital		**8,649,846**	**0**	**33,297,074**	**0**	**84,925,809**
Total Liabilities and Capital		**9,245,498**	**0**	**34,000,904**	**0**	**86,882,564**
Difference		25,222		-33,233		-82,464
Difference as %		0		0		0

* Intangible assets decreased on the amount of the depreciation a/c 05

** The value of the Low value assets a/c12 decreased on the depreciation, a/c 13

BEST AVAILABLE COPY

Votkinsk Vodokanal Profit and Loss Statement (000's Rubles)		
Revenues	1995	1996
Water and Wastewater Revenues	5,270,943	8,549,036
Other revenues	599,889	933,180
Total Revenues	*6,170,832*	*9,482,216*
Subsidies	5,294,221	4,741,810
Total Revenues	11,465,053	14,224,026
Expenses		
Production Expenses		
Energy	1,556,591	2,747,980
Salary	738,477	1,153,626
Labor costs	324,331	478,593
Chemicals and Materials	351,714	312,139
Repairs (materials and subcontractors work)	1,228,508	886,888
Workshop	1,534,108	2,813,582
G&A	343,840	745,026
Others	2,177,061	3,287,967
Total Production Expenses	*8,214,630*	*12,425,801*
Net profit before depreciation	3,250,423	1,798,225
Depreciation	1,838,354	4,876,323
Net profit after depreciation	1,412,069	(3,078,098)

* Despite making a profit in 1995, Vodokanal has not paid profit tax.

BEST AVAILABLE COPY

Table 6

Votkinsk Vodokanal Sources and Uses of Funds (in '000 rubles)		
Sources	1995	1996
Net profit before depreciation	1,412,069	-3,078,098
Depreciation	1,838,354	4,876,323
Subsidies for utility maintaining	269,306	3,954,904
Other Additions to Capital	0	37,054
Increase in accounts payable	108,178	1,252,925
Total	**3,627,907**	**7,043,108**
Uses		
Increase in main assets	892,336	4,050,857
Increase in accounts receivable	1,588,787	1,972,554
Increase in inventories	376,170	180,081
Increase in cash and bank	96,380	(463,015)
Increase in securities	(220,000)	40,000
Compensations out of profit	642,346	739,638
Total	**3,376,019**	**6,520,115**
Difference	251,888	-522,993
Difference as %	7.46%	-7.43%

BEST AVAILABLE COPY

.ble 7

Votkinsk Vodokanal Revenue Analysis - 1995 (Rubles 000s)					
	1995	Population	Budgetary Organizations	Industries	Others *
+ Billed for Water and Sewerage	6,662,984	3,998,504	384,387	1,998,533	281,560
- Collected	5,493,127	3,088,960	348,774	1,820,359	235,034
	82.44%	*77.25%*	*90.74%*	*91.08%*	*83.48%*
including					
Received in Bank Accounts or Cash	2,152,495	948,897	344,513	662,848	196,237
via off-sets	0	0	0	0	0
via barter	3,340,632	2,140,063	4,261	1,157,511	38,797
Promissory Notes	0	0	0	0	0
= Increase in accounts receivable	1,169,857	909,544	35,613	178,174	46,526

* In 1995 there were four different categories of the customers. In 1996 others and industrial customers were merged.

BEST AVAILABLE COPY

54

.ble 8

Votkinsk Vodokanal Revenue Analysis- 1996 (Rubles 000s)					
	1996	Population	Budgetary Organizations	Industries	Others
+ Billed for Water and Sewerage	10,421,273	6,577,862	644,487	3,198,924	0
- Collected	8,773,452	5,140,743	521,732	3,110,977	0
	84.19%	*78.15%*	*80.95%*	*97.25%*	
including					
Received in Bank Accounts					
or Cash	1,828,051	*931,876*	*473,867*	*422,308*	-
via off-sets	407,045	*398,662*	*883*	*7,500*	-
via barter	6,218,356	*3,540,205*	*46,982*	*2,631,169*	-
Promissory Notes	320,000	*270,000*	-	*50,000*	-
= Increase in accounts receivable	1,647,821	1,437,119	122,755	87,947	0

