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**UKRAINE LOCAL ELECTRIC COMPANIES
International Accounting Standards (Task A 1)
L'viv Oblenergo**

**NIS Institutional Based Services Under the Energy
Efficiency and Market Reform Project
Contract No CCN-Q-00-93-00152-00**

**Ukraine Power Sector Reform
Delivery Order No 18**

Final Report

Prepared for

U S Agency for International Development
Bureau for Europe and NIS
Office of Environment, Energy and Urban Development
Energy and Infrastructure Division

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September 25, 1998

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EXECUTIVE SUMMARY

The Scope of Work for this project includes advising Local Electric Companies (LECs) in Ukraine on restatement of their accounts to International Accounting Standards (IAS) Specifically, Task III A (1) calls for

“Support in implementation of IAS, standardized reporting and controls as required by NERC)”

In line with the task, there is a specific deliverable in the LEC section

“1 Model Action Plan on limited IAS, standardized reporting and controls implementation, as required by NERC”

L’viv is one of two Oblenergos for which a restatement of accounts to International Accounting Standards was made for this Delivery Order The comprehensive report in Appendix A explains the methodology employed to accomplish the restatement and presents very detailed financial statements for the consolidated enterprise and each of its operating entities, along with an analysis of the results

L’viv Oblenergo maintains its accounts in accordance with Ukrainian accounting standards, as required for tax purposes and governmental reporting A “limited scope” IAS restatement of L’viv Oblenergo’s accounts was performed This means that a formal audit of transactions was not conducted and that a valuation of plant and equipment and other assets was not performed A full restatement would have taken a considerably longer time and the cost would have been prohibitive The restatement performed was sufficient to determine the overall financial condition of the Oblenergo and its operating units Additional refinement would add little to the overall conclusions on operating performance and financial position An in-depth description of the existing Ukrainian accounting system and the methodology of the restatement is contained in Appendix 1 of the attached report

The restatement was performed by a team of accounting specialists which started by meeting with the senior management of the Oblenergo to understand its overall structure and operations In depth discussions were held with the Chief Accountant to understand the accounting processes and data flows Likewise, considerable time was spent with the Sales Department personnel to understand the recording of revenue and processing of cash and other forms of payment Sales and revenue data is initially recorded at the district (REM) offices and those procedures were observed Operating costs are accumulated at the division (PEM) level so data gathering occurred there Obviously, the majority of time was spent at the headquarters in the offices of the Chief Accountant

Detailed information was obtained from sales and cost ledgers for each of the 3 PEMs which make up the electric distribution and supply portion of the business. Two Combined Heat and Power (CHP) plants make up another significant portion of the entire business. It was important to treat them separately for accounting and reporting purposes since they are not included in the privatization process and investors should be aware of their impact on the financial results. Other smaller subsidiaries are involved in construction, network technology, security, administration and trading.

The source data was gathered at the various entities and then processed and analyzed by the team. It was important that the team be given full access to the financial records in order to make an accurate restatement. The Oblenergo was very cooperative in providing access to personnel and records at the various locations. The necessity to insure that all ledgers and records be found became apparent, however, when the team was analyzing the preliminary results of the restatement. The Oblenergo transfers certain longer term accounts receivable (outstanding debt from customers) and longer term accounts payable (debt for electricity purchased from generators) to a ledger in the "Administration" division. Since the team had information on the approximate level of outstanding debts, it became apparent that receivables and payables were understated. That information was provided by the Oblenergo when the team asked for it and is reflected in the consolidated company balance sheet.

The Report in the Appendix contains the IAS restatement information for the consolidated company and each of the 3 PEMs, 2 CHPs, and the other subsidiaries. Financial statements and an analysis of the results for each quarter of 1996 and 1997 and the first quarter of 1998 are contained therein.

The Oblenergo should continue the process of producing IAS restatements on a quarterly basis. The next logical step would be to acquire software and adopt practices which would allow it to maintain accounting information in accordance with IAS on an ongoing basis, in addition to the mandatory Ukrainian standards.

APPENDIX A

**Ukraine:
Financial
Restatement and
Analysis of Lviv
Oblenergo**

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September 5, 1998

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1. EXECUTIVE SUMMARY

Lviv City is located in the western part of Ukraine and is the capital of Lviv Oblast (one of Ukraine's historical lands). The city was originally established around 1256. Since that time, the area has been in the power of Poland, the Austrian Empire, and, since 1939, the former Soviet Union (FSU). In 1991 it became part of independent Ukraine. With its long history as a major trade center of central Europe and periodic status as a regional capital, Lviv Oblast is one of the most economically developed regions of Ukraine. Along with its traditional sectors such as machine building and fuel industry, the Oblast has developed food production, electronics, chemicals, metal fabrication, and the power supply into major industries.

The power industry originates from 1894 when the first electric streetcar routes were put into operation in Lviv City. Due to extensive industrialization in the western part of Ukraine after World War II, Lviv Oblast became a key industrial and electricity producing area. However, this expansion was abruptly halted with the collapse of the FSU and traditional Soviet All Union Supply Network for exports. Compounding the problem was the economic shock of the rapid rise to international prices of energy, monetary inflation and the continued practice of public administration of the economy. The result was an economic and monetary collapse with resulting high unemployment that was (and continues to be for the whole of Ukraine) one of the worst cases in the FSU. For Lviv, the long term effects of the collapse were less severe (compared to other parts of the Ukraine). Because of its diversified industrial production (mostly light industry), a developed agriculture sector, a much shorter history with Communism (it was part of Poland until the late 1930's) and its natural geographical alliance with Europe, the future economic prospects of the area are good and the region's economy is beginning to stabilize.

The objective of this study is to have a realistic understanding of the actual sales, costs and cash flows that pass through the consolidated company Lviv Oblenergo. The company itself consists of the following individual business units, three electric distribution companies (Lviv, Lviv City and Drohobych), two CHP plants (1 and 2), and divisions working in construction, network technology, security, administration and trading. To accomplish this task four steps are required. First, the collection of basic accounting data from the company. In the case of Lviv, this collection process was made at the most significant business units. Second, the development of a methodology (and computer model) that would systematically convert the basic data collected into Western financial statements. For Lviv, this meant analyzing different reporting formats (a total of seven) and developing a computer algorithm to utilize the different reporting formats to restate in a consistent manner. Third, the actual implementation of the methodology and computer algorithm on the data collected. Finally, the analysis of the individual units and the consolidation of the individual units into a financial

statement of the entire company

However, one would be naive to state that this conversion was totally precise in going from one system to another. Besides some small internal differences in the basic accounting of the two systems, the major factors preventing precise conversion to IAS financial statements would be the attempts at understating cash received or overstating costs (to lower the tax burden) and the lack of standard application of the Ukrainian accounting system. For each chief accountant, a unique application of the rules exists. Although some adjustments have been made to overcome this problem, these two factors represent unsystematic risk that can only be overcome by an expensive and time consuming audit. This was beyond the scope of this study and the objectives of the participants.

In basic economic principles, at some point the marginal cost of doing a task exceeds the marginal benefit derived from the cost. This applies to financial work as well. In the case of this restatement, a limited IAS conversion was performed because it was both cost effective and provided a reasonable estimate of the company's operating performance in a format western trained investor's could understand. The main focus of this restatement was on the profitability of operations with particular emphasis on sales and operating costs. After all, if the company cannot be profitable from its operations, more refined (and expensive) restatement is an academic exercise and a waste of resources that could be more efficiently utilized in supporting improvement in the problem areas of operations. Based on the findings in the following report, Lviv Oblenergo is such a case where the most beneficial and cost effective use of donor resources available to the recipient is supporting management on improving basic operations and not continued refinement of IAS financial statements.

A summary of the financial results from the restatement for the consolidated company is provided below. More detailed analysis of the consolidated company, the consolidation of the electric companies only and each individual unit of the consolidated company are provided within the main body of the text of this report. For details of the methodology used to restate the financial statement into IAS, see Appendix One.

Consolidated Company

Company Analysis

Income Statement

Table 3.1 is the consolidated income statement of the nine most significant components for Lviv Oblenergo. Mainly, two trends exist for sales. The first is seasonal and the second is economic. The seasonal trend is related to the production of the heat plant. The second trend is economic. Total sales for the first quarter of 1996, 1997 and 1998 are 86.9, 83.3 million UAH (4.2% decrease) and 81.1 million UAH (6.4% decrease from 1996). Both heat and electricity are the main reasons for the decline. For 1996, electricity declined by 6.8% and heat decreased by 5.8%. The decline, however, was less severe because other

revenues doubled (although their overall contribution is only 4% of total revenues) For 1997 the financial pattern is different Heat continues its decline by 12% while electricity increased by 2.8% The reason for the overall decline in electricity concerns the rationing that occurred in both 1996 and to a lesser extent in 1997 This constraint on the market was caused by a lack of energy available for generation For heat it was the lack of fuel from the supplier who limited fuel purchases because of lack of payment by the CHPs

As for operating expenses, the largest cost is purchased energy and the general trend and reasons for the trend are the same as for sales The second largest cost is fuel Although sales are declining, fuel purchases increase Although some weather considerations exist (longer winter season), the main reason is the price increased This point is especially true in 1998

Operating costs are highly variable The main reason for this variability is the heat divisions Two reasons exist for this variability First, during the colder months (when the costs rise) the plants are operating while in the warmer months they are idle In addition, CHP-1 added a new network, Sykhivsky, that added to overall costs Relative to sales, operating costs (other than purchased energy) are small and stable Wages are increasing for two reasons During 1996 a change in accounting (tax) policy allowed the company to deduct wage bonuses Prior to this the common practice was to deduct the expense after taxable profit was calculated In addition, through 1996-1998 wages were increased as an adjustment to inflation

Operating income for the period examined has declined from 11.0% of sales in the first quarter of 1996 to negative 11.3% in the first quarter of 1998 From the third quarter of 1996 the consolidated entity has had negative operating income on an IAS basis The explanations for this performance are numerous First, heat production (mainly CHP-2) has consistently had losses In addition, fuel costs have continually increased in relation to sales This results in small gross profit margins from heat and steam Although electricity was either profitable or breakeven for most quarters until the third quarter of 1997 (total profits of 10.9 million UAH), this part of the business also started to lose money after the third quarter The main reason is decreasing gross margin (purchased power to sales) because of increasing total electricity losses

Since debt is near zero, the main financial costs are bad debt¹ Most of the bad debt write-offs come from heat production However, the smaller divisions, such as guards, construction and the network, also contribute to the consistent write-offs of bad debt For the most part, the electricity business supports the rest of the company

Net income follows the same pattern as net operating income, profitable in the early quarters with a gradual decline to losses by the beginning of 1998

¹ Part of the restatement was to calculate an aging of total accounts receivable and payable to estimate the amount of bad debt

Balance Sheet

Table 3 2 is the restated balance sheet for the company. Between the first and third quarter of 1996, gross fixed assets increased six times due to a revaluation of assets. From the beginning of 1996 to the first quarter of 1998, current assets increased from 53.1 million to 130.9 million UAH. Almost all the increase is due to various types of receivables. Cash balances are small relative to other assets. The main reason is low cash collection rates and the transit account that absorbs most of the cash payments from electricity. The little cash the company does receive goes to meeting wages.

Equity had a large rise between the second and third quarters of 1996. This was due to an increase in Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The Reserve Fund was reclassified as Additional Capital at the beginning of 1997. Long term debt was zero for all of the periods examined. As for current liabilities, the total balance tripled during the restatement period. Almost the entire increase in short term liabilities came from payables. Accounts payable increased from 50 million to 127.6 million while wages payable increased from 1.4 million to 6.0 million. The main reason behind these increases is the low cash collection rate.

Statement of Changes in Financial Position

Table 3 3 examines the cash flow from all financial activities during the year. Net income for most years was negative because of poor collection from heat production and increasingly smaller operating margins in both electricity and heat. Other than the revaluation of assets, no adjustments from operating activities contributed significantly.

Comparative Analysis

Tables 3 5 (normalized income statement) and 3 6 (normalized balance sheet) examine the financial relationship between the different business units that make up Lviv Oblenergo. The electric portion of the business dominates sales. Over the nine quarters examined, total sales from electric is approximately 85%. If CHP-1 is included, the total sales accounted for increases to 97%. Lviv City PEM is the business that each year earns the most consistent profit. The main reason is it has the lowest losses of the three electric distribution companies and has a natural advantage with a high concentration of consumers. On the other hand, Drohobych is the poorest performer of the three for the opposite reasons. It has the highest losses. Overall, the heat plants are the least profitable. They consistently either breakeven or experience losses. In some years, the guard business has a large negative impact because of poor collection rate on fees earned.

Since the divisions have very little debt, the main variable determining net income is the amount of bad debt written off. For the most part, the same pattern exists for net income as operating income. The electric PEMs have very little bad debt from delays in collection.

whereas both the heat plants and the smaller divisions consistently experience overdue accounts

Table 3 6 examines the components of the consolidated balance sheet Several interesting points are more easily seen within this table First, the most profitable unit, the Lviv City PEM represents only on average 6 3% of total asset value The reason is it has a natural advantage due to the high concentration of its consumers Second, the largest relative value belongs to Drohobych PEM with on average 32% of the total value of the assets Third, bBoth the CHP plants have large relative values within the company For CHP-1, this is justified since it generates approximately 12% of revenues However, CHP-2 is much less efficient Although its relative total asset value averages 18% of assets, it generates less than 2% of sales By any measure this is a very poor utilization of resources

Conclusions

In the final analysis it is difficult to isolate real company performance from the influence of overwhelming external environmental factors These external factors include a general collapse of the national (and local) economy, hyperinflation from previous periods, higher cost of energy without control to pass the costs on to consumers (fixed purchase and selling tariffs under the prior tariff structure), poor cash collections along with a demonetization of the economy (increasing barter transactions), continued command economy influence from the State sector, increased competition from Independent Energy Suppliers and an antiquated, inefficient power delivery system Under these conditions, the ability for a company to continue operating is a major achievement

However, some conclusions can be made First, the electricity portion of the business has the most promise Although electricity losses continue to rise due to theft and technical losses from poor equipment, it has supported the business for the last two years Even after discounting non-cash transactions, the electric company manages to collect most of its sales In addition, in almost all of the periods in the restatement it either showed a profit or broke even in its operations Lviv City is the best operating PEM while Drohobych is the poorest The main differences are losses and Lviv City's natural advantage through a high concentration of consumers in the city Heat production is a problem area and it will be to the advantage of the Oblenergo to transfer all assets to the city They are inefficient, have poor collection rates on sales and are a poor utilization of resources This point is especially true for CHP-2, which on 14% of total assets generates less than 2% of total sales By any efficiency measure this is poor The security guard division is unprofitable because it cannot collect fees earned The network adjustment provides a valuable service However, collections need to be improved

In addition to the company, the area also has great promise Its location (Western Ukraine) and historical significance are a natural attraction for tourism Its short history with the Soviet structure will give it the same advantage that many central European countries are enjoying It has a broad, well-diversified economic base with a mixture of industrial and

agriculture Several important companies, such as Coke-Cola and Svitoch have operations within the area Finally its close proximity to Europe will eventually lead to investment from these countries and a close export market for local production

2 INTRODUCTION

General Description

The objective of this study is to have a realistic understanding of the actual sales, costs and cash flows that pass through the system of distributing electricity, heat and other related businesses that make up the consolidated company Lviv Oblenergo. The constraints to achieving this goal are directly related to Ukraine's integration within the FSU. First, the accounting system that has been carried over from the past was based on measuring production and actual cash flows for tax collection. Second, as with all FSU countries, the collapse of the FSU brought with it a new currency and inflation from attempts to support the infrastructure and social programs of the past. Finally, the breakup of the FSU caused a complete collapse of any systematic approach to collect and pay other parties beyond either cash transactions or barter.

In addition to the constraints from the past system and current operating environment, the restatement was further complicated by the corporate structure of the company. Lviv Oblenergo is not just one company in a single business, but a consolidated business with several distinct operations. Figure 2.1 summarizes the corporate structure of the company and also provides a framework for the analysis of the entire company. Included within its business scope are three electricity distribution networks (Lviv City, Lviv District and Drohobych), two combined heat and power plants (CHP-1 and CHP-2), a technical network and metering group (Lvivenergonaladka), a security service, a construction group (Lvivenergobud), and a trading company (Zakhidenergotorg). The analysis presented within this report will examine each of these companies as a separate unit (this includes a description of their business, restatement of their accounts and analysis of operating results), and then a consolidation of all business as well as just the electricity distribution part.

A methodology has been developed and implemented to overcome these obstacles². An overview of the restatement methodology is pictured in Figure 2.2. The basis of its implementation is to directly collect the raw data from bookkeepers and accountants. This basic data includes the amount of the product delivered (sales), the cost associated with delivery, and the actual cash inflows and outflows. For the most part a cost was the same in both systems of accounting. It was mainly the system of summarizing these figures that differs under Socialists and International Accounting. After collection, these figures would be then used as the raw material for re-stating the accounts using International Accounting Standards.

² Details are provided in appendix 1

Figure 1 Lviv Oblenergo Business Units

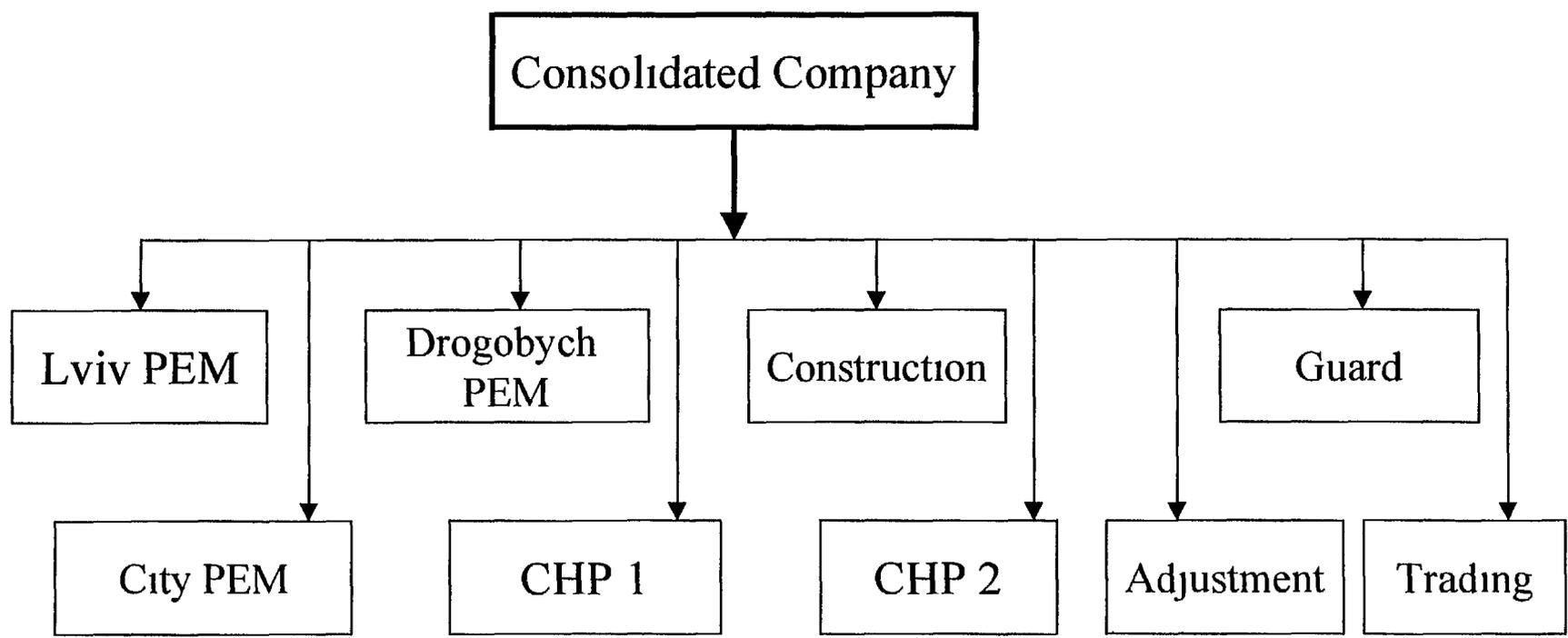


Figure 2

Restatement Model

Data

Sales
Costs
Purchases of Energy/Fuel
Cash In/Cash Out
Ukrainian Balance Sheet

Model

Restatement Model

Output

IAS Balance Sheet
IAS Income Statement
IAS Cash Flow Statement

IAS Assumptions

However, one would be naive to state that this conversion was totally precise in going from one system to another. Besides some small internal differences in the basic accounting of the two systems, the major factors preventing accurate conversion to credible IAS financial statements would be the understating of cash received or overstating costs (to lower the tax burden) and the lack of standard application of the Ukrainian accounting system. For each chief accountant, a unique application of the rules existed. This was especially problematic in Lviv Oblenergo where ten business units were examined and seven different bookkeeping methods were used. This condition existed even though a standard set of reporting practices within the energy sector was supposed to be followed by each company. Although some adjustments have been made to overcome this problem, these two factors represent unsystematic risk that can only be overcome by an expensive and time consuming audit. Especially considering the size and complexity of this business, this was beyond the scope of this study and the objectives of the participants.

By working with the chief accountant, the bookkeeping staff, and the general ledger of the business units for 1996-1998, a thorough understanding of the individual methodologies was achieved at each subsidiary. All of the information was then incorporated into developing a computer algorithm that could systematically restate the company's financial operating position. After the data was collected and reviewed for accuracy, the computer model was run and the results were included within the text of this report.

General Background

Lviv City is located in the western part of Ukraine and is the capital of Lviv Oblast (one of Ukraine's historical lands). The city was originally established around 1256. Since that time, the area has been in the power of Poland, the Austrian Empire, and, since 1939, the former Soviet Union. In 1991 it became part of independent Ukraine. With its long history as a major trade center of central Europe and periodic status as a regional capital, Lviv Oblast is one of the most economically developed regions of Ukraine. Along with its traditional sectors such as machine building and fuel industry, the Oblast has developed food production, electronics, chemicals, metal fabrication, and the power supply into major industries.

For Lviv, the power industry has its origins in 1894 when the first electric streetcar routes were established in the city. Beginning in 1908, the industry as it looks today was started as the first power plant (now CHP-1) was commissioned. Progress continued slowly as the area developed under Polish occupation. The area was fortunate that its infrastructure escaped most of the Nazi destruction from WW II and remained largely intact.

After the war the Soviet Union regained control over the country and the power sector (Lviv included) was developed using the Communist model. During the period of Soviet dominance, the Communists embarked on a massive industrialization and modernization program. This included expansion of the power sector. Due to this extensive industrialization campaign, Lviv Oblast became one of the key light industrial areas of the

FSU It was during this period, 1945-1991, that both the physical infrastructure and to a large extent the operating structure of the power sector of today was created. The structure itself (i.e. Communist model) is the typical vertically integrated command economy where at the top is the main administrative monopoly (Minenergo) that makes decisions and below it the functional units that implement the decisions directed to it from above. In addition, under this system, the decisions themselves were focused only on production (and meeting quotas) and did not regard price as a variable. Based on this above described structure, the Ukrainians inherited (at its 1991 independence) an extremely energy intensive, inefficient power industry with little ability to respond to world market forces. Without vast energy reserves to utilize, this inefficiency would eventually bankrupt the economy.

For the first four years after independence, the sector was managed as it was during the Soviet period. However, one main difference existed. The price of energy had increased to world prices. To sustain itself the economy used both reserves and then credit to purchase energy. Soon both ran out, the economy collapsed and the sector was forced to embark on a massive market reform program. This began in 1995 for the power sector. In the process of restructuring, the former vertical monopolies were unbundled to form six power generation companies (Gencos), the National High Voltage Transmission Networks, and twenty seven local electricity distribution companies in each Oblast (Lviv Oblenergo is part of this network) that own and operate low voltage networks and distribute electricity to the customers. Concurrently, Gencos and Oblenergos became joint stock companies wherein the stock parcels are held by the Government of Ukraine, independent businesses, and individuals. Along with Oblenergos, the low voltage supply segment of the electricity market also includes independent suppliers operating through Oblenergo owned networks.

Under the Ukrainian Electricity Law, both generators and suppliers of energy in Ukraine operate through the Wholesale Electricity Market (WEM, or Energomarket) under the Energomarket Members Agreement. The wholesale market activities are supervised by the Ministry of Energy of Ukraine (Minenergo) in terms of general policy-making and regulated by the independent National Electricity Regulatory Commission (NERC) that sets tariffs on electricity and provides licenses for the corresponding activities.

Company

Lviv Oblenergo's main business is the distribution of electricity along with the

production of heat³ At present, its electric market consists of approximately 800,000 customers Included in this total are 90% of the businesses and 100% of the Oblast's residents⁴ Most major businesses in the region fall into its corporate customer base However, due to the non-liquidity within the economy and the use of barter for many transactions, the Oblenergo has faced competition from individual independent suppliers These companies purchase energy and sell it directly to industrial customers at a lower price than the regulated price the Oblenergo is forced to charge In return, the independent supplier will receive cash and barter The Oblenergo receives a smaller low voltage fee for transmitting the power instead of a normal retail profit margin

Currently, Lviv Oblenergo is undergoing privatization Under the plan, almost 75% of its corporate stock has been scheduled for public trading This includes a preferential subscription of up to 20% of the stock for the Company's present and former employees (and some others) Under Ukrainian law the State retains 25%⁵ plus one share As recently as July 1998, a 35% stake in the company was purchased through an auction by Privatbank (one of Ukraine's largest commercial banks) In addition, Privatbank has been endorsed the right to manage the government share of the Lviv Oblenergo stock In effect, the management of the company should have control without State interference

³ Most of the heat produced is sold wholesale to a heat distribution company, Lviv TeploEnergo

⁴ Source East Invest Securities

⁵ Source Lviv Oblenergo Corporate Prospectus

3. CONSOLIDATED COMPANY

The consolidated company Lviv Oblenergo consists of ten individual business units. However, due to the difficulties involved and the very small size of one unit, only nine are reflected in the consolidation. These include Lviv PEM, Lviv City PEM, Drohobych PEM, CHP-1, CHP-2, Guard, Construction, Network Adjustment and Administration. The trading division is not included because of the difficulties involved in obtaining the necessary financial data and the very small size. Its impact on sales and the balance sheet would have less than 0.5%. The analysis will proceed as follows, the first section will focus on the general operation of the company for the period 1996-1998. The second section will examine the performance of the different divisions within the company. It should be noted for the reader that a more detailed discussion of electricity is located in Section 4 of this study.

Company Analysis

Income Statement

Table 3.1 is the consolidated income statement for Lviv Oblenergo. The operating information is summarized by quarter. Beginning with total sales, two types of trends exist. The first is seasonal and the second is economic. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters. In the fourth quarter, a sharp rise in revenues occurs. Most of the trend is due to the production at the CHP plants. During the colder months the CHP plants are operating and selling heat into the distribution network. As warmer weather comes, CHP-2 is shut down for lack of demand and maintenance while its customers are switched to the CHP-1 network. However, there also exists some seasonal demand for electricity. The pattern and reasons are the same as for heat. During colder weather the public uses more electricity mainly for heating homes.

The second trend is economic. Since the study has three years of first quarter data, this is the point to examine. Beginning in the first quarter of 1996, total sales are 86.9 million UAH. The following year, 1997, sales decrease to 83.3 million UAH (4.2% decrease) and for the same period in 1998 the sales fall to 81.1 million UAH (6.4% decrease from 1996). Both heat and electricity are the main reasons for the decline. For 1996, electricity declined by 6.8% and heat decreased by 5.8%. The decline, however, was less severe because other revenues doubled (although their overall contribution is only around 4% of total revenues). For 1997 the financial pattern is different. Heat continues its decline by 12% while electricity increases by 2.8%. Other revenues declined back to the original 1996 level. The reason for the decline in electricity

is the rationing that occurred in both 1996 and to a lesser extent in 1997. This constraint on the market was caused by a lack of energy available for generation. For heat it was the lack of fuel from the supplier limiting purchases because of lack of payment by the CHPs.

The next section in the income statement deals with operational expenses. The largest cost for distribution is purchased energy. The general trend and reasons for the trend are the same as for sales. From 1996 to 1997 electricity purchases decrease and during 1998 they increase relative to 1997. The second largest cost is fuel and, as expected, it follows a similar seasonal pattern as heat sales. Large purchases during colder weather. However, it is important to see that a different trend exists from year to year. Costs increase for each of the three first quarters included in the analysis. Although some weather considerations exist (longer winter season), the main reason is the price of fuel increased. This point is especially true in 1998.

Operating costs are the largest cost that management has any influence to control. Its trend is highly variable and the reason for this variability is the heat divisions. For example, during the third quarter of 1996 the cost was 3.0 million UAH. By the first quarter of 1997 the cost had increased to 12.0 million UAH. Two reasons exist for this variability. First, during the colder months (when the costs rise) the plants are operating while the warmer months they are idle. In addition, CHP-1 added a new network, Sykhivsky, that added to overall costs. Relative to sales, operating costs are small and stable.

Wages are increasing for two reasons. During 1996 a change in accounting (tax) policy allowed the company to deduct wage bonuses. Prior to this the common practice was to deduct the expense after taxable profit was calculated. In addition, through 1996-1998 wages were increased as an adjustment to inflation.

Depreciation expense is extremely small and reflects both the old equipment and facilities in use, and tax policy that does not allow large deductions.

Operating income for the period examined has declined from 11.0% of sales in the first quarter of 1996 to negative 11.3% in the first quarter of 1998. From the third quarter of 1996 the consolidated has had negative operating income. The explanations for this performance are numerous. First, heat production (mainly CHP-2) has consistently had losses. In addition, fuel costs have continually increased in relation to sales. This results in small gross profit margins from heat and steam. Although electricity was either profitable or breakeven for most quarters until the third quarter of 1997 (total profits of 10.9 million UAH), this part of the business also started to lose money. The main reason is decreasing gross margin (purchased power to sales) because of increasing total electricity losses. Finally, the other businesses are both small and offer very little profit to the main consolidated company.

The next section down the income statement is the financial costs. The consolidated company has very little short or long term debt. Therefore, interest on debt is near zero. However, as part of the restatement data was collected on inflow and outflow of money to

do an aging of accounts receivable and payable. Because of the difficulty in getting this data, some assumptions were used (see Appendix One for explanation), the aging still will give an approximation of the flow of money. Write-offs begin in the second quarter of the analysis and continue until the end of the analysis. The highest percentage comes from heat production. However, the smaller divisions, such as guards, construction and the network, also contribute to the consistent write-offs of bad debt. For the most part, the electricity part supports the rest of the company.

Net income follows the same pattern as net operating income, profitable in the early quarters of 1996 with a gradual decline to losses by the beginning of 1998.

Balance Sheet

Table 3.2 is the restated balance sheet for the company. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and third quarter of 1996, gross fixed assets increased six times due to a revaluation of assets. The major reason for the revaluation is asset values had eroded due to inflation. In addition, Assets under Construction remained constant at around 22 million until the first quarter of 1997. The balance increased then 47 million from construction projects in Drohobych PEM and the heat plant.

Current assets increase from 63.8 million to 131 million UAH. Almost all the increase is due to various types of receivables. Combined, they increase approximately three times in value. Cash balances are small relative to other assets. The main reason is low cash collection rates and the transit account that absorbs most of the cash payments from electricity. The little cash the company does receive goes to meeting wages and taxes.

Equity had a large rise between the second and third quarters of 1996. The account within equity that increased was the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The reserve fund was reclassified as additional capital at the beginning of 1997. Long term debt was zero for the period.

Table 3 2
Consolidated Company
Ukraine Energy Project

Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	65 815	66 420	297 882	605 828	603 935	604 398	608 375	612 998	622 014	622 742
Less Accumulated Depreciation	20 712	29 274	133 951	302 648	306 074	308 185	306 216	314 534	317 324	320 303
Net Fixed Assets	45 102	37 146	163 931	303 180	297 861	296 213	302 159	298 464	304 690	302 439
Assets Under Construction	21 757	22 460	23 849	24 898	24 194	45 889	46 966	41 818	30 476	31 383
Net Utility Plant	66 859	59 606	187 780	328 078	322 055	342 102	349 125	340 282	335 166	333 822
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	(442)	(86)	(146)	1 261	1 553	2 773	1 924	2 513	2 688	2 829
Less Accumulated Depreciation	58	116	174	365	438	468	551	603	727	800
Net Nonutility Property and Intangibles	(499)	(202)	(319)	896	1 115	2 305	1 373	1 910	1 961	2 029
Long Term Financial Investments	3	3	3	3	3	31	93	62	92	92
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	322
Total Other Property and Investments	(496)	(199)	(316)	899	1 118	2 336	1 466	1 972	2 053	2 443
<i>Current Assets</i>										
Cash and Short Term Investments	2 145	930	224	687	1 079	844	881	1 301	2 515	814
Accounts Receivable	23 510	36 013	66 417	75 549	86 931	99 546	95 400	93 827	91 600	106 548
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	23 510	36 013	66 417	75 549	86 931	99 546	95 400	93 827	91 600	106 548
Inventory	4 576	6 939	3 055	4 642	5 400	11 025	11 872	11 849	11 430	11 738
Government Employee and Other Receivables	14 027	37 320	7 212	7 552	28 198	4 173	2 546	4 171	8 082	11 618
Other Current Assets	8 878	5 224	5 414	2 112	8 337	36	163	332	391	217
Total Current Assets	53 136	86 426	82 322	90 542	129 945	115 624	110 862	111 480	114 018	130 935
TOTAL ASSETS	138 796	145 833	269 786	419 519	453 118	460 062	461 453	453 734	451 237	467 200
CAPITALIZATION AND LIABILITIES										
<i>Stockholder's Equity</i>										
Statutory Capital (Net)	62 203	75 234	75 469	73 122	73 122	73 122	48 493	73 122	48 493	48 493
Additional Capital	0	0	0	0	250 070	268 347	300 309	266 992	286 200	286 051
Reserve Funds	22 532	10 448	255 801	256 176	3 211	4 461	4 223	1 697	2 296	3 201
Retained Earnings	(3 867)	8 247	4 421	(5 894)	(9 583)	(12 945)	(23 893)	(33 737)	(47 207)	(53 354)
Unrealized Differences ¹	0	(43 972)	(170 116)	1 862	2 231	278	12 384	17 488	33 846	39 272
Total Equity	80 968	49 957	165 575	325 266	319 051	333 263	341 516	325 561	323 628	323 663
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	80 968	49 957	165 575	325 266	319 051	333 263	341 516	325 561	323 628	323 663
<i>Current Liabilities</i>										
Short Term Debt	7	770	724	618	593	410	382	346	318	252
Accounts Payable	49 981	86 325	87 914	78 781	118 899	111 870	106 732	110 983	110 940	127 637
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Payables	49 981	86 325	87 914	78 781	118 899	111 870	106 732	110 983	110 940	127 637
Wages and Social Insurance Payable	1 393	2 110	3 029	4 824	6 171	6 926	7 703	6 925	5 968	6 024
Taxes and Non-Budget Payable	4 048	4 212	9 770	8 325	4 334	3 673	2 697	7 392	3 451	3 886
Government Employee and Other Payable	138	1 785	1 898	455	2 764	2 275	1 120	1 285	322	467
Advances from Customers	8	13	23	20	6	6	6	6	8	5
Other Current Liabilities	253	661	872	1 227	1 286	1 639	1 278	1 236	6 602	5 266
Total Current Liabilities	55 828	95 876	104 211	94 253	134 067	126 799	119 937	128 173	127 609	143 537
TOTAL CAPITALIZATION AND LIABILITIES	136 796	145 833	269 786	419 519	453 118	460 062	461 453	453 734	451 237	467 200

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

Table 3 3
Consolidated Company
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
(000 UAH)

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Cash Flow from Operating Activities									
Net Income	8 401	(3 986)	(10 409)	(3 854)	(3 574)	(11 231)	(10 208)	(13 864)	(5 884)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(12 503)	(30 016)	(9 132)	(11 382)	(12 615)	4 146	1 573	2 227	(14 948)
Change in Other Short Term Assets	(22 002)	34 033	1 375	(27 629)	26 701	653	(1 772)	(3 551)	(3 670)
Change in Accounts Payable	38 344	1 325	(9 133)	40 118	(7 029)	(5 138)	4 251	(43)	18 697
Change in Other Short Term Liabilities	2 941	6 400	(719)	(279)	(56)	(1 696)	4 021	(493)	(703)
Depreciation Expense	8 620	102 847	168 889	3 499	2 141	(1 886)	8 370	2 914	3 052
Net Cash Provided by Operating Activities	13 400	114 388	151 280	4 327	9 142	(3 921)	16 443	1 054	428
Cash Flow from Investment Activities									
Completed Plant In Service	(605)	(228 124)	(307 946)	1 693	(463)	(3 977)	(4 623)	(9 016)	(728)
Change In Construction Work In Progress	(703)	(1 389)	(1 049)	704	(21 695)	(1 077)	5 148	11 342	(907)
Change In Nonutility Property and Intangibles	(356)	74	(1 407)	(292)	(1 248)	787	(558)	(205)	(463)
Net Cash Provided by Investment Activities	(1 664)	(229 440)	(310 402)	2 305	(23 406)	(4 267)	(33)	2 121	(2 098)
Cash Flow from Financing Activities									
Short Term Loans	(763)	46	106	25	183	28	36	28	66
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	847	244 361	(1 972)	(2 895)	19 527	7 095	(11 214)	(4 822)	756
Net Cash Provided by Financing Activities	84	244 407	(1 866)	(2 870)	19 710	7 123	(11 178)	(4 794)	822
Unrealized Cash Differences ¹	(43 972)	(126 144)	171 978	370	(1 953)	12 106	5 104	16 358	5 427
Net Change in Cash	(23 751)	(774)	581	277	(81)	(190)	128	875	(1 305)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

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As for current liabilities, the total balance doubled during the restatement. Almost the entire increase in short term liabilities came from payables. Accounts payable increased from 50 million to 127.6 million while wages payable increased from 1.4 million to 6.0 million. The main reason behind these increases is the low cash collection rate.