ıble 9

Votkinsk Vodokanal Accounts Receivable Analysis - 1995 (Rubles 000s)					
	1995	**Population**	**Budgetary Organizations**	**Industries**	**Others**
+ Accounts receivable at the beginning of the period	**477,834**	**327,132**	**2,000**	**106,602**	**42,100**
+ Water and waste water services billed including	**6,662,984**	3,998,504	384,387	1,998,533	281,560
Services	**5,552,265**	3,331,953	320,310	1,665,378	234,624
VAT	**1,110,719**	666,551	64,077	333,155	46,936
Collected	**5,493,127**	3,088,960	348,774	1,820,359	235,034
Collection Rate	82%	77%	91%	91%	83%
- *Received on a bank accounts or cash desk*	**2,152,495**	948,897	344,513	662,848	196,237
- *Received via off-sets*	**0**	0	0	0	0
- *Received via barter*	**3,340,632**	2,140,063	4,261	1,157,511	38,797
- *Received Promissory Note*	**0**	0	0	0	0
- *Received Securities*	**0**	0	0	0	0
= Accounts receivable at the end of the period	**1,647,691**	**1,236,676**	**37,613**	**284,776**	**88,626**

67

Votkinsk Vodokanal Accounts Receivable Analysis - 1996 (Rubles 000s)					
	1996	Population	Budgetary Organizations	Industries *	Other
+ Accounts receivable at the beginning of the period	**1,647,691**	**1,236,676**	**37,613**	**373,402**	**0**
+ Water and waste water services billed including	**10,421,273**	6,577,862	644,487	3,198,924	0
Services	**8,684,046**	5,481,332	537,051	2,665,663	0
VAT	**1,737,227**	1,096,530	107,436	533,261	0
Collected	**8,773,452**	5,140,743	521,732	3,110,977	0
- *Received on a bank accounts or cash desk*	**1,828,051**	931,876	473,867	422,308	0
- *Received via off-sets*	**407,045**	398,662	883	7,500	0
- *Received via barter*	**6,218,356**	3,540,205	46,982	2,631,169	0
- *Received Promissory Note*	**320,000**	270,000	0	50,000	0
- *Received Securities*	**0**	0	0	0	0
= Accounts receivable at the end of the period	**3,295,512**	**2,673,795**	**160,368**	**461,349**	**0**

* Accounts receivable at the beginning of the period for the industrial group of the customers is a sum of these at the end of the previous period for industrial and others, because these two groups were merged.

13

able 11

Votkinsk Vodokanal Aging of Accounts Receivable (Estimate)
As of January 1, 1997

(Rubles 000s)

	> 365 days	181 - 365 days	< 181 days	Total
+ **Accounts receivable**				
Including				
population	4,185	432,249	2,237,352	2,673,786
budget organizations	1,908	13,323	142,514	157,745
industries	29,071	1,739	432,921	463,731
others				0
Subtotal	***35,164***	***447,311***	***2,812,787***	***3,295,262***
Percentage	1.07%	13.57%	85.36%	100.00%
+ **Bad debts (estimate)**				
including				
population	0	0	0	197,336
budget organizations	0	0	0	19,335
industries	0	0	0	95,968
others	0	0	0	0
Subtotal	*0*	*0*	*0*	*312,639*
= **Accounts receivable that with a Good Probability of Collection**				
including				
population	4,185	432,249	2,237,352	2,476,450
budget organizations	1,908	13,323	142,514	138,410
industries	29,071	1,739	432,921	367,763
others	0	0	0	0
Total Accounts Receivable	***35,164***	***447,311***	***2,812,787***	***2,982,623***

53

Table 12

Votkinsk Vodokanal Analysis of the Accounts Payable 1995
(000's Rubles)

Accounts Payable as of 1 1 95	**586,693**				
Electricity	21,387	476,932			
Chemicals and Materials	83				
Others	193,188				
Salaries	30,815				
Labor Taxes	38,395				
Labor Mandatory Payments	25,037				
Non-Labor Taxes	15,514				
Heating	35,811				
In-house utilities	183,057				
Sewerage	18,196				
Repairs	25,210				
Capital Investments	-				
Billed in 1995	**12,461,161**				
Electricity	2,370,198				
Chemicals and Materials	2,513,290				
Others	562,587				
Salaries	1,693,948				
Labor Taxes	98,472				
Labor Mandatory Payments	602,207				
Taxes	280,051				
Heating	425,986				
In-house utilities	2,676,380				
Sewerage	218,352				
Repairs	550,819				
Capital Investments	468,871				
Paid		**Cash**	**Promissory Notes**	**Barter**	**Off-set**
Electricity	2,226,071	1,451,403	-	774,668	-
Chemicals and Materials	2,513,249	2,513,249	-	-	-
Others	808,878	297,708	-	511,170	-
Salaries	1,654,743	1,654,743	-	-	-
Labor Taxes	113,521	34,608	-	-	78,913
Labor Mandatory Payments	549,708	549,708	-	-	-
Taxes	265,455	169,553	-	-	95,902
Heating	442,135	173,722	-	268,413	-
In-house utilities	2,755,696	106,379	-	2,649,317	-
Sewerage	236,548		-	236,548	-
Repairs	567,137	563,876	-	3,261	-
Capital Investments	348,013	222,528	-	125,485	-
Total	**12,481,154**	**7,737,477**	**-**	**4,568,862**	**174,815**
Accounts Payable as of 1/1/96	**697,096**				
Electricity	165,514	496,084			
Chemicals and Materials	124				
Others	77,293				
Salaries	70,020				
Labor Taxes	23,346				
Labor Mandatory Payments	77,536				
Taxes	30,110				
Heating	19,662				
In-house utilities	103,741				
Sewerage	-				
Repairs	8,892				
Capital Investments	120,858				

Note: In the calculations of this table unwrapped balance of the accounts was used. Due to this figures

Votkinsk Vodokanal Analysis of the Accounts Payable 1996
(000's Rubles)

Accounts Payable as of 1/1/96	**697,096**				
Electricity	165,514				
Chemicals and Materials	124				
Others	77,293				
Salaries	70,020				
Labor Taxes	23,346				
Labor Mandatory Payments	77,536				
Taxes	30,110				
Heating	19,662				
In-house utilities	103,741				
Sewerage	-				
Repairs	8,892				
Capital Investments	120,858				
Billed in 1996	**16,872,528**				
Electricity	3,477,051				
Chemicals and Materials	2,402,832				
Others	854,477				
Salaries	2,853,850				
Labor Taxes	50,549				
Labor Mandatory Payments	1,133,690				
Taxes	550,459				
Heating	725,737				
In-house utilities	2,969,122				
Sewerage	524,520				
Repairs	108,218				
Capital Investments	1,222,023				
Paid		**Cash**	**Promissory Notes**	**Barter**	**Off-set**
Electricity	3,178,117	60,391	220,000	1,341,134	1,556,592
Chemicals and Materials	2,275,768	826,998	-	1,448,770	-
Others	681,925	288,726	-	393,199	-
Salaries	2,646,945	2,646,945	-	-	-
Labor Taxes	58,760	13,768	-	-	44,992
Labor Mandatory Payments	991,743	983,360	-	-	8,383
Taxes	436,219	242,972	-	-	193,247
Heating	744,259	-	367,000	377,259	-
In-house utilities	3,072,863	-	-	3,072,863	-
Sewerage	524,520	-	-	524,520	-
Repairs	31,962	-	-	31,962	-
Capital Investments	831,407	49,640	40,000	247,250	494,517
Total	**15,474,488**	**5,112,800**	**627,000**	**7,436,957**	**2,297,731**
Accounts Payable as of 1/1/96	**2,050,480**				
Electricity	419,792				
Chemicals and Materials	127,188				
Others	249,845				
Salaries	276,925				
Labor Taxes	15,135				
Labor Mandatory Payments	219,483				
Taxes	144,350				
Heating	1,140				
In-house utilities	-				
Sewerage	-				
Repairs	85,148				
Capital Investments	511,474				

able 14

Votkinsk Vodokanal Accounts Payable Estimate Aging as of January 1, 1997. (R '000s)				
	>365 days	181-365 days	<181 days	Total
Accounts Payable Total	**0**	**44,856**	**1,875,228**	**1,920,084**
Energy	0	0	464,448	464,448
Personnel	0	0	276,925	276,925
*Taxes (except related to labor)**	0	18056	126,498	144,554
Taxes related to labor	0	0	15,135	15,135
Mandatory payments to non-budgetary funds (except related to the labor)	0	0	64,654	64,654
Mandatory payments to non-budgetary funds related to the labor	0	0	219,482	219,482
Others	0	26800	708086	734,886
Percent of Total Payable	*0%*	*2%*	*98%*	*100%*

* The tax was overpaid via an off-set.