Statement of Changes in Financial Position

Table 3.3 examines the cash flow from all financial activities during the year. Net income on an accrual basis was between 8.4 and negative 13.9 million UAH. For most years it was negative. Adjustments from operating activities were highly variable, but did not offer any significant trends. Adjustments from investments offered only one important change, the revaluation of assets. However, this was mainly a non-cash transaction and contributed little to the real value of the company.

Comparative Analysis

Tables 3.5 and 3.6 examine the financial relationship between the different business units that make up Lviv Oblenergo. Table 3.5 focuses on the income statement while table 3.6 examines the balance sheet.

Beginning with the income statement, it can be easily seen that the electric portion of the business dominates sales. Over the nine periods examined, Lviv PEM contributed 32.3% of sales, Lviv City PEM 25.3% and Drohobych PEM 27.7%. The total is approximately 85%. If CHP-1 is included, the total sales accounted for increases to 97%. These four units make up almost the whole company in terms of sales.

The next section down Table 3.5 examines operating income. It is important to note that the percentage could be a proportion of a profit or loss and it depends on the sign (positive or negative) associated with overall operating profit. Lviv City PEM is the business that each year earns the most consistent profit. The main reason is it has the lowest losses of the three electric distribution companies. On the other hand, Drohobych is the poorest performer of the three for the opposite reasons. It has the highest losses. Overall, the heat plants are the least profitable. They consistently either breakeven or experience losses. In some years, the security guard business has a large negative impact. The reason is the poor collection rate on fees earned from outside clients.

Since none of the divisions have any debt, the main variable determining net income is the amount of bad debt written off. For the most part, the same pattern exists for net income as operating income. The electric PEMs have very little bad debt from delays in collection whereas both the heat plants and the smaller divisions consistently experience overdue accounts.

**Table 3 4
Consolidated Company
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	0.9	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.9
Collection Rate	N A	N A	N A	N A	N A	N A	N A	N A	N A
% Accounts Receivable Over 60 Days	N A	N A	N A	N A	N A	N A	N A	N A	N A
% Accounts Payable Over 60 Days	N A	N A	N A	N A	N A	N A	N A	N A	N A
Capital Structure and Long Term Solvency									
Debt to Equity	1.9	0.6	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Debt to Total Assets	66%	39%	22%	30%	28%	26%	28%	28%	31%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)									
Operating Profits to Sales	11.0%	1.2%	2.1%	6.3%	3.7%	-0.8%	3.1%	8.5%	11.3%
Net Unrealized Accounts to Sales	0.0%	6.7%	18.7%	0.5%	-0.7%	16.9%	18.8%	11.1%	-0.9%
Net Income to Sales	9.0%	7.6%	23.9%	7.9%	-4.8%	18.3%	22.4%	20.1%	8.2%
Asset Utilization									
Sales to Current Assets (Annualized)	4.0	2.9	2.1	1.9	2.9	2.3	1.7	2.5	2.5
Sales to Net Utility Plant (Annualized)	5.8	1.3	0.6	0.8	1.0	0.7	0.6	0.8	1.0
Sales to Total Assets (Annualized)	2.4	0.9	0.4	0.5	0.7	0.6	0.4	0.6	0.7
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	70.9%	73.9%	84.4%	81.8%	68.0%	68.6%	79.1%	72.1%	71.9%
Operating and Maintenance to Sales	3.7%	5.7%	6.3%	14.2%	14.3%	10.2%	6.1%	15.2%	13.0%
Fuel to Sales	10.7%	12.2%	0.4%	2.2%	14.1%	10.5%	1.8%	8.2%	17.1%
Wages and Social Cost to Sales	2.9%	5.3%	7.3%	4.5%	4.6%	8.0%	9.6%	7.1%	5.0%
Depreciation to Sales	0.9%	1.7%	3.4%	3.6%	2.6%	3.5%	6.7%	5.9%	4.2%
Operating Income to Sales	11.0%	1.2%	2.1%	6.3%	3.7%	-0.8%	3.1%	8.5%	11.3%
Net Income to Sales	9.0%	7.6%	23.9%	7.9%	-4.8%	18.3%	22.4%	20.1%	8.2%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	24.7%	24.6%	18.0%	19.2%	21.6%	20.7%	20.7%	20.3%	22.8%
Current Assets	59.3%	30.5%	21.6%	28.7%	25.1%	24.0%	24.6%	25.3%	28.0%
Net Fixed Assets	40.9%	69.6%	78.2%	71.1%	74.4%	75.7%	75.0%	74.3%	71.5%
Current Liabilities	65.7%	38.6%	22.5%	29.6%	27.6%	26.0%	28.2%	28.3%	30.7%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	34.3%	61.4%	77.5%	70.4%	72.4%	74.0%	71.8%	71.7%	69.3%

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Table 3 5
Consolidated Company
Ukraine Energy Project
Normalized Income Statement By Business Unit¹
(000 UAH)

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Total Sales	86 937	60 635	46 664	61 187	83 279	63 881	47 038	70 787	81 137
Electricity Lviv	30 1%	37 1%	41 0/	31 3%	29 1%	33 6/	32 8%	26 5%	29 1/
Electricity City	22 2/	25 1%	26 0%	24 7/	22 4%	25 0/	30 2/	27 3%	24 9%
Electricity Drozhobych	23 4%	29 1/	31 3%	28 1/	24 5/	29 7%	33 6%	25 7/	24 1%
Heat CHP 1	20 4%	6 6/	0 2/	12 7%	19 9/	9 4/	1 3/	16 6/	18 0/
Heat CHP 2	3 3/	1 1%	0 0/	1 4%	3 2%	1 4/	0 0%	2 3%	2 8/
Guard	0 4/	0 5/	0 7%	0 7/	0 4%	0 5/	0 7/	0 5%	0 4%
Network Adjustment	0 2/	0 5/	0 6%	0 4/	0 2/	0 3%	0 7/	0 5/	0 3%
Construction	0 0%	0 0%	0 2/	0 7%	0 1/	0 1%	0 7%	0 7/	0 3/
Total Operating	9 533	753	(977)	(3 885)	(3 108)	(500)	(1 480)	(6 027)	(9 194)
Electricity Lviv	13 5/	213 7/	4 0%	52 7/	54 1%	276 5%	49 4/	63 8/	16 2%
Electricity City	26 5%	437 2/	294 1%	42 7%	92 7/	731 5%	174 2%	39 7/	31 4/
Electricity Drozhobych	15 5%	149 2/	110 9/	99 2%	5 1/	58 5/	37 5%	37 0/	47 5/
Heat CHP 1	90 4/	558 5%	225 7/	0 0%	120 1%	899 3/	114 6%	17 3%	60 5/
Heat CHP 2	11 3/	116 3%	41 0%	8 6/	5 2%	169 9%	58 7/	15 8%	6 2/
Guard	2 0/	15 6/	18 8%	7 1/	2 4%	20 2%	9 2/	0 1/	0 3%
Network Adjustment	1 2%	20 2/	14 7%	1 7/	1 0/	0 7%	9 6%	0 9/	0 5%
Construction	0 0%	0 0/	1 3/	1 4%	3 4/	49 9/	1 8%	0 9/	0 7/
Total Net¹	7 799	(4 609)	(11 138)	(4 845)	(4 006)	(11 695)	(10 541)	(14 259)	(6 673)
Electricity Lviv	26 1/	22 9/	3 1%	46 0%	46 0/	10 5%	8 4%	28 0/	24 9/
Electricity City	29 3%	67 0%	25 4/	33 1%	70 3/	30 6/	23 8%	16 4%	43 2/
Electricity Drozhobych	26 6/	15 1%	12 3/	82 4%	4 2%	2 5/	13 2/	67 0%	9 7/
Heat CHP 1	109 0/	157 4%	90 2%	4 0/	95 7%	124 8%	78 1/	8 5/	87 1%
Heat CHP 2	13 6%	42 9/	13 8%	6 6/	3 2%	7 3%	19 9%	6 8/	9 2%
Guard	2 5%	2 5/	3 0/	1 4%	7 4/	2 1/	0 4%	1 9%	4 8/
Network Adjustment	1 4/	3 1%	1 1/	1 0%	6 8%	2 8/	1 2/	1 1%	3 9/
Construction	0 0/	0 0/	0 1%	0 9/	2 7%	2 7%	0 3/	0 7/	0 2%

¹ Include Internal Transfers

Table 3 6
Consolidated Company
Ukraine Energy Project
Normalized Balance Sheet By Business Unit
(000 UAH)

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Total Assets	145 833	269 786	419 519	453 118	460 062	461 453	453 734	451 237	467 200
Electricity Lviv	20 1/	81 0/	50 1/	18 5/	18 9/	19 1/	19 7/	19 7/	18 8 4/
Electricity City	4 1/	8 6/	5 9/	5 7/	5 8/	5 9/	5 9/	5 8/	5 7 1/
Electricity Drozhobych	18 1/	45 5/	30 5/	28 2/	31 5/	31 4/	30 7/	30 1/	29 1/
Heat CHP 1	24 2/	17 3/	11 7/	11 2/	10 4/	11 3/	11 4/	9 7/	10 4/
Heat CHP 2	11 5/	27 2/	17 4/	16 3/	16 2/	15 8/	16 3/	16 7/	16 4/
Guard	0 4/	0 3/	0 3/	0 3/	0 3/	0 4/	0 4/	0 4/	0 5/
Network Adjustment	2 6/	1 1/	0 4/	0 4/	0 6/	0 6/	0 6/	0 6/	0 6/
Construction	0 0/	0 7 4/	0 5/	0 5/	0 5/	0 5/	0 6/	0 6 4/	0 6/
Total Fixed Assets	59 606	187 780	328 078	322 055	342 102	349 125	340 282	335 166	333 822
Electricity Lviv	39 4/	44 8/	23 4/	23 9/	23 1/	23 3/	23 8/	23 8/	23 5/
Electricity City	6 3/	11 1/	6 5/	6 9/	6 7/	6 9/	6 7/	6 7/	7 1 4/
Electricity Drozhobych	40 7/	64 0/	37 9/	38 2/	40 9/	40 1/	39 3/	38 9/	38 9/
Heat CHP 1	24 2/	13 2/	8 3/	8 4/	7 8/	7 7/	8 7/	8 5/	8 5/
Heat CHP 2	18 8/	36 4/	20 8/	21 3/	20 0/	19 6/	20 0/	20 4/	20 3 4/
Guard	0 0/	0 0/	0 0/	0 0/	0 0 4/	0 0/	0 0/	0 0 4/	0 0/
Network Adjustment	3 3 4/	0 8/	0 4 4/	0 4/	0 4/	0 4 4/	0 5/	0 5/	0 5 4/
Construction	0 0 4/	0 7/	0 4/	0 4/	0 4/	0 3 4/	0 3/	0 4/	0 5/
Total Current Assets	86 426	82 322	90 542	129 945	115 624	110 862	111 480	114 018	130 935
Electricity Lviv	6 5/	163 1 4/	147 4/	5 2 4/	6 5/	6 1/	6 7/	7 3 4/	6 4/
Electricity City	2 3 4/	2 6 4/	3 3 4/	2 3 4/	2 8/	2 3 4/	3 2/	2 1/	1 8/
Electricity Drozhobych	2 4 4/	3 0/	3 7 4/	3 5 4/	4 1/	4 2 4/	4 5/	4 6/	4 4/
Heat CHP 1	24 1/	26 5/	24 1/	18 2/	18 0/	22 7/	19 6/	13 2/	15 2 4/
Heat CHP 2	6 4 4/	6 2/	5 2/	4 1 4/	4 4/	4 0 4/	5 4/	6 2/	6 5/
Guard	0 7/	1 0/	1 2/	0 9/	1 3/	1 5 4/	1 7/	1 6/	1 8/
Network Adjustment	2 1 4/	1 9/	0 3/	0 5/	1 0 4/	1 3 4/	1 2/	0 8 4/	0 8/
Construction	0 0/	0 8/	0 9/	0 8/	0 9/	0 9/	1 3/	1 2/	0 9/
Total Equity¹	49 957	165 575	325 266	319 051	333 263	341 516	325 561	323 628	323 663
Electricity Lviv	49 5/	127 9/	63 1/	24 3/	24 2/	24 2 4/	25 5/	25 6 4/	25 5 4/
Electricity City	9 8/	13 0/	5 7/	7 1 4/	7 0/	7 1/	7 4 4/	7 4/	7 5/
Electricity Drozhobych	50 0/	73 1/	38 7/	39 1/	42 6/	41 5/	41 7/	41 1/	41 1/
Heat CHP 1	29 8/	15 2/	8 5/	8 6 4/	8 3/	8 1/	8 6/	8 6/	8 6/
Heat CHP 2	26 2/	41 8/	21 3 4/	21 7/	20 8 4/	20 4/	21 5 4/	21 7/	21 8/
Guard	0 0/	0 0/	0 0/	0 0/	0 0/	0 0/	0 0/	0 0 4/	0 0/
Network Adjustment	4 5/	0 2/	0 4/	0 5/	0 6/	0 7 4/	0 7/	0 6/	0 6/
Construction	0 0/	0 7/	0 4 4/	0 4/	0 4/	0 4/	0 4/	0 4/	0 5/
Total Current Liabilities	95 876	104 211	94 253	134 067	126 799	119 937	128 173	127 609	143 537
Electricity Lviv	4 8/	6 5/	5 5/	4 8/	5 0/	4 8/	4 8/	4 5/	3 5/
Electricity City	1 2/	1 7/	3 1/	2 3/	2 8/	2 5/	2 3/	1 8/	1 8 4/
Electricity Drozhobych	1 5 4/	1 7/	2 4/	2 3/	2 2/	2 6/	2 7 4/	2 2/	1 9 4/
Heat CHP 1	21 3/	20 7/	22 9/	17 2/	15 8 4/	20 3/	18 5/	12 6/	14 4/
Heat CHP 2	3 8 4/	4 1/	4 0/	3 4/	4 1 4/	2 7 4/	3 2/	4 1/	4 2/
Guard	0 7/	0 8/	1 2/	0 9 4/	1 2/	1 4/	1 5/	1 4/	1 6/
Network Adjustment	1 7/	2 7 4/	0 2/	0 2/	0 3/	0 5/	0 4/	0 5/	0 5 4/
Construction	0 0/	0 6/	0 7/	0 7/	0 8/	0 8/	1 0/	1 0/	0 8/

¹ Includes Long Term Debt

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Table 3.6 examines the components of the consolidated balance sheet. Several interesting points are more easily seen within this table. First, the most profitable unit, the Lviv City PEM represents only on average 6.3% of total asset value. The reason is it has a natural advantage due to the high concentration of its consumers. The largest relative value belongs to Drohobych PEM with on average 32% of the total value of the assets. Both the CHP plants have large relative values within the company. For CHP-1, this is justified since it generates approximately 12% of revenues. However, CHP-2 is very inefficient. Although its relative total asset value averages 18% of assets, it generates less than 2% of sales. By any measure this is a very poor utilization of resources.

Since total fixed assets are a large portion of total assets, all of the above statements on total assets apply to fixed assets. As for current assets, an interesting difference exists. Most of the liquidity comes from the CHP-1 plant. However, this is very misleading since most of the current assets are receivables that should have been written off as bad debt.

Once again, equity patterns follow the same pattern of total assets and current liabilities follow the pattern of current assets.

4. CONSOLIDATED ELECTRIC DISTRIBUTION

The Lviv Oblenergo consists of the three electricity PEMs, Lviv Oblast, Drohobych and Lviv City. The Lviv City PEM covers the city itself while Drohobych serves the north area. Lviv PEM is responsible for the rest of the area. The region that the Oblenergo covers is economically diverse. It includes some heavy industry such as several chemical factories. In addition, several light industrial business (including joint ventures with Coke Cola and Svidoch (candy)) have established operations. The area also includes sizable agriculture production and a large residential population.

Table 4.1 is the consolidated income statement for the electricity distribution divisions of Lviv. Supporting tables include 4.2 (Sales of Electricity), 4.3 (Other Income and Expenses), 4.4 (Electricity / Fuel Purchased), 4.5 (Main Production Costs), 4.7 (Aging of Accounts Receivable) and 4.8 (Aging of Accounts Payable).

Table 4.1 is the 1996-1998 quarterly restated income statement. Beginning with sales, two types of trends exist. The first is seasonal and the second is economic. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters (due to warmer weather). In the fourth quarter, a sharp rise in revenues occurred due to both colder weather and increased processing of seasonal agricultural products.

The second trend is economic. Beginning with the first quarter of both 1996 and 1997, a quarter by quarter comparison shows that the first quarter sales for 1997 is lower than 1996 by 6.8%. The following year same period sales increased by 3.3%. Although some of the pattern may be associated with the general economic condition of the area, the majority of the pattern is explained by a constraint in power supply from the wholesale market. Since the quarter being analyzed is the winter period, demand is at its peak. Generation during this period could not meet demand because of fuel constraints. This shortage in generation was passed on to distribution throughout the country and was especially acute in 1996. The conditions in 1997 were improved, but still constrained the company's ability to meet demand.

The next section in the income statement deals with operational expenses. Also of usefulness is Table 4.7, Financial Ratios. In particular, the section referring to the common size income statement will yield important insights to the analysis. The largest cost for distribution is purchased energy. For 1996 and 1997 the ratio of energy costs to sales⁶ are 89.4% and 84.9% respectively for each of the two years. Two variables

⁶ This is a very important ratio that is the best indicator of eventual profitability. It simply measures how much money is left over to pay all other costs. Normally, an electric distribution company would require a ratio of .80 or lower to meet its expenses other than electricity. A ratio of .80 translates into 20% of sales to meet all other operating expenses and investment.

determine this ratio, overall losses within the distribution system and the purchase and selling tariffs. Increased losses would cause the ratio to deteriorate (higher). A larger difference between the selling and purchasing tariff of electricity would cause it to improve (lower). From 1996 to 1997 system losses increased from 25% to 27.2%. If prices remained constant the ratio would have deteriorated (increased) by 2%. However, the ratio improved considerably. Therefore, the difference between selling and purchasing increased. However, the improvement still places the absolute value, 84.9%, too low to sufficiently cover costs and investment.

For the year the quarter by quarter comparison through out the year shows large differences between quarters (see Table 4.7). Both the 1st and 4th quarters (winter months) ratios are high and average around 91% of sales. However, during the summer months the ratios fall to 80% of sales. Although the tariffs are set by NERC, the underlying economic cause of the increased cost during the winter months is the higher average marginal cost of energy because of the increase use of fossil fuels to meet the higher demand. During the summer months more of the demand is met by cheaper nuclear power.

Wages are the second largest cost and their trend is increasing. In 1996, labor costs average 4.2% of sales. This average increased to 6.4% in 1997. Two reasons underlie the increase. During 1996 several changes were made to accounting procedures. Prior to this periods bonuses were accounted for after calculation of profit. During 1996 the law changed so that they could be included as a wage expense. The second reason for the increase is a reflection of the higher wages required to compensate for the general erosion of wages from past inflation.

After wages, the next largest cost is operating expenses. This category includes materials, spare parts, fuel (other than for generation), small investment and servicing costs. Combined with maintenance (which is very small), these costs averaged 2.8% of sales for both 1996 and 1997. At this low level, the equipment is not being sufficiently maintained to operate in an efficient manner. Depreciation remains a very small component for two reasons. First, current law allows only very small annual deductions as an expense. The second reason is the very low value assigned to it under the old Socialist financial system (even after revaluations).

Table 4.2, Electricity Sales, outlines the monthly electricity sold (in MWH), average tariff (UAH per MWH) and revenues (000 UAH) by consumer group for the period 1996-1998 (1st quarter). Total electricity sold for 1996 was 2,976,930 MWH with an average tariff of 72.1 UAH per MWH. Total revenues for the same period were 214.9 million UAH. As for 1997, 2,882,060 MWH were sold at an average price of 75.9 UAH per MWH. This generated total revenues of 218.7 million UAH. The year to year decrease in MWH was 3% and the increase in revenues was 1.7%. The difference

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Table 4.2
Consolidated Electric Company
Ukraine Energy Project
Electricity Sales

Month	1 Total Electricity Sold (MWH)	2 Tariff (UAH per MWH)	3 Total Sales (000 UAH)	4 Total MW Sold (MWH)	5 Capacity Charge (UAH per MW)	6 Total Revenues (000 UAH)	7 Total Electricity Sold (MWH)	8 Tariff (UAH per MWH)	9 Total Sales (000 UAH)	10 Total Electricity Sold (MWH)	11 Tariff (UAH per MWH)	12 Total Sales (000 UAH)	13 Total Electricity Sold (MWH)	14 Tariff (UAH per MWH)	15 Total Sales (000 UAH)
	Industrial >750			Industrial >750			Industrial < 750			Railroad			City Transport		
January (1996)	97 287	63.6	6 188	307	6 718.7	2 085	29 387	88.0	2 585	2 535	70.7	179	2 814	77.2	225
February	111 885	64.2	7 188	289	6 834.5	1 876	28 118	80.2	2 338	19 868	71.9	1 428	2 314	79.1	183
March	142 479	63.4	9 038	291	6 742.4	1 981	28 485	79.6	2 347	25 810	71.0	1 833	2 786	79.4	220
April	113 821	62.7	7 133	274	7 032.6	1 926	28 089	78.0	2 188	20 863	70.0	1 467	2 819	77.0	217
May	95 113	62.8	5 970	289	6 886.7	1 928	20 815	77.8	1 800	20 800	70.4	1 485	2 484	76.8	188
June	115 734	61.1	7 077	287	6 451.8	1 917	20 341	76.0	1 545	19 118	68.2	1 238	2 810	76.3	198
July	116 393	60.1	6 988	301	6 528.9	1 987	19 315	74.6	1 441	19 808	67.1	1 329	2 321	73.8	171
August	83 989	58.7	5 018	282	6 331.8	1 858	18 892	73.8	1 401	4 281	67.0	285	0	0	0
September	82 735	58.8	4 867	300	6 328.8	1 954	17 778	74.1	1 318	8 929	69.0	617	194	73.7	14
October	84 484	60.7	5 123	291	6 458.4	1 878	18 338	74.7	1 445	22 485	68.0	1 531	0	0	0
November	89 588	63.7	4 370	269	6 787.9	1 826	19 500	78.8	1 538	22 045	70.4	1 553	104	75.8	8
December	92 052	64.2	3 964	277	6 854.9	1 902	17 602	79.9	1 408	10 145	70.7	718	0	0	0
January (1997)	80 425	64.2	5 163	265	6 830.2	1 810	26 578	80.3	2 134	20 825	70.8	1 474	2 288	70.4	181
February	100 583	62.1	6 242	269	6 710.0	1 805	23 717	79.3	1 881	24 346	69.8	1 699	2 550	77.8	188
March	89 899	62.9	6 288	232	6 807.8	1 533	22 399	77.1	1 727	25 418	70.1	1 783	2 682	77.0	205
April	115 524	62.7	7 244	258	6 827.9	1 710	21 887	77.8	1 898	24 814	70.0	1 723	2 578	77.6	200
May	98 741	64.2	6 341	235	6 868.1	1 587	18 822	78.2	1 471	24 013	70.4	1 690	2 087	77.4	180
June	92 977	64.4	5 892	235	6 893.8	1 573	18 481	77.8	1 440	22 104	70.2	1 552	2 328	78.2	182
July	73 285	63.8	4 877	171	6 742.7	1 153	18 352	78.0	1 278	20 085	70.3	1 412	2 169	77.8	189
August	78 015	64.7	4 921	178	6 881.8	1 178	15 878	78.5	1 246	20 433	70.4	1 439	2 244	78.0	175
September	82 113	64.5	5 938	186	6 755.1	1 324	17 027	78.1	1 330	22 998	70.5	1 821	2 867	78.9	208
October	88 430	63.9	5 717	218	6 754.8	1 459	18 748	78.7	1 476	26 811	70.5	1 833	2 528	78.7	199
November	77 423	65.7	5 050	148	6 794.5	992	21 570	79.8	1 718	25 808	71.7	1 851	2 581	78.4	205
December	82 407	66.3	5 482	174	6 885.1	1 188	28 205	78.2	2 207	28 080	72.0	2 023	1 882	78.7	150
January (1998)	77 878	68.8	5 341	138	7 085.2	875	28 418	85.0	2 502	24 878	77.2	1 927	2 835	84.6	223
February	72 877	71.4	5 190	138	7 284.1	992	27 208	88.3	2 401	25 858	80.7	2 070	1 618	87.8	142
March	107 125	72.6	7 782	187	7 558.1	1 413	27 588	90.8	2 505	27 082	81.8	2 207	2 872	88.4	239
	Non-Industrial			Agriculture			Residential City			Residential Rural			Transmission		
January (1998)	40 784	77.2	3 149	17 820	81.1	1 095	70 152	43.0	3 019	4 884	50.1	245	1 867	77.3	144
February	48 219	80.1	3 704	17 830	82.4	1 120	69 178	45.8	3 171	5 438	58.1	318	1 848	80.4	148
March	48 887	80.1	3 921	17 608	83.0	1 109	72 730	47.3	3 437	5 894	54.8	309	1 553	84.4	131
April	39 883	78.3	3 108	18 125	84.7	1 044	54 819	47.5	2 803	3 774	55.4	209	1 037	103.8	107
May	28 083	77.2	2 012	11 887	80.8	710	53 537	48.9	2 620	3 041	58.2	171	588	99.6	58
June	29 310	78.1	2 231	10 889	58.7	638	51 983	51.2	2 861	2 835	55.5	163	485	110.6	55
July	20 843	51.0	1 063	9 380	58.4	548	57 182	50.0	2 880	2 819	57.6	168	472	103.5	49
August	20 491	73.0	1 495	8 788	58.1	589	52 156	53.4	2 783	4 237	68.8	282	675	58.1	51
September	28 899	73.6	2 128	10 088	58.3	588	49 284	82.6	3 087	4 472	71.8	321	863	57.8	50
October	30 535	74.8	2 285	10 523	57.7	607	58 930	84.1	3 257	4 900	76.7	378	1 038	58.7	61
November	33 702	80.7	2 720	10 781	81.8	687	56 127	85.3	3 885	4 878	75.0	386	1 489	61.4	92
December	48 730	78.7	3 725	11 419	82.3	711	86 714	84.5	4 303	5 628	75.3	424	1 517	61.1	93
January (1997)	43 543	80.3	3 495	13 392	82.6	839	62 786	86.3	4 162	7 688	75.7	583	1 488	62.6	93
February	40 889	77.5	3 168	13 469	80.8	816	60 692	84.4	3 610	6 195	75.4	487	1 315	58.3	78
March	45 941	77.5	3 490	12 125	88.9	838	55 853	82.8	3 513	9 384	77.9	731	1 115	58.3	65
April	37 751	78.4	2 997	12 160	81.8	749	50 233	83.9	3 208	5 905	77.2	458	1 128	60.3	68
May	27 859	76.0	2 116	9 465	81.9	586	42 509	82.6	2 859	12 188	80.0	875	723	60.8	44
June	31 183	77.9	2 425	8 324	82.0	518	43 155	84.9	2 800	78.3	877	495	82.8	31	
July	21 823	77.9	1 707	7 315	82.1	454	48 087	84.2	3 148	8 834	78.6	879	468	62.0	29
August	22 583	77.8	1 753	8 157	81.9	505	37 885	83.3	2 383	8 581	79.0	878	390	61.5	24
September	28 527	78.1	2 227	8 220	82.0	510	41 268	84.9	2 679	9 142	78.0	722	487	64.2	30
October	30 111	78.7	2 389	8 182	82.3	518	49 243	86.3	3 264	12 080	78.5	848	724	80.8	44
November	38 108	78.5	2 870	8 012	81.8	550	48 069	87.7	3 118	12 323	77.8	958	2 171	82.2	135
December	50 187	80.7	4 048	10 452	82.2	650	62 704	84.2	5 278	15 827	77.9	1 217	2 282	82.8	142
January (1998)	35 723	88.8	3 099	9 998	87.5	875	50 858	88.6	3 386	12 813	80.3	1 037	1 088	0	54
February	39 287	88.4	3 474	10 266	88.6	704	51 088	87.5	3 447	12 050	80.9	975	1 234	79.4	88
March	42 075	81.3	3 841	10 103	71.3	720	58 219	89.0	3 881	13 838	74.8	1 020	1 221	77.0	94

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between production and revenue increases was caused by the increase in the average tariff

A more important comparison is period by period. Since information is available for three years on the 1st quarter, this will be the period examined. Total electricity sold (in MWH) for the 1st quarter (1996-1998) average 303,469, 266,418 and 254,996 per month respectively. The trend in sales during this period follows the trend of combined industrial consumption. From 1996 to 1997 industry's consumption fell by a total of 20%. This decrease accounts for most of the 12% fall in total sales. From 1997 to 1998 total sales increased by 4%.

Table 4.3 is other income and internal transactions. Other revenues for electricity distribution are fees collected for late payment, repairs and meter installation as well as fees for transmitting electricity. Compared with electricity sales, the total is very small and averages 2-3% of monthly electric sales. The trend for the 2 years examined is increasing mainly because of late fees.

Table 4.4 shows the monthly purchases for electricity from the main grid. Since this represents the most significant cost, it is shown in greater detail by the inclusion of this table. As with sales, period by period analysis will be used with the period being 1st quarter. Total purchases in MWH for each quarter are as follows, 1,253,146 (1996), 1,158,699 (1997) and 1,119,892 (1998)⁷. Calculated losses attributable to distribution average over 25%. This level is extremely high when compared to the 6.2% loss rate within the U.S. Rural Electric System⁸.

The next table, 4.5, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs have been made within the context of the restated income statement.

⁷ It should be noted that sales in MWH during this period are 87,809 (1996), 77,345 (1997) and 82,710 (1998). Losses would be 18.7% for 1996, 22.9% for 1997 and 20.2% for 1998. The company also has some self-generation from the CHP-1, but the amount is so small it was ignored.

⁸ 1994 Statistical Report Rural Electric Borrowers, Rural Electric Service, United States Department Of Agriculture (Washington, DC: Government Printing Office)

Table 4 3
Consolidated Electric Company
Ukraine Energy Project
Indirect Income and Expenses

<u>Month</u>	<u>Indirect Income</u>		<u>Other Expenses</u>	
	<u>Other Outside Revenues</u>	<u>Internal Sales</u>		
January (1996)	317 9	0	0	0
February	366 7	0	0	0
March	417 0	0	0	0
April	338 1	0	0	0
May	281 1	0	0	0
June	298 9	0	0	0
July	277 0	0	0	0
August	227 7	0	0	0
September	247 2	0	0	0
October	277 2	0	0	0
November	282 2	0	0	0
December	290 4	0	0	0
January (1997)	1 881 9	0	0	0
February	709 0	0	0	0
March	435 8	0	0	0
April	470 3	0	0	0
May	354 6	0	0	0
June	514 2	0	0	0
July	324 8	0	0	0
August	171 3	0	0	0
September	658 3	0	0	0
October	1 988 9	0	0	0
November	295 0	0	0	0
December	278 3	0	0	0
January (1998)	329 8	0	0	0
February	336 7	0	0	0
March	410 6	0	0	0

Table 4 4
Consolidated Electric Company
Ukraine Energy Project
Purchases Electricity/Fuel
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	397 922	45 87	18 251	0	0	0	0	0	0
February	404 916	50 99	20 647	0	0	0	0	0	0
March	450 308	50 58	22 777	0	0	0	0	0	0
April	338 937	50 47	17 105	0	0	0	0	0	0
May	265 898	49 70	13 215	0	0	0	0	0	0
June	285 929	50 64	14 479	0	0	0	0	0	0
July	295 856	50 71	15 003	0	0	0	0	0	0
August	232 761	46 86	10 908	0	0	0	0	0	0
September	285 689	47 13	13 466	0	0	0	0	0	0
October	329 124	47 76	15 720	0	0	0	0	0	0
November	319 611	49 61	15 857	0	0	0	0	0	0
December	367 515	50 22	18 458	0	0	0	0	0	0
January (1997)	414 340	49 42	20 478	0	0	0	0	0	0
February	368 058	48 49	17 846	0	0	0	0	0	0
March	376 301	48 58	18 280	0	0	0	0	0	0
April	363 679	47 42	17 246	0	0	0	0	0	0
May	292 640	47 75	13 972	0	0	0	0	0	0
June	269 658	46 81	12 622	0	0	0	0	0	0
July	241 201	48 17	11 619	0	0	0	0	0	0
August	248 098	47 79	11 856	0	0	0	0	0	0
September	288 830	47 57	13 741	0	0	0	0	0	0
October	351 964	46 85	16 488	0	0	0	0	0	0
November	343 265	46 21	15 863	0	0	0	0	0	0
December	404 016	46 30	18 706	0	0	0	0	0	0
January (1998)	368 385	49 91	18 385	0	0	0	0	0	0
February	335 487	51 80	17 378	0	0	0	0	0	0
March	416 020	54 23	22 563	0	0	0	0	0	0

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Tables 4 5
 Consolidated Electric Company
 Ukraine Energy Project
 Main Production Costs

Month	Depreciation 2	Maintenance 3	Material 5	Fuel 6	Construction Material 7	Sp Part 8	Li stock 9	Agreed re Pr d ct 10	COGS 11	Low sh Res 12	D p cation of LV Res 13	Transport Cost 16	Cross E pen 18	S rviding Operall n 29	Non In estment Operall n 10	Def r d Expes es 11								
January (1986)	0	0	34	0	130	0	64	0	0	0	0	2	0	23	0	11	0	66	0	0	0	0	0	0
February	222	0	14	0	150	0	120	0	0	0	0	1	0	64	0	7	0	27	0	0	0	0	0	0
March	156	0	14	0	164	0	57	0	0	0	0	4	0	20	0	7	0	80	0	0	0	0	0	0
April	182	0	0	0	101	0	59	0	0	0	0	4	0	13	0	6	0	48	0	0	0	0	0	0
May	183	0	14	0	119	0	54	0	0	0	0	4	0	18	0	6	0	21	0	0	0	0	0	0
June	377	0	18	0	129	0	61	0	0	0	0	9	0	29	0	8	0	55	0	0	0	0	0	1
July	382	0	13	0	61	0	70	0	0	0	0	0	0	17	0	7	0	42	0	0	0	0	0	1
August	296	0	14	0	124	0	58	0	0	0	0	1	0	3	0	7	0	69	0	0	0	0	0	0
September	441	0	2	0	86	0	52	0	0	0	0	1	0	5	0	74	0	28	0	0	0	0	0	0
October	558	0	16	0	105	0	79	0	0	0	0	2	0	8	0	12	0	89	0	0	0	0	0	0
November	558	0	13	0	91	0	73	0	0	0	0	3	0	56	0	7	0	156	0	0	0	0	0	0
December	561	0	20	0	408	0	57	0	0	0	0	1	0	30	0	57	0	90	0	0	0	0	0	0
January (1987)	613	0	12	0	170	0	51	0	0	0	0	1	0	7	0	15	0	4	0	0	0	0	0	0
February	504	0	12	0	187	0	55	0	0	0	0	2	0	13	0	17	0	87	0	0	0	0	0	0
March	544	0	15	0	117	0	50	0	0	0	0	1	0	12	0	54	0	31	0	1	0	0	0	0
April	560	0	21	0	150	0	58	0	0	0	0	2	0	15	0	15	0	79	0	0	0	0	0	0
May	561	0	18	0	178	0	52	0	0	0	0	2	0	15	0	8	0	207	0	1	0	0	0	1
June	561	0	15	0	119	0	53	0	0	0	0	1	0	19	0	6	0	85	0	1	0	0	0	0
July	668	0	37	0	110	0	65	0	0	0	0	1	0	18	0	7	0	27	0	0	0	0	0	1
August	434	0	22	0	123	0	62	0	0	0	0	1	0	6	0	4	0	120	0	0	0	0	0	0
September	1 098	0	40	0	147	0	73	0	0	0	0	2	0	45	0	5	0	25	0	0	0	0	0	0
October	510	0	31	0	146	0	59	0	0	0	0	2	0	21	0	3	0	77	0	0	0	0	0	0
November	435	0	36	0	155	0	69	0	0	0	0	1	0	27	0	3	0	83	0	1	0	0	0	3
December	2 053	0	31	0	254	0	79	0	0	0	0	2	0	39	0	4	0	159	0	0	0	0	0	1
January (1988)	201	0	0	0	251	0	66	0	0	0	0	6	0	20	0	7	0	120	0	1	0	0	0	0
February	84	0	0	0	211	0	57	0	0	0	0	2	0	32	0	2	0	639	0	0	0	0	0	1
March	2 093	0	27	0	178	0	69	0	0	0	0	2	0	24	0	1	0	716	0	0	0	0	0	0

	In estments 33	Non Operative al Expes es 43	C sh ¹ 50	Settlement A ount 51	COGS A ounts 55	Suppl rs P yment 60	Non b dget P yment 65	Budget P yments 68	Insurance P yments 69	Sal ry 70	C sh Advan ce 71	Debt rs/ Credt rs 76	Int rnal Settlement 78	Int rnal part Settlement 79	Depr d thm Fund 86	COGS
January (1986)	0	0		7		13	486	8	164	449	0	123	102	124	111	5
February	0	0		1		13	562	7	140	391	0	113	98	7	0	5
March	0	0		6		23	509	12	242	676	0	74	114	95	0	5
April	0	0		7		38	280	46	214	590	0	68	80	61	0	2
May	0	0		13		18	341	46	216	609	0	120	50	1	0	1
June	0	0		12		15	424	47	225	613	0	86	139	12	0	2
July	0	0		4		1	348	16	242	674	0	13	87	1	0	1
August	0	0		4		14	352	42	180	497	0	62	74	107	0	2
September	0	0		4		13	174	50	221	588	0	72	51	62	0	1
October	0	0		4		19	90	71	218	618	0	90	2	3	0	3
November	0	0		8		13	52	58	76	224	0	68	22	202	0	1
December	0	0		7		17	41	64	215	596	0	160	27	0	0	3
January (1987)	0	0		7		7	20	60	239	624	0	107	46	11	0	2
February	0	0		6		10	22	57	220	637	0	86	46	13	0	1
March	0	0		3		25	17	63	262	761	0	75	16	0	0	3
April	0	0		5		0	1	72	349	952	0	85	30	0	0	0
May	0	0		8		12	9	74	347	950	0	274	18	44	0	1
June	0	0		2		6	16	73	348	960	0	55	45	1	0	0
July	0	0		11		14	40	273	763	1	111	44	0	0	0	0
August	0	0		4		1	16	1	320	883	0	123	27	0	0	1
September	0	0		6		27	24	137	313	901	0	147	29	0	0	3
October	0	0		1		1	6	57	322	914	0	61	0	0	0	0
November	0	0		4		4	9	58	328	942	0	65	0	258	0	1
December	0	0		3		4	14	63	361	929	0	152	20	107	0	4
January (1988)	0	0		1		1	11	40	376	982	0	38	17	0	0	6
February	0	0		2		15	15	41	210	377	0	103	17	2	0	0
March	0	0		9		14	14	54	199	364	0	121	11	0	0	6

Amount (round up) included in schedule 31

BEST AVAILABLE COPY

Balance Sheet

Table 4.6 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had an insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased over six times due to a revaluation of assets. In addition, Assets under Construction increased from 9.3 million to 30.5 million during the first quarter of 1997 due to construction projects at the Droghobych PEM.

Current assets increase from 5.5 million UAH to 16.4 million UAH. Cash balances and accounts receivable remained comparatively small. For most of the period examined, inventory was the largest current asset. For an electric distribution company, this is unusual and is attributed to the goods accumulated under barter arrangements.

Equity had a large rise between the second and third quarters of 1996. The account within equity that increased was the Reserve Funds, which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The reserve fund was reclassified as additional capital at the beginning of 1997. Long term debt was zero until the last period and the increase was small.

Current liabilities increase 2 ½ times from 4.3 million to 10.3. Most of the increase is split between accounts payable and wages payable. Accounts payable increased dramatically for the beginning of 1996 until the second quarter of 1997.

Tables 4.8 and 4.9 examine aggregate aging of accounts receivable and payable to determine cash flows for the company as a whole.⁹ The initial point of the analysis was January 1996. For accounts receivable, the inflow of payments (both cash and non-cash) is sufficient enough that total accounts receivable ages only to 30 days the last eight months of the analysis. For accounts payable, the last two months age to 60 days. Two reasons exist for the deteriorating performance of payables when compared to receivables. First, the gross margin (sales less purchases of electricity) is too small to cover all operating costs. The second reason is the value received may not be sufficiently liquid enough to use as payment of debts.

⁹ It is strongly suggested for the reader interested in this information to read the detailed description in the appendix concerning the methodologies of how this was calculated and what assumptions were used.

Table 4 6
Consolidated Electric Company
Ukraine Energy Project
 Balance Sheet as of
 (000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Long Term Assets										
Fixed Assets	74 261	74 807	376 661	476 365	479 778	480 096	483 777	485 476	487 792	487 931
Less Accumulated Depreciation	22 452	31 219	160 479	263 688	266 923	268 572	269 708	273 559	275 955	278 040
Net Fixed Assets	51 809	43 588	216 182	212 677	212 855	211 524	214 069	211 917	211 837	209 891
Assets Under Construction	7 424	7 939	8 972	9 892	9 331	30 553	31 106	25 709	21 392	22 087
Net Utility Plant	59 233	51 527	225 154	222 569	222 186	242 077	245 175	237 626	233 229	231 978
Other Property and Investments										
Nonutility Property and Intangibles	501	757	893	998	1 247	1 266	1 431	1 987	2 085	2 202
Less Accumulated Depreciation	77	191	250	268	311	341	369	429	506	570
Net Nonutility Property and Intangibles	424	566	643	730	936	925	1 062	1 558	1 579	1 632
Long Term Financial Investments	3	3	3	3	3	32	62	62	62	62
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	322
Total Other Property and Investments	427	569	646	733	939	957	1 124	1 620	1 641	2 016
Current Assets										
Cash and Short Term Investments	417	475	288	262	153	234	349	781	475	309
Accounts Receivable	393	656	759	1 681	1 459	1 549	3 103	2 630	2 355	2 327
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	393	656	759	1 681	1 459	1 549	3 103	2 630	2 355	2 327
Inventory	2 703	4 358	4 244	4 301	3 262	4 375	4 042	5 193	5 416	5 509
Government Employee and Other Receivables	1 968	2 199	3 100	3 970	8 444	7 781	4 259	4 463	7 518	7 285
Other Current Assets	29	2 007	130 457	129 526	1 122	1 659	2 247	3 011	182	1 037
Total Current Assets	5 510	9 695	138 848	139 740	14 440	15 598	14 000	16 078	15 946	16 467
TOTAL ASSETS	65 172	61 791	364 648	363 042	237 565	258 632	260 299	255 324	250 816	250 461
CAPITALIZATION AND LIABILITIES										
Stockholder's Equity										
Statutory Capital (Net)	49 507	49 507	49 507	49 507	49 507	49 507	49 507	49 507	49 507	49 507
Additional Capital	0	0	0	0	71 745	75 422	78 355	78 801	189 419	189 489
Reserve Funds	11 278	5 109	304 727	303 144	103 632	121 068	120 565	114 501	999	1 000
Retained Earnings	0	(1 825)	3 012	4 129	(487)	319	5 417	5 648	(5 561)	(4 984)
Unrealized Differences ¹	0	1 824	(3 012)	(4 129)	487	(319)	(5 417)	(5 648)	5 649	5 070
Total Equity	60 785	54 615	354 234	352 651	224 884	245 997	248 427	242 809	240 013	240 082
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	60 785	54 615	354 234	352 651	224 884	245 997	248 427	242 809	240 013	240 082
Current Liabilities										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	1 869	3 377	4 637	3 885	4 414	4 640	3 966	5 107	4 948	4 022
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Payables	1 869	3 377	4 637	3 885	4 414	4 640	3 966	5 107	4 948	4 022
Wages and Social Insurance Payable	1 122	1 660	2 222	3 585	4 753	5 364	5 645	4 853	4 039	4 351
Taxes and Non-Budget Payable	1 143	1 863	2 154	2 343	1 968	2 497	1 414	1 359	1 157	1 320
Government Employee and Other Payable	27	29	1 061	58	289	64	121	577	121	193
Advances from Customers	7	13	3	22	527	6	26	6	8	5
Other Current Liabilities	219	234	337	498	730	64	700	613	530	488
Total Current Liabilities	4 367	7 176	10 414	10 391	12 681	12 635	11 872	12 515	10 803	10 379
TOTAL CAPITALIZATION AND LIABILITIES	65 172	61 791	364 648	363 042	237 565	258 632	260 299	255 324	250 816	250 461

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

Table 4 7
Consolidated Electric Company
Financial Ratios

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.4	13.3	13.4	1.1	1.2	1.7	1.3	1.5	1.6
Collection Rate	100%	90%	112%	110%	73%	104%	68%	99%	77%
% Accounts Receivable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	10%
Capital Structure and Long Term Solvency									
Debt to Equity	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
Debt to Total Assets	12%	3%	3%	5%	5%	5%	5%	4%	4%
Times Interest Earned (Cash)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)	1.45	1.43	1.45	1.55	1.55	1.59	1.57	1.66	1.56
Operating Profits to Sales	-0.4%	10.9%	3.8%	8.2%	1.6%	9.4%	2.8%	6.5%	-4.7%
Net Unrealized Accounts to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income to Sales	2.8%	8.7%	2.4%	9.0%	1.3%	9.0%	2.3%	6.9%	5.0%
Asset Utilization									
Sales to Current Assets (Annualized)	27.2	1.6	1.3	14.3	16.3	16.1	11.3	14.1	15.4
Sales to Net Utility Plant (Annualized)	5.1	1.0	0.8	0.9	1.0	0.9	0.8	1.0	1.1
Sales to Total Assets (Annualized)	4.3	0.6	0.5	0.9	1.0	0.9	0.7	0.9	1.0
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	93.7%	80.9%	85.9%	97.2%	89.3%	77.7%	81.9%	90.7%	92.0%
Operating and Maintenance to Sales	2.8%	2.3%	2.4%	3.9%	2.0%	2.8%	2.9%	3.5%	4.1%
Fuel to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wages and Social Cost to Sales	3.1%	4.5%	5.2%	3.8%	4.4%	6.9%	7.6%	6.8%	4.4%
Depreciation to Sales	0.9%	1.4%	2.5%	3.3%	2.7%	3.1%	5.0%	5.5%	3.9%
Operating Income to Sales	-0.4%	10.9%	3.8%	8.2%	1.6%	9.4%	2.8%	6.5%	-4.7%
Net Income to Sales	2.8%	8.7%	2.4%	9.0%	1.3%	9.0%	2.3%	6.9%	5.0%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	1.1%	0.7%	0.5%	0.6%	0.6%	1.2%	1.0%	0.9%	0.9%
Current Assets	15.7%	38.1%	38.5%	6.1%	6.0%	5.4%	6.3%	6.4%	6.6%
Net Fixed Assets	83.4%	61.7%	61.3%	93.5%	93.6%	94.2%	93.1%	93.0%	92.0%
Current Liabilities	11.6%	2.9%	2.9%	5.3%	4.9%	4.6%	4.9%	4.3%	4.1%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	88.4%	97.1%	97.1%	94.7%	95.1%	95.4%	95.1%	95.7%	95.9%

Table 4 8
Consolidated Electric Company
Ukraine Energy Project
Determination and Aging of Accounts Receivable

(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	19 211	20 997	(1 785)					(1 785)	(1 785)
February	21 915	24 794	(4 664)	0				(4 664)	(4 664)
March	24 720	20 103	(46)	0	0			(46)	(46)
April	20 340	18 244	2 050	0	0	0		2 050	2 050
May	17 000	15 361	3 689	0	0	0	0	3 689	3 689
June	18 021	16 178	5 531	0	0	0	0	5 531	5 531
July	16 872	20 914	1 489	0	0	0	0	1 489	1 489
August	13 767	15 836	(580)	0	0	0	0	(580)	(580)
September	15 190	14 353	257	0	0	0	0	257	257
October	16 839	17 526	(430)	0	0	0	0	(430)	(430)
November	17 087	19 808	(3 150)	0	0	0	0	(3 150)	(3 150)
December	17 555	19 249	(4 844)	0	0	0	0	(4 844)	(4 844)
January (1997)	21 796	16 812	139	0	0	0	0	139	139
February	20 971	11 698	9 412	0	0	0	0	9 412	9 412
March	20 605	17 748	12 269	0	0	0	0	12 269	12 269
April	20 521	22 074	10 716	0	0	0	0	10 716	10 716
May	17 966	27 339	1 343	0	0	0	0	1 343	1 343
June	17 902	9 226	10 020	0	0	0	0	10 020	10 020
July	15 030	13 004	12 046	0	0	0	0	12 046	12 046
August	14 469	6 739	14 469	5 307	0	0	0	19 776	19 776
September	15 931	11 043	15 931	8 734	0	0	0	24 664	24 664
October	15 830	13 592	15 830	11 072	0	0	0	26 902	26 902
November	17 789	20 508	17 789	6 395	0	0	0	24 184	24 184
December	22 653	21 776	22 653	2 408	0	0	0	25 061	25 061
January (1998)	19 441	14 674	19 441	10 387	0	0	0	29 828	29 828
February	19 830	15 377	19 830	14 451	0	0	0	34 281	34 281
March	24 113	18 455	24 113	15 825	0	0	0	39 938	39 938

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

07

Table 4 9
Consolidated Electric Company
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	20 092	19 070	1 023						
February	22 564	24 345	(759)	0				1 023	1 023
March	25 010	23 158	1 093	0				(759)	(759)
April	18 799	22 675	(2 784)	0	0			1 093	1 093
May	15 026	17 042	(4 799)	0	0	0		(2 784)	(2 784)
June	16 705	24 698	(12 792)	0	0	0	0	(4 799)	(4 799)
July	16 990	31 537	(27 339)	0	0	0	0	(12 792)	(12 792)
August	12 805	14 405	(28 939)	0	0	0	0	(27 339)	(27 339)
September	14 925	13 037	(27 051)	0	0	0	0	(28 939)	(28 939)
October	17 683	16 618	(25 986)	0	0	0	0	(27 051)	(27 051)
November	17 687	14 020	(22 319)	0	0	0	0	(25 986)	(25 986)
December	20 734	8 275	(9 860)	0	0	0	0	(22 319)	(22 319)
January (1997)	22 432	16 582	(4 009)	0	0	0	0	(9 860)	(9 860)
February	19 807	9 921	5 877	0	0	0	0	(4 009)	(4 009)
March	20 334	19 774	6 437	0	0	0	0	5 877	5 877
April	19 616	23 674	2 379	0	0	0	0	6 437	6 437
May	16 699	28 314	(9 235)	0	0	0	0	2 379	2 379
June	14 976	7 324	(1 583)	0	0	0	0	(9 235)	(9 235)
July	13 758	11 862	312	0	0	0	0	(1 583)	(1 583)
August	13 967	4 746	9 534	0	0	0	0	312	312
September	16 651	8 580	16 651	954	0	0	0	9 534	9 534
October	18 659	10 164	18 659	7 441	0	0	0	17 605	17 605
November	18 298	17 854	18 298	8 246	0	0	0	26 100	26 100
December	23 209	19 978	23 209	6 566	0	0	0	26 544	26 544
January (1998)	20 458	10 301	20 458	19 474	0	0	0	29 775	29 775
February	19 431	14 722	19 431	20 458	4 752	0	0	39 932	39 932
March	26 623	19 987	26 623	19 431	5 223	0	0	44 641	44 641
								51 277	51 277

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Statement of Changes in Financial Position

Table 4.10 examines the cash flow from all financial activities during the year. Net income on an accrual basis ranges between negative 11.2 million and positive 5.5 million UAH. No consistent pattern exists. Operating and investment follow the same pattern because they are influenced (in this case) by the same transaction, the revaluation of fixed assets. However, this has no material effect on the operating activities of the company. It is merely a paper transaction to increase the taxable value of assets.

Table 4 10
Consolidated Electric Company
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Consolidated Electric Company

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Cash Flow from Operating Activities									
Net Income	(1 825)	4 837	1 116	(4 616)	806	5 098	231	(11 209)	577
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(263)	(103)	(922)	222	(90)	(1 554)	473	275	28
Change in Other Short Term Assets	(3 864)	(129 237)	4	124 969	(987)	3 267	(2 119)	(449)	(715)
Change in Accounts Payable	1 508	1 280	(752)	529	226	(674)	1 141	(159)	(926)
Change in Other Short Term Liabilities	1 281	1 978	729	1 761	(272)	(89)	(498)	(1 553)	502
Depreciation Expense	8 881	129 319	103 227	3 276	1 679	1 164	3 911	2 473	2 149
Net Cash Provided by Operating Activities	7 543	3 217	102 286	130 759	556	2 114	2 908	587	1 038
Cash Flow from Investment Activities									
Completed Plant In Service	(546)	(301 854)	(99 704)	(3 413)	(318)	(3 681)	(1 699)	(2 316)	(139)
Change in Construction Work in Progress	(515)	(1 033)	(920)	561	(21 222)	(553)	5 397	4 317	(695)
Change in Nonutility Property and Intangibles	(256)	(136)	(105)	(249)	(48)	(195)	(556)	(98)	(439)
Net Cash Provided by Investment Activities	(1 317)	(303 023)	(100 729)	(3 101)	(21 588)	(4 429)	3 142	1 903	(1 273)
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	(6 169)	299 618	(1 583)	(127 767)	21 113	2 430	(5 618)	(2 884)	71
Net Cash Provided by Financing Activities	(6 169)	299 618	(1 583)	(127 767)	21 113	2 430	(5 618)	(2 884)	71
Unrealized Cash Differences ¹	1 824	(4 836)	(1 116)	4 616	(806)	(5 098)	(231)	11 297	(579)
Net Change in Cash	56	(187)	(26)	(109)	81	115	432	(306)	(166)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

5. LVIV CITY PEM

Lviv City Electric Network (PEM) serves the city of Lviv. It is composed of five district networks (REMS) Galitsky, Lychakivsky, Zaluzhny, Shevchenkivsky, and Frankivsky. Its consumer base is comprised of 228,666 urban residential consumers and 259 industrial customers. Among its main industrial consumers are Svitoch (Ukraine's major confectionary business), Coca-Cola and the local water supply network. It employs 738 employees as of July 1, 1998.

Table 5.1 is the income statement for the distribution company Lviv City PEM. Supporting tables include 5.2 (Sales of Electricity), 5.3 (Other Income and Expenses), 5.4 (Electricity / Fuel Purchased), 5.5 (Main Production Costs), 5.8 (Aging of Accounts Receivable) and 5.9 (Aging of Accounts Payable).

Table 5.1 is the 1996-1998 quarterly restated income statement. Beginning with sales, two types of trends exist. The first is seasonal and the second is economic. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters (due to warmer weather). In the fourth quarter, a sharp rise in revenues due to both colder weather. The second trend is economic. Beginning with the first quarter of both 1996 and 1997, a quarter by quarter comparison shows that the first quarter sales for 1997 are lower than 1996. However, beginning with the second of 1997, each successive quarter shows an improvement over the last. The main reason explaining this trend was the general constraint on electricity supplied that was imposed on distribution by generation. Generation could not meet demand due to fuel shortages. The shortages were caused by a lack of payment from distribution companies who, in turn, had problems collecting from the final consumer.

The next section in the income statement deals with operational expenses. Also of usefulness is Table 5.7, Financial Ratios. In particular, the section referring to the common size income statement will yield important insights to the analysis. The largest cost for distribution is purchased energy. Although for both 1996 and 1997 the ratio of energy costs to sales is relatively constant at 77%, the quarter by quarter comparison throughout the year shows large differences between quarters. Both the 1st and 4th quarters (winter months) ratios are high and average around 81-82% of sales. However, during the summer months the ratios fall to 70% of sales. Since both the purchasing and selling tariffs are fixed by NERC, the Oblenergo has very little control concerning this factor. One factor that contributes to the higher cost is the higher average marginal cost of energy during the winter months because of the increased use of fossil fuels to meet the higher demand. During the summer months more of the demand is met by cheaper nuclear power.

Table 5 1
City PEM
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/1/96	1/7/96	1/10/96	1/1/97	1/1/97	1/7/97	1/10/97	1/1/98	1/1/98
Sales									
Electricity	18 990	14 990	11 941	14 895	17 374	15 578	13 860	18 885	19 865
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	0	0	0	0	0	0	0	0	0
Other Revenues	305	235	182	234	1 310	420	347	463	334
Total Sales	19 295	15 225	12 123	15 130	18 684	15 998	14 207	19 348	20 199
Operational Expenses									
Purchased Electricity	(15 830)	(10 906)	(8 335)	(12 623)	(14 699)	(11 116)	(10 333)	(15 627)	(16 132)
Operating Expenses	(507)	(531)	(410)	(364)	(420)	(324)	(382)	(280)	(212)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(317)	(397)	(396)	(289)	(491)	(706)	(536)	(698)	(658)
<i>Total Operating Expenses</i>	(16 653)	(11 833)	(9 141)	(13 275)	(15 610)	(12 145)	(11 351)	(16 605)	(17 002)
Maintenance	0	0	(1)	(4)	(7)	(5)	(11)	(3)	(2)
Depreciation	(111)	(102)	(107)	(192)	(186)	(194)	(268)	(348)	(311)
<i>Total Operational Expenses</i>	(111)	(102)	(109)	(195)	(193)	(199)	(279)	(351)	(312)
Operating Income	2 530	3 290	2 874	1 659	2 881	3 654	2 577	2 392	2 884
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	2 530	3 290	2 874	1 659	2 881	3 654	2 577	2 392	2 884
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	0	0	0	0	0	0	0	0
Taxes & Payments	(247)	(203)	(41)	(57)	(64)	(73)	(72)	(58)	0
<i>Total Taxes and Financial Costs</i>	(247)	(203)	(41)	(57)	(64)	(73)	(72)	(58)	0
NET INCOME	2 284	3 086	2 833	1 602	2 817	3 581	2 505	2 334	2 884

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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The next largest cost is operating expenses. This category includes materials, spare parts, fuel (other than for generation), small investment and servicing costs. Combined with maintenance (which is very small), these costs averaged 3% of sales during 1996, but have experienced a decline during 1997. During the first quarter of 1998 they are only 1.1% of sales. The reason for the decline is insufficient collection of liquid assets (cash) that is necessary to purchase the specialized parts and services needed for maintenance of electrical equipment.

Wages are the third largest cost and their trend is increasing. In 1996, labor costs average 2.4% of sales. This average increased to 3.8% in 1997 and during the first quarter of 1998, the ratio was 3.3% of sales. The increase in 1996 was due to a change in accounting (tax) policy. The change that increase wages was that bonuses were allowed to be deducted as an expense instead of being included as profit allocation. Also contributing to the overall increase are broad increases to make up for the general erosion of wages from past inflation. Depreciation remains a very small component for two reasons. First, tax rates under current tax policy allow for only very small deductions. The second reason is the very low original value assigned to it.

Although approximate, the aging in Tables 5.8 and 5.9 shows that the total money flow has been sufficient to cover sales and expenses so that no bad debts are necessary. However, what the tables do not show is that most of the value flowing into the company is non-cash transactions and that the PEM suffers from non-liquidity. There is a problem in meeting cash payment obligations (for example, wages).

Finally, how did the PEM perform in terms of profitability? Overall, it made a total of 23 million UAH over the 9 quarters restated. That is equivalent to 15.7% of sales. This performance is excellent and is mainly caused by the lower losses within this system. However, it should be pointed out that Lviv City has a natural advantage over the other two PEMs in that its consumer base is much more concentrated and easily serviced. Because of its location more electricity could be sold per unit of investment and a more efficient operation exists because of higher per unit sales.

Table 5.2, Electricity Sales, outlines the monthly electricity sold (in MWH), average tariff (UAH per MWH) and revenues (000 UAH) by consumer group for the period 1996-1998 (1st quarter). Total electricity sold for 1996 was 833,085 MWH with an average tariff of 73.1 UAH per MWH. Total revenues for the same period were 60.8 million UAH. As for 1997, 858,333 MWH were sold at an average price of 76.6 UAH per MWH. This generated total revenues of 65.7 million UAH. The year to year increase in MWH was 3% and in revenues was 8%. The difference between production and revenue increases was caused by the increase in the average tariff.

A more important comparison is period by period. Since information is available for three years on for the 1st quarter, this will be the period examined. Electricity sold (in

**Table 5 2
City PEM
Ukraine Energy Project
Electricity Sales**

Month	1 Total Electricity Sold (MWH)	2 Tariff (UAH per MWH)	3 Total Sales (000 UAH)	4 Total MW Sold (MWH)	5 Capacity Charge (UAH per MW)	6 Total Rev nues (000 UAH)	7 Total Electricity Sold (MWH)	8 Tariff (UAH per MWH)	9 Total Sales (000 UAH)	10 Total Electricity Sold (MWH)	11 Tariff (UAH per MWH)	12 Total Sales (000 UAH)	13 Total Electricity Sold (MWH)	14 Tariff (UAH per MWH)	15 Total Sales (000 UAH)
	Industrial >750			Industrial >750			Industrial < 750			Railroad			City Transport		
January (1996)	38 188	83 6	2 300	104	8 733 1	701	6 338	122 6	777	0	0 0	0	2 614	77 2	225
February	26 893	83 7	1 721	102	8 875 6	701	7 812	81 2	818	0	0 0	0	2 314	79 1	183
March	32 457	82 8	2 038	99	8 865 6	863	7 232	90 3	590	0	0 0	0	2 768	78 4	220
April	33 597	82 7	2 107	103	8 750 1	895	7 169	78 8	551	0	0 0	0	2 619	77 0	217
May	20 189	82 6	1 293	82	8 683 3	812	5 773	78 2	451	0	0 0	0	2 484	78 8	189
June	27 392	81 1	1 873	96	8 438 5	818	6 201	75 8	470	0	0 0	0	2 810	76 3	199
July	28 220	80 3	1 582	97	8 330 5	814	5 418	74 5	403	0	0 0	0	2 321	73 9	171
August	17 535	59 3	1 040	88	8 317 3	819	4 840	74 0	358	0	0 0	0	0	0 0	0
September	13 778	54 2	747	83	8 337 0	589	4 013	73 9	287	0	0 0	0	194	73 7	14
October	15 640	81 1	969	90	8 451 1	581	4 853	75 1	364	0	0 0	0	0	0 0	0
November	24 773	83 7	1 578	93	8 783 9	631	4 212	78 2	334	0	0 0	0	104	75 8	8
December	21 865	84 0	1 405	98	8 823 5	669	1 438	83 5	120	0	0 0	0	0	0 0	0
January (1997)	20 030	83 6	1 278	75	8 760 0	507	5 020	80 3	403	0	0 0	0	2 288	70 4	181
February	29 751	81 9	1 841	82	8 609 8	542	4 892	78 3	383	0	0 0	0	2 550	77 6	198
March	29 643	82 4	1 851	83	8 542 2	543	5 136	77 1	398	0	0 0	0	2 682	77 0	205
April	30 726	82 6	1 824	82	8 597 6	541	5 121	77 3	398	0	0 0	0	2 578	77 6	200
May	26 042	82 7	1 833	89	8 674 2	584	3 903	78 1	305	0	0 0	0	2 087	77 4	160
June	28 084	83 2	1 848	88	8 670 5	587	4 012	77 8	312	0	0 0	0	2 328	78 2	182
July	25 729	83 1	1 824	79	8 721 5	521	3 511	78 0	274	0	0 0	0	2 189	77 9	169
August	24 624	83 1	1 588	81	8 688 7	540	3 490	78 2	288	0	0 0	0	2 244	78 0	175
September	24 841	83 5	1 583	78	8 710 5	510	4 480	78 1	350	0	0 0	0	2 887	78 0	208
October	28 574	83 7	1 693	85	8 778 5	578	4 744	78 9	374	0	0 0	0	2 528	78 7	199
November	31 228	84 1	2 003	70	8 714 3	470	6 325	78 7	504	0	0 0	0	2 581	78 4	205
December	32 473	84 5	2 093	83	8 855 4	569	7 010	79 0	580	0	0 0	0	1 882	78 7	150
January (1998)	28 412	89 0	1 831	82	8 987 7	432	9 509	84 3	602	0	0 0	0	2 635	84 6	223
February	27 832	89 3	1 837	82	7 128 0	442	8 808	87 7	860	0	0 0	0	1 818	87 8	142
March	27 400	71 3	1 854	60	7 550 0	453	9 026	89 9	812	0	0 0	0	2 872	88 4	239
	Non-Industrial			Agriculture			Residential City			Residential Rural			Transmission		
January (1996)	15 438	77 8	1 188	808	81 0	37	27 178	43 8	1 185	1 498	53 4	80	8	8 000 0	38
February	16 372	79 1	1 295	817	82 1	38	29 328	44 2	1 285	1 825	85 5	128	8	5 000 0	30
March	18 455	78 0	1 263	481	82 3	30	35 022	42 5	1 489	1 974	54 2	107	7	5 000 0	35
April	14 571	78 3	1 112	281	217 9	81	24 884	43 4	1 078	1 089	58 9	83	8	7 333 3	44
May	8 145	76 9	628	32	23 144	19	989	43 2	989	1 252	58 1	74	3	7 333 3	22
June	10 714	75 9	813	245	80 0	15	19 233	48 6	897	1 617	58 8	95	4	8 250 0	25
July	7 287	74 7	545	315	58 3	19	22 829	45 6	1 033	1 510	80 3	81	3	7 000 0	21
August	6 831	71 4	489	88	58 4	5	21 040	53 1	1 118	1 480	80 1	89	391	58 4	23
September	9 186	72 5	668	51	59 6	3	21 855	57 3	1 253	1 950	70 8	138	287	58 7	17
October	10 503	75 0	788	68	80 3	4	22 918	57 4	1 315	2 125	80 0	170	252	58 7	15
November	12 288	84 1	1 034	341	81 3	21	23 438	81 3	1 437	1 815	78 9	145	305	82 0	19
December	16 435	79 2	1 460	123	78 9	10	29 002	58 9	1 850	1 989	80 0	180	208	52 4	11
January (1997)	16 958	79 6	1 349	336	82 5	21	28 168	80 1	1 892	4 081	80 0	325	21	47 6	1
February	15 382	78 0	1 167	402	59 7	24	25 145	55 9	1 408	1 582	80 0	125	22	80 9	2
March	18 828	77 0	1 285	288	60 4	18	22 744	52 3	1 180	5 841	78 8	450	20	50 0	1
April	15 870	77 3	1 227	352	51 1	18	21 724	55 8	1 212	2 135	80 1	171	24	41 7	1
May	10 424	77 8	811	108	66 0	7	18 171	54 4	878	4 710	81 3	383	17	58 8	1
June	13 027	77 8	1 014	143	55 9	8	18 260	56 5	918	5 480	81 0	444	29	68 0	2
July	8 257	77 9	643	44	88 2	3	22 825	56 8	1 297	3 717	81 0	301	25	80 0	2
August	8 654	78 0	675	101	59 4	8	14 348	53 1	782	3 812	81 0	282	13	76 9	1
September	11 731	78 2	917	94	63 8	8	14 872	53 8	787	4 580	81 0	371	13	76 9	1
October	11 802	78 5	927	168	86 3	11	21 684	57 8	1 249	5 474	80 2	439	17	0 0	0
November	13 835	78 2	1 098	175	57 1	10	20 835	63 7	1 327	5 988	80 0	479	24	83 3	2
December	20 327	79 6	1 618	347	83 4	22	28 883	60 7	1 632	8 427	80 1	675	22	45 5	1
January (1998)	11 845	85 9	1 028	453	68 2	30	25 086	80 2	1 510	8 364	79 4	505	23	87 0	2
February	12 843	86 4	1 109	488	67 8	33	25 564	80 4	1 545	5 284	81 3	428	23	43 5	1
March	15 300	82 0	1 407	431	71 9	31	25 139	80 7	1 528	7 088	68 3	484	21	47 6	1

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Table 5 3
City PEM
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	105 1	0	0	0
February	95 5	0	0	0
March	104 1	0	0	0
April	94 2	0	0	0
May	65 6	0	0	0
June	75 4	0	0	0
July	69 6	0	0	0
August	56 2	0	0	0
September	56 4	0	0	0
October	65 2	0	0	0
November	82 4	0	0	0
December	86 7	0	0	0
January (1997)	790 8	0	0	0
February	351 6	0	0	0
March	167 2	0	0	0
April	154 0	0	0	0
May	129 0	0	0	0
June	136 8	0	0	0
July	96 6	0	0	0
August	102 4	0	0	0
September	148 1	0	0	0
October	174 1	0	0	0
November	108 0	0	0	0
December	180 9	0	0	0
January (1998)	108 5	0	0	0
February	109 0	0	0	0
March	116 2	0	0	0

Table 5 4
Electricity and Fuel Purchases
City PEM
Ukraine Energy Project
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	126 809	45 87	5 816	0	0	0	0	0	0
February	96 459	50 99	4 918	0	0	0	0	0	0
March	100 737	50 58	5 095	0	0	0	0	0	0
April	90 836	50 47	4 584	0	0	0	0	0	0
May	56 219	49 70	2 794	0	0	0	0	0	0
June	69 659	50 64	3 527	0	0	0	0	0	0
July	66 560	50 71	3 375	0	0	0	0	0	0
August	50 858	46 86	2 383	0	0	0	0	0	0
September	54 662	47 13	2 576	0	0	0	0	0	0
October	63 893	47 76	3 052	0	0	0	0	0	0
November	86 973	49 61	4 315	0	0	0	0	0	0
December	104 662	50 22	5 257	0	0	0	0	0	0
January (1997)	102 853	49 42	5 083	0	0	0	0	0	0
February	94 226	48 49	4 569	0	0	0	0	0	0
March	103 891	48 58	5 047	0	0	0	0	0	0
April	93 174	47 42	4 418	0	0	0	0	0	0
May	68 006	47 75	3 247	0	0	0	0	0	0
June	73 712	46 81	3 450	0	0	0	0	0	0
July	69 759	48 17	3 360	0	0	0	0	0	0
August	68 910	47 79	3 293	0	0	0	0	0	0
September	77 335	47 57	3 679	0	0	0	0	0	0
October	96 141	46 85	4 504	0	0	0	0	0	0
November	110 469	46 21	5 105	0	0	0	0	0	0
December	129 989	46 30	6 018	0	0	0	0	0	0
January (1998)	113 727	49 91	5 676	0	0	0	0	0	0
February	96 069	51 80	4 976	0	0	0	0	0	0
March	101 040	54 23	5 480	0	0	0	0	0	0

Tables 5.5
City PEM
Ukraine Energy Project
Main Production Costs

Month	Depreciation 2	Maintenance 3	Material 5	Fuel 6	Construction Material 7	Spare Part 8	Inventory 9	Agricultural Products 10	Oil 11	Low sh Item 12	Depreciation of LV Items 13	Transport Costs 16	Construction Expenses 18	Operating Operations 19	Non-Operational Operations 36	Deferred Expenses 31
January (1986)	0	0	60	1	0	0	0	0	0	0	10	0	0	0	0	0
February	17	0	71	1	0	0	0	0	0	0	43	0	0	0	0	0
March	17	0	65	1	0	0	0	0	0	1	7	1	0	0	0	0
April	17	0	63	1	0	0	0	0	0	1	5	1	0	0	0	0
May	17	0	75	1	0	0	0	0	0	2	11	1	0	0	0	0
June	38	0	81	1	0	0	0	0	0	10	14	2	0	0	0	0
July	39	0	44	1	0	0	0	0	0	1	7	1	0	0	0	1
August	19	0	69	1	0	1	0	0	0	0	1	2	0	0	0	0
September	40	0	50	2	0	1	0	0	0	0	3	68	0	0	0	0
October	59	0	46	2	0	0	0	0	0	1	1	1	0	0	0	0
November	59	0	38	1	0	1	0	0	0	1	47	1	0	0	0	0
December	63	0	69	2	0	2	0	0	0	0	37	45	0	0	0	0
January (1987)	60	0	61	3	0	3	0	0	0	1	1	2	0	0	0	0
February	56	0	71	3	0	3	0	0	0	1	7	4	0	0	0	0
March	59	0	70	4	0	1	0	0	0	1	3	53	0	0	0	0
April	60	0	58	3	0	2	0	0	0	1	4	1	0	0	0	0
May	61	0	63	4	0	2	0	0	0	1	3	1	0	0	0	0
June	62	0	59	4	0	1	0	0	0	1	5	1	0	0	0	0
July	62	0	63	4	0	3	0	0	0	0	3	1	0	0	0	0
August	63	0	63	5	0	0	0	0	0	0	3	0	0	0	0	0
September	103	0	72	6	0	7	0	0	0	1	34	2	0	0	0	0
October	133	0	68	6	0	1	0	0	0	0	8	1	0	0	0	0
November	83	0	70	8	0	1	0	0	0	1	12	1	0	0	0	0
December	83	0	62	7	0	2	0	0	0	1	9	1	0	0	0	1
January (1988)	157	0	66	7	0	0	0	0	0	0	4	2	0	0	0	0
February	84	0	14	14	0	1	0	0	0	1	6	2	0	0	0	0
March	49	0	12	13	0	0	0	0	0	0	11	3	0	0	0	0
	Investment 33	Non-Operational Expenses 43	Material 50	Settlement Account 51	Other Account 55	Supplies 60	Non-budget Payments 65	Budget Payments 68	Insurance Payments 69	Salary 70	Construction Advances 71	Debt Credit 76	Interest Settlements 78	Interest Settlements 79	Debt Funds 86	(M)
January (1986)	0	0	0	0	0	13	76	8	26	70	0	7	77	0	17	5
February	0	0	0	0	0	13	74	7	20	56	0	13	79	0	0	5
March	0	0	0	0	0	23	69	12	38	106	0	9	73	0	0	5
April	0	0	0	0	0	38	62	11	34	93	0	14	66	0	0	2
May	0	0	1	0	0	18	54	12	37	99	0	6	14	1	0	1
June	0	0	1	0	0	15	53	12	36	98	0	21	122	0	0	2
July	0	0	0	0	0	1	46	16	40	109	0	3	67	1	0	2
August	0	0	0	0	0	14	43	5	29	78	0	8	56	8	0	2
September	0	0	0	0	0	13	83	14	38	102	0	16	16	0	0	3
October	0	0	0	0	0	19	3	19	43	116	0	43	26	3	0	3
November	0	0	0	0	0	6	13	0	16	7	0	4	1	26	0	1
December	0	0	0	0	0	13	1	19	41	113	0	27	26	0	0	3
January (1987)	0	0	0	0	0	7	3	20	53	110	0	12	26	0	0	2
February	0	0	0	0	0	10	4	16	45	122	0	9	23	0	0	1
March	0	0	0	0	0	25	2	18	35	128	0	12	19	0	0	3
April	0	0	0	0	0	0	0	25	69	189	0	36	16	0	0	0
May	0	0	3	0	0	12	1	23	60	163	0	18	18	0	0	1
June	0	0	0	0	0	6	3	22	60	164	0	6	13	1	0	0
July	0	0	0	0	0	11	3	26	53	143	1	26	27	0	0	0
August	0	0	0	0	0	1	5	1	57	158	0	13	14	0	0	1
September	0	0	0	0	0	26	0	37	59	167	0	31	14	0	0	3
October	0	0	0	0	0	1	0	18	60	169	0	25	0	0	0	0
November	0	0	0	0	0	3	4	0	17	162	0	3	0	0	0	1
December	0	0	0	0	0	3	0	22	66	183	0	20	3	0	0	1
January (1988)	0	0	0	0	0	1	0	0	59	165	0	28	0	0	0	6
February	0	0	0	0	0	13	0	0	59	163	0	16	0	0	0	6
March	0	0	0	1	0	14	0	0	56	156	0	10	4	0	0	6

50

MWH) for the 1st quarter (1996-1998) averaged 87,904, 77,345 and 82,710 per month respectively. The trend in sales during this period follows the trend of combined industrial consumption (both large and small consumers). From 1996 to 1997 industry consumption fell by a total of 16%. This decrease accounts for most of the 12% fall in total sales. From 1997 to 1998 total sales increased by 7%. Once again, the increase is explained by the 5.6% increase in large industrial consumption and 9% increase in small industrial consumption.