19

ıble 15

Votkinsk Vodokanal 1995 Tax Payment Analysis (000's Rubles)						
Taxes	Balance as of 1/1/95	Billed in 1995	Paid in 1995	Cash	Off-sets	Balance
Profit tax	0	0	0	0	0	0
Federal budget	*0*	*0*	*0*	*0*	*0*	*0*
Oblast budget	*0*	*0*	*0*	*0*	*0*	*0*
Local budget	*0*	*0*	*0*	*0*	*0*	*0*
VAT & Special Tax	-34,045	1,335,145	1,397,978	9,130	1,388,849	-96,878
Federal budget	*(25,534)*	*$1,001,359*	*0*	*0*	*0*	*975,825*
Oblast budget	*(4,085)*	*$160,217*	*0*	*0*	*0*	*156,132*
Local budget	*(4,426)*	*$173,569*	*0*	*0*	*0*	*169,143*
Other taxes except those related to the labor costs *	64	26,253	25,553	25,553	0	764
Federal budget	*64*	*8,852*	*8,193*	*8,193*	*0*	*723*
Oblast budget	*0*	*4,960*	*4,960*	*4,960*	*0*	*0*
Local budget	*0*	*12,442*	*12,400*	*12,400*	*0*	*42*
Taxes related to labor						
Income tax	6,261	168,416	176,578	80,676	95,902	-1,901
Federal budget	*626*	*16,842*	*8,068*	*8,068*		*9,400*
Oblast budget	*0*	*0*	*0*	*0*	*0*	*0*
Local budget	*5,635*	*151,574*	*0*	*72,608*	*95,902*	*0*
Excess Wage Tax	37,650	78,542	95,888	21,070	74,818	20,304
Federal budget	*13,983*	*29,170*	35,612	*7,825*	*27,787*	7,541
Oblast budget	*3,227*	*6,731*	8,218	*1,806*	*6,412*	1,740
Local budget	*20,440*	*42,640*	52,058	*11,439*	*40,619*	11,022
Other taxes related to labor	*745*	19,930	17,633	13,538	4,095	3,042
Federal budget	*0*	*0*	*0*	*0*	*0*	*0*
Oblast budget	*0*	*0*	*0*	*0*	*0*	*0*
Local budget	*745*	*19,930*	*17,633*	*13,538*	*4,095*	*3,042*
Non-budget funds						
Related to labor ***	25,036	602,207	549,708	549,708	0	77,535
Not-related to labor **	9,189	85,382	63,325	63325		31,246

* Land tax and tax for vehicle owners and property tax

** Road development fund

*** Pension fund, employment fund, social security fund, medical insurance fund

62

able 16

Votkinsk Vodokanal 1995 Tax Payment Analysis
(000's Rubles)

Taxes	Balance as of 1/1/96	Billed in 1996	Paid in 1996	Cash	Off-sets	Balance
Profit tax	**0**	**0**	**0**	**0**	**0**	**0**
Federal budget	0	0	0	0	0	0
Oblast budget	0	0	0	0	0	0
Local budget	0	0	0	0	0	0
VAT & Special Tax	**-96,878**	**1,940,974**	**1,986,792**	**16,300**	**1,970,492**	**-142,696**
Federal budget	975,825	1,455,731	1,490,094	0	0	941,462
Oblast budget	156,132	232,917	238,415	0	0	150,634
Local budget	169,143	252,327	258,283	0	206,963	163,187
Other taxes except those related to the labor costs *	**764**	**60,824**	**38,985**	**24,633**	**14,352**	**22,603**
Federal budget	723	28,689	15,655	15,655	0	13,757
Oblast budget	0	8,668	2,544	2,544	0	6,124
Local budget	42	23,467	20,786	6,434	14,352	2,723
Taxes related to labor Income tax	**-1,901**	**301,214**	**178,895**	**0**	**178,895**	**120,418**
Federal budget	9,400	30,121	0	0	0	39,521
Oblast budget	0	0	0	0	0	0
Local budget	0	271,093	178,895	0	178,895	92,198
Excess Wage Tax	**20,304**		**20,304**	**0**	**20,304**	**0**
Federal budget	7,541	0	7,541	0	7,541	0
Oblast budget	1,740	0	1,740	0	1,740	0
Local budget	11,022	0	11,023	0	11,023	-1
Other taxes related to labor	**3,042**	**50,549**	**38,456**	**22,771**	**15,685**	**15,135**
Federal budget	0	0	0	0	0	0
Oblast budget	0	0	0	0	0	0
Local budget	3,042	50,549	38,456	22,771	15,685	15,135
Non-budget funds						
Related to labor ***	**77,535**	**1,133,690**	**991,743**	**983,360**	**8,383**	**219,482**
Not-related to labor **	**31,246**	**188,421**	**111,814**	**111,814**	**0**	**107,853**

* Land tax and tax for vehicle owners and property tax

** Road development fund

*** Pension fund, employment fund, social security fund, medical insurance fund

BEST AVAILABLE COPY

Votkinsk Vodokanal 1995 Operating Expenditure Analysis
(in '000 Rubles)