In terms of usage, the main consumer groups are large industrial consumers (>750 MWH), residential city and non-industrial groups. Over the period examined, the large industrial group purchased 35% (1996), 39% (1997), and 34% (1st quarter 1998) of the total sold whereas the residential city customers consumption was 36% (1996), 29% (1997) and 31% (1st quarter 1998). For non-industrial consumers, they remained constant at 18% over the entire period analyzed.

Table 5.3 is other income and internal transactions. Other revenues for electricity distribution are fees collected for late payment, repairs and meter installation as well as fees for transiting electricity. Compared with electricity sales, the total is very small and averages 2-3% of monthly electric sales. The trend for the 2 years examined is increasing mainly because of late fees.

Table 5.4 shows the monthly purchases for electricity from the Energomarket. Since this represents the most significant cost, it is shown in greater detail by the inclusion of this table. As with sales, period by period analysis will be used with the period being the 1st quarter of each year. Total purchases in MWH for each quarter are as follows: 108,000 (1996), 100,300 (1997) and 103,600 (1998)¹⁰. Calculated losses attributable to distribution average over 20%. This level is extremely high when compared to the 6.2% loss rate within the U.S. Rural Electric System¹¹.

The next table, 5.5, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs has been made within the context of the restated income statement.

¹⁰ It should be noted that sales in MWH during this period are 87,809 (1996), 77,345 (1997) and 82,710 (1998). Losses would be 18.7% for 1996, 22.9% for 1997 and 20.2% for 1998. The company also has some self-generation from the CHP-1, but the amount is so small it was ignored.

¹¹ 1994 Statistical Report Rural Electric Borrowers, Rural Electric Service, United States Department Of Agriculture (Washington, DC: Government Printing Office)

Balance Sheet

Table 5.6 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased seven times due to revaluation of assets. In addition, Assets under Construction have increased by the same amount. Combined, net utility assets have increased by a similar amount and the major reason is the revaluation.

Current assets increased from 1.4 million UAH to 3.5 million UAH in the third quarter of 1997. Cash balances and accounts receivable remain comparatively small. For most of the period examined, inventory was the largest current asset. For an electric distribution company this is unusual and is attributed to the goods accumulated under barter arrangements.

Equity had a large increase between the second and third quarters of 1996. The account causing the increase was Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The reserve fund was reclassified as additional capital at the beginning of 1997. Long term debt was zero for the period.

As for current liabilities, accounts payable increased dramatically for the beginning of 1996 until the second quarter of 1997. During the same period, wages and social costs payable also increased from 1.3 million UAH to 1 million UAH. Finally, taxes and non-budget payables doubled in value. The major reason for the increase in each account was the lack of liquidity within the system which caused certain accounts (not subject to barter arrangements) to accumulate. The net result is current liabilities increased five times from 0.7 million to 3.5 million UAH. After the second quarter (1997) the balance reduced to 3.0 million and then finally leveled off at approximately 2.4 million UAH.

Statement of Changes in Financial Position

Table 5.10 examines the cash flow from all financial activities during the year. Net income on an accrual basis was between 1.6 and 3.6 million UAH until the third quarter of 1997. It then took a large drop to 0.5 million UAH and then went up again to its previous level. With the exception of the second quarter of 1996, cash provided from operations is near zero.

Table 5.6
City PEM
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	5 121	5 174	35 478	36 125	36 989	37 270	38 277	38 784	39 370	39 761
Less Accumulated Depreciation	1 906	1 958	15 166	15 430	15 582	15 754	15 930	18 168	18 505	18 805
Net Fixed Assets	3 215	3 216	20 312	20 695	21 407	21 516	22 347	20 616	20 865	20 956
Assets Under Construction	371	565	599	794	903	1 562	1 764	2 158	2 416	2 582
Net Utility Plant	3 586	3 781	20 911	21 489	22 310	23 078	24 111	22 774	23 281	23 538
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	271	323	401	442	574	566	585	826	830	890
Less Accumulated Depreciation	20	82	115	124	141	156	167	208	249	266
Net Nonutility Property and Intangibles	251	241	286	318	433	410	418	618	581	624
Long Term Financial Investments	3	3	3	3	3	3	3	3	3	3
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	322
Total Other Property and Investments	254	244	289	321	436	413	421	621	584	949
<i>Current Assets</i>										
Cash and Short Term Investments	74	61	8	50	4	68	21	364	112	30
Accounts Receivable	58	81	161	256	192	146	609	681	370	459
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	58	81	161	256	192	146	609	681	370	459
Inventory	516	853	466	489	625	793	832	1 014	1 274	1 097
Government Employee and Other Receivables	777	591	834	1 844	2 152	1 546	204	398	628	341
Other Current Assets	5	395	636	305	58	734	928	1 078	8	446
Total Current Assets	1 430	1 981	2 105	2 944	3 031	3 287	2 594	3 535	2 392	2 373
TOTAL ASSETS	5 270	6 006	23 305	24 754	25 777	26 778	27 126	26 930	26 257	26 860
CAPITALIZATION AND LIABILITIES										
<i>Stockholders Equity</i>										
Statutory Capital (Net)	3 222	3 222	3 222	3 222	3 222	3 222	3 222	3 222	3 222	3 222
Additional Capital	0	0	0	0	18 834	19 666	20 526	20 393	20 202	20 601
Reserve Funds	1 329	1 676	18 265	18 618	616	386	412	414	415	416
Retained Earnings	0	2 284	5 370	8 203	9 806	12 623	16 204	18 708	21 042	23 926
Unrealized Differences		(2 284)	(5 370)	(8 203)	(9 806)	(12 623)	(16 204)	(18 708)	(20 954)	(23 840)
Total Equity	4 551	4 898	21 487	21 840	22 672	23 274	24 160	24 029	23 927	24 325
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	4 551	4 898	21 487	21 840	22 672	23 274	24 160	24 029	23 927	24 325
<i>Current Liabilities</i>										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	83	112	345	768	683	1 571	976	1 430	1 151	1 091
Less Bad Debt Allowance										
Net Payables	83	112	345	768	683	1 571	976	1 430	1 151	1 091
Wages and Social Insurance Payable	127	168	330	688	811	923	1 007	528	562	708
Taxes and Non-Budget Payable	436	705	846	988	1 049	999	306	224	120	188
Government Employee and Other Payable	4	5	5	5	3	2	3	169	5	105
Advances from Customers	1	3	2	4	21	5	5	5	4	5
Other Current Liabilities	68	115	290	461	538	4	669	545	488	438
Total Current Liabilities	719	1 108	1 818	2 914	3 105	3 504	2 966	2 901	2 330	2 535
TOTAL CAPITALIZATION AND LIABILITIES	5 270	6 006	23 305	24 754	25 777	26 778	27 126	26 930	26 257	26 860

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

**Table 5 7
City PEM
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.8	1.2	1.0	1.0	0.9	0.9	1.2	1.0	0.9
Collection Rate	99%	102%	103%	110%	75%	113%	70%	92%	82%
% Accounts Receivable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capital Structure and Long Term Solvency									
Debt to Equity	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Debt to Total Assets	18%	8%	12%	12%	13%	11%	11%	9%	9%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)	1.47	1.45	1.49	1.54	1.53	1.63	1.61	1.66	1.54
Operating Profits to Sales	13.1%	21.6%	23.7%	11.0%	15.4%	22.8%	18.1%	12.4%	14.3%
Net Unrealized Accounts to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income to Sales	11.8%	20.3%	23.4%	10.6%	15.1%	22.4%	17.6%	12.1%	14.3%
Asset Utilization									
Sales to Current Assets (Annualized)	39.0	28.9	16.5	20.0	22.7	24.7	16.1	32.4	34.0
Sales to Net Utility Plant (Annualized)	20.4	2.9	2.3	2.7	3.2	2.7	2.5	3.3	3.4
Sales to Total Assets (Annualized)	12.9	2.6	2.0	2.3	2.8	2.4	2.1	2.9	3.0
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	82.0%	71.6%	68.8%	83.4%	78.7%	69.5%	72.7%	80.8%	79.9%
Operating and Maintenance to Sales	2.6%	3.5%	3.4%	2.4%	2.2%	2.0%	2.6%	1.4%	1.0%
Fuel to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wages and Social Cost to Sales	1.6%	2.6%	3.3%	1.9%	2.6%	4.4%	4.5%	3.6%	3.3%
Depreciation to Sales	0.6%	0.7%	0.9%	1.3%	1.0%	1.2%	1.9%	1.8%	1.5%
Operating Income to Sales	13.1%	21.6%	23.7%	11.0%	15.4%	22.8%	18.1%	12.4%	14.3%
Net Income to Sales	11.8%	20.3%	23.4%	10.6%	15.1%	22.4%	17.6%	12.1%	14.3%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	1.3%	0.7%	1.0%	0.7%	0.5%	2.2%	2.5%	1.4%	1.7%
Current Assets	33.0%	9.0%	11.9%	11.8%	12.3%	9.6%	13.1%	9.1%	8.8%
Net Fixed Assets	63.0%	89.7%	86.8%	86.6%	86.2%	88.9%	84.6%	88.7%	87.6%
Current Liabilities	18.4%	7.8%	11.8%	12.0%	13.1%	10.9%	10.8%	8.9%	9.4%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	81.6%	92.2%	88.2%	88.0%	86.9%	89.1%	89.2%	91.1%	90.6%

Table 5 8
City PEM
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	6 644	6 776	(132)					(132)	(132)
February	6 102	7 065	(1 096)	0				(1 096)	(1 096)
March	6 549	5 172	281	0	0			281	281
April	6 023	6 975	(671)	0	0	0		(671)	(671)
May	4 321	4 600	(950)	0	0	0	0	(950)	(950)
June	4 881	3 968	(37)	0	0	0	0	(37)	(37)
July	4 548	4 730	(219)	0	0	0	0	(219)	(219)
August	3 796	4 241	(664)	0	0	0	0	(664)	(664)
September	3 780	3 568	(452)	0	0	0	0	(452)	(452)
October	4 269	4 800	(982)	0	0	0	0	(982)	(982)
November	5 289	4 822	(515)	0	0	0	0	(515)	(515)
December	5 571	6 987	(1 931)	0	0	0	0	(1 931)	(1 931)
January (1997)	6 528	4 675	(78)	0	0	0	0	(78)	(78)
February	6 040	4 507	1 455	0	0	0	0	1 455	1 455
March	6 116	4 892	2 679	0	0	0	0	2 679	2 679
April	5 844	6 210	2 313	0	0	0	0	2 313	2 313
May	4 902	8 283	(1 068)	0	0	0	0	(1 068)	(1 068)
June	5 252	3 633	551	0	0	0	0	551	551
July	4 941	4 450	1 041	0	0	0	0	1 041	1 041
August	4 385	2 555	2 872	0	0	0	0	2 872	2 872
September	4 881	2 910	4 843	0	0	0	0	4 843	4 843
October	5 642	4 220	5 642	623	0	0	0	6 266	6 266
November	6 204	5 622	6 204	644	0	0	0	6 848	6 848
December	7 502	7 927	6 423	0	0	0	0	6 423	6 423
January (1998)	6 570	5 047	6 570	1 376	0	0	0	7 945	7 945
February	6 606	5 083	6 606	2 862	0	0	0	9 468	9 468
March	7 023	6 380	7 023	3 088	0	0	0	10 112	10 112

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 5 9
City PEM
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	6 177	5 728	449					449	449
February	5 316	5 564	200	0				200	200
March	5 513	4 950	763	0	0			763	763
April	4 990	5 294	459	0	0	0		459	459
May	3 141	3 059	541	0	0	0	0	541	541
June	4 012	3 827	726	0	0	0	0	726	726
July	3 753	4 709	(230)	0	0	0	0	(230)	(230)
August	2 718	3 546	(1 058)	0	0	0	0	(1 058)	(1 058)
September	2 827	2 866	(1 097)	0	0	0	0	(1 097)	(1 097)
October	3 435	3 728	(1 389)	0	0	0	0	(1 389)	(1 389)
November	4 455	4 282	(1 216)	0	0	0	0	(1 216)	(1 216)
December	5 643	2 775	1 652	0	0	0	0	1 652	1 652
January (1997)	5 445	5 293	1 804	0	0	0	0	1 804	1 804
February	4 948	3 155	3 596	0	0	0	0	3 596	3 596
March	5 481	5 852	3 224	0	0	0	0	3 224	3 224
April	4 882	6 166	1 941	0	0	0	0	1 941	1 941
May	3 677	9 041	(3 423)	0	0	0	0	(3 423)	(3 423)
June	3 857	2 977	(2 543)	0	0	0	0	(2 543)	(2 543)
July	3 785	4 428	(3 186)	0	0	0	0	(3 186)	(3 186)
August	3 679	1 938	(1 445)	0	0	0	0	(1 445)	(1 445)
September	4 242	3 406	(609)	0	0	0	0	(609)	(609)
October	5 013	4 011	393	0	0	0	0	393	393
November	5 526	7 946	(2 027)	0	0	0	0	(2 027)	(2 027)
December	6 478	7 307	(2 856)	0	0	0	0	(2 856)	(2 856)
January (1998)	6 159	3 682	(379)	0	0	0	0	(379)	(379)
February	5 342	5 066	(103)	0	0	0	0	(103)	(103)
March	5 796	6 205	(513)	0	0	0	0	(513)	(513)

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 5 10
City PEM
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	2 284	3 086	2 833	1 602	2 817	3 581	2 505	2 334	2 884
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(23)	(80)	(95)	64	48	(463)	(72)	311	(89)
Change in Other Short Term Assets	(541)	(97)	(702)	(197)	(236)	1 109	(526)	580	26
Change in Accounts Payable	29	233	423	(85)	888	(595)	454	(279)	(60)
Change in Other Short Term Liabilities	360	477	673	278	(489)	57	(519)	(292)	265
Depreciation Expense	114	13 241	273	169	187	187	2 279	378	317
Net Cash Provided by Operating Activities	(61)	13 774	572	227	394	295	1 616	698	459
Cash Flow from Investment Activities									
Completed Plant In Service	(53)	(30 304)	(647)	(864)	(281)	(1 007)	(507)	(586)	(391)
Change In Construction Work In Progress	(194)	(34)	(195)	(109)	(659)	(202)	(394)	(258)	(166)
Change In Nonutility Property and Intangibles	(52)	(78)	(41)	(132)	8	(19)	(241)	(4)	(382)
Net Cash Provided by Investment Activities	(299)	(30 416)	(883)	(1 105)	(932)	(1 228)	(1 142)	(848)	(939)
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	347	16 589	353	832	602	886	(131)	(190)	400
Net Cash Provided by Financing Activities	347	16 589	353	832	602	886	(131)	(190)	400
Unrealized Cash Differences ¹	(2 284)	(3 086)	(2 833)	(1 602)	(2 817)	(3 581)	(2 505)	(2 246)	(2 886)
Net Change in Cash	(13)	(53)	42	(46)	64	(47)	343	(252)	(82)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

6. LVIV PEM

Lviv Electric Network serves most of the Lviv Oblast. It is composed of 13 REMS Brody, Busk, Gorodok, Zolochyv, Kaminka Buska, Mostyska, Zhovkva, Peremyshl, Pustomyty, Radekhiv, Chervonograd, Sokal and Yavoriv. Its consumer base is comprised of 311,575 residential consumers and 484 industrial customers. Among its main industrial users are the Druzhba Oil Pipeline, Yavorivska Sirka sulfur processing plant, mines and a coal washing plant in Chervonograd. It employs 1,582 employees as of July 1, 1998.

Table 6.1 is the income statement for the distribution division Lviv PEM. Supporting tables include 6.2 (Sales of Electricity), 6.3 (Other Income and Expenses), 6.4 (Electricity / Fuel Purchased), 6.5 (Main Production Costs), 6.8 (Aging of Accounts Receivable) and 6.9 (Aging of Accounts Payable).

Table 6.1 is the 1996-1998 quarterly restated income statement. Beginning with sales one trend exists and it is seasonal. This trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters (due to warmer weather). In the fourth quarter, consumption begins to rise for two reasons. The first is colder weather and the second is increased economic activity due to agriculture harvesting. For the most part, consumption has remained steady over the time period restated and was not effected by constraints in supply imposed on it through generation's insufficient power production. The reason is the small industrial base in proportion to rural consumption.

The next section in the income statement deals with operational expenses. Also of usefulness is Table 6.7, Financial Ratios. In particular, the section referring to the common size income statement will yield important insights to the analysis. The largest cost for distribution is purchased energy. Over the period examined purchased power as a percent of sales is very high at 91.5%. During some periods, the cost rises as high as sales itself. This trend is seasonal and usually occurs during the winter months. The cause of this pattern is the higher percentage of use of rural consumers (with their lower average tariff) during the winter months as they increase usage to heat and light their homes. During the summer months, the industrial usage increases (with its higher average tariff) and the ratio falls.

The next largest cost is operating expenses. This category includes materials, spare parts, fuel (other than for generation), small investment and servicing costs. Combined with maintenance (which is very small), these costs averaged 2.8% of sales during 1996, 3.2% during 1997 and 3.5% for the first quarter of 1998. In all cases this expenditure is very low. The reason for the low level is the insufficient collection of liquid assets necessary to purchase the specialized parts and services needed for maintenance of equipment.

Table 6 1
Lviv PEM
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/1/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	25 723	22 069	18 784	18 841	24 305	21 341	16 119	20 871	23 181
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	0	0	0	0	0	0	0	0	0
Other Revenues	463	397	338	339	(57)	109	(688)	(2 107)	417
Total Sales	26 186	22 466	19 122	19 180	24 248	21 450	15 431	18 764	23 598
Operational Expenses									
Purchased Electricity	(25 515)	(18 928)	(17 217)	(18 631)	(23 632)	(16 974)	(13 302)	(18 835)	(21 636)
Operating Expenses	(775)	(397)	(408)	(817)	(395)	(667)	(506)	(1 042)	(742)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(885)	(1 094)	(1 055)	(1 047)	(1 174)	(1 694)	(1 488)	(1 610)	(1 663)
<i>Total Operating Expenses</i>	<i>(27 175)</i>	<i>(20 419)</i>	<i>(18 680)</i>	<i>(20 495)</i>	<i>(25 201)</i>	<i>(19 335)</i>	<i>(15 295)</i>	<i>(21 488)</i>	<i>(24 041)</i>
Maintenance	34	(4)	(28)	(2)	(1)	9	70	16	(79)
Depreciation	(334)	(435)	(452)	(730)	(727)	(743)	(937)	(1 135)	(972)
<i>Total Operational Expenses</i>	<i>(300)</i>	<i>(439)</i>	<i>(481)</i>	<i>(731)</i>	<i>(728)</i>	<i>(733)</i>	<i>(867)</i>	<i>(1 119)</i>	<i>(1 051)</i>
Operating Income	(1 289)	1 608	(39)	(2 046)	(1 681)	1 381	(732)	(3 843)	(1 493)
NON-OPERATING INCOME									
Net Non Utility Operating Income	0								
Total Operating Income Before Taxes and Financial Costs	(1 289)	1 608	(39)	(2 046)	(1 681)	1 381	(732)	(3 843)	(1 493)
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	0	0	0	0	0	0	0	0
Taxes & Payments	(747)	(552)	(307)	(180)	(163)	(152)	(151)	(143)	(166)
<i>Total Taxes and Financial Costs</i>	<i>(747)</i>	<i>(552)</i>	<i>(307)</i>	<i>(180)</i>	<i>(163)</i>	<i>(152)</i>	<i>(151)</i>	<i>(143)</i>	<i>(166)</i>
NET INCOME	(2 036)	1 056	(346)	(2 226)	(1 844)	1 229	(883)	(3 986)	(1 659)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

Wages are the third largest cost and their trend is increasing. In 1996, labor costs average 4.8% of sales. The main reason for this increase is a change in tax policy allowing wage bonuses to be deducted as an expense. This average increased to 7.7% in 1997 and during the first quarter of 1998, the ratio was 7.0% of sales. Throughout the period, increases in wages were needed to make up for the general erosion of wages from past inflation. Depreciation remains a very small component, averaging 3.6% of sales, for two reasons. First, tax policy allows for only small deductions. The second reason is the very low value assigned to equipment under the old Socialist financial system. It should be noted that the average ratio to sales is increasing over time. In 1996 it was 2.3% of sales while in 1997 it went up to 4.6%.

Finally, how did the PEM perform in terms of profitability? Overall, it lost an average of 1.1 million in total (5% of sales) per quarter. Within the constraints of having both purchasing and selling tariffs set using normative instead of actual losses, the problem is actual losses are substantially higher than the normative rate used in setting tariffs. Thus, the uncovered losses are eliminating any profit available. Compounding this problem is a shortage of cash collections.

Table 6.2, Electricity Sales, outlines the monthly electricity sold (in MWH), average tariff (UAH per MWH) and revenues (000 UAH) by consumer group for the period 1996-1998 (1st quarter). Total electricity sold for 1996 was 1,184,315 MWH with an average tariff of 72.4 UAH per MWH. Total revenues for the same period were 85.4 million UAH. As for 1997, 1,091,349 MWH were sold at an average price of 75.6 UAH per MWH. This generated total revenues of 82.6 million UAH. The year to year decrease in MWH was 7.8% and in revenues was 3.2%. The difference between production and revenue increases was caused by the increase of 4.4% in the average tariff.

A more important comparison is period by period. Since information is available for three years on the 1st quarter, this will be the period examined. Total electricity sold (in MWH) for the 1st quarter (1996-1998) averaged 120,758, 107,303 and 93,587 per month respectively. The trend in sales during this period follows the trend of all sectors. From 1996 to 1997, industry consumption fell by a total of 18.7%, residential consumption decreased by 11.2%, non-industrial fell by 11.2 and agriculture dropped 26.3%. The two main economic activities of the area, industrial and agriculture, dropped over 1/4th of its usage in one year.

In terms of usage, the main consumer groups are large industrial consumers (>750 MWH), residential city, non-industrial groups and agriculture. Over the period examined, the large industrial group purchased 44% (1996), 38% (1997), and 32% (1st quarter 1998) of the total sold whereas the residential city customers consumed 21% (1996), 19% (1997) and 16% (1st quarter 1998). Non-industrial consumers purchased 11% (1996), 12% (1997) and 16% (1st quarter), and agriculture purchased 7% (1996), 7% (1997) and 5% (1st quarter) of total electricity sold.

**Table 6 2
Lviv PEM
Ukraine Energy Project
Electricity Sales**

Month	1 Total Electricity Sold (MWH)	2 Tariff (UAH per MWH)	3 Total Sales (000 UAH)	4 Total MWH Sold (MWH)	5 Capacity Charge (UAH per MW)	6 Total Revenues (000 UAH)	7 Total Electricity Sold (MWH)	8 Tariff (UAH per MWH)	9 Total Sales (000 UAH)	10 Total Electricity Sold (MWH)	11 Tariff (UAH per MWH)	12 Total Sales (000 UAH)	13 Total Electricity Sold (MWH)	14 Tariff (UAH per MWH)	15 Total Sales (000 UAH)
	Industrial >750			Industrial >750			Industrial < 750			Railroad			City Transport		
January (1986)	30 033	63 8	1 918	124	6 687 0	831	11 191	78 0	872	1 480	71 0	105	0	0 0	0
February	58 583	64 6	3 854	118	6 805 7	800	10 286	79 5	819	6 480	71 9	466	0	0 0	0
March	72 854	63 9	4 652	126	6 559 4	826	10 882	78 9	859	6 578	71 0	469	0	0 0	0
April	51 234	62 7	3 214	107	6 576 5	705	9 851	77 8	752	7 802	70 0	553	0	0 0	0
May	47 482	62 9	2 988	123	6 679 2	824	6 886	77 8	534	7 210	70 4	508	0	0 0	0
June	56 136	61 1	3 430	124	6 462 8	801	6 521	75 9	495	4 820	68 2	329	0	0 0	0
July	51 307	60 1	3 082	120	6 360 0	781	6 815	74 7	517	6 869	67 0	447	0	0 0	0
August	47 619	59 8	2 854	121	6 340 5	795	7 039	73 8	594	35	73 7	3	0	0 0	0
September	41 348	59 9	2 477	118	6 432 0	748	7 133	74 0	528	2 888	68 9	180	0	0 0	0
October	39 173	61 1	2 384	110	6 481 6	713	7 301	75 2	549	6 788	69 1	665	0	0 0	0
November	22 203	63 9	1 419	103	6 848 8	702	6 727	78 0	525	8 159	71 2	581	0	0 0	0
December	20 010	64 7	1 285	110	6 855 4	788	7 320	79 1	579	4 127	71 8	298	0	0 0	0
January (1987)	43 900	64 5	2 833	110	6 880 9	758	11 044	78 9	671	10 078	71 6	722	0	0 0	0
February	48 006	62 4	2 986	109	6 844 0	746	8 117	77 0	702	10 885	68 7	759	0	0 0	0
March	37 623	63 3	2 381	79	6 807 6	522	8 158	78 7	842	12 071	70 3	849	0	0 0	0
April	48 722	62 8	3 082	103	6 831 1	683	7 818	77 8	616	11 420	70 0	799	0	0 0	0
May	42 140	65 9	2 776	78	6 679 5	521	7 765	78 0	806	11 842	70 8	845	0	0 0	0
June	34 879	65 0	2 287	74	6 756 8	500	7 168	78 0	558	10 888	70 5	752	0	0 0	0
July	19 088	68 4	1 286	30	6 700 0	201	5 795	78 0	452	10 121	70 5	714	0	0 0	0
August	21 463	69 1	1 494	32	6 887 5	214	5 884	77 8	442	10 358	70 8	731	0	0 0	0
September	38 089	65 8	2 511	69	6 724 6	454	6 402	78 1	500	11 138	70 9	790	0	0 0	0
October	40 240	63 7	2 584	83	6 722 9	558	7 228	78 7	569	12 142	71 2	865	0	0 0	0
November	22 288	68 3	1 544	27	6 825 9	187	6 689	79 7	533	11 898	71 7	850	0	0 0	0
December	25 281	70 1	1 772	32	7 031 3	225	7 854	80 5	632	13 830	72 0	982	0	0 0	0
January (1988)	23 577	71 4	1 683	28	7 182 3	187	10 287	85 7	882	14 435	77 1	1 113	0	0 0	0
February	21 515	78 1	1 637	28	7 382 9	207	8 249	88 6	731	13 815	80 6	1 121	0	0 0	0
March	47 174	74 6	3 519	69	7 594 2	524	9 635	82 6	692	13 780	81 6	1 123	0	0 0	0
	Non-Industrial			Agriculture			Residential City			Residential Rural			Transmission		
January (1986)	12 859	75 3	968	11 571	81 3	708	24 504	42 2	1 034	0	0 0	0	1 283	58 8	72
February	15 297	81 3	1 243	11 402	82 9	717	22 770	46 3	1 055	200	55 0	11	1 195	85 6	78
March	18 849	81 7	1 548	11 247	83 3	712	21 562	50 8	1 098	128	55 6	7	844	82 2	59
April	13 292	79 8	1 082	10 133	82 3	631	17 284	49 8	858	119	58 8	7	805	81 8	37
May	8 873	77 5	687	7 833	80 8	476	16 873	51 9	881	81	61 7	5	384	81 1	24
June	10 262	77 0	780	7 422	80 2	447	19 032	52 8	1 005	82	54 3	5	357	80 8	22
July	5 862	74 6	445	6 270	58 9	368	18 861	51 3	1 019	78	63 3	5	346	58 8	21
August	5 500	74 0	407	6 709	58 1	390	18 324	53 5	980	76	65 8	5	373	57 9	22
September	9 452	74 0	700	8 858	58 0	388	15 908	67 3	1 071	81	76 9	7	394	57 7	23
October	9 181	75 3	681	7 151	57 8	413	16 713	68 8	1 167	80	77 8	7	494	58 7	29
November	10 285	78 7	810	7 140	61 9	442	20 215	87 4	1 382	37	81 1	3	852	61 0	52
December	15 088	80 0	1 207	7 589	61 8	468	23 485	70 3	1 650	69	78 7	7	752	62 6	47
January (1987)	12 285	81 6	1 003	8 470	62 7	531	20 702	72 1	1 492	107	74 8	8	750	62 7	47
February	13 633	79 4	1 083	8 757	60 6	531	21 103	71 1	1 500	175	85 7	15	727	60 5	44
March	15 804	78 1	1 242	8 353	72 5	608	19 310	71 3	1 378	85	70 6	6	855	61 1	40
April	11 910	78 0	938	8 028	61 9	487	15 867	70 7	1 129	82	80 6	5	570	61 4	35
May	9 761	77 8	682	6 495	61 9	402	16 811	71 2	1 197	188	75 8	15	489	60 1	27
June	9 712	77 9	757	5 764	62 1	358	16 013	71 3	1 141	1 896	77 8	132	304	62 5	19
July	6 793	77 9	528	5 109	62 0	317	14 542	72 8	1 059	2 180	77 1	188	318	60 1	19
August	6 520	78 2	510	5 893	61 8	352	13 383	70 8	947	2 088	77 6	182	241	62 2	15
September	8 914	78 4	688	5 775	62 2	358	14 618	73 0	1 087	1 658	77 2	128	302	62 9	19
October	9 880	78 6	777	5 700	62 1	354	14 604	75 8	1 107	2 616	78 0	204	434	62 2	27
November	12 458	79 4	989	6 354	62 0	394	14 282	73 0	1 044	3 488	78 8	268	1 698	62 4	108
December	18 778	81 5	1 368	8 952	62 1	432	20 088	108 8	2 142	3 413	76 2	280	1 721	62 8	108
January (1988)	12 648	87 5	1 106	8 889	87 9	453	13 804	73 7	1 017	3 481	82 4	287	1 585	0 0	87
February	14 222	88 8	1 277	8 936	88 5	468	14 182	76 7	1 088	3 779	82 0	310	654	81 7	60
March	16 251	91 8	1 493	8 805	71 3	485	16 548	77 7	1 285	3 183	81 4	259	722	84 5	81

Table 6 3 is other income and internal transactions. Other revenues for electricity distribution are fees collected for late payment, repairs and meter installation as well as fee for transmitting electricity. Compared with electricity sales the total is very small and averages 2-3% of monthly electric sales. The trend for the 2 years examined is increasing mainly because of late fees.

Table 6 4 shows the monthly purchases for electricity from the Energomarket. Since this represents the most significant cost, it is shown in greater detail by the inclusion of this table. As with sales, period by period analysis will be used with the period being the 1st quarter. Total purchases in MWH for each quarter are as follows: 515,851 (1996), 483,592 (1997) and 414,671 (1998). Calculated losses attributable to distribution average over 29%. This level is extremely high when compared to the 6.2% loss rate within the U.S. Rural Electric System¹².

The next Table, 6 5, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs has been made within the context of the restated income statement.

Balance Sheet

Table 6 6 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both account's receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased from 39.2 million UAH to 126.2 million UAH in the third quarter of 1997. The next quarter the value increased to 219.0 million UAH. The increase was due to a revaluation of assets. Combined with Work in Progress, which increased about four times over the period, net utility assets have increased 2.5 times with the major reason for the increase being the fixed asset revaluation.

Current assets increased from 2.3 million UAH to 8.3 million UAH. During the second and third quarters of 1996 a large increase was experienced, and then it returned to normal levels. Cash (liquid assets) and accounts receivable are small in

¹² 1994 Statistical Report Rural Electric Borrowers, Rural Electric Service, United States Department Of Agriculture (Washington, DC: Government Printing Office)

Table 6.3
Lviv PEM
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	117 2	0	0	0
February	159 2	0	0	0
March	186 6	0	0	0
April	140 7	0	0	0
May	124 7	0	0	0
June	131 8	0	0	0
July	120 0	0	0	0
August	107 8	0	0	0
September	110 3	0	0	0
October	119 3	0	0	0
November	106 1	0	0	0
December	113 7	0	0	0
January (1997)	21 6	0	0	0
February	36 9	0	0	0
March	115 0	0	0	0
April	34 8	0	0	0
May	62 3	0	0	0
June	11 3	0	0	0
July	92 1	0	0	0
August	33 3	0	0	0
September	813 6	0	0	0
October	2 254 5	0	0	0
November	123 1	0	0	0
December	24 3	0	0	0
January (1998)	119 5	0	0	0
February	124 2	0	0	0
March	173 5	0	0	0

Table 6 4
Electricity and Fuel Purchases
Lviv PEM
Ukraine Energy Project
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	137 738	45 87	6 317	0	0	0	0	0	0
February	175 255	50 99	8 936	0	0	0	0	0	0
March	202 859	50 58	10 261	0	0	0	0	0	0
April	138 054	50 47	6 967	0	0	0	0	0	0
May	116 102	49 70	5 770	0	0	0	0	0	0
June	122 246	50 64	6 190	0	0	0	0	0	0
July	119 831	50 71	6 077	0	0	0	0	0	0
August	110 888	46 86	5 197	0	0	0	0	0	0
September	126 114	47 13	5 944	0	0	0	0	0	0
October	138 942	47 76	6 636	0	0	0	0	0	0
November	109 938	49 61	5 454	0	0	0	0	0	0
December	130 219	50 22	6 540	0	0	0	0	0	0
January (1997)	182 944	49 42	9 041	0	0	0	0	0	0
February	157 731	48 49	7 648	0	0	0	0	0	0
March	142 916	48 58	6 943	0	0	0	0	0	0
April	145 372	47 42	6 894	0	0	0	0	0	0
May	111 859	47 75	5 341	0	0	0	0	0	0
June	101 247	46 81	4 739	0	0	0	0	0	0
July	79 279	48 17	3 819	0	0	0	0	0	0
August	83 708	47 79	4 000	0	0	0	0	0	0
September	115 249	47 57	5 483	0	0	0	0	0	0
October	146 614	46 85	6 868	0	0	0	0	0	0
November	119 200	46 21	5 509	0	0	0	0	0	0
December	139 488	46 30	6 458	0	0	0	0	0	0
January (1998)	132 259	49 91	6 601	0	0	0	0	0	0
February	115 523	51 80	5 984	0	0	0	0	0	0
March	166 888	54 23	9 051	0	0	0	0	0	0

Tables 6.5
Lviv PEM
Ukraine Energy Project
Main Production Costs

Month	Depreciation 2	Maintenance 3	Materials 5	Fuel 6	Construction Material 7	Spare Parts 8	Interest 9	Agricultural Production 10	Other 11	Low value Items 12	Depreciation of I.V. Items 13	Transport Costs 16	Class Expenses 18	Swimming Operations 29	Non Interest Operations 30	Deferred Expenses 31
January (1988)	0	34	61	46	0	0	0	0	0	1	13	11	0	0	0	0
February	130	14	51	71	0	16	0	0	0	1	21	7	0	0	0	0
March	63	14	73	40	0	12	0	0	0	3	13	6	0	0	0	0
April	89	0	27	38	0	10	0	0	0	3	8	5	0	0	0	0
May	89	14	45	32	0	7	0	0	0	2	8	6	0	0	0	0
June	227	18	25	35	0	18	0	0	0	1	15	6	0	0	0	0
July	232	13	9	43	0	30	0	0	0	0	10	6	0	0	0	1
August	40	14	23	30	0	19	0	0	0	1	4	5	0	0	0	1
September	165	2	29	27	0	7	0	0	0	0	1	6	0	0	0	0
October	235	16	33	54	0	11	0	0	0	1	7	11	0	0	0	0
November	236	13	36	43	0	16	0	0	0	2	9	6	0	0	0	0
December	236	20	324	33	0	25	0	0	0	7	12	0	0	0	0	0
January (1987)	236	12	94	30	0	14	0	0	0	1	6	13	0	0	0	0
February	236	12	95	30	0	14	0	0	0	1	6	13	0	0	0	0
March	235	15	17	25	0	12	0	0	0	1	6	13	0	0	0	0
April	235	21	69	30	0	16	0	0	0	1	9	1	0	1	0	0
May	236	18	93	29	0	11	0	0	0	1	11	14	0	0	0	0
June	235	15	29	26	0	17	0	0	0	1	12	6	0	1	0	1
July	234	37	16	37	0	11	0	0	0	1	14	5	0	1	0	0
August	0	22	40	25	0	7	0	0	0	1	16	6	0	0	0	1
September	673	40	33	38	0	11	0	0	0	1	3	4	0	0	0	0
October	0	31	33	31	0	23	0	0	0	2	11	3	0	0	0	0
November	0	36	36	35	0	28	0	0	0	1	13	3	0	0	0	0
December	1 078	33	117	47	0	33	0	0	0	0	15	2	0	1	0	3
January (1988)	0	0	129	60	0	35	0	0	0	2	30	3	0	0	0	0
February	0	0	138	19	0	52	0	0	0	6	16	5	0	1	0	0
March	916	27	89	29	0	19	0	0	0	2	26	0	0	0	0	1
	In extra 33	Non Operational Expenses 43	Materials 50	Settlement Account 51	Oil Account 55	Supplier 60	Non budget Payment 65	Budget Payments 68	Insurance Payment 69	Salary 70	Class Advances 71	Debt re/ Credit re 76	Initial Settlement 78	Initial part Settlement 79	Depreciation Fund 86	Other 87
January (1988)	0	0		7		0	218	0	71	196	0	23	25	123	94	0
February	0	0		1		0	304	0	62	183	0	28	20	7	0	0
March	0	0		6		0	226	0	96	278	0	39	41	95	0	0
April	0	0		7		0	96	35	95	263	0	12	13	61	0	0
May	0	0		12		0	144	34	96	268	0	107	16	0	0	0
June	0	0		12		0	208	35	100	272	0	26	17	12	0	0
July	0	0		4		0	152	0	107	306	0	18	20	0	0	0
August	0	0		4		0	150	38	80	227	0	36	18	99	0	0
September	0	0		4		0	69	37	93	242	0	22	66	62	0	0
October	0	0		4		0	15	52	81	247	0	11	28	0	0	0
November	0	0		2		0	17	42	102	287	0	25	23	228	0	0
December	0	0		7		0	8	45	86	243	0	37	0	0	0	0
January (1987)	0	0		6		0	14	40	94	264	0	8	20	13	0	0
February	0	0		6		0	14	40	94	264	0	8	21	13	0	0
March	0	0		3		0	11	45	119	341	0	11	17	0	0	0
April	0	0		5		0	3	48	145	399	0	8	14	0	0	0
May	0	0		5		0	10	51	154	428	0	228	0	14	0	0
June	0	0		2		0	9	51	149	420	0	35	12	0	0	0
July	0	0		8		0	8	14	114	331	0	70	17	0	0	0
August	0	0		4		0	8	0	134	379	0	81	11	0	0	0
September	0	0		6		1	21	100	129	401	0	66	14	0	0	0
October	0	0		1		0	6	39	129	389	0	5	0	0	0	0
November	0	0		1		0	6	41	130	406	0	19	0	218	0	0
December	0	0		3		0	10	43	148	408	0	94	23	107	0	0
January (1988)	0	0		1		0	11	40	146	401	0	10	17	0	0	0
February	0	0		2		2	11	41	152	414	0	81	17	2	0	0
March	0	0		8		0	9	54	143	407	0	110	17	1	0	0

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Table 6 6
Lviv PEM
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	39 099	39 214	126 183	219 014	220 159	220 158	222 727	223 101	224 483	224 117
Less Accumulated Depreciation	8 272	16 759	43 488	143 896	144 455	144 845	145 122	145 794	147 996	148 697
Net Fixed Assets	30 827	22 455	82 695	75 118	75 704	75 313	77 605	77 307	76 487	75 420
Assets Under Construction	870	1 034	1 401	1 510	1 280	3 854	3 614	3 710	3 172	3 167
Net Utility Plant	31 697	23 489	84 096	76 628	76 984	79 167	81 219	81 017	79 659	78 587
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	103	273	296	320	373	418	527	795	869	917
Less Accumulated Depreciation	33	71	92	97	113	113	120	131	153	186
Net Nonutility Property and Intangibles	70	202	204	223	260	305	407	664	716	731
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	70	202	204	223	260	305	407	664	716	731
<i>Current Assets</i>										
Cash and Short Term Investments	252	204	91	93	42	105	219	243	133	170
Accounts Receivable	28	185	194	675	358	640	1 379	1 242	1 376	1 096
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	28	185	194	675	358	640	1 379	1 242	1 376	1 096
Inventory	1 852	3 010	3 128	3 047	1 757	2 820	2 387	3 259	3 243	3 548
Government Employee and Other Receivables	225	1 250	1 875	921	3 589	3 365	1 827	1 570	3 185	3 216
Other Current Assets	19	982	128 972	128 705	1 051	629	917	1 200	112	356
Total Current Assets	2 376	5 631	134 260	133 441	6 797	7 560	6 729	7 514	8 349	8 386
TOTAL ASSETS	34 144	29 322	218 560	210 292	84 041	87 032	88 355	89 195	88 724	87 704
CAPITALIZATION AND LIABILITIES										
<i>Stockholder's Equity</i>										
Statutory Capital (Net)	24 020	24 020	24 020	24 020	24 020	24 020	24 020	24 020	24 020	24 020
Additional Capital	0	0	0	0	52 911	55 756	57 829	58 408	58 399	58 030
Reserve Funds	7 688	703	187 726	181 070	674	867	723	580	584	584
Retained Earnings	0	(2 036)	(980)	(1 326)	(3 552)	(5 396)	(4 167)	(5 050)	(9 036)	(10 695)
Unrealized Differences ¹		2 035	980	1 326	3 552	5 396	4 167	5 050	9 036	10 695
Total Equity	31 708	24 722	211 746	205 090	77 605	80 643	82 572	83 008	83 003	82 634
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	31 708	24 722	211 746	205 090	77 605	80 643	82 572	83 008	83 003	82 634
<i>Current Liabilities</i>										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	1 331	2 644	3 450	2 105	2 534	2 042	1 956	2 598	2 771	2 052
Less Bad Debt Allowance										
Net Payables	1 331	2 644	3 450	2 105	2 534	2 042	1 956	2 598	2 771	2 052
Wages and Social Insurance Payable	541	974	1 230	1 931	2 631	2 997	2 999	2 552	2 180	2 215
Taxes and Non-Budget Payable	487	837	1 079	1 095	713	1 301	721	694	709	761
Government Employee and Other Payable	18	21	1 054	50	48	44	84	339	54	37
Advances from Customers	6	10	1	18	506	1	21	1	4	0
Other Current Liabilities	53	114	0	3	4	4	2	3	3	5
Total Current Liabilities	2 436	4 600	6 814	5 202	6 436	6 389	5 783	6 187	5 721	5 070
TOTAL CAPITALIZATION AND LIABILITIES	34 144	29 322	218 560	210 292	84 041	87 032	88 355	89 195	88 724	87 704

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

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**Table 6 7
Lviv PEM
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.2	19.7	25.7	1.1	1.2	1.2	1.2	1.5	1.7
Collection Rate	102%	84%	109%	129%	81%	113%	83%	138%	69%
% Accounts Receivable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	5%	0%	21%
Capital Structure and Long Term Solvency									
Debt to Equity	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Debt to Total Assets	16%	3%	2%	8%	7%	7%	7%	6%	6%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)	1.44	1.41	1.46	1.57	1.55	1.58	1.56	1.67	1.58
Operating Profits to Sales	-4.9%	7.2%	-0.2%	10.7%	6.9%	6.4%	-4.7%	20.5%	6.3%
Net Unrealized Accounts to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income to Sales	7.8%	4.7%	1.8%	11.6%	7.6%	5.7%	5.7%	21.2%	7.0%
Asset Utilization									
Sales to Current Assets (Annualized)	18.6	0.7	0.6	11.3	12.8	12.8	8.2	9.0	11.3
Sales to Net Utility Plant (Annualized)	4.5	1.1	1.0	1.0	1.2	1.1	0.8	0.9	1.2
Sales to Total Assets (Annualized)	3.6	0.4	0.4	0.9	1.1	1.0	0.7	0.8	1.1
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	97.4%	84.3%	90.0%	97.1%	97.5%	79.1%	86.2%	100.4%	91.7%
Operating and Maintenance to Sales	3.1%	1.7%	2.0%	4.3%	1.6%	3.2%	3.7%	5.6%	2.8%
Fuel to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wages and Social Cost to Sales	3.4%	4.9%	5.5%	5.5%	4.8%	7.9%	9.6%	8.6%	7.0%
Depreciation to Sales	1.3%	1.9%	2.4%	3.8%	3.0%	3.5%	6.1%	6.0%	4.1%
Operating Income to Sales	-4.9%	7.2%	0.2%	10.7%	6.9%	6.4%	4.7%	20.5%	6.3%
Net Income to Sales	7.8%	-4.7%	1.8%	11.6%	7.6%	5.7%	5.7%	21.2%	7.0%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	0.6%	0.1%	0.3%	0.4%	0.7%	1.6%	1.4%	1.6%	1.7%
Current Assets	19.2%	61.4%	63.5%	8.1%	8.7%	7.6%	8.4%	9.4%	9.6%
Net Fixed Assets	80.1%	38.5%	36.4%	91.6%	91.0%	91.9%	90.8%	89.8%	89.6%
Current Liabilities	15.7%	3.1%	2.5%	7.7%	7.3%	6.5%	6.9%	6.4%	5.8%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	84.3%	96.9%	97.5%	92.3%	92.7%	93.5%	93.1%	93.6%	94.2%

proportion to the other assets classified as current. The largest balance is for inventory. For an electric distribution company this is unusual and is attributed to the goods accumulated under barter arrangements.

Equity had a large increase between the second and third quarters of 1996. The account that increased was the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The reserve fund was reclassified as additional capital at the beginning of 1997. Long term debt was zero for the period.

As for current liabilities, wages and social costs payable increased dramatically from 5 million UAH to 35 million by the end of the third quarter of 1996. The balance in the accounts then ranged from 2 – 3 million UAH for the rest of the period examined. The net result is current liabilities doubled from 24 million to 50 million UAH. After the second quarter (1996) the balance remained constant at approximately 60 million UAH.

Statement of Changes in Financial Position

Table 6.10 examines the cash flow from all financial activities during the year. Total net income on an accrual basis between 1996 and the first quarter of 1998 is negative 10.7 million UAH. The major reason for the loss was the large losses in electricity system. In most periods the losses in electricity were over 30% of the total purchased.

As for investment activities, the only meaningful activity was the revaluation of assets that took place in 1996. Otherwise, the company had insufficient cash generated to produce any significant investment.

Table 6 8
Lviv PEM
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	6 628	7 451	(823)					(823)	(823)
February	9 003	10 871	(2 691)	0				(2 691)	(2 691)
March	10 555	8 276	(412)	0	0			(412)	(412)
April	7 960	6 478	1 070	0	0	0		1 070	1 070
May	7 050	6 014	2 106	0	0	0	0	2 106	2 106
June	7 456	6 455	3 107	0	0	0	0	3 107	3 107
July	6 785	7 525	2 367	0	0	0	0	2 367	2 367
August	6 098	6 886	1 579	0	0	0	0	1 579	1 579
September	6 239	6 371	1 447	0	0	0	0	1 447	1 447
October	6 747	7 120	1 074	0	0	0	0	1 074	1 074
November	6 002	11 029	(3 952)	0	0	0	0	(3 952)	(3 952)
December	6 431	6 603	(4 125)	0	0	0	0	(4 125)	(4 125)
January (1997)	8 287	8 009	(3 847)	0	0	0	0	(3 847)	(3 847)
February	8 413	4 279	287	0	0	0	0	287	287
March	7 549	7 286	551	0	0	0	0	551	551
April	7 800	9 236	(885)	0	0	0	0	(885)	(885)
May	7 133	11 645	(5 397)	0	0	0	0	(5 397)	(5 397)
June	6 516	3 271	(2 151)	0	0	0	0	(2 151)	(2 151)
July	4 817	5 982	(3 316)	0	0	0	0	(3 316)	(3 316)
August	4 890	2 096	(522)	0	0	0	0	(522)	(522)
September	5 723	4 719	482	0	0	0	0	482	482
October	4 771	6 771	(1 519)	0	0	0	0	(1 519)	(1 519)
November	6 048	11 619	(7 089)	0	0	0	0	(7 089)	(7 089)
December	7 945	7 426	(6 570)	0	0	0	0	(6 570)	(6 570)
January (1998)	6 761	4 387	(4 197)	0	0	0	0	(4 197)	(4 197)
February	7 023	5 599	(2 772)	0	0	0	0	(2 772)	(2 772)
March	9 815	6 409	633	0	0	0	0	633	633

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75/ This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 6 9
Lviv PEM
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	7 173	6 535	638						
February	9 811	9 691	757	0				638	638
March	11 238	9 295	2 700	0	0			757	757
April	7 607	7 888	2 419	0	0	0		2 700	2 700
May	6 621	5 821	3 219	0	0	0	0	2 419	2 419
June	7 182	6 478	3 922	0	0	0	0	3 219	3 219
July	7 002	8 267	2 658	0	0	0	0	3 922	3 922
August	5 957	7 251	1 364	0	0	0	0	2 658	2 658
September	6 510	5 945	1 930	0	0	0	0	1 364	1 364
October	7 354	7 298	1 985	0	0	0	0	1 930	1 930
November	6 470	5 387	3 068	0	0	0	0	1 985	1 985
December	7 583	3 435	7 217	0	0	0	0	3 068	3 068
January (1997)	9 856	7 086	9 856	130	0	0	0	7 217	7 217
February	8 463	4 560	8 463	5 426	0	0	0	9 986	9 986
March	7 775	8 082	7 775	5 807	0	0	0	13 889	13 889
April	7 870	10 624	7 870	2 958	0	0	0	13 582	13 582
May	6 602	12 787	4 643	0	0	0	0	10 828	10 828
June	5 750	3 704	5 750	939	0	0	0	4 643	4 643
July	4 665	4 106	4 665	2 583	0	0	0	6 688	6 688
August	4 677	2 120	4 677	4 665	463	0	0	7 248	7 248
September	6 972	4 494	6 972	4 677	635	0	0	9 805	9 805
October	7 529	5 823	7 529	6 460	0	0	0	12 283	12 283
November	6 452	9 218	6 452	4 770	0	0	0	13 988	13 988
December	8 770	7 040	8 770	4 182	0	0	0	11 222	11 222
January (1998)	7 476	3 684	7 476	8 770	498	0	0	12 952	12 952
February	6 939	4 594	6 939	7 476	4 674	0	0	16 744	16 744
March	10 843	7 446	10 843	6 939	4 704	0	0	19 088	19 088
								22 486	22 486

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 - Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 6 10
Lviv PEM
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	(2 036)	1 056	(346)	(2 226)	(1 844)	1 229	(883)	(3 986)	(1 659)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(157)	(9)	(481)	317	(282)	(739)	137	(134)	280
Change in Other Short Term Assets	(3 146)	(128 733)	1 302	126 276	(418)	1 684	(898)	(811)	(280)
Change in Accounts Payable	1 313	806	(1 345)	429	(492)	(86)	642	173	(719)
Change in Other Short Term Liabilities	851	1 408	(267)	805	445	(520)	(238)	(639)	68
Depreciation Expense	8 525	26 750	100 413	575	390	284	683	2 224	734
Net Cash Provided by Operating Activities	7 386	(99 778)	99 622	128 402	(357)	623	326	813	83
Cash Flow from Investment Activities									
Completed Plant In Service	(115)	(86 969)	(92 831)	(1 145)	1	(2 569)	(374)	(1 382)	366
Change In Construction Work In Progress	(164)	(367)	(109)	230	(2 574)	240	(96)	538	5
Change In Nonutility Property and Intangibles	(170)	(23)	(24)	(53)	(45)	(109)	(268)	(74)	(48)
Net Cash Provided by Investment Activities	(449)	(87 359)	(92 964)	(968)	(2 618)	(2 438)	(738)	(918)	323
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	(6 985)	187 023	(6 856)	(127 485)	3 038	1 929	436	(5)	(369)
Net Cash Provided by Financing Activities	(6 985)	187 023	(6 656)	(127 485)	3 038	1 929	436	(5)	(369)
Unrealized Cash Differences ¹	2 035	(1 055)	346	2 226	1 844	(1 229)	883	3 986	1 659
Net Change in Cash	(49)	(113)	2	(51)	63	114	24	(110)	37

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

7. DROHOBYCH PEM

Drohobych Electric Network serves the northern part of Lviv Oblast. It is composed of 9 REMS: Drohobych, Borislav, Zhidachiv, Mykolaiv, Sambir, Stavy, Skole, Stryi and Turka. Its consumer base is comprised of 254,604 residential consumers and 505 industrial customers. The latter include such major businesses as Zhidachiv cellulose and paper mill, Halychyna (Drohobych oil refinery), and Mykolaiv Cement Plant. It has 1,398 employees as of July 1, 1998.

Table 7.1 is the income statement for the distribution division Drohobych PEM. Supporting tables include 7.2 (Sales of Electricity), 7.3 (Other Income and Expenses), 7.4 (Electricity / Fuel Purchased), 7.5 (Main Production Costs), 7.8 (Aging of Accounts Receivable) and 7.9 (Aging of Accounts Payable).

Table 7.1 is the 1996-1998 quarterly restated income statement. Beginning with sales, two types of trends exist. The first is seasonal and the second is economic. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage during both the second and third quarters (due to warmer weather). In the fourth quarter, a sharp rise in revenues occurred due to colder weather. The second trend is economic. Beginning with the first quarter of both 1996 and 1997, a quarter by quarter comparison shows that first quarter sales for 1997 is lower than 1996. However, in 1998 the consumption of electricity rises almost to the previous level of 1996. The main reason for this trend is the constraint within the power supply system. It was especially acute in 1996 and was caused by a lack of fuel at the generation level to produce enough power to meet demand.

The next section in the income statement deals with operational expenses. Also of usefulness is Table 7.7, Financial Ratios. In particular, the section referring to the common size income statement will yield important insights to the analysis. The largest cost for distribution is purchased energy. For 1996 the ratio of cost to sales is 97.2%. That leaves 2.8% to service all other costs. The ratio improved in 1997 by falling to 87.2%. This level is still unacceptable when compared to the normal 20% required, but an improvement over 1996. The extremely small margin between sales and cost of power is caused by two factors interacting. The first is the purchasing and selling tariffs are set using normative loss rates and do not account for local conditions. The second factor is individual PEM losses. Since Drohobych's electricity losses are over double the normative, the division will experience large losses on this electricity it cannot recover through sales.

Also like the other PEMs is the seasonal trend in operating margin. During the winter months the margin practically goes to zero as additional lower residential tariff consumers use additional electricity. However, during the summer months when the industrial percentage is greater the operating margin increases because of the higher

Table 7 1
Drohobych PEM
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	20 032	17 385	14 352	16 895	18 666	18 131	15 613	17 932	19 260
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	0	0	0	0	0	0	0	0	0
Other Revenues	334	286	232	276	1 774	811	179	228	326
Total Sales	20 366	17 671	14 584	17 171	20 440	18 942	15 792	18 160	19 586
Operational Expenses									
Purchased Electricity	(20 330)	(14 966)	(13 824)	(18 781)	(18 273)	(15 751)	(13 581)	(16 595)	(20 558)
Operating Expenses	(507)	(333)	(307)	(839)	(448)	(600)	(373)	(654)	(1 725)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(860)	(985)	(952)	(613)	(1 097)	(1 505)	(1 329)	(1 540)	(494)
<i>Total Operating Expenses</i>	(21 697)	(16 283)	(15 082)	(20 233)	(19 818)	(17 856)	(15 283)	(18 789)	(22 777)
Maintenance	0	0	0	0	0	0	0	0	0
Depreciation	(151)	(264)	(585)	(791)	(779)	(794)	(1 063)	(1 601)	(1 172)
<i>Total Operational Expenses</i>	(151)	(264)	(585)	(791)	(779)	(794)	(1 063)	(1 601)	(1 172)
Operating Income	(1 482)	1 123	(1 083)	(3 853)	(158)	292	(555)	(2 230)	(4 363)
NON OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	(1 482)	1 123	(1 083)	(3 853)	(158)	292	(555)	(2 230)	(4 363)
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	3 722
Unrealized Accounts Payable ²	0	0	0	0	0	0	(827)	(7 318)	0
Taxes & Payments	(591)	(428)	(287)	(139)	(10)	(4)	(9)	(8)	(8)
<i>Total Taxes and Financial Costs</i>	(591)	(428)	(287)	(139)	(10)	(4)	(836)	(7 326)	3 714
NET INCOME	(2 073)	695	(1 370)	(3 992)	(167)	288	(1 391)	(9 556)	(649)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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industrial tariff users. In addition to the changing mix in consumers is the increased average marginal cost of energy during the winter months because of the increase use of fossil fuels to meet higher demand. During the summer months more of the demand is met by cheaper nuclear power.

The next largest cost is operating expenses. This category includes materials, spare parts, fuel (other than for generation), small investment. It is 2.6% of sales during 1996 and 2.4% for 1997. At this level the normal operation and maintenance of equipment cannot be maintained and the equipment is slowly depreciating without replacement. The reason for the low level is insufficient collection of liquid assets necessary to purchase the specialized parts and services needed for maintenance of equipment and the small margins the company is allowed to charge.

Wages are the third largest cost and their trend is increasing. In 1996, labor costs average 2.0% of sales. This average increased to 3.5% in 1997 and during the first quarter of 1998, the ratio is 3.4% of sales. The cause of the small increase is both a change in tax policy concerning deductibility of wage bonuses and a reflection of the higher wages required to make up for the general erosion of wages from past inflation. However, when compared to the other two networks the proportional amount spent on wages is significantly smaller. Depreciation remains a very small component for two reasons. First, the tax deductions allowed by law.

As opposed to the other two PEMs, Drohobych has not been able to collect a sufficient amount of sales and experienced bad debt the last three quarters of the restatement period. This had a negative impact on an already poor operating performance.

The final question to be answered is profitability. For Drohobych, it is the worst financial performer of the three PEMs. It lost a total of 18.2 million on sales of 158.2 million for the period restated. This is equivalent to 11.5% of sales. The main cause of the loss was the extremely high cost of electricity as related to sales. The high cost was caused by the large total electricity losses the PEM sustained.

Table 7.2, Electricity Sales, outlines the monthly electricity sold (in MWH), average tariff (UAH per MWH) and revenues (000 UAH) by consumer group for the period 1996-1998 (1st quarter). Total electricity sold for 1996 was 959,510 MWH with an average tariff of 71.7 UAH per MWH. Total revenues for the same period were 68.4 million UAH. As for 1997, 932,378 MWH were sold at an average price of 75.4 UAH per MWH. This generated total revenues of 70.4 million UAH. The year to year decrease in MWH was 2.8% and the increase in revenues was 2.4%. The difference between the production decrease and the revenue increase was caused by an increase in the average tariff of 5.2%.

**Table 7 2
Drohobych PEM
Ukraine Energy Project
Electricity Sales**

Month	1 Total Electricity Sold (MWH)	2 Tariff (UAH per MWH)	3 Total Sales (000 UAH)	4 Total MW Sold (MWH)	5 Capacity Charge (UAH per MW)	6 Total Revenues (000 UAH)	7 Total Electricity Sold (MWH)	8 Tariff (UAH per MWH)	9 Total Sales (000 UAH)	10 Total Electricity Sold (MWH)	11 Tariff (UAH per MWH)	12 Total Sales (000 UAH)	13 Total Electricity Sold (MWH)	14 Tariff (UAH per MWH)	15 Total Sales (000 UAH)
	Industrial >750			Industrial 750			Industrial < 750			Railroad			City Transport		
January (1998)	31 086	83 3	1 899	79	8 748 8	533	11 858	78 9	935	1 055	70 3	74	0	0 0	0
February	28 089	83 8	1 792	70	8 922 8	475	11 210	80 3	800	13 388	71 8	982	0	0 0	0
March	37 198	83 1	2 345	88	7 210 5	472	11 371	78 8	908	17 234	71 0	1 224	0	0 0	0
April	28 990	82 5	1 812	84	8 257 1	526	11 249	78 9	887	13 061	68 9	913	0	0 0	0
May	27 482	82 7	1 721	74	8 850 1	489	7 878	77 0	814	13 590	70 5	957	0	0 0	0
June	32 208	81 3	1 674	77	8 453 7	498	7 819	76 1	580	13 288	68 2	907	0	0 0	0
July	38 886	80 1	2 335	85	8 887 6	592	8 882	74 6	521	13 130	67 1	882	0	0 0	0
August	18 835	58 6	1 122	43	8 339 4	272	8 513	73 5	479	4 226	86 9	283	0	0 0	0
September	27 613	58 5	1 643	100	8 201 2	619	8 630	74 4	484	6 241	70 0	437	0	0 0	0
October	28 451	58 8	1 762	91	8 437 3	583	7 182	74 0	531	12 729	68 0	668	0	0 0	0
November	21 812	83 5	1 372	74	8 708 3	485	8 581	78 1	677	13 886	70 0	972	0	0 0	0
December	20 077	84 0	1 284	69	8 738 7	485	8 844	78 9	707	6 018	70 0	421	0	0 0	0
January (1997)	16 495	83 8	1 052	80	8 812 5	545	10 514	81 8	880	10 747	70 0	752	0	0 0	0
February	22 826	81 6	1 405	78	8 828 2	517	9 708	82 0	788	13 481	68 8	840	0	0 0	0
March	32 733	82 8	2 054	70	8 888 7	488	8 105	75 7	689	13 347	70 0	934	0	0 0	0
April	38 078	82 6	2 258	73	8 857 5	486	8 828	77 8	684	13 184	70 0	924	0	0 0	0
May	30 559	83 2	1 832	68	8 847 1	452	7 154	78 3	580	12 071	70 0	845	0	0 0	0
June	32 014	84 3	2 057	73	8 857 5	488	7 310	77 8	588	11 438	70 0	800	0	0 0	0
July	28 488	82 7	1 787	62	8 790 3	421	7 048	78 1	550	8 974	70 0	898	0	0 0	0
August	28 728	82 0	1 871	63	8 898 4	422	6 985	78 2	538	10 075	70 3	708	0	0 0	0
September	29 073	83 4	1 844	51	8 882 7	350	6 145	78 1	480	11 860	70 1	831	0	0 0	0
October	22 818	84 6	1 460	48	8 770 8	325	6 778	78 7	533	13 888	68 8	888	0	0 0	0
November	23 928	84 5	1 543	48	8 838 7	335	8 556	78 4	678	13 812	71 7	891	0	0 0	0
December	24 843	84 8	1 597	58	8 847 5	404	13 341	78 1	1 015	14 450	72 0	1 041	0	0 0	0
January (1998)	25 889	87 2	1 727	50	7 120 0	358	8 812	85 1	818	10 541	77 2	814	0	0 0	0
February	23 230	88 6	1 818	48	7 458 5	343	8 850	88 5	810	11 743	80 8	849	0	0 0	0
March	32 551	70 8	2 308	58	7 517 2	438	8 928	88 7	801	13 302	81 5	1 084	0	0 0	0
	Non-Industrial			Agriculture			Residential City			Residential Rural			Transmission		
January (1998)	12 487	78 8	982	5 741	80 7	348	18 472	43 3	800	3 388	48 8	165	588	81 2	37
February	14 550	80 1	1 168	5 911	81 5	384	17 083	48 1	821	3 313	54 0	179	848	82 2	40
March	13 583	80 4	1 090	5 880	82 4	367	16 148	52 8	852	3 584	54 7	185	802	82 0	37
April	11 920	78 9	933	5 711	81 5	351	12 671	52 8	887	2 588	53 8	138	428	81 2	28
May	9 045	77 3	698	3 513	80 8	214	13 420	55 1	740	1 708	53 9	82	168	80 9	10
June	8 343	75 2	627	3 022	58 3	178	13 718	55 3	750	1 228	51 4	63	134	58 8	8
July	7 584	8 8	74	2 805	57 3	161	14 892	55 0	808	1 330	54 1	72	123	58 5	7
August	8 160	73 6	601	2 891	58 2	174	12 782	53 5	685	2 881	70 1	188	111	58 0	8
September	10 281	74 2	781	3 178	58 9	187	11 533	86 2	763	2 431	72 4	178	182	58 3	11
October	10 851	74 3	807	3 304	57 8	180	11 201	89 2	775	2 885	74 1	199	282	58 7	17
November	11 119	78 8	876	3 300	61 7	204	12 474	88 4	888	3 026	72 0	218	342	61 8	21
December	13 209	80 1	1 058	3 727	62 6	233	14 227	70 5	1 003	3 540	72 8	257	557	62 3	35
January (1997)	14 282	80 0	1 143	4 586	62 8	287	13 818	70 3	878	3 530	70 8	250	715	62 8	45
February	11 874	77 1	916	4 310	80 8	281	14 444	69 5	1 004	4 458	73 4	327	588	58 5	32
March	12 311	77 4	953	3 474	81 0	212	13 789	68 6	947	3 058	75 2	275	440	54 5	24
April	9 871	83 3	831	3 780	81 8	234	12 542	69 1	887	3 708	75 5	280	534	58 9	32
May	8 874	72 1	638	2 684	81 8	177	9 827	81 2	583	7 280	78 3	577	257	82 3	18
June	8 424	77 8	654	2 417	82 1	150	10 882	88 1	741	3 880	77 4	301	182	61 7	10
July	6 873	77 8	535	2 182	82 0	134	11 720	87 7	783	2 737	78 7	210	127	63 0	8
August	7 409	76 7	588	2 383	82 2	147	9 834	87 8	674	2 861	77 6	222	138	58 8	8
September	7 882	77 5	611	2 351	81 7	145	11 878	88 9	825	2 804	78 8	223	152	68 8	10
October	8 428	78 8	665	2 328	82 3	145	12 945	70 1	808	3 880	78 4	305	273	62 3	17
November	8 818	80 0	785	2 483	82 0	154	10 942	88 3	747	2 849	74 4	212	448	60 1	27
December	13 082	81 2	1 081	3 153	82 2	188	15 725	95 8	1 504	3 787	74 5	282	518	63 8	33
January (1998)	11 132	86 9	967	2 875	88 8	182	11 858	71 8	859	3 088	78 9	245	484	62 8	31
February	12 222	88 0	1 088	2 842	88 0	203	11 330	71 8	814	3 007	78 8	237	557	66 4	37
March	10 524	88 4	941	2 887	71 2	204	14 532	73 8	1 070	3 385	82 3	277	478	68 9	32

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A more important comparison is period by period. Since information is available for three years for the 1st quarter, this will be the period examined. Total electricity sold (in MWH) for the 1st quarter (1996-1998) averaged 94,808, 81,770 and 78,698 per month respectively. The trend in sales during this period follows the trend of the large industrial and residential consumers. From 1996 to 1997 large industrial consumption fell by a total of 25%. Since this sector used over 40% of the electricity sold, this large decrease caused most of the decline in total sales during the period. In addition, residential consumption fell by 18% over the same period.

In terms of usage, the main consumer groups are large and small industrial consumers (both >750 and <750 MWH), residential city and non-industrial groups. Over the period examined, the industrial groups purchased 36% (1996), 35% (1997), and 34% (1st quarter 1998) of the total sold whereas the residential city customers consumed 14% (1996), 13% (1997) and 14% (1st quarter 1998), and for non-industrial consumers, they remained constant at 17% over the entire period.

Table 7.3 is other income and internal transactions. Other revenues for electricity distribution are fees collected for late payment, repairs and meter installation as well as fee for transiting electricity. Compared with electricity sales, the total is very small and averages 2-10% of monthly electric sales.

Table 7.4 shows the monthly purchases for electricity from the main grid. Since this represents the most significant cost, it is shown in greater detail by the inclusion of this table. As with sales, period by period analysis will be used with the period being 1st quarter. Total purchases in MWH for each quarter are as follows, 413,290 (1996), 374,138 (1997) and 394,385 (1998)¹³. Calculated losses attributable to distribution were 31% (1996st - 1st quarter), 34% (1997 - 1st quarter) and 40% (1998 - 1st quarter). The losses are both very high and increasing. This level is extremely high when compared to the 6.2% loss rate within the U.S. Rural Electric System¹⁴.

The next table, 7.5, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs has been made within the context of the restated income statement.

¹³ It should be noted that sales in MWH during this period are 87,809 (1996), 77,345 (1997) and 82,710 (1998). Losses would be 18.7% for 1996, 22.9% for 1997 and 20.2% for 1998. The company also has some self-generation from the CHP-1, but the amount is so small it was ignored.