	Planned			Actual		
	Water	Wastewater	Total	Water	Wastewater	Total
+ Energy	**1,153,824**	588,445	1,742,269	**1,221,034**	435,557	1,656,591
+ Salary	**372,475**	362826	735,301	**339,180**	299297	638,477
+ Labor costs	**148,990**	145,130	294,120	**172,794**	151,537	324,331
+ Chemicals and Materials	**453,862**	0	453,862	**381,714**	0	381,714
+ Repairs (materials and subcontractors work)	**862,575**	83,999	946,574	**764,043**	444,465	1,208,508
+ Workshop	**898,896**	972,570	1,871,466	**713,119**	870,989	1,584,108
+ G&A	**110,832**	110,832	221,664	**171,920**	171,920	343,840
+ Others	**1,319,703**	1,656,584	2,976,287	**920,602**	1,156,459	2,077,061
= Subtotal expenses	5,321,157	3,920,386	9,241,543	4,684,406	3,530,224	8,214,630
+ Depreciation	951,844	828,140	1,779,984	981,056	857,298	1,838,354
= Total expenses including depreciation	**6,273,001**	**4,748,526**	**11,021,527**	**5,665,462**	**4,387,522**	**10,052,984**

able 17

Votkinsk Vodokanal 1996 Operating Expenditure Analysis (in '000 Rubles)						
	Planned			Actual		
	Water	Wastewater	Total	Water	Wastewater	Total
+ Energy	**1,825,545**	945,392	2,770,937	**1,934,848**	813,132	2,747,980
+ Salary	**561,100**	548369	1,109,469	**596,146**	557480	1,153,626
+ Labor costs	**221,635**	216,606	438,241	**246,933**	231,660	478,593
+ Chemicals and Materials	**656,885**	0	656,885	**312,139**	0	312,139
+ Repairs (materials and subcontractors work)	**2,119,800**	1,799,200	3,919,000	**440,740**	446,148	886,888
+ Workshop	**1,851,266**	1,528,074	3,379,340	**1,280,801**	1,532,781	2,813,582
+ G&A	**247,200**	247,200	494,400	**372,513**	372,513	745,026
+ Others	**2,150,500**	2,584,002	4,734,502	**1,407,352**	1,880,615	3,287,967
= Subtotal expenses	9,633,931	7,868,843	17,502,774	6,591,472	5,834,329	12,425,801
+ Depreciation	2,608,171	2,269,099	4,877,270	2,610,519	2,265,804	4,876,323
= Total expenses including depreciation	**12,242,102**	**10,137,942**	**22,380,044**	**9,201,991**	**8,100,133**	**17,302,124**

ble 19

Votkinsk Vodokanal Detailed Labor Costs (Rubles 000s)						
	1995			1996		
Items	Water	Sewerage	Total	Water	Sewerage	Total
Direct labor costs						
Direct labor wages	223,647	241,109	**464,756**	327,141	396,991	**724,132**
Mandatory payments based on wages	79,492	85,513	**165,005**	130,374	156,449	**286,823**
Taxes	12,998	13,984	**26,982**	5,813	6,976	**12,789**
Bonuses	86653	95,632	**182,285**	108,521	128,807	**237,328**
Compensation out of transfers	11,576	11,124	**22,700**	11,702	13,279	**24,981**
Subtotal	**414,366**	**447,362**	**861,728**	**583,551**	**702,502**	**1,286,053**
Workshop labor costs						
Workshop wages	488,441	488,441	**976,881**	887,136	887,136	**1,774,271**
Mandatory payments based on wages	173,737	173,737	**347,473**	352,578	352,578	**705,155**
Taxes	28,409	28,409	**56,818**	15,721	15,721	**31,441**
Bonuses	185,391	185,391	**370,781**	245,302	245,302	**490,604**
Compensation out of transfers	8,321	8,321	**16,641**	12,301	12,301	**24,601**
Subtotal	***884,299***	***884,299***	***1,768,594***	***1,513,038***	***1,513,038***	***3,026,072***
G&A labor costs						
G&A wages	126,156	126,156	**252,311**	177,724	177,724	**355,447**
Mandatory payments based on wages	44,865	44,865	**89,729**	70,856	70,856	**141,712**
Taxes	7,336	7,336	**14,672**	3,160	3,160	**6,319**
Bonuses	72,595	72,595	**145,190**	80,375	80,375	**160,749**
Compensation out of transfers	1,600	1,600	**3,200**	927	927	**1,854**
Subtotal	***171,021***	***171,021***	***342,040***	***248,580***	***248,580***	***666,081***
Subtotal Indirect	**1,055,320**	**1,055,320**	**2,110,634**	**1,761,618**	**1,761,618**	**3,692,153**
Total	**1,469,686**	**1,502,682**	**2,972,362**	**2,345,169**	**2,464,120**	**4,978,206**

66