¹⁴ 1994 Statistical Report Rural Electric Borrowers, Rural Electric Service, United States Department Of Agriculture (Washington, DC: Government Printing Office)

Table 7 3
Drohobyich PEM
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	95 6	0	0	0
February	112 0	0	0	0
March	126 3	0	0	0
April	103 1	0	0	0
May	90 9	0	0	0
June	91 7	0	0	0
July	87 5	0	0	0
August	63 7	0	0	0
September	80 5	0	0	0
October	92 6	0	0	0
November	93 7	0	0	0
December	90 0	0	0	0
January (1997)	1 069 5	0	0	0
February	320 6	0	0	0
March	383 6	0	0	0
April	281 4	0	0	0
May	163 3	0	0	0
June	366 0	0	0	0
July	136 2	0	0	0
August	35 6	0	0	0
September	7 2	0	0	0
October	91 4	0	0	0
November	63 9	0	0	0
December	73 1	0	0	0
January (1998)	101 8	0	0	0
February	103 6	0	0	0
March	120 9	0	0	0

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Table 7 4
Electricity and Fuel Purchases
Drohobych PEM
Ukraine Energy Project
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	133 376	45 87	6 117	0	0	0	0	0	0
February	133 202	50 99	6 792	0	0	0	0	0	0
March	146 713	50 58	7 421	0	0	0	0	0	0
April	110 047	50 47	5 554	0	0	0	0	0	0
May	93 577	49 70	4 651	0	0	0	0	0	0
June	94 024	50 64	4 761	0	0	0	0	0	0
July	109 464	50 71	5 551	0	0	0	0	0	0
August	71 015	46 86	3 328	0	0	0	0	0	0
September	104 913	47 13	4 945	0	0	0	0	0	0
October	126 289	47 76	6 032	0	0	0	0	0	0
November	122 700	49 61	6 088	0	0	0	0	0	0
December	132 634	50 22	6 661	0	0	0	0	0	0
January (1997)	128 543	49 42	6 353	0	0	0	0	0	0
February	116 101	48 49	5 629	0	0	0	0	0	0
March	129 494	48 58	6 291	0	0	0	0	0	0
April	125 133	47 42	5 934	0	0	0	0	0	0
May	112 774	47 75	5 384	0	0	0	0	0	0
June	94 699	46 81	4 433	0	0	0	0	0	0
July	92 163	48 17	4 440	0	0	0	0	0	0
August	95 481	47 79	4 563	0	0	0	0	0	0
September	96 246	47 57	4 579	0	0	0	0	0	0
October	109 209	46 85	5 116	0	0	0	0	0	0
November	113 596	46 21	5 250	0	0	0	0	0	0
December	134 539	46 30	6 229	0	0	0	0	0	0
January (1998)	122 399	49 91	6 109	0	0	0	0	0	0
February	123 894	51 80	6 418	0	0	0	0	0	0
March	148 092	54 23	8 032	0	0	0	0	0	0

Tables 7.5
 Drohobych PEM
 Ukraine Energy Project
 Main Production Costs

Month	Depreciation 2	Maintenance 3	Materials 4	Fuel 6	Construction Material 7	Spare Part 8	Livestock 9	Agriculture Production 10	Other 11	Low value Items 12	Depreciation of Livestock 13	Transport Cost 16	Cross Expense 18	Switching Operation 29	Non Investment Operation 30	Deferred Expenses 31
January (1986)	0	0	8	17	0	0	0	0	0	0	0	0	66	0	0	0
February	75	0	29	48	0	0	0	0	0	0	0	0	27	0	0	0
March	76	0	26	16	0	0	0	0	0	0	0	0	80	0	0	0
April	76	0	12	20	0	0	0	0	0	0	0	0	48	0	0	0
May	77	0	20	21	0	0	0	0	0	0	0	0	21	0	0	0
June	111	0	24	26	0	0	0	0	0	0	0	0	55	0	0	0
July	111	0	9	25	0	0	0	0	0	0	0	0	42	0	0	0
August	237	0	32	26	0	0	0	0	0	0	0	0	69	0	0	0
September	237	0	7	23	0	0	0	0	0	0	0	0	28	0	0	0
October	264	0	25	23	0	0	0	0	0	0	0	0	89	0	0	0
November	264	0	17	29	0	0	0	0	0	0	0	0	356	0	0	0
December	263	0	15	21	0	0	0	0	0	0	0	0	90	0	0	0
January (1987)	317	0	15	18	0	0	0	0	0	0	0	0	4	0	0	0
February	212	0	21	22	0	0	0	0	0	0	0	0	87	0	0	0
March	231	0	30	21	0	0	0	0	0	0	0	0	31	0	0	0
April	265	0	22	25	0	0	0	0	0	0	0	0	79	0	0	0
May	265	0	23	20	0	0	0	0	0	0	0	0	207	0	0	0
June	265	0	31	24	0	0	0	0	0	0	0	0	85	0	0	0
July	371	0	32	24	0	0	0	0	0	0	0	0	27	0	0	0
August	371	0	20	33	0	0	0	0	0	0	0	0	120	0	0	0
September	321	0	22	30	0	0	0	0	0	0	0	0	25	0	0	0
October	357	0	26	22	0	0	0	0	0	0	0	0	77	0	0	0
November	352	0	49	27	0	0	0	0	0	0	0	0	83	0	0	0
December	892	0	76	25	0	0	0	0	0	0	0	0	159	0	0	0
January (1988)	44	0	56	0	0	0	0	0	0	0	0	0	120	0	0	0
February	0	0	60	24	0	0	0	0	0	0	0	0	639	0	0	0
March	1128	0	77	27	0	0	0	0	0	0	0	0	716	0	0	0

	Investment 31	Non Operational Expenses 43	Cash 50	Settlement Amount 51	Other Account 55	Supplier 56	Non budget Payment 65	Budget Payments 68	Insurance Payment 69	Salary 70	Cash Advance 71	Debit / Credit 76	Interest Settlements 78	Interest Settlements 79	Depreciation Fund 86	Other
January (1986)	0	0	0	0	0	192	0	0	67	183	0	93	0	0	0	0
February	0	0	0	0	0	185	0	0	58	153	0	71	0	0	0	0
March	0	0	0	0	0	215	0	0	108	292	0	26	0	0	0	0
April	0	0	0	0	0	122	0	0	84	243	0	43	0	0	0	0
May	0	0	0	0	0	143	0	0	84	241	0	7	0	0	0	0
June	0	0	0	0	0	164	0	0	90	243	0	38	0	0	0	0
July	0	0	0	0	0	150	0	0	96	239	0	7	0	0	0	0
August	0	0	0	0	0	158	0	0	71	192	0	18	0	0	0	0
September	0	0	0	0	0	22	0	0	90	244	0	35	0	0	0	0
October	0	0	0	0	0	72	0	0	94	236	0	37	0	0	0	0
November	0	0	0	0	0	34	0	0	19	46	0	39	0	0	0	0
December	0	0	0	0	0	52	0	0	88	240	0	96	0	0	0	0
January (1987)	0	0	0	0	0	4	0	0	93	251	0	86	0	0	0	0
February	0	0	0	0	0	4	0	0	81	272	0	69	0	0	0	0
March	0	0	0	0	0	2	0	0	108	292	0	53	0	0	0	0
April	0	0	0	0	0	0	0	0	135	364	0	41	0	0	0	0
May	0	0	0	0	0	1	0	0	133	360	0	28	0	0	0	0
June	0	0	0	0	0	3	0	0	139	375	0	15	0	0	0	0
July	0	0	0	0	0	3	0	0	107	289	0	15	0	0	0	0
August	0	0	0	0	0	3	0	0	130	346	0	27	0	0	0	0
September	0	0	0	0	0	3	0	0	125	333	0	50	0	0	0	0
October	0	0	0	0	0	0	0	0	133	355	0	31	0	0	0	0
November	0	0	0	0	0	3	0	0	140	374	0	43	0	0	0	0
December	0	0	0	0	0	4	0	0	147	391	0	38	0	0	0	0
January (1988)	0	0	0	0	0	0	0	0	131	363	0	0	0	0	0	0
February	0	0	0	0	0	4	0	0	0	0	0	6	0	0	0	0
March	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0

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Balance Sheet

Table 7.6 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased seven times due to a revaluation of assets. In addition, Assets under Construction have doubled. Combined, net utility assets have increased by a factor of 6 (which is approximately the same as gross assets). The major reason for the increase is fixed asset revaluation.

Current assets increased from 1.7 million UAH to 5.7 million UAH during the period examined. Cash balances and accounts receivable remained comparatively small. The largest current asset was Receivables from Government, Employee and Other Receivables. This account increased from 1.0 million at the beginning of 1996 to 3.7 million in 1998. Unlike the other two networks, inventory is not as significant.

Equity had a large rise between the second and third quarters of 1996. The account that caused the increase was the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. The reserve fund was reclassified as additional capital at the beginning of 1998. Long term debt was zero until the first quarter of 1998 when it increased to 24 million UAH.

As for current liabilities, the company experienced an increase in short term debt of 14.5 million UAH the same quarter as the increase in long term debt. Therefore, its total debt during that quarter increased by almost 39 million UAH. In addition, during the same quarter of 1998, Government, Employee and Other Payables increased from almost zero to 11.3 million.

Statement of Changes in Financial Position

Table 7.10 examines the cash flow from all financial activities during the year. Net income totaled negative 3.3 million UAH for the 2 ¼ year period examined. The extent of the quarterly profit or loss was seasonal. During the colder months the division's margins were much smaller and it lost money. During the summer months the margins were larger and a small profit was created.

As for investment activities, Work in Progress took a large jump in the first quarter of 1997. This created a use of cash of approximately of almost 17 million UAH. In addition, the gross plant increased due to the revaluation.

Table 7 6
Drohobych PEM
Ukraine Energy Project
 Balance Sheet as of
 (000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	30 041	30 419	215 000	221 226	222 630	222 668	222 773	223 591	223 939	224 053
<i>Less Accumulated Depreciation</i>	12 274	12 502	101 825	104 362	106 886	107 973	108 656	109 597	109 454	110 538
Net Fixed Assets	17 767	17 917	113 175	116 864	115 744	114 695	114 117	113 994	114 485	113 515
Assets Under Construction	6 183	6 340	6 972	7 588	7 148	25 137	25 728	19 841	15 804	16 338
<i>Net Utility Plant</i>	23 950	24 257	120 147	124 452	122 892	139 832	139 845	133 835	130 289	129 853
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	127	161	196	236	300	282	319	366	386	395
<i>Less Accumulated Depreciation</i>	24	38	43	47	57	72	82	90	104	118
Net Nonutility Property and Intangibles	103	123	153	189	243	210	237	276	282	277
Long Term Financial Investments	0	0	0	0	0	29	59	59	59	59
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
<i>Total Other Property and Investments</i>	103	123	153	189	243	239	296	335	341	336
<i>Current Assets</i>										
Cash and Short Term Investments	91	210	189	119	107	61	109	174	230	109
Accounts Receivable	307	390	404	750	909	763	1 115	707	609	772
<i>Less Bad Debt Allowance</i>	0	0	0	0	0	0	0	0	0	0
Net Receivables	307	390	404	750	909	763	1 115	707	609	772
Inventory	335	495	650	765	880	762	823	920	899	864
Government Employee and Other Receivables	966	358	391	1 205	2 703	2 869	2 228	2 495	3 405	3 728
Other Current Assets	5	630	849	516	13	296	402	733	62	235
<i>Total Current Assets</i>	1 704	2 083	2 483	3 355	4 612	4 751	4 677	5 029	5 205	5 708
TOTAL ASSETS	25 758	26 463	122 783	127 996	127 747	144 822	144 818	139 199	135 835	135 897
CAPITALIZATION AND LIABILITIES										
<i>Stockholder's Equity</i>										
Statutory Capital (Net)	22 265	22 265	22 265	22 265	22 265	22 265	22 265	22 265	22 265	22 265
Additional Capital	0	0	0	0	0	0	0	0	110 818	110 858
Reserve Funds	2 261	2 730	98 736	103 456	102 342	119 815	119 430	113 507	0	0
Retained Earnings	0	(2 073)	(1 378)	(2 749)	(6 740)	(6 908)	(6 620)	(8 011)	(17 567)	(18 215)
Unrealized Differences	0	2 073	1 378	2 749	6 740	6 908	6 620	8 011	17 567	18 215
<i>Total Equity</i>	24 526	24 995	121 001	125 721	124 607	142 080	141 695	135 772	133 083	133 123
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
<i>Total Capitalization</i>	24 526	24 995	121 001	125 721	124 607	142 080	141 695	135 772	133 083	133 123
<i>Current Liabilities</i>										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	455	621	842	1 012	1 197	1 027	1 034	1 079	1 026	879
<i>Less Bad Debt Allowance</i>	0	0	0	0	0	0	0	0	0	0
Net Payables	455	621	842	1 012	1 197	1 027	1 034	1 079	1 026	879
Wages and Social Insurance Payable	454	518	662	966	1 311	1 444	1 639	1 773	1 297	1 428
Taxes and Non-Budget Payable	220	321	229	260	206	197	387	441	328	371
Government Employee and Other Payable	5	3	2	3	238	18	34	69	62	51
Advances from Customers	0	0	0	0	0	0	0	0	0	0
Other Current Liabilities	98	5	47	34	188	56	29	65	39	45
<i>Total Current Liabilities</i>	1 232	1 468	1 782	2 275	3 140	2 742	3 123	3 427	2 752	2 774
TOTAL CAPITALIZATION AND LIABILITIES	25 758	26 463	122 783	127 996	127 747	144 822	144 818	139 199	135 835	135 897

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

**Table 7 7
Drohobych PEM
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio									
Collection Rate	1 4	1 4	1 5	1 5	1 7	1 5	1 5	1 9	2 1
% Accounts Receivable Over 60 Days	100%	87%	122%	89%	62%	86%	51%	68%	80%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	43%	25%	36%
	0%	0%	0%	0%	0%	0%	0%	27%	33%
Capital Structure and Long Term Solvency									
Debt to Equity	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Debt to Total Assets	6%	1%	2%	2%	2%	2%	2%	2%	2%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)	1 43	1 42	1 42	1 55	1 56	1 57	1 55	1 65	1 57
Operating Profits to Sales	7 3%	6 4%	7 4%	22 4%	-0 8%	1 5%	3 5%	12 3%	22 3%
Net Unrealized Accounts to Sales	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	5 2%	-40 3%	0 0%
Net Income to Sales	10 2%	3 9%	9 4%	23 2%	-0 8%	1 5%	8 8%	52 6%	3 3%
Asset Utilization									
Sales to Current Assets (Annualized)	39 1	28 5	17 4	14 9	17 2	16 2	12 6	14 0	13 7
Sales to Net Utility Plant (Annualized)	3 4	0 6	0 5	0 6	0 6	0 5	0 5	0 6	0 6
Sales to Total Assets (Annualized)	3 1	0 6	0 5	0 5	0 6	0 5	0 5	0 5	0 6
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	99 8%	84 7%	94 8%	109 4%	89 4%	83 2%	86 0%	91 4%	105 0%
Operating and Maintenance to Sales	2 5%	1 9%	2 1%	4 9%	2 2%	3 2%	2 4%	3 6%	8 8%
Fuel to Sales	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Wages and Social Cost to Sales	4 2%	5 6%	6 5%	3 6%	5 4%	7 9%	8 4%	8 5%	2 5%
Depreciation to Sales	0 7%	1 5%	4 0%	4 6%	3 8%	4 2%	6 7%	8 8%	6 0%
Operating Income to Sales	7 3%	6 4%	7 4%	22 4%	-0 8%	1 5%	3 5%	12 3%	22 3%
Net Income to Sales	10 2%	3 9%	9 4%	23 2%	-0 8%	1 5%	8 8%	52 6%	3 3%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	1 5%	0 3%	0 6%	0 7%	0 5%	0 8%	0 5%	0 4%	0 6%
Current Assets	7 9%	2 0%	2 6%	3 6%	3 3%	3 2%	3 6%	3 8%	4 2%
Net Fixed Assets	91 7%	97 9%	97 2%	96 2%	96 6%	96 6%	96 1%	95 9%	95 6%
Current Liabilities	5 5%	1 5%	1 8%	2 5%	1 9%	2 2%	2 5%	2 0%	2 0%
Long Term Liabilities	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Equity	94 5%	98 5%	98 2%	97 5%	98 1%	97 8%	97 5%	98 0%	98 0%

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Table 7 8
Drohobyich PEM
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	5 939	6 769	(830)					(830)	(830)
February	6 810	6 858	(878)	0				(878)	(878)
March	7 617	6 654	85	0	0			85	85
April	6 358	4 792	1 651	0	0	0		1 651	1 651
May	5 629	4 748	2 532	0	0	0	0	2 532	2 532
June	5 684	5 755	2 461	0	0	0	0	2 461	2 461
July	5 539	8 660	(659)	0	0	0	0	(659)	(659)
August	3 873	4 709	(1 495)	0	0	0	0	(1 495)	(1 495)
September	5 171	4 414	(738)	0	0	0	0	(738)	(738)
October	5 822	5 606	(522)	0	0	0	0	(522)	(522)
November	5 796	3 957	1 317	0	0	0	0	1 317	1 317
December	5 553	5 659	1 211	0	0	0	0	1 211	1 211
January (1997)	6 981	4 129	4 064	0	0	0	0	4 064	4 064
February	6 519	2 913	6 519	1 152	0	0	0	7 670	7 670
March	6 940	5 571	6 940	2 100	0	0	0	9 039	9 039
April	6 877	6 628	6 877	2 411	0	0	0	9 288	9 288
May	5 930	7 410	5 930	1 878	0	0	0	7 808	7 808
June	6 134	2 322	6 134	5 486	0	0	0	11 620	11 620
July	5 272	2 571	5 272	6 134	2 915	0	0	14 321	14 321
August	5 194	2 088	5 194	5 272	6 134	827	0	17 427	17 427
September	5 326	3 414	5 326	5 194	5 272	2 720	827	18 512	19 339
October	5 417	2 601	5 417	5 326	5 194	2 671	2 720	18 608	22 155
November	5 537	3 267	5 537	5 417	5 326	1 927	2 671	18 207	24 425
December	7 206	6 423	7 206	5 537	4 320	0	1 927	17 063	25 208
January (1998)	6 111	5 240	6 111	7 206	4 617	0	0	17 934	26 079
February	6 201	4 695	6 201	6 111	7 129	0	0	19 440	27 585
March	7 275	5 667	7 275	6 201	6 111	1 462	0	21 048	29 193

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 7 9
Drohobyich PEM
Ukraine Energy Project
Determination and Aging of Accounts Payable

(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	6 743	6 806	(64)					(64)	(64)
February	7 437	9 090	(1 716)	0				(1 716)	(1 716)
March	8 259	8 913	(2 370)	0	0			(2 370)	(2 370)
April	6 201	9 493	(5 662)	0	0	0		(5 662)	(5 662)
May	5 265	8 161	(8 559)	0	0	0	0	(8 559)	(8 559)
June	5 511	14 393	(17 441)	0	0	0	0	(17 441)	(17 441)
July	6 236	18 562	(29 767)	0	0	0	0	(29 767)	(29 767)
August	4 130	3 609	(29 245)	0	0	0	0	(29 245)	(29 245)
September	5 588	4 226	(27 884)	0	0	0	0	(27 884)	(27 884)
October	6 893	5 592	(26 582)	0	0	0	0	(26 582)	(26 582)
November	6 761	4 350	(24 171)	0	0	0	0	(24 171)	(24 171)
December	7 509	2 065	(18 728)	0	0	0	0	(18 728)	(18 728)
January (1997)	7 132	4 203	(15 800)	0	0	0	0	(15 800)	(15 800)
February	6 396	2 205	(11 609)	0	0	0	0	(11 609)	(11 609)
March	7 079	5 840	(10 370)	0	0	0	0	(10 370)	(10 370)
April	6 864	6 884	(10 390)	0	0	0	0	(10 390)	(10 390)
May	6 420	6 486	(10 455)	0	0	0	0	(10 455)	(10 455)
June	5 369	643	(5 729)	0	0	0	0	(5 729)	(5 729)
July	5 307	3 329	(3 750)	0	0	0	0	(3 750)	(3 750)
August	5 611	688	1 174	0	0	0	0	1 174	1 174
September	5 438	680	5 438	494	0	0	0	5 931	5 931
October	6 117	330	6 117	5 438	164	0	0	11 719	11 719
November	6 320	690	6 320	6 117	4 911	0	0	17 349	17 349
December	7 961	5 630	7 961	6 320	5 398	0	0	19 679	19 679
January (1998)	6 822	2 934	6 822	7 961	6 320	2 464	0	23 567	23 567
February	7 150	5 062	7 150	6 822	7 961	1 258	2 464	23 191	25 655
March	9 984	6 336	9 984	7 150	6 822	1 625	1 258	25 582	29 304

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 7 10
Drohobych PEM
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	(2 073)	695	(1 370)	(3 992)	(167)	288	(1 391)	(9 556)	(649)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(83)	(14)	(346)	(159)	146	(352)	408	98	(163)
Change in Other Short Term Assets	(177)	(407)	(596)	(1 110)	(331)	474	(695)	(218)	(461)
Change in Accounts Payable	166	221	170	185	(170)	7	45	(53)	(147)
Change in Other Short Term Liabilities	70	93	323	680	(228)	374	259	(622)	169
Depreciation Expense	242	89 328	2 541	2 534	1 102	693	949	(129)	1 098
Net Cash Provided by Operating Activities	218	89 221	2 092	2 130	519	1 196	966	(924)	496
Cash Flow from Investment Activities									
Completed Plant In Service	(378)	(184 581)	(6 226)	(1 404)	(38)	(105)	(818)	(348)	(114)
Change in Construction Work In Progress	(157)	(632)	(616)	440	(17 989)	(591)	5 887	4 037	(534)
Change in Nonutility Property and Intangibles	(34)	(35)	(40)	(64)	(11)	(67)	(47)	(20)	(9)
Net Cash Provided by Investment Activities	(569)	(185 248)	(6 882)	(1 028)	(18 038)	(763)	5 022	3 669	(657)
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	469	96 006	4 720	(1 114)	17 473	(385)	(5 923)	(2 689)	40
Net Cash Provided by Financing Activities	469	96 006	4 720	(1 114)	17 473	(385)	(5 923)	(2 689)	40
Unrealized Cash Differences ¹	2 073	(695)	1 370	3 992	167	(288)	1 391	9 556	649
Net Change in Cash	118	(21)	(70)	(12)	(46)	48	65	56	(121)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

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Equity displayed very little variation during the period with the exception of an increase of 96 million UAH from the fixed asset revaluation

8. CHP-1

The CHP-1 combined heat and power plant is located next to both the main Lviv Oblenergo building and the headquarters of the Lviv City Oblenergo. Both are within the city limits of Lviv. It is the oldest power plant in the region that was originally built in 1908. Its present structure was constructed during the period between 1946 and 1954. The plant is equipped with 5 steam boilers manufactured in Russia with 4 turbogenerators that were produced in the 1930's by the engineering firm Siemens of Germany. The equipment was acquired after World War II as war indemnity. The fuel used within the plant is natural gas with mazut held in reserve. The heat plant installed capacity is 800 Gcal, while its working capacity currently amounts to 515 Gcal. In addition, the electric plant has installed capacity of 31.3 MW and working capacity of 17 MW. The actual electricity output is negligible, and the plant's primary function is for the generation of heat for the district heat system. Since May 1998, CHP-1 has been leased to the municipality. Once the lease came into effect, the CHP payroll was reduced from 353 to 84 employees while the released workers were transferred to the municipality staff.

Of the total heat produced, 80% is sold to a municipal heat distribution company, LvivTeploEnergo, which acts as a retail distributor. The balance of 20% is sold directly into the industrial sector. The main industrial customers are "Politron", and "Karat". Currently, the main problem is arrears from both LvivTeploEnergo and direct heat and hot water customers. Because of this problem with collections, the company is overdue paying its fuel bill.

Table 8.1 is the income statement for the CHP-1. Supporting tables include 8.2 (Sales of Heat), 8.3 (Other Income and Expenses), 8.4 (Electricity / Fuel Purchased), 8.5 (Main Production Costs), 8.8 (Aging of Accounts Receivable) and 8.9 (Aging of Accounts Payable).

Table 8.1 is the 1996-1998 quarterly restated income statement. Beginning with sales, two types of trends exist. The first is seasonal and the second is economic. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters (due to warmer weather). In the fourth quarter, a sharp rise in revenues occurs due to colder weather. The second trend is economic. Beginning with the first quarter of 1996, 1997 and 1998, there has been a steady decline in revenues that total 17.6%. During this period, arrears with the natural gas supplier caused periodic limitations of gas delivery from the supplier. Without the required natural gas, the company could not meet demand and the resulting sales were lower. In addition, the company began either limiting or stopping delivery of heat to several industrial consumers who were not paying for the heat delivered. Payables in natural gas have increased because of the lack of payment from the heat distribution company. Therefore, the CHP plant has only been able to purchase fuel on a cash basis.

Table 8 1
Lviv CHP-1
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	17 769	3 996	114	7 759	16 611	5 977	592	11 736	14 637
Internal Transfers	0	0	0	0	0	0	0	0	0
Other Revenues	0	0	0	0	0	0	0	0	0
Total Sales	17 769	3 996	114	7 759	16 611	5 977	592	11 736	14 637
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	(1 160)	(1 744)	(1 284)	(6 078)	(10 123)	0	(895)	0	0
Fuel and Raw Materials	(7 850)	(6 152)	(205)	(1 256)	(9 684)	(5 466)	(851)	(4 254)	(12 244)
Wages & Social Costs	(84)	(203)	(547)	(247)	(316)	(406)	(359)	(373)	(384)
<i>Total Operating Expenses</i>	(9 094)	(8 099)	(2 036)	(7 581)	(20 123)	(10 296)	(2 105)	(12 390)	(19 916)
Maintenance	(6)	(22)	(23)	(13)	(56)	(10)	(23)	5	(5)
Depreciation	(54)	(78)	(261)	(167)	(166)	(163)	(160)	(395)	(276)
<i>Total Operational Expenses</i>	(60)	(100)	(284)	(180)	(222)	(173)	(182)	(390)	(280)
Operating Income	8 615	(4 203)	(2 205)	(1)	(3 734)	(4 492)	(1 695)	(1 044)	(5 559)
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	8 615	(4 203)	(2 205)	(1)	(3 734)	(4 492)	(1 695)	(1 044)	(5 559)
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	(2 987)	(7 638)	0	0	(10 058)	(6 467)	0	0
Taxes & Payments	(116)	(66)	(197)	(192)	(100)	(40)	(72)	(172)	(251)
<i>Total Taxes and Financial Costs</i>	(116)	(3 053)	(7 836)	(192)	(100)	(10 098)	(6 539)	(172)	(251)
NET INCOME	8 500	(7 256)	(10 041)	(193)	(3 834)	(14 590)	(8 234)	(1 216)	(5 810)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

However it should be pointed out that total sales in 1997 were actually higher than 1996. This was due to a colder winter.

The next section in the income statement deals with operational expenses. Also of usefulness is table 8.7, Financial Ratios. In particular, the section referring to the common size income statement will yield important insights to the analysis. The largest cost for distribution is purchased fuel. For 1996 the ratio of cost to sales is 98.3%. That leaves 2.7% to service all other costs. The ratio improved in 1997 by falling to 82.4%. This level is still unacceptable when compared to the normal 20% required, but an improvement over 1996. As for 1998, it is too soon to draw any meaningful conclusions because of the large degree of seasonality. What is clear is that the CHP is not collecting sufficient revenues to cover costs the past two years.

The next largest cost is operating expenses. This category includes materials, spare parts, fuel (other than for generation) and small investment. A comparison of quarterly operating cost shows a seasonal pattern. For the first three quarters of 1996, costs range from 1.2 to 1.6 million UAH. This is expected since many of the costs to maintain a boiler are fixed. In the fourth quarter of 1996 this cost rises significantly to 6.1 million UAH and for the first quarter of 1997 to 10.1 million UAH. Thereafter, the quarterly average costs are at a much higher level than 1996. The explanation for this pattern is during this period the Sykhivsky heat network was refurbished and several new additions were made to extend it.

Finally, wages increased from 0.8 million the first quarter of 1996 to 5 million by the third quarter, and thereafter are mostly higher averaging 3.5 million per quarter. The unusual behavior of this cost, especially in 1996, is explained by reporting policy. For the first quarter of 1996, only wages are recorded in accounts 69 and 70 and any bonuses are expenses after profit. In the second quarter, wages and bonuses are expensed before profit and counted as expense. This practice is continued for the rest of the restatement period. For the third quarter of 1996, an annual bonus is also included as an expense. In addition to changes in accounting policy, wages also rise due to adjustments in the cost of living.

Table 8.2 is Heat Sales. The largest consumer for heat and steam in table 8.3 is classified as Other. In reality this is the retail distribution network LvivTeploEnergo which purchases 74% (or 125 Gcal) of production for resale. A distant second is industrial usage with 17% of the total. As expected, the sales trend during the year is highly seasonal. The peak usage occurs during the winter months and gradually declines until July where sales are zero. Beginning in October sales rise along with colder weather.

Table 8.3 is other income and internal transactions. For the heat plant there are no other revenues reported.

Table 8 2
Lviv CHP-1
Ukraine Energy Project
Heat Sales

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
M nth	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)
	Industry Hot Water			Residential Hot Water			Cooperative H t Water			Green House H t Water			Other Hot Water		
January (1996)	31	41 339 71	1 278	18	22 218 87	349	0	22 217 74	8	0	41 338 71	10	125	37 516 10	4 878
February	20	43 418 72	853	15	22 153 84	334	0	22 217 57	5	0	41 337 84	12	118	37 532 57	4 444
March	20	41 303 28	837	17	22 038 18	365	0	22 218 81	6	0	41 337 42	7	112	37 284 84	4 158
April	10	41 481 52	408	11	22 218 93	254	0	22 200 88	5	0	41 338 98	5	86	37 416 17	2 478
May	0	40 503 02	20	1	22 218 88	32	0	22 352 84	1	0	0 00	0	13	37 480 08	457
June	0	0 00	0	10	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	5	42 801 18	201	5	28 849 88	149	0	28 555 58	3	0	4 272 73	1	37	38 875 79	1 421
December	27	42 810 17	1 172	18	28 590 37	468	0	28 578 85	8	0	0 00	1	111	38 157 48	4 023
January (1997)	28	42 788 01	1 127	16	28 593 02	485	0	28 288 55	8	0	57 142 86	2	127	38 772 02	4 928
February	18	42 840 27	889	14	28 554 80	428	0	31 007 75	8	0	34 482 76	1	101	38 822 83	3 818
March	13	42 828 39	577	15	28 588 99	442	0	28 982 55	8	0	34 482 76	1	87	38 821 39	3 751
April	11	42 782 64	484	14	28 819 77	423	0	32 258 08	8	0	40 000 00	1	88	38 851 27	3 420
May	1	43 850 79	22	2	28 734 87	48	0	0 00	0	0	0 00	1	85	38 458 04	593
June	1	41 984 73	22	4	28 823 48	107	0	28 411 78	1	0	0 00	0	18	38 887 48	618
July	0	0 00	0	0	28 735 83	5	0	0 00	0	0	0 00	0	1	38 128 38	15
August	0	0 00	0	0	27 777 78	3	0	0 00	0	0	0 00	0	3	38 417 10	133
September	0	24 380 24	1	0	28 411 78	8	0	0 00	0	0	0 00	0	10	38 323 47	385
October	2	42 864 89	78	4	28 542 48	113	0	40 000 00	2	0	0 00	0	33	38 580 39	1 281
November	14	42 887 72	581	15	28 588 18	454	0	28 881 02	7	0	34 482 76	1	78	38 847 85	3 052
December	22	42 788 52	952	15	28 588 57	445	0	28 189 01	8	0	34 482 76	1	107	39 077 74	4 188
January (1998)	18	42 801 32	701	14	28 830 67	422	0	28 520 30	8	0	37 037 04	1	108	38 891 87	4 138
February	14	42 845 58	583	13	28 524 25	388	0	38 461 54	1	0	38 461 54	1	88	38 818 85	3 334
March	13	42 781 15	580	15	28 598 89	454	0	28 702 87	8	0	38 461 54	1	100	38 808 28	3 887
	Industry Steam			Residential Steam			Cooperative Steam			Green House Steam			Other Steam		
January (1998)	8	41 816 48	387	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	41 810 58	15	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	0	41 338 24	14	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
April	3	41 484 35	128	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
May	1	41 208 08	61	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
June	3	41 478 82	108	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	2	43 054 17	87	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	1	42 850 54	28	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	1	43 140 03	31	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
December	7	43 181 75	283	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
January (1997)	8	43 280 84	242	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
April	1	42 311 88	41	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
May	2	42 782 78	78	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
June	3	42 894 44	115	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	44 178 71	11	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	3	42 888 28	134	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	4	42 951 25	183	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
December	7	43 055 88	287	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
January (1998)	1	42 883 21	47	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	2	42 952 48	103	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0

1 Includes Cooperative Sales Cooperative Garages and Artists Workshops and Communal Customers

Table 8 3
Lviv CHP-1
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	00	0	0	0
February	00	0	0	0
March	00	0	0	0
April	00	0	0	0
May	00	0	0	0
June	00	0	0	0
July	00	0	0	0
August	00	0	0	0
September	00	0	0	0
October	00	0	0	0
November	00	0	0	0
December	00	0	0	0
January (1997)	00	0	0	0
February	00	0	0	0
March	00	0	0	0
April	00	0	0	0
May	00	0	0	0
June	00	0	0	0
July	00	0	0	0
August	00	0	0	0
September	00	0	0	0
October	00	0	0	0
November	00	0	0	0
December	00	0	0	0
January (1998)	00	0	0	0
February	00	0	0	0
March	00	0	0	0

Table 8 4
Electricity and Fuel Purchases
Lviv CHP-1
Ukraine Energy Project
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	0	0 00	0	27 266	0	4 132	0	0	0
February	0	0 00	0	23 252	0	3 718	0	0	0
March	0	0 00	0	22 396	0	3 501	0	0	0
April	0	0 00	0	14 598	0	2 262	0	0	0
May	0	0 00	0	3 384	0	390	0	0	0
June	0	0 00	0	1	139	97	0	0	0
July	0	0 00	0	1	24	24	0	0	0
August	0	0 00	0	1	168	84	0	0	0
September	0	0 00	0	0	61	12	0	0	0
October	0	0 00	0	0	160	48	0	0	0
November	0	0 00	0	9	136	1 196	0	0	0
December	0	0 00	0	24 681	0	3 381	0	0	0
January (1997)	0	0 00	0	26 910	0	3 668	0	0	0
February	0	0 00	0	19 775	0	2 635	0	0	0
March	0	0 00	0	19 628	0	2 634	0	0	0
April	0	0 00	0	17 138	0	2 322	0	0	0
May	0	0 00	0	4 033	0	509	0	0	0
June	0	0 00	0	5 039	0	681	0	0	0
July	0	0 00	0	0	150	45	0	0	0
August	0	0 00	0	1	125	125	0	0	0
September	0	0 00	0	1	258	361	0	0	0
October	0	0 00	0	8	150	1 211	0	0	0
November	0	0 00	0	17 212	0	2 681	0	0	0
December	0	0 00	0	22 317	0	3 499	0	0	0
January (1998)	0	0 00	0	20 523	0	4 400	0	0	0
February	0	0 00	0	16 823	0	4 345	0	0	0
March	0	0 00	0	20 072	0	2 440	0	0	0

20

Table 8 4 shows the monthly purchases for fuel The pattern of purchases is the same as sales Large fuel purchases in the winter, declining to very small ones during the summer months On a quarter by quarter basis, total fuel purchases were 11,351 (1996), 8,936 (1997) and 11,186 (1998) cubic meters for the first quarter of each year The exception to this occurred during January 1998 when a very small value was recorded

The next table, 8 5, outlines the main production costs associated with the company The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine Within the table are all the basic accounts used to record costs of production However, discussion of costs will be made within the context of the restated income statement and is presented here for informational purposes for the reader needing more detail

Balance Sheet

Table 8 6 is the restated balance sheet for the sector For 1998, first quarter results are available at the time this report is being written Both account's receivable and payable were aged for the restatement by each business unit However, the net result would have had insignificant impact on the balance sheet and the original values were used All other values were taken from the Ukrainian reported financial statements

Between the first and second quarter of 1996, gross fixed assets increased seven times due a revaluation of assets In addition, Assets under Construction has remained the same until the last two quarters evaluated when it declined Combined, net utility assets have increased by a factor of 2 The major reason for the increase is fixed asset revaluation

Current assets increase from 10 4 million UAH to 19 9 million UAH during the period examined Cash balances decline from almost 1 million to near zero The largest current asset was Government, Employee and Other Receivables This account represents approximately 65% of current assets

Equity had a large rise between the second and third quarters of 1996 The account that caused the increased was the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above The reserve fund was reclassified as additional capital at the beginning of 1997

As for current liabilities, the company experienced an increase by a factor of 2 for accounts payable Accounts payable represents most of short-term liabilities

Tables 8 8 and 8 9 examine the aggregate cash flows of the CHP plant The first point that becomes apparent in accounts receivable is the poor collection rates For

Tables 8.5
Lviv CHP 1
Ukraine Energy Project
Main Production Costs

Month	Dep. of Utilization 2	Maintenance 3	Material 5	Fuel 6	Construction Material 7	Spare Parts 8	Lubricants 9	Agricultural Products 10	Oil 11	Low-shelf Items 12	Dep. of Utilization of LV Items 13	Transport Costs 16	Construction Expenses 18	Switching Operations 29	Non-Interest Operations 30	Deferred Expenses 31
January (1998)	0	0	102	0	0	2	0	0	0	1	1	3	0	0	0	0
February	16	0	81	0	0	2	0	0	0	11	2	5	0	0	0	0
March	16	0	82	0	0	2	0	0	0	1	3	3	0	0	0	0
April	16	0	102	0	0	3	0	0	0	8	1	3	0	0	0	0
May	0	0	81	390	0	4	0	0	0	1	1	3	0	0	0	0
June	43	0	112	97	0	15	0	0	0	1	1	4	0	0	0	0
July	41	0	89	24	0	2	0	0	0	1	2	2	0	0	0	0
August	14	0	114	84	0	3	0	0	0	1	0	2	0	0	0	0
September	172	0	41	12	0	18	0	0	0	8	1	15	0	0	0	0
October	18	0	96	48	0	7	0	0	0	1	4	3	0	0	0	0
November	39	0	142	1 196	0	2	0	0	0	1	2	5	0	0	0	0
December	42	0	123	3 381	0	4	0	0	0	0	3	1	0	0	0	0
January (1997)	54	0	113	3 678	0	48	0	0	0	1	0	11	0	0	0	0
February	54	0	130	2 635	0	4	0	0	0	0	3	4	0	0	0	0
March	54	0	117	2 634	0	4	0	0	0	0	2	3	0	0	0	0
April	54	0	96	2 322	0	7	0	0	0	0	1	8	0	0	0	0
May	53	0	306	309	0	2	0	0	0	1	1	37	0	0	0	0
June	53	0	44	681	0	1	0	0	0	0	2	6	0	0	0	0
July	53	0	69	45	0	1	0	0	0	1	3	1	0	0	0	0
August	71	0	49	125	0	15	0	0	0	1	1	3	0	0	0	0
September	30	0	94	361	0	6	0	0	0	1	1	3	0	0	0	0
October	224	0	75	1 211	0	0	0	0	0	0	2	2	0	0	0	0
November	81	0	85	2 681	0	0	0	0	0	1	3	1	0	0	0	0
December	81	0	85	3 499	0	5	0	0	0	1	4	2	0	0	0	0
January (1998)	106	0	82	4	0	1	0	0	0	0	3	2	0	0	0	0
February	74	0	80	4 343	0	1	0	0	0	1	3	2	0	0	0	2
March	88	0	68	2 440	0	3	0	0	0	1	2	3	0	0	0	0
	Inventories 33	Non-Operational Expenses 43	Construction 50	Settlement Account 51	Oil Account 55	Supplies 60	Non-budget Payment 65	Budget Payment 68	Insurance Payment 69	Salary 70	Construction Advances 71	Debtors/Creditors 76	Interest Settlement 78	Interest Payment Settlement 79	Depreciation Fund 86	(Mkr)
January (1998)	0	0	0	1	183	39	10	15	0	0	18	24	0	16	0	0
February	0	0	0	1	315	27	7	13	33	1	22	17	0	0	0	0
March	0	0	0	0	254	21	10	23	0	0	22	14	0	0	0	0
April	0	0	0	3	254	29	8	24	0	0	18	18	0	0	0	0
May	0	0	0	1	307	16	0	27	72	0	21	1	0	16	0	0
June	0	0	0	1	249	6	7	21	59	0	17	32	0	0	0	0
July	0	0	0	0	278	15	7	20	54	0	22	4	0	0	0	0
August	0	0	0	1	253	4	10	18	49	0	17	10	0	0	0	0
September	0	0	0	1	255	152	9	105	301	0	48	7	0	32	0	0
October	0	0	0	0	284	13	11	23	63	0	17	2	0	0	0	0
November	0	0	0	0	359	33	10	32	58	0	23	8	0	0	0	0
December	0	0	0	1	340	29	96	21	51	0	26	20	0	0	0	0
January (1997)	0	0	0	0	134	17	11	26	70	0	20	18	0	0	0	0
February	0	0	0	2	275	42	10	28	75	0	19	4	0	0	0	0
March	0	0	0	0	279	10	11	32	86	0	32	25	0	0	0	0
April	0	0	0	0	140	0	15	38	100	0	20	9	0	0	0	0
May	0	0	0	0	170	14	11	32	86	0	20	11	0	0	0	0
June	0	0	0	0	163	14	14	41	110	0	18	31	0	0	0	0
July	0	0	0	0	128	21	4	30	82	0	18	4	0	0	0	0
August	0	0	0	1	102	9	2	32	90	0	20	5	0	0	0	0
September	0	0	0	0	162	9	29	33	92	0	18	2	317	0	0	0
October	0	0	0	0	1	8	15	31	86	0	5	2	0	0	0	0
November	0	0	0	2	6	32	14	33	92	0	20	0	0	0	0	32
December	0	0	0	1	67	88	15	33	98	0	19	0	0	0	0	1
January (1998)	0	0	0	0	52	90	14	34	93	0	20	0	0	0	0	0
February	0	0	0	0	118	67	14	34	94	0	22	0	0	0	0	0
March	0	0	0	0	28	48	17	37	93	0	18	0	0	0	0	0

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Table 8.6
Lviv CHP-1
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Long Term Assets										
Fixed Assets	5 193	5 283	36 859	39 372	38 990	39 006	39 233	42 123	48 592	48 668
Less Accumulated Depreciation	3 114	3 163	24 638	24 754	24 620	24 783	25 003	25 158	25 584	25 820
Net Fixed Assets	2 079	2 120	12 221	14 618	14 370	14 223	14 230	16 965	23 008	22 848
Assets Under Construction	12 159	12 331	12 606	12 716	12 592	12 624	12 674	12 703	5 587	5 606
Net Utility Plant	14 238	14 451	24 827	27 334	26 962	26 847	26 904	29 668	28 595	28 454
Other Property and Investments										
Nonutility Property and Intangibles	55	67	69	80	98	108	115	132	149	167
Less Accumulated Depreciation	23	29	28	26	34	33	36	37	46	52
Net Nonutility Property and Intangibles	32	38	41	54	64	75	79	95	103	115
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	32	38	41	54	64	75	79	95	103	115
Current Assets										
Cash and Short Term Investments	966	223	17	5	69	14	28	14	28	32
Accounts Receivable	1 413	1 353	949	1 258	1 150	939	1 334	1 167	1 016	1 089
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	1 413	1 353	949	1 258	1 150	939	1 334	1 167	1 016	1 089
Inventory	2 838	3 600	4 092	4 522	1 206	5 248	6 164	4 174	4 611	4 903
Government Employee and Other Receivables	5 207	15 065	16 295	15 757	17 300	14 422	17 287	16 009	9 390	13 676
Other Current Assets	9	546	478	243	3 890	171	299	475	20	232
Total Current Assets	10 433	20 787	21 831	21 785	23 615	20 794	25 112	21 839	15 065	19 932
TOTAL ASSETS	24 703	35 276	46 699	49 173	50 641	47 716	52 095	51 602	43 763	48 501
CAPITALIZATION AND LIABILITIES										
Stockholder's Equity										
Statutory Capital (Net)	14 146	14 146	14 146	14 146	14 146	14 146	14 146	14 146	14 146	14 146
Additional Capital	0	0	0	0	13 040	13 257	13 424	13 565	13 309	13 437
Reserve Funds	578	725	10 943	13 449	335	257	187	184	186	231
Retained Earnings	0	8 500	1 244	(8 797)	(8 990)	(12 824)	(27 414)	(35 648)	(36 864)	(42 673)
Unrealized Differences		(8 500)	(1 244)	8 797	8 990	12 824	27 414	35 648	36 930	42 737
Total Equity	14 724	14 871	25 089	27 595	27 521	27 660	27 757	27 895	27 707	27 878
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	14 724	14 871	25 089	27 595	27 521	27 660	27 757	27 895	27 707	27 878
Current Liabilities										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	9 830	20 147	21 233	21 172	22 629	19 554	23 661	22 998	15 428	20 173
Less Bad Debt Allowance										
Net Payables	9 830	20 147	21 233	21 172	22 629	19 554	23 661	22 998	15 428	20 173
Wages and Social Insurance Payable	60	94	175	263	242	204	388	442	316	211
Taxes and Non-Budget Payable	83	157	196	137	243	291	280	256	297	224
Government Employee and Other Payable	6	7	0	6	6	7	8	11	15	14
Advances from Customers	0	0	0	0	0	0	0	0	0	0
Other Current Liabilities	0	0	6	0	0	0	1	0	0	1
Total Current Liabilities	9 979	20 405	21 610	21 578	23 120	20 056	24 338	23 707	16 056	20 623
TOTAL CAPITALIZATION AND LIABILITIES	24 703	35 276	46 699	49 173	50 641	47 716	52 095	51 602	43 763	48 501

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

**Table 8 7
Lviv CHP-1
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1 0	1 0	1 0	1 0	1 0	1 0	0 9	0 9	1 0
Collection Rate	34%	91%	1309%	28%	72%	83%	607%	57%	56%
% Accounts Receivable Over 60 Days	6%	92%	0%	0%	47%	83%	0%	0%	70%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capital Structure and Long Term Solvency									
Debt to Equity	1 4	0 9	0 8	0 8	0 7	0 9	0 8	0 6	0 7
Debt to Total Assets	58%	46%	44%	46%	42%	47%	46%	37%	43%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)									
Operating Profits to Sales	48 5%	105 2%	1927 2%	0 0%	22 5%	75 2%	786 4%	8 9%	38 0%
Net Unrealized Accounts to Sales	0 0%	74 7%	6674 8%	0 0%	0 0%	168 3%	1092 4%	0 0%	0 0%
Net Income to Sales	47 8%	181 6%	8774 6%	2 5%	23 1%	244 1%	1390 9%	10 4%	39 7%
Asset Utilization									
Sales to Current Assets (Annualized)	3 4	0 7	0 0	1 3	3 2	1 0	0 1	3 1	2 9
Sales to Net Utility Plant (Annualized)	4 9	0 6	0 0	1 2	2 5	0 9	0 1	1 6	2 1
Sales to Total Assets (Annualized)	2 0	0 3	0 0	0 6	1 4	0 5	0 0	1 1	1 2
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Operating and Maintenance to Sales	6 5%	43 1%	1102 2%	78 2%	60 6%	73 9%	147 4%	66 2%	49 8%
Fuel to Sales	44 2%	154 0%	178 9%	16 2%	58 3%	91 4%	143 7%	36 2%	83 7%
Wages and Social Cost to Sales	0 5%	5 1%	477 7%	3 2%	1 9%	6 8%	60 7%	3 2%	2 6%
Depreciation to Sales	0 3%	2 0%	228 3%	2 2%	1 0%	2 7%	26 9%	3 4%	1 9%
Operating Income to Sales	48 5%	105 2%	1927 2%	0 0%	22 5%	75 2%	286 4%	8 9%	38 0%
Net Income to Sales	47 8%	181 6%	8774 6%	2 5%	23 1%	244 1%	1390 9%	10 4%	39 7%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	3 8%	2 0%	7 6%	2 3%	2 0%	2 6%	2 3%	2 3%	7 7%
Current Assets	58 9%	46 7%	44 3%	46 6%	43 6%	48 7%	42 3%	34 4%	41 1%
Net Fixed Assets	41 0%	53 2%	55 6%	53 2%	56 3%	51 6%	57 5%	65 3%	58 7%
Current Liabilities	57 8%	46 3%	43 9%	45 7%	42 0%	46 7%	45 9%	36 7%	42 5%
Long Term Liabilities	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Equity	42 2%	53 7%	56 1%	54 3%	58 0%	53 3%	54 1%	63 3%	57 5%

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Table 8 8
Lviv CHP-1
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	6 718	3 256	3 463						
February	5 664	953	5 664	2 510				3 463	3 463
March	5 387	1 811	5 387	5 664	699			8 173	8 173
April	3 277	2 539	3 277	5 387	3 824	0		11 750	11 750
May	611	837	611	3 277	5 387	2 987	0	12 488	12 488
June	108	275	108	611	3 277	5 112	2 987	12 262	12 262
July	0	1 272	0	108	611	2 005	5 112	9 109	12 096
August	87	90	87	0	108	521	2 005	2 724	10 823
September	28	136	28	58	0	0	521	716	10 820
October	0	669	(583)	0	0	0	0	86	10 712
November	1 804	584	638	0	0	0	0	(583)	10 043
December	5 955	926	5 668	0	0	0	0	638	11 264
January (1997)	6 792	650	6 792	5 018	0	0	0	5 668	16 293
February	5 040	2 203	5 040	6 792	2 816	0	0	11 810	22 435
March	4 779	747	4 779	5 040	6 792	2 069	0	14 648	25 273
April	4 377	1 665	4 377	4 779	5 040	5 127	2 069	18 680	29 305
May	737	2 178	737	4 377	4 779	2 862	5 127	19 323	32 017
June	863	1 124	863	737	4 377	3 655	2 862	12 755	30 576
July	51	1 565	51	863	737	2 812	3 655	9 632	30 315
August	136	1 312	136	51	288	0	2 812	4 463	28 801
September	405	714	166	0	0	0	0	475	27 624
October	1 589	715	1 040	0	0	0	0	166	27 315
November	4 258	2 106	3 192	0	0	0	0	1 040	28 189
December	5 889	3 833	5 248	0	0	0	0	3 192	30 342
January (1998)	5 318	3 525	5 318	1 723	0	0	0	5 248	32 398
February	4 305	2 812	4 305	4 229	0	0	0	7 041	34 191
March	5 014	1 837	5 014	4 305	2 392	0	0	8 534	35 684
								11 711	38 861

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 - Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 8 9
Lviv CHP-1
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	414	3 713	(3 299)					(3 299)	(3 299)
February	552	1 499	(4 246)	0				(4 246)	(4 246)
March	454	2 302	(6 094)	0	0			(6 094)	(6 094)
April	488	2 989	(8 595)	0	0	0		(8 595)	(8 595)
May	941	1 252	(8 907)	0	0	0	0	(8 907)	(8 907)
June	684	573	(8 796)	0	0	0	0	(8 796)	(8 796)
July	558	1 580	(9 818)	0	0	0	0	(9 818)	(9 818)
August	579	417	(9 657)	0	0	0	0	(9 657)	(9 657)
September	1 176	481	(8 962)	0	0	0	0	(8 962)	(8 962)
October	629	1 028	(9 361)	0	0	0	0	(9 361)	(9 361)
November	1 929	850	(8 281)	0	0	0	0	(8 281)	(8 281)
December	4 138	1 211	(5 354)	0	0	0	0	(5 354)	(5 354)
January (1997)	4 189	725	(1 890)	0	0	0	0	(1 890)	(1 890)
February	3 284	2 341	(947)	0	0	0	0	(947)	(947)
March	3 288	947	1 394	0	0	0	0	1 394	1 394
April	2 810	1 741	2 463	0	0	0	0	2 463	2 463
May	1 154	2 405	1 154	57	0	0	0	1 212	1 212
June	1 079	1 327	964	0	0	0	0	964	964
July	459	1 712	(289)	0	0	0	0	(289)	(289)
August	525	1 526	(1 289)	0	0	0	0	(1 289)	(1 289)
September	524	881	(1 646)	0	0	0	0	(1 646)	(1 646)
October	1 660	595	(581)	0	0	0	0	(581)	(581)
November	3 085	2 098	406	0	0	0	0	406	406
December	3 988	3 799	595	0	0	0	0	595	595
January (1998)	502	3 498	(2 400)	0	0	0	0	(2 400)	(2 400)
February	4 855	2 832	(378)	0	0	0	0	(378)	(378)
March	2 846	1 924	544	0	0	0	0	544	544

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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1996, total sales were 29.6 million UAH. Of the total, 10.6 million UAH aged over 90 days and should have been written off as bad debt. For 1997 the condition deteriorated on total sales of 34.9 million UAH. Of this total sales, over 16 million UAH aged beyond 90 days. That is equivalent to a non-payment rate of almost 50%. Since money was not being realized from sales, large amounts of accounts payable went unpaid.

Statement of Changes in Financial Position

Table 8.10 examines the cash flow from all financial activities during the year. Total net income for the entire period totaled negative 42.6 million UAH for the 2 ¼ years examined. The main reason for the loss was under-utilization of the plant and high fixed costs. As for investment activities, both gross assets and work in progress took a large jump in the second quarter of 1996. The increase in fixed assets was caused by the increase in revaluation. Equity displayed very little variation during the period with the exception of an increase of 10 million from the fixed asset revaluation of fixed assets.

Table 8 10
Lviv CHP-1
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	8 500	(7 256)	(10 041)	(193)	(3 834)	(14 590)	(8 234)	(1 216)	(5 810)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	60	404	(309)	108	211	(395)	167	151	(73)
Change in Other Short Term Assets	(11 157)	(1 654)	343	(1 874)	2 555	(3 909)	3 092	6 637	(4 790)
Change in Accounts Payable	10 317	1 086	(61)	1 457	(3 075)	4 107	(663)	(7 570)	4 745
Change in Other Short Term Liabilities	109	119	29	85	11	175	32	(61)	(178)
Depreciation Expense	55	21 474	114	(126)	162	223	156	435	242
Net Cash Provided by Operating Activities	(616)	21 429	116	(350)	(136)	201	2 784	(428)	(54)
Cash Flow from Investment Activities									
Completed Plant In Service	(90)	(31 576)	(2 513)	382	(16)	(227)	(2 890)	(6 469)	(76)
Change in Construction Work In Progress	(172)	(275)	(110)	124	(32)	(50)	(29)	7 116	(19)
Change in Nonutility Property and Intangibles	(12)	(2)	(11)	(16)	(10)	(7)	(17)	(17)	(18)
Net Cash Provided by Investment Activities	(274)	(31 853)	(2 634)	488	(58)	(284)	(2 936)	630	(113)
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	147	10 218	2 506	(74)	139	97	138	(254)	173
Net Cash Provided by Financing Activities	147	10 218	2 506	(74)	139	97	138	(254)	173
Unrealized Cash Differences ¹	(8 500)	7 256	10 041	193	3 834	14 590	8 234	1 282	5 808
Net Change in Cash	(743)	(206)	(12)	64	(55)	14	(14)	14	4

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

9 CHP-2

The CHP-2 combined heat and power plant, located 10 km north of Lviv in the village of Murovane, was commissioned in 1983 with an installed capacity of 227 GCal serviced by 4 steam and 2 water heat boilers produced in the 1980's in Russia. Its project design included the installation of an electric plant. However, the project was first delayed and then abandoned due to the economic crisis in the FSU. At present, CHP-2 is operating at 1/7th of its capacity and only produces heat. In summer the demand for heat goes below economically practicable figures and the plant is closed. Its customers are switched to the LvivTeploEnergo networks. Of the heat produced, 80% is sold to the heat distribution company LvivTeploEnergo and the balance is sold directly to 27 industrial and residential consumers. The division had 228 employees as of July 1998.

The plant uses natural gas as primary fuel with mazut as the alternative. Currently the main problem is the lack of payment from the distribution company. The lack of payment has caused the plant to be in arrears to fuel suppliers. As of August 1998, LvivTeploEnergo owed 5.4 million UAH to CHP-2 while the company's fuel debt amounted to approximately 2.5 million UAH.

Unlike CHP-1, the company has not been leased to the municipality and is still under the Oblenergo auspices. A discussion is currently underway to transfer CHP-2 into municipal ownership.

Table 9.1 is the income statement for the CHP-2. Supporting tables include 9.2 (Sales of Heat), 9.3 (Other Income and Expenses), 9.4 (Electricity / Fuel Purchased), 9.5 (Main Production Costs), 9.8 (Aging of Accounts Receivable) and 9.9 (Aging of Accounts Payable).

Table 9.1 is the 1996-1998 quarterly restated income statement. First, it should be noted that in terms of revenues CHP-2 is significantly smaller than CHP-1 (to be exact 1/6th the size). Like CHP-1, its operations follow the same financial operating pattern. As expected, a seasonal trend exists. The seasonal trend shows a peak in consumption in the first quarter of each year with a decline in usage in both the second and third quarters (due to warmer weather). In the fourth quarter, a sharp rise in revenues occurs due to colder weather. It is interesting to note that sales in 1997 actually went up when compared to 1996. This increase is probably due to an increase in money collected and paid to the fuel supplier rather than normal weather demand since most of the market is constrained by supply rather than demand.

The next section in the income statement deals with operational expenses. Also of usefulness is Table 9.7, Financial Ratios. In particular, the section referring to the

Table 9 1
Lviv CHP2
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	2 826	676	3	866	2 700	907	0	1 602	2 254
Internal Transfers	0	0	0	0	0	0	0	0	0
Other Revenues	0	0	0	0	0	0	0	0	0
Total Sales	2 826	676	3	866	2 700	907	0	1 602	2 254
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	(44)	(59)	(167)	(48)	(50)	(42)	(48)	(198)	(399)
Fuel and Raw Materials	(1 463)	(1 219)	(2)	(111)	(2 041)	(1 240)	0	(1 537)	(1 604)
Wages & Social Costs	(167)	(160)	(88)	(107)	(182)	(209)	(173)	(182)	(191)
<i>Total Operating Expenses</i>	(1 673)	(1 438)	(257)	(266)	(2 273)	(1 491)	(221)	(1 917)	(2 194)
Maintenance	0	0	0	0	0	0	0	0	0
Depreciation	(73)	(114)	(147)	(268)	(265)	(264)	(648)	(639)	(630)
<i>Total Operational Expenses</i>	(73)	(114)	(147)	(268)	(265)	(264)	(648)	(639)	(630)
Operating Income	1 080	(875)	(401)	332	162	(848)	(869)	(954)	(570)
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	1 080	(875)	(401)	332	162	(848)	(869)	(954)	(570)
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	(1 080)	(1 102)	0	0	0	(1 219)	0	0
Taxes & Payments	(18)	(22)	(37)	(14)	(33)	(8)	(11)	(22)	(44)
<i>Total Taxes and Financial Costs</i>	(18)	(1 103)	(1 139)	(14)	(33)	(8)	(1 230)	(22)	(44)
NET INCOME	1 062	(1 978)	(1 540)	318	129	(856)	(2 099)	(976)	(614)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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common size income statement will yield important insights to the analysis. The primary cost for heat production is purchased fuel. For 1996 the ratio of cost to sales is 75.5%. At this level, a sufficient margin exists to service most operational and administration costs. However, by 1997 the ratio had climbed to 102.8%. At this level, revenues do not even cover the cost of fuel. The large increase in fuel cost was the main reason the operating profit for 1997 is much lower than the comparable period in 1996.

Wages are the second largest cost and their trend has been rising. Comparing the absolute level for each of the first quarters (1996, 1997 and 1998), the expenditure has gone up by 9% between 1996 and 1997. For the period from 1997 to 1998 it rose by 5.5%. As outlined earlier, changes in accounting policy and inflation explain the reasons for the increase.

After wages, the next expense is for operations. For the first quarter of 1996 and 1997, the expenditure is extremely small at approximately 1.8% of sales. At this level the operation of the equipment cannot be maintained. The reason for such low expenditures is lack of sufficient cash generation to meet the needs of operation and very small operating margins.

Table 9.2 is Heat Sales. The table basically illustrates that 80% of production is sold for resale (included in Other Hot Water) while 6% of the remaining hot water goes to industry and 14% is direct sales to residential consumers. The figures are consistent over all periods within the restatement. Total sales in 1996 equaled 114 GCal while for 1997 sales were higher at 140 GCal. The cause of the increased sales was more heat supplied to meet demand rather than traditional weather factors. The average tariff for 1996 was approximately 37,000 UAH per GCal and for 1997 only slightly higher at 38,000 GCal.

Table 9.3 is other income and internal transactions. For the heat plant there are no other revenues reported.

The next two tables, 9.4 and 9.5, outline the main production costs associated with the company. Since purchases of fuel are the most significant cost, they are shown separately in table 9.4. As for 9.5, the format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs will be made within the context of the restated income statement and are presented here as supplemental data.

Balance Sheet

Table 9.6 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and

**Table 9 2
Lviv CHP2
Ukraine Energy Project
Heat Sales**

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Month	Total Heat Sold (000 Gk l)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)	Total Heat Sold (000 Gkal)	Tariff (UAH per m ³)	Total Sales (000 UAH)
	Industry Hot Water			Residential Hot Water			Cooperative Hot Water			Green House Hot Water			Other Hot Water		
January (1998)	2	41 338 70	66	4	22 217 64	88	0	0 00	0	0	0 00	0	22	37 045 88	818
February	1	40 162 03	59	4	22 218 86	83	0	0 00	0	0	0 00	0	22	37 045 84	789
March	1	42 756 14	52	4	22 218 88	80	0	0 00	0	0	0 00	0	21	37 046 84	765
April	1	41 348 88	24	4	22 218 91	87	0	0 00	0	0	0 00	0	11	37 048 28	403
May	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	4	37 080 99	181
June	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	0	0 00	0	0	28 811 11	5	0	0 00	0	0	0 00	0	3	38 358 77	108
December	1	42 808 22	44	4	28 588 10	124	0	0 00	0	0	0 00	0	5	111 570 01	585
January (1997)	1	42 908 57	82	4	28 548 37	120	0	0 00	0	0	0 00	0	24	38 380 84	924
February	1	42 805 10	47	3	28 841 88	91	0	0 00	0	0	0 00	0	20	38 387 02	785
March	1	41 378 31	24	2	28 707 11	71	0	0 00	0	0	0 00	0	15	38 381 88	581
April	0	44 910 18	15	2	28 268 28	48	0	0 00	0	0	0 00	0	18	38 342 81	620
May	0	38 881 04	3	1	28 848 52	28	0	0 00	0	0	0 00	0	5	38 422 85	181
June	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	0	41 085 88	3	0	0 00	0	0	0 00	0	0	0 00	0	4	38 348 80	157
November	1	43 082 20	36	3	28 881 20	81	0	0 00	0	0	0 00	0	12	38 335 78	488
December	1	42 897 33	81	4	28 700 41	115	0	0 00	0	0	0 00	0	17	38 380 33	658
January (1998)	2	42 855 28	84	4	28 538 13	110	0	0 00	0	0	0 00	0	17	38 333 33	644
February	1	42 708 87	58	3	28 568 30	100	0	0 00	0	0	0 00	0	14	38 438 88	548
March	1	43 172 88	43	3	28 897 15	101	0	0 00	0	0	0 00	0	15	38 342 85	583
	Industry Steam			Residential Steam			Cooperative Steam			Green House Steam			Other Steam		
January (1998)	0	41 304 35	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	41 338 82	2	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	0	41 328 41	4	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
April	0	41 333 33	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
May	0	41 304 35	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
June	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	42 791 87	2	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	42 845 16	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
December	0	42 918 67	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
January (1997)	0	40 000 00	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	41 688 87	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	0	46 153 85	3	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
April	0	44 444 44	2	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
May	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
June	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
July	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
August	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
September	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
October	1	28 187 82	23	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
November	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
December	0	41 888 87	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
January (1998)	0	76 823 08	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
February	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0
March	0	33 333 33	1	0	0 00	0	0	0 00	0	0	0 00	0	0	0 00	0

1 Includes Cooperative Sales Cooperative Garages and Artists Workshops and Communal Customers

Table 9 3
Lviv CHP2
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	0 0	0	0	0
February	0 0	0	0	0
March	0 0	0	0	0
April	0 0	0	0	0
May	0 0	0	0	0
June	0 0	0	0	0
July	0 0	0	0	0
August	0 0	0	0	0
September	0 0	0	0	0
October	0 0	0	0	0
November	0 0	0	0	0
December	0 0	0	0	0
January (1997)	0 0	0	0	0
February	0 0	0	0	0
March	0 0	0	0	0
April	0 0	0	0	0
May	0 0	0	0	0
June	0 0	0	0	0
July	0 0	0	0	0
August	0 0	0	0	0
September	0 0	0	0	0
October	0 0	0	0	0
November	0 0	0	0	0
December	0 0	0	0	0
January (1998)	0 0	0	0	0
February	0 0	0	0	0
March	0 0	0	0	0

Table 9 4
Electricity and Fuel Purchases
Lviv CHP2
Ukraine Energy Project
(000 HRs)

Month	Electricity Purchased			Fuel Purchased			Fuel Purchased		
	MWH Purchased	HRN Per MWH	Cost of Electricity	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel	MT / m ³ Purchased	HRN Per Unit	Cost of Fuel
January (1996)	0	0 00	0	4 956	0	753	0	0	0
February	0	0 00	0	4 604	0	710	0	0	0
March	0	0 00	0	4 573	0	695	0	0	0
April	0	0 00	0	2 810	0	417	0	0	0
May	0	0 00	0	718	0	107	0	0	0
June	0	0 00	0	13	0	2	0	0	0
July	0	0 00	0	0	NA	0	0	0	0
August	0	0 00	0	0	NA	0	0	0	0
September	0	0 00	0	0	NA	0	0	0	0
October	0	0 00	0	150	0	23	0	0	0
November	0	0 00	0	581	0	88	0	0	0
December	0	0 00	0	4 295	0	657	0	0	0
January (1997)	0	0 00	0	5 335	0	812	0	0	0
February	0	0 00	0	3 800	0	572	0	0	0
March	0	0 00	0	3 690	0	560	0	0	0
April	0	0 00	0	3 381	0	510	0	0	0
May	0	0 00	0	1 136	0	170	0	0	0
June	0	0 00	0	0	NA	0	0	0	0
July	0	0 00	0	0	NA	0	0	0	0
August	0	0 00	0	0	NA	0	0	0	0
September	0	0 00	0	915	0	168	0	0	0
October	0	0 00	0	3 153	0	583	0	0	0
November	0	0 00	0	4 220	0	785	0	0	0
December	0	0 00	0	3 863	0	731	0	0	0
January (1998)	0	0 00	0	2 837	0	362	0	0	0
February	0	0 00	0	3 938	0	512	0	0	0
March	0	0 00	0	1 419	0	190	0	0	0

Note For the summer months the plant shuts down

Tables 9.5
Lviv CHP2
Ukraine Energy Project
Main Production Costs

Month	Depr d Uon 2	Mainten an 3	M terial 5	F el 6	Construction Mat rial 7	Sp P rt 8	LA test ch 9	Agricul P od et 10	Oil r 11	Low al Items 12	D p d Uon of LV Items 13	Transport Cost 16	C su E penses 18	S rvidng Operations 29	Non In estm ent Operations 10	Def rred F pen ce 11
January (1996)	24	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
February	24	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
March	24	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
April	24	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0
May	24	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0
June	65	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
July	22	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
August	63	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
September	63	0	139	0	0	0	0	0	0	0	0	0	0	0	0	0
October	63	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
November	116	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
December	89	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0
January (1997)	89	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
February	89	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
March	87	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
April	88	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
May	88	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
June	88	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
July	149	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
August	149	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
September	350	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0
December	659	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0
January (1998)	210	0	131	0	0	0	0	0	0	0	0	0	0	0	0	0
February	210	0	127	0	0	0	0	0	0	0	0	0	0	0	0	0
March	210	0	121	0	0	0	0	0	0	0	0	0	0	0	0	0
	In estm et ts 33	Non Operational E pens es 43	Ch sh 50	Settlement A ount 51	Oh r A ount 55	Suppl rs 60	Non h dget P ym ent 65	B dget P ym ent 68	Insurance P ym ents 69	Sal ry 70	Ch sh Ad vances 71	Debt rs/ Credts rs 76	Int mal Settlement 78	Int rd part Settlement 79	D p d Uon Fund 86	(X)h
January (1996)	0	0		0		0	0	6	19	23	0	0	0	0	0	12
February	0	0		0		0	2	2	23	41	0	0	0	0	0	24
March	0	0		0		0	2	6	20	41	0	0	0	0	0	39
April	0	0		0		0	0	5	14	31	0	0	0	0	0	40
May	0	0		0		0	0	6	24	45	0	0	0	0	0	25
June	0	0		0		0	7	5	14	52	0	0	0	0	0	75
July	0	0		0		0	1	5	17	28	0	0	0	0	0	72
August	0	0		0		0	3	1	20	22	0	0	0	0	0	44
September	0	0		0		0	27	0	0	0	0	0	0	0	0	70
October	0	0		0		0	2	6	22	40	0	0	0	0	0	120
November	0	0		0		0	0	6	17	28	0	0	0	0	0	56
December	0	0		0		0	0	0	0	0	0	0	0	0	0	41
January (1997)	0	0		0		0	8	7	23	36	0	0	0	0	0	75
February	0	0		0		0	4	5	16	39	0	0	0	0	0	97
March	0	0		0		0	2	7	19	49	0	0	0	0	0	69
April	0	0		0		0	2	6	17	44	0	0	0	0	0	88
May	0	0		0		0	0	8	24	59	0	0	0	0	0	58
June	0	0		0		0	16	8	18	47	0	0	0	0	0	32
July	0	0		0		0	0	6	22	39	0	0	0	0	0	57
August	0	0		0		0	0	0	17	40	0	0	0	0	0	78
September	0	0		0		0	0	5	16	39	0	0	0	0	0	91
October	0	0		0		0	0	0	12	34	0	0	0	0	0	62
November	0	0		0		0	3	6	23	39	0	0	0	0	0	53
December	0	0		0		0	11	2	21	53	0	0	0	0	0	147
January (1998)	0	0		0		0	14	6	20	53	0	0	0	0	0	38
February	0	0		0		0	6	5	16	45	0	0	0	0	0	38
March	0	0		0		0	7	6	20	37	0	0	0	0	0	38

Table 9 6
Lviv CHP2
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Long Term Assets										
Fixed Assets	10 462	10 465	77 083	77 083	77 339	77 343	77 340	77 353	77 353	77 353
Less Accumulated Depreciation	1 391	1 464	10 941	11 089	11 379	11 646	11 909	12 556	12 562	13 106
Net Fixed Assets	9 071	9 001	66 142	65 994	65 960	65 697	65 431	64 797	64 791	64 247
Assets Under Construction	2 173	2 189	2 270	2 290	2 545	2 711	3 094	3 206	3 497	3 671
Net Utility Plant	11 244	11 190	68 412	68 284	68 505	68 408	68 525	68 003	68 288	67 918
Other Property and Investments										
Nonutility Property and Intangibles	21	38	49	56	56	1 128	58	86	79	82
Less Accumulated Depreciation	7	14	16	22	23	21	21	20	32	30
Net Nonutility Property and Intangibles	14	24	33	34	33	1 107	37	66	47	52
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	14	24	33	34	33	1 107	37	66	47	52
Current Assets										
Cash and Short Term Investments	317	94	3	7	19	0	8	3	10	11
Accounts Receivable	10	14	19	13	16	16	6	27	0	780
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	10	14	19	13	16	16	6	27	0	780
Inventory	385	404	612	641	413	450	530	1 274	838	817
Government Employee and Other Receivables	1 628	3 740	1 721	4 010	4 878	4 474	3 628	3 979	6 054	6 661
Other Current Assets	1 140	1 254	2 714	63	1	123	317	714	151	220
Total Current Assets	3 480	5 506	5 069	4 734	5 327	5 063	4 489	5 997	7 053	8 489
TOTAL ASSETS	14 738	16 720	73 514	73 052	73 865	74 578	73 051	74 066	75 388	76 459
CAPITALIZATION AND LIABILITIES										
Stockholder's Equity										
Statutory Capital (Net)	10 349	10 349	10 349	10 349	10 350	10 349	10 349	10 349	10 349	10 349
Additional Capital	0	0	0	0	0	59 030	59 417	59 524	59 819	59 993
Reserve Funds	2 746	2 747	58 889	58 914	58 906	36	35	35	35	77
Retained Earnings	0	1 062	(916)	(2 456)	(2 138)	(2 009)	(2 866)	(4 965)	(5 941)	(6 555)
Unrealized Differences		(1 062)	916	2 456	2 138	2 009	2 866	4 965	5 941	6 555
Total Equity	13 095	13 096	69 238	69 263	69 256	69 415	69 801	69 908	70 203	70 419
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	13 095	13 096	69 238	69 263	69 256	69 415	69 801	69 908	70 203	70 419
Current Liabilities										
Short Term Debt	0	0	61	0	93	0	41	70	100	80
Accounts Payable	1 567	3 537	4 078	3 561	4 229	4 934	2 747	3 423	4 276	5 592
Less Bad Debt Allowance										
Net Payables	1 567	3 537	4 078	3 561	4 229	4 934	2 747	3 423	4 276	5 592
Wages and Social Insurance Payable	55	65	113	164	223	190	299	453	524	247
Taxes and Non-Budget Payable	14	15	21	52	63	35	54	83	121	37
Government Employee and Other Payable	0	0	0	1	0	0	2	107	151	60
Advances from Customers	0	0	0	0	0	0	0	0	0	0
Other Current Liabilities	7	7	3	11	1	4	107	22	13	24
Total Current Liabilities	1 643	3 624	4 276	3 789	4 609	5 163	3 250	4 158	5 185	6 040
TOTAL CAPITALIZATION AND LIABILITIES	14 738	16 720	73 514	73 052	73 865	74 578	73 051	74 066	75 388	76 459

Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

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**Table 9 7
Lviv CHP2
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.5	1.2	1.2	1.2	1.0	1.4	1.4	1.4	1.4
Collection Rate	21%	43%	N A	2%	35%	20%	N A	113%	23%
% Accounts Receivable Over 60 Days	17%	89%	0%	0%	31%	84%	0%	0%	0%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	47%
Capital Structure and Long Term Solvency									
Debt to Equity	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
Debt to Total Assets	22%	6%	5%	6%	7%	4%	6%	7%	8%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)									
Operating Profits to Sales	38.2%	129.4%	N A	38.4%	6.0%	93.5%	N A	59.5%	25.3%
Net Unrealized Accounts to Sales	0.0%	159.7%	N A	0.0%	0.0%	0.0%	N A	0.0%	0.0%
Net Income to Sales	37.6%	292.4%	N A	36.7%	4.8%	94.4%	N A	60.9%	27.3%
Asset Utilization									
Sales to Current Assets (Annualized)	2.1	0.5	0.0	0.7	2.1	0.8	0.0	0.9	1.1
Sales to Net Utility Plant (Annualized)	1.0	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.1
Sales to Total Assets (Annualized)	0.7	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	0.0%	0.0%	N A	0.0%	0.0%	0.0%	N A	0.0%	0.0%
Operating and Maintenance to Sales	1.6%	8.7%	N A	5.5%	1.9%	4.6%	N A	12.4%	17.7%
Fuel to Sales	51.8%	180.2%	N A	12.8%	75.6%	136.8%	N A	95.9%	71.2%
Wages and Social Cost to Sales	5.9%	23.7%	N A	12.4%	6.7%	23.0%	N A	11.4%	8.5%
Depreciation to Sales	2.6%	16.8%	N A	30.9%	9.8%	29.1%	N A	39.9%	28.0%
Operating Income to Sales	38.2%	129.4%	N A	38.4%	6.0%	93.5%	N A	59.5%	25.3%
Net Income to Sales	37.6%	292.4%	N A	36.7%	4.8%	94.4%	N A	60.9%	27.3%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%
Current Assets	32.9%	6.9%	6.5%	7.2%	6.8%	6.1%	8.1%	9.4%	11.1%
Net Fixed Assets	66.9%	93.1%	93.5%	92.7%	91.7%	93.8%	91.8%	90.6%	88.8%
Current Liabilities	21.7%	5.8%	5.2%	6.2%	6.9%	4.4%	5.6%	6.9%	7.9%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	78.3%	94.2%	94.8%	93.8%	93.1%	95.6%	94.4%	93.1%	92.1%

payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased seven times due to a revaluation of assets. In addition, Assets under Construction remained the same until the last quarter of 1996 when it started to steadily increase until 1998. Management confirmed that some of the plant was being rehabilitated, but progress had been slow due to lack of funds to pay for it.

Current assets increase from 3.3 million UAH to 8.5 million UAH during the period examined. Compared to the size of other assets within the current account, cash balances are almost zero. This reemphasizes the severity of the lack of sufficient cash flow generated. As with many of the other segments with the business, the largest current asset was Government, Employee and Other Receivable. It grew from 1.6 to 6.6 million UAH.

Equity had a large rise between the second and third quarters of 1996. The account within equity that increased was the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. It should be noted that the rise was much more significant in the case of this plant when compared to the other business. With the others, the rise in the reserve fund approximately corresponded with the increase in fixed assets. Long term debt was zero for the entire period.

As for current liabilities, they increased by three times during the period of the restatement. Almost all the increase was due to an increase in accounts payable. Most of the increase in accounts payable is arrears to the fuel suppliers.

Statement of Changes in Financial Position

Table 9.10 examines the cash flow from all financial activities during the year. Total net income for the entire period totaled negative 5.4 million UAH for the 2 ¼ year examined. The main reason for the loss was the high cost of fuels in relation to the sales it generated.

As for investment activities, both gross assets and work in progress had a large increase in the second quarter of 1996. The increase in fixed assets was caused by the increase in revaluation. Other than this correction for inflation, very little investment occurred.

Equity displayed very little variation during the period with the exception of an increase by 10 million from the fixed asset revaluation.

Table 9 8
Lviv CHP2
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	972	132	840					840	840
February	944	249	944	591				1 535	1 535
March	911	220	911	944	372			2 226	2 226
April	514	118	514	911	944	254		2 622	2 622
May	162	117	162	514	911	827	254	2 414	2 667
June	0	56	0	162	514	854	827	1 531	2 611
July	0	267	0	0	162	247	854	409	2 344
August	2	243	(79)	0	0	0	247	(79)	2 103
September	1	202	(279)	0	0	0	0	(279)	1 903
October	0	20	(300)	0	0	0	0	(300)	1 882
November	112	0	(188)	0	0	0	0	(188)	1 994
December	754	0	566	0	0	0	0	566	2 748
January (1997)	1 107	483	1 107	83	0	0	0	1 190	3 372
February	904	240	904	950	0	0	0	1 854	4 036
March	689	233	689	904	717	0	0	2 310	4 492
April	685	1 107	685	689	514	0	0	1 888	4 070
May	222	679	222	685	524	0	0	1 431	3 613
June	0	70	0	222	685	455	0	1 362	3 543
July	0	57	0	0	222	629	455	851	3 487
August	0	86	0	0	0	136	629	136	3 401
September	0	93	(93)	0	0	0	136	(93)	3 308
October	183	134	(44)	0	0	0	0	(44)	3 357
November	586	711	(169)	0	0	0	0	(169)	3 232
December	833	972	(308)	0	0	0	0	(308)	3 093
January (1998)	819	295	217	0	0	0	0	217	3 618
February	707	144	707	73	0	0	0	780	4 181
March	728	75	728	705	0	0	0	1 433	4 834

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 - Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 9 9
Lviv CHP2
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	99	184	(85)					(85)	(85)
February	134	166	(117)	0				(117)	(117)
March	144	164	(137)	0	0			(137)	(137)
April	136	129	(130)	0	0	0		(130)	(130)
May	148	119	(101)	0	0	0	0	(101)	(101)
June	212	116	(6)	0	0	0	0	(6)	(6)
July	165	87	72	0	0	0	0	72	72
August	161	101	132	0	0	0	0	132	132
September	300	125	300	7	0	0	0	306	306
October	267	392	181	0	0	0	0	181	181
November	235	67	235	114	0	0	0	349	349
December	152	251	152	98	0	0	0	250	250
January (1997)	255	311	194	0	0	0	0	194	194
February	266	260	200	0	0	0	0	200	200
March	250	488	(38)	0	0	0	0	(38)	(38)
April	265	614	(387)	0	0	0	0	(387)	(387)
May	249	159	(297)	0	0	0	0	(297)	(297)
June	187	94	(204)	0	0	0	0	(204)	(204)
July	289	64	21	0	0	0	0	21	21
August	302	78	245	0	0	0	0	245	245
September	515	56	515	189	0	0	0	704	704
October	124	47	124	515	142	0	0	781	781
November	216	924	73	0	0	0	0	73	73
December	963	439	597	0	0	0	0	597	597
January (1998)	492	109	492	488	0	0	0	980	980
February	447	102	447	492	386	0	0	1 325	1 325
March	439	91	439	447	492	295	0	1 673	1 673

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 9 10
Lviv CHP2
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	1 062	(1 978)	(1 540)	318	129	(856)	(2 099)	(976)	(614)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(4)	(5)	6	(3)	0	10	(21)	27	(780)
Change in Other Short Term Assets	(2 245)	351	333	(578)	245	572	(1 492)	(1 076)	(655)
Change in Accounts Payable	1 970	541	(517)	688	705	(2 187)	678	853	1 316
Change in Other Short Term Liabilities	11	50	91	59	(58)	233	203	144	(441)
Depreciation Expense	80	9 479	154	291	265	263	646	18	542
Net Cash Provided by Operating Activities	(188)	10 416	67	437	1 157	(1 109)	12	(34)	(18)
Cash Flow from Investment Activities									
Completed Plant In Service	(3)	(66 618)	0	(256)	(4)	3	(13)	0	0
Change In Construction Work In Progress	(16)	(81)	(20)	(255)	(166)	(383)	(112)	(291)	(174)
Change in Nonutility Property and Intangibles	(17)	(11)	(7)	0	(1 072)	1 070	(28)	7	(3)
Net Cash Provided by Investment Activities	(36)	(66 710)	(27)	(511)	(1 242)	690	(153)	(284)	(177)
Cash Flow from Financing Activities									
Short Term Loans	0	(61)	61	(93)	93	(41)	(29)	(30)	20
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	1	56 142	25	(7)	159	388	107	295	216
Net Cash Provided by Financing Activities	1	56 081	86	(100)	252	345	78	265	236
Unrealized Cash Differences ¹	(1 062)	1 978	1 540	(318)	(129)	856	2 099	976	614
Net Change in Cash	(223)	(213)	126	(174)	167	(74)	(63)	(53)	41

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

10. CONSTRUCTION

The division LvivEnergoBud works on construction projects. Originally established to build the CHP – 2 plant in 1980, the division was maintained to continue on other projects both inside and outside Lviv Oblenergo. Only in October 1996 was the division transferred into the operations of LvivOblenergo and the restatement reflect this transfer. Prior to this date it was owned by the Ministry of Energy. Types of construction projects the division specializes in include industrial, housing complexes, roads and heat networks.

At the writing of this report its main outside consumer is the DobzotvizEnergoBud (a division of Zakhidenergo generating plant). Other than that, most of the internal work is at the CHP- 1 since the CHP – 2 has been closed down from lack of fuel. A major problem with the work in the past has been the lack of cash payments for work completed. Although some payments have been made using barter arrangements, most of the accounts receivable has been liquidated by transferring the amount owed to promissory notes. At present there are 213 employees and wage arrears are 1-2 months.

Table 10.1 is the income statement for the construction division. Supporting tables include 10.2 (Other Income and Expenses), 10.3 (Main Production Costs), 10.6 (Aging of Accounts Receivable) and 10.7 (Aging of Accounts Payable).

Table 10.1 is the 1996-1998 quarterly restated income statement. Although sales are erratic, they have normally ranged around 1 to 6 million UAH. The truth may be sales (and costs) are higher. However, due to the extensive use of barter (from electric and heat sales) in supplying construction materials, some data concerning these transactions has been undoubtedly lost. Based on the size of the division and its relative importance when compared to electricity, it was determined that the time required to find the answers was not worth the additional expense.

The next section in the income statement deals with operational expenses. Operating expenses are the largest expense. In a normal quarter, the expense ranges from 2 – 3 million UAH. Wages are the second largest cost and they normally range between 0.6 - 1 million per quarter. The one exception is the first quarter of 1997 when the expense had a large drop to 0.5 million UAH. Since the previous quarter had a large increase the reason for the erratic behavior is labor was prepaid.

Based on overall profitability, the company earned a small total profit according

Table 10 1
Lviv Construction
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	0	0	31	143	2	76	65	75	110
Other Revenues	0	0	100	413	114	69	345	489	283
Total Sales	0	0	131	556	116	145	410	564	393
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	0	0	(79)	(262)	(165)	(249)	(258)	(319)	(151)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	0	0	(32)	(90)	(48)	(63)	(77)	(79)	(65)
<i>Total Operating Expenses</i>	0	0	(111)	(352)	(213)	(312)	(335)	(398)	(216)
Maintenance	0	0	0	(0)	(0)	(0)	(0)	(0)	0
Depreciation	0	0	(1)	(6)	(5)	(6)	(37)	(36)	(5)
<i>Total Operational Expenses</i>	0	0	(1)	(6)	(5)	(6)	(38)	(37)	(5)
Operating Income	0	0	18	198	(102)	(173)	38	129	173
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	0	0	18	198	(102)	(173)	38	129	173
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable	0	0	0	0	0	0	0	54	60
Unrealized Accounts Payable ²	0	0	0	0	0	(59)	0	0	(102)
Taxes & Payments	0	0	(3)	(9)	(5)	(6)	(6)	(7)	(9)
<i>Total Taxes and Financial Costs</i>	0	0	(3)	(9)	(5)	(65)	(6)	47	(51)
NET INCOME	0	0	15	188	(107)	(239)	32	176	122

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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to the restatements. As stated previously, considering the amount of non-cash transactions involved it is difficult to say with any certainty whether the results represent a true financial picture of the division.

Table 10.2 reports the other revenues. In the general context of the restatement model, with its primary focus on electricity and heat, this is where revenues from the other, non energy business revenues are reported.

The next table, 10.3, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs will be made within the context of the restated income statement. Most of the discussion concerning cost was completed above when discussing the income statement and the table is provided for informational purposes.

Balance Sheet

Table 10.4 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Between the first and second quarter of 1996, gross fixed assets increased seven times due to a revaluation of assets. In addition, Assets under Construction remained the same until the last quarter of 1996 when it started to steadily increase until 1998.

Current assets increase from 8 million UAH to 1.2 million UAH during the period examined. Compared to the size of other assets within the current account, cash balances are almost zero. They range from almost zero to 0.5 million. This reemphasizes the severity of the lack of sufficient cash flow generated. The largest and fastest growing account is accounts receivable. Starting in 1996, the balance grew by a factor of 5 from 2 to 8 million UAH.

Equity had a large rise between the second and third quarters of 1996 due to the fixed asset revaluation. As for current liabilities, the company's total increased from 7 to 1.2 million. All of the increase was due to arrears accumulating to short term creditors. These creditors range from suppliers to labor.

Tables 10.5 and 10.6 are the aging of aggregate receivables and payables.

Table 10.2
Lviv Construction
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	0 0	0	0	0
February	0 0	0	0	0
March	0 0	0	0	0
April	0 0	0	0	0
May	0 0	0	0	0
June	0 0	0	0	0
July	0 0	0	0	0
August	0 0	0	0	0
September	99 8	31	0	0
October	127 8	0	0	0
November	153 0	0	0	0
December	131 8	143	0	0
January (1997)	3 8	0	0	0
February	18 0	2	0	0
March	92 2	0	0	0
April	12 6	0	0	0
May	23 8	36	0	0
June	32 5	40	0	0
July	0 0	4	0	0
August	160 5	26	0	0
September	184 8	35	0	0
October	194 5	8	0	0
November	142 2	66	0	0
December	151 8	1	0	0
January (1998)	41 2	12	0	0
February	126 0	66	0	0
March	116 0	32	0	0

Tables 10.3
Living Construction
Ukraine Energy Project
Main Production Costs

Month	Depreciation 2	Maintenance 3	Material 4	Fixed 6	Construction Material 7	Sp Parts 8	Li stock 9	Agricult P od els 10	Other 11	Low al Items 12	Depr d Un f L.V. Item 13	Transport Cost 16	Cross E pen es 18	S er v i c i n g O p e r a t i o n s 29	Non Investment Operations 30	Def er r e d E p e n s e s 31
January (1996)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
September	0	0	58	1	0	0	0	0	0	0	0	0	0	0	0	
October	0	0	58	1	0	0	0	0	0	0	0	0	0	0	0	
November	0	0	79	0	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	66	2	0	0	0	0	0	1	2	0	0	0	0	
January (1997)	1	0	32	0	0	0	0	0	0	1	0	0	0	0	0	
February	1	0	47	0	0	0	0	0	0	1	1	0	0	0	0	
March	1	0	49	0	0	0	0	0	0	0	0	0	0	0	0	
April	1	0	30	1	0	0	0	0	0	2	1	0	0	0	0	
May	1	0	94	0	0	0	0	0	0	1	0	0	0	0	0	
June	1	0	55	0	0	0	0	0	0	1	0	0	0	0	0	
July	0	0	81	2	0	0	0	0	0	0	1	0	0	0	0	
August	36	0	49	1	0	0	0	0	0	0	0	0	0	0	0	
September	0	0	39	1	0	0	0	0	0	1	0	0	0	0	0	
October	31	0	105	1	0	0	0	0	0	1	1	0	0	0	0	
November	0	0	89	1	0	0	0	0	0	1	0	0	0	0	0	
December	4	0	64	1	0	0	0	0	0	1	0	0	0	0	0	
January (1998)	0	0	10	1	0	0	0	0	0	1	0	0	0	0	0	
February	0	0	45	1	0	0	0	0	0	1	0	0	0	0	0	
March	3	0	46	2	0	0	0	0	0	1	1	0	0	0	0	

	In vestments 33	Non Operational E xpenses 43	Cash 40	Settle ment Account 51	Other Accounts 55	Suppl ies 60	Non b udget P ayment 65	B udget P ayment 68	Insurance P ayments 69	Sal ary 70	C ash Advances 71	Debit rs/ Credit rs 76	Int ernal Settlements 78	Int er nal Settlement 79	D e p r e c i a t i o n F und 86	Other
January (1996)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	10	1	3	12	20	0	10	0	0	0	1	0
October	0	0	0	0	12	1	3	11	21	1	0	0	0	0	1	0
November	0	0	0	0	15	0	3	11	20	0	0	0	0	0	1	0
December	0	0	0	0	20	0	2	10	17	1	3	0	0	0	1	0
January (1997)	0	0	0	0	7	0	1	4	9	0	1	0	0	0	0	0
February	0	0	0	0	11	0	1	5	11	0	0	0	0	0	0	0
March	0	0	0	0	11	0	2	6	13	0	2	0	0	0	0	0
April	0	0	0	0	11	0	2	8	17	0	0	0	0	0	0	0
May	0	0	0	0	12	0	2	6	13	0	0	0	0	0	0	0
June	0	0	0	0	19	1	2	6	13	0	3	0	0	0	0	0
July	0	0	0	0	35	0	2	8	22	1	0	0	0	0	0	0
August	0	0	0	0	11	0	2	7	16	0	0	0	0	0	0	0
September	0	0	0	0	11	0	2	8	17	0	6	0	0	0	0	0
October	0	0	0	0	14	0	2	9	14	0	0	0	0	0	0	0
November	0	0	0	0	11	0	2	8	19	0	0	0	0	0	0	0
December	0	0	0	0	23	0	2	9	21	1	7	0	0	0	0	0
January (1998)	0	0	0	0	12	0	1	4	7	0	0	0	0	0	0	0
February	0	0	0	0	11	0	2	8	18	1	0	0	0	0	0	0
March	0	0	0	0	18	3	3	9	19	0	0	0	0	0	0	0

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Table 10 4
Lviv Construction
Ukraine Energy Project
 Balance Sheet as of
 (000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	0	0	3 338	3 338	3 338	3 338	3 337	3 339	3 340	3 711
Less Accumulated Depreciation	0	0	2 081	2 091	2 104	2 113	2 122	2 168	2 152	2 208
Net Fixed Assets	0	0	1 257	1 247	1 234	1 225	1 215	1 171	1 188	1 503
Assets Under Construction	0	0	0	0	0	0	0	0	0	0
Net Utility Plant	0	0	1 257	1 247	1 234	1 225	1 215	1 171	1 188	1 503
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	0	0	14	14	14	15	9	23	24	25
Less Accumulated Depreciation	0	0	7	7	8	7	6	6	6	5
Net Nonutility Property and Intangibles	0	0	7	7	6	8	3	17	18	20
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	0	0	7	7	6	8	3	17	18	20
<i>Current Assets</i>										
Cash and Short Term Investments	0	0	0	0	0	0	2	0	48	7
Accounts Receivable	0	0	388	431	658	300	496	918	699	834
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	0	0	388	431	658	300	496	918	699	834
Inventory	0	0	123	188	187	189	208	222	216	191
Government Employee and Other Receivables	0	0	108	174	184	555	335	283	362	184
Other Current Assets	0	0	0	0	0	1	1	0	1	3
Total Current Assets	0	0	619	793	1 029	1 045	1 042	1 423	1 326	1 219
TOTAL ASSETS	0	0	1 883	2 047	2 269	2 278	2 260	2 611	2 532	2 742
CAPITALIZATION AND LIABILITIES										
<i>Stockholders Equity</i>										
Statutory Capital (Net)	0	0	236	236	236	236	236	236	238	236
Additional Capital	0	0	0	0	0	0	0	0	1 083	1 398
Reserve Funds	0	0	991	1 116	1 094	1 112	1 084	1 102	14	0
Retained Earnings	0	0	0	15	203	96	(142)	(110)	66	188
Unrealized Differences	0	0	0	(15)	(219)	(128)	117	110	(94)	(290)
Total Equity	0	0	1 227	1 352	1 314	1 316	1 295	1 338	1 307	1 532
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	0	0	1 227	1 352	1 314	1 316	1 295	1 338	1 307	1 532
<i>Current Liabilities</i>										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	0	0	264	236	272	274	338	528	573	515
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Payables	0	0	264	236	272	274	338	528	573	515
Wages and Social Insurance Payable	0	0	157	186	223	221	224	178	114	102
Taxes and Non-Budget Payable	0	0	112	116	172	168	147	108	176	153
Government Employee and Other Payable	0	0	0	0	165	141	216	247	344	418
Advances from Customers	0	0	0	0	0	0	0	0	0	0
Other Current Liabilities	0	0	123	157	123	158	40	212	18	22
Total Current Liabilities	0	0	656	695	955	962	965	1 273	1 225	1 210
TOTAL CAPITALIZATION AND LIABILITIES	0	0	1 883	2 047	2 269	2 278	2 260	2 611	2 532	2 742

Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

Table 10 5
Lviv Construction
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	0	0	0					0	0
February	0	0	0	0				0	0
March	0	0	0	0	0			0	0
April	0	0	0	0	0	0		0	0
May	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0
September	131	70	61	0	0	0	0	61	61
October	128	93	95	0	0	0	0	95	95
November	153	131	117	0	0	0	0	117	117
December	275	71	275	46	0	0	0	321	321
January (1997)	4	43	4	275	3	0	0	282	282
February	20	18	20	4	260	0	0	284	284
March	92	201	92	20	4	59	0	175	175
April	13	11	13	92	13	0	59	118	177
May	60	116	60	2	0	0	0	62	121
June	72	152	(18)	0	0	0	0	(18)	42
July	4	45	(59)	0	0	0	0	(59)	1
August	186	2	125	0	0	0	0	125	185
September	220	73	220	53	0	0	0	273	332
October	202	148	202	125	0	0	0	327	387
November	208	77	208	202	47	0	0	458	517
December	153	144	153	208	106	0	0	467	526
January (1998)	53	78	53	153	208	28	0	442	502
February	192	134	192	53	153	74	28	472	560
March	148	227	148	171	0	0	74	319	481

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 10 6
Lviv Construction
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	0	0	0						
February	0	0	0	0				0	0
March	0	0	0	0	0			0	0
April	0	0	0	0	0	0		0	0
May	0	0	0	0	0	0		0	0
June	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0
September	116	70	46	0	0	0	0	0	0
October	110	93	62	0	0	0	0	46	46
November	130	131	62	0	0	0	0	62	62
December	127	71	118	0	0	0	0	62	62
January (1997)	58	43	58	75	0	0	0	118	118
February	79	18	79	58	57	0	0	133	133
March	86	201	79	0	0	0	0	194	194
April	95	11	95	68	0	0	0	79	79
May	130	116	130	47	0	0	0	163	163
June	99	152	99	25	0	0	0	177	177
July	152	45	152	80	0	0	0	125	125
August	123	2	123	152	77	0	0	231	231
September	104	73	104	123	152	5	0	352	352
October	178	148	178	104	123	4	0	383	383
November	132	77	132	178	104	46	4	409	413
December	132	144	132	132	138	0	4	460	468
January (1998)	36	78	36	132	132	60	46	402	456
February	88	134	88	36	130	0	0	360	414
March	105	227	105	27	0	0	0	254	368
								132	246

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Although revenues are small, the money expected from them is very slow in being received from the debtors. Based on table 10.6, it takes between 6-8 months to obtain compensation.

Statement of Changes in Financial Position

Table 10.8 examines the cash flow from all financial activities during the year. Total net income for the entire period totaled 2 million UAH while under ownership of the Oblenergo. As for investment activities, gross assets had a large increase in the second and third quarter of 1996. The increase in fixed assets was caused by the increase in revaluation. Other than this correction for inflation, very little investment occurred. Equity displays very little variation during the period with the exception of an increase by 3 million from the fixed asset revaluation that was added to the reserve account.

Table 10 7
Lviv Construction
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income			15	188	(107)	(239)	32	176	122
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable			(43)	(227)	358	(196)	(422)	219	(135)
Change in Other Short Term Assets			(131)	(9)	(374)	201	39	(74)	201
Change in Accounts Payable			(28)	36	2	64	190	45	(58)
Change in Other Short Term Liabilities			67	224	5	(61)	118	(93)	43
Depreciation Expense			10	14	8	8	48	(16)	55
Net Cash Provided by Operating Activities			(125)	38	(1)	16	(29)	81	106
Cash Flow from Investment Activities									
Completed Plant In Service			0	0	0	1	(2)	(1)	(371)
Change In Construction Work In Progress			0	0	0	0	0	0	0
Change In Nonutility Property and Intangibles			0	0	(1)	6	(14)	(1)	(1)
Net Cash Provided by Investment Activities			0	0	(1)	7	(16)	(2)	(372)
Cash Flow from Financing Activities									
Short Term Loans			0	0	0	0	0	0	0
Long Term Loans			0	0	0	0	0	0	0
Equity			125	(22)	18	(28)	18	(3)	299
Net Cash Provided by Financing Activities			125	(22)	18	(28)	18	(3)	299
Unrealized Cash Differences ¹			(15)	(204)	91	246	(7)	(204)	(196)
Net Change in Cash			0	0	0	2	(2)	48	(41)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

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11. GUARD

This division is responsible for providing the security forces for both the Oblenergo and Minenergo in the 5 Western Oblasts. The regions are Lviv, Ivano-Frankivsk, Zakarpattia (Vzhgorod), Volyn (Lutsk) and Rivne.

From a practical standpoint, the security division reaches an agreement with the other facilities on an individual basis to provide security at a given plant. There are approximately 10-12 agreements. However, many of the other firms are in arrears concerning fees for security and the company is currently in arrears 4 months with wages.

Table 11.1 is the income statement for the security guard division. Supporting tables include 11.2 (Other Income and Expenses), 11.3 (Main Production Costs), 11.6 (Aging of Accounts Receivable) and 11.7 (Aging of Accounts Payable).

Table 11.1 is the 1996-1998 quarterly restated income statement. Although sales vary, they have normally ranged between 4 - 5 million UAH. The one exception is the last quarter of 1996 when revenues increased to 6 million.

The next section in the income statement deals with operational expenses. For the most part, the expenses are wages with a very small amount of operating cost. Wages normally average around 15 - 25 million UAH each quarter.

Table 11.2 reports the other revenues. In the general context of the restatement model, with its primary focus on electricity and heat, this is where revenues from the other, non-energy business revenues are reported. Table 11.3 are the main costs. Costs were discussed above within the context of the income statement.

Balance Sheet

Table 11.4 is the restated balance sheet for the sector. For 1998, first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Fixed assets are mainly an office and some office furniture. Therefore, the values are very small. Current assets increase from 2 million UAH to 2.3 million UAH during the period examined. Compared to the size of other assets within the current account, cash balances are almost zero. This reemphasizes the severity of the lack of sufficient cash flow generated. The largest and fastest growing account is accounts receivable. Starting in 1996, the balance grew from 2 to 2.2 million UAH. All of it is arrears due for services rendered to outside consumers.

Table 11 1
Lviv Guard
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	137	124	137	166	127	122	116	116	116
Other Revenues	324	328	344	422	349	340	322	320	320
Total Sales	461	452	480	588	476	463	439	436	436
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	(3)	(7)	(7)	(3)	(7)	(3)	(1)	(10)	(3)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(96)	(202)	(153)	(142)	(251)	(182)	(178)	(285)	(285)
<i>Total Operational Expenses</i>	(99)	(209)	(160)	(145)	(258)	(185)	(179)	(295)	(288)
Maintenance	0	0	0	0	0	0	0	0	0
Depreciation	(33)	(2)	(0)	(0)	(15)	(55)	(8)	(19)	(3)
<i>Total Operational Expenses</i>	(33)	(2)	(0)	(0)	(15)	(55)	(8)	(19)	(3)
Operating Income	329	241	320	442	202	223	252	122	144
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	329	241	320	442	202	223	252	122	144
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	169	82	112
Unrealized Accounts Payable ²	0	0	0	(194)	(355)	(349)	(332)	(329)	(321)
Taxes & Payments	0	(0)	(515)	(14)	(18)	5	(15)	(33)	(139)
<i>Total Taxes and Financial Costs</i>	0	(0)	(515)	(209)	(373)	(345)	(177)	(279)	(348)
NET INCOME	330	241	(195)	233	(171)	(122)	75	(158)	(203)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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Table 11.2
Lviv Guard
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	79 9	38	0	0
February	106 8	50	0	0
March	137 2	49	0	0
April	113 4	41	0	0
May	113 4	41	0	0
June	101 4	41	0	0
July	114 6	46	0	0
August	114 6	46	0	0
September	114 6	46	0	0
October	140 7	55	0	0
November	140 7	55	0	0
December	140 7	55	0	0
January (1997)	121 0	44	0	0
February	114 0	41	0	0
March	114 0	41	0	0
April	113 4	41	0	0
May	113 4	41	0	0
June	113 4	41	0	0
July	107 8	39	0	0
August	107 8	39	0	0
September	106 8	39	0	0
October	106 8	39	0	0
November	106 8	39	0	0
December	106 8	39	0	0
January (1998)	109 0	39	0	0
February	105 7	38	0	0
March	105 7	38	0	0

Tables 11.3
Lviv Guard
Ukraine Energy Project
Main Production Costs

Month	Depreciation 2	Maintenance 3	Materials 5	Fuel 6	Construction Material 7	Sp Part 8	Li stock 9	Agricultural Production 10	Oil 11	Low sh Item 12	Depreciation of LV Items 13	Transport Cost 16	Construction Expenses 18	Swelling Operations 29	Non Investment Operation 30	Deferred Expense 31
January (1986)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
January (1987)	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
January (1988)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	In vestments 33	Non Operational Expenses 43	Contingency 50	Settlement Account 51	Oil Account 55	Supply 60	Non budget Payment 65	Budget Payments 68	Insurance Payment 69	Salary 70	Contingency Advances 71	Debit Credit 76	Initial Settlement 78	Initial Settlement 79	Depreciation Fund 86	Oil
January (1986)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	17	7	21	0	0	1	0	0	0
March	0	0	0	1	0	0	0	17	19	49	0	0	1	0	0	0
April	0	0	0	1	0	0	0	7	21	54	0	0	1	0	0	0
May	0	0	0	0	0	0	0	9	19	47	0	3	1	0	0	0
June	0	0	0	0	0	0	0	15	19	41	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	2	63	19	0	1	1	0	0	0
September	0	0	0	0	0	0	0	513	19	52	0	5	1	0	0	0
October	0	0	0	0	0	0	0	7	22	56	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	8	17	47	0	2	1	0	0	0
January (1987)	0	0	0	0	0	0	0	8	21	54	0	0	1	0	0	0
February	0	0	0	0	0	0	0	8	24	69	0	0	0	0	0	0
March	0	0	0	0	0	0	0	1	23	60	0	6	0	0	0	0
April	0	0	0	0	0	0	0	1	25	69	0	0	0	0	0	0
May	0	0	0	0	0	0	0	5	19	69	0	2	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	14	22	59	0	0	0	0	0	0
August	0	0	0	0	0	0	0	1	27	70	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	3	0	8	25	69	0	0	0	0	0	0
November	0	0	0	0	0	2	0	8	25	70	0	0	0	0	0	0
December	0	0	0	0	0	5	0	8	25	71	0	9	0	0	0	0
January (1988)	0	0	0	0	0	107	0	8	25	70	1	0	0	0	0	157
February	0	0	0	0	0	3	0	7	25	70	0	0	0	0	0	157
March	0	0	0	0	0	4	0	10	25	70	0	2	0	0	0	157

Table 11.4
Lviv Guard
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Long Term Assets										
Fixed Assets	4	4	6	6	6	6	6	6	6	6
Less Accumulated Depreciation	0	0	0	1	1	1	1	1	1	2
Net Fixed Assets	3	3	6	6	5	5	5	5	5	4
Assets Under Construction	0	0	0	0	0	0	0	0	0	0
Net Utility Plant	3	3	6	6	5	5	5	5	5	4
Other Property and Investments										
Nonutility Property and Intangibles	8	18	18	34	44	148	200	183	222	214
Less Accumulated Depreciation	3	6	8	8	21	20	70	60	82	80
Net Nonutility Property and Intangibles	6	12	10	25	23	128	130	123	140	134
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	6	12	10	25	23	128	130	123	140	134
Current Assets										
Cash and Short Term Investments	30	23	4	0	0	45	3	6	11	5
Accounts Receivable	192	454	580	743	1021	1406	1569	1777	1734	2170
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	192	454	580	743	1021	1406	1569	1777	1734	2170
Inventory	0	0	0	0	0	0	0	0	0	0
Government Employee and Other Receivables	25	17	1	178	101	12	33	15	29	92
Other Current Assets	1	137	228	184	20	0	48	87	1	51
Total Current Assets	247	631	812	1105	1142	1463	1653	1885	1775	2318
TOTAL ASSETS	256	646	827	1136	1171	1596	1788	2013	1920	2456
CAPITALIZATION AND LIABILITIES										
Stockholder's Equity										
Statutory Capital (Net)	11	11	11	11	17	11	11	11	11	11
Additional Capital	0	0	0	0	0	0	0	0	114	115
Reserve Funds	11	11	13	30	8	119	119	119	7	8
Retained Earnings	0	330	570	375	609	438	316	392	234	31
Unrealized Differences ¹		(330)	(570)	(375)	(609)	(438)	(316)	(392)	(234)	(33)
Total Equity	23	23	25	41	25	131	130	130	132	132
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	23	23	25	41	25	131	130	130	132	132
Current Liabilities										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	103	407	550	566	514	516	928	1080	1034	1034
Less Bad Debt Allowance										
Net Payables	103	407	550	566	514	516	928	1080	1034	1034
Wages and Social Insurance Payable	109	187	209	347	484	552	603	664	617	647
Taxes and Non-Budget Payable	12	21	39	76	102	124	117	131	121	625
Government Employee and Other Payable	0	0	0	0	32	266	0	1	0	0
Advances from Customers	0	0	0	0	0	0	0	0	0	0
Other Current Liabilities	10	8	4	106	13	8	10	7	16	18
Total Current Liabilities	233	623	802	1095	1146	1466	1658	1883	1788	2324
TOTAL CAPITALIZATION AND LIABILITIES	256	646	827	1136	1171	1596	1788	2013	1920	2456

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

**Table 11.5
Lviv Guard
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Collection Rate	80%	61%	50%	39%	42%	27%	34%	27%	20%
% Accounts Receivable Over 60 Days	0%	0%	38%	42%	48%	47%	46%	46%	49%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	68%	31%	26%	260%
Capital Structure and Long Term Solvency									
Debt to Equity	27.6	32.5	26.7	45.7	11.2	12.8	14.5	13.5	17.6
Debt to Total Assets	97%	97%	96%	98%	92%	93%	94%	93%	95%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)									
Operating Profits to Sales	71.4%	53.3%	66.6%	75.2%	42.5%	48.2%	57.4%	27.9%	33.1%
Net Unrealized Accounts to Sales	0.0%	0.0%	0.0%	33.1%	74.7%	75.5%	75.6%	75.4%	73.6%
Net Income to Sales	71.5%	53.3%	-40.6%	39.7%	35.9%	26.3%	17.1%	36.2%	-46.6%
Asset Utilization									
Sales to Current Assets (Annualized)	2.9	2.2	1.7	2.1	1.3	1.1	0.9	1.0	0.8
Sales to Net Utility Plant (Annualized)	544.2	326.4	349.3	435.7	358.9	370.0	351.0	348.7	436.2
Sales to Total Assets (Annualized)	2.9	2.2	1.7	2.0	1.2	1.0	0.9	0.9	0.7
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating and Maintenance to Sales	0.6%	1.6%	1.5%	0.5%	1.5%	0.6%	0.2%	2.3%	0.8%
Fuel to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wages and Social Cost to Sales	20.8%	44.6%	31.8%	24.2%	52.8%	39.4%	40.5%	65.4%	65.3%
Depreciation to Sales	7.2%	0.5%	0.1%	0.1%	3.2%	11.8%	1.8%	4.4%	0.8%
Operating Income to Sales	71.4%	53.3%	66.6%	75.2%	42.5%	48.2%	57.4%	27.9%	33.1%
Net Income to Sales	71.5%	53.3%	-40.6%	39.7%	35.9%	26.3%	17.1%	36.2%	-46.6%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	70.3%	70.1%	65.4%	87.2%	88.1%	87.8%	88.3%	90.3%	88.4%
Current Assets	97.7%	98.1%	97.3%	97.5%	91.6%	92.4%	93.6%	92.4%	94.4%
Net Fixed Assets	0.5%	0.7%	0.5%	0.5%	0.3%	0.3%	0.2%	0.3%	0.2%
Current Liabilities	96.5%	97.0%	96.4%	97.9%	91.8%	92.7%	93.5%	93.1%	94.6%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	3.5%	3.0%	3.6%	2.1%	8.2%	7.3%	6.5%	6.9%	5.4%

Equity increased between the second and third quarters of 1996 because of the asset revaluation. As for current liabilities, the company's total increased from 2 to 2.3 million. All of the increase was due to arrears accumulating to the short term creditors. These creditors range from suppliers to labor.

Statement of Changes in Financial Position

Table 11.8 examines the cash flow from all financial activities during the year. Total net income for the entire period totaled 3 million UAH for the 2 ¼ years examined in the restatement. As for investment activities, gross assets had a large increase in the second and third quarter of 1996 due to the revaluation. Equity displayed very little variation during the period with the exception of an increase by 3 million from the fixed asset revaluation that was added to the Reserve Account.

Table 11 6
Lviv Guard
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	118	123	(5)					(5)	(5)
February	157	128	24	0				24	24
March	186	117	93	0	0			93	93
April	155	112	136	0	0	0		136	136
May	155	95	155	41	0	0	0	196	196
June	143	68	143	128	0	0	0	270	270
July	160	79	160	143	49	0	0	351	351
August	160	75	160	160	116	0	0	436	436
September	160	84	160	160	160	32	0	513	513
October	196	82	196	160	160	78	32	594	627
November	196	76	196	196	160	84	78	636	747
December	196	74	196	196	196	86	84	674	869
January (1997)	165	75	165	196	196	121	86	678	958
February	155	48	155	165	196	148	121	664	1 066
March	155	75	155	155	165	121	148	597	1 146
April	154	53	154	155	155	112	121	577	1 247
May	154	39	154	154	155	116	112	580	1 363
June	154	33	154	154	154	122	116	585	1 484
July	147	62	147	154	154	92	122	547	1 568
August	147	37	147	147	154	117	92	565	1 678
September	145	48	145	147	147	106	117	545	1 776
October	145	26	145	145	147	121	106	558	1 895
November	145	45	145	145	145	102	121	538	1 995
December	145	47	145	145	145	98	102	534	2 093
January (1998)	148	24	148	145	145	121	98	560	2 218
February	144	44	144	148	145	101	121	539	2 318
March	144	21	144	144	148	124	101	560	2 441

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 11 7
Lviv Guard
Ukraine Energy Project
Determination and Aging of Accounts Payable
(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	0	123	(123)					(123)	(123)
February	13	128	(236)	0				(238)	(238)
March	119	117	(236)	0	0			(236)	(236)
April	86	112	(263)	0	0	0		(263)	(263)
May	79	95	(278)	0	0	0	0	(278)	(278)
June	46	68	(300)	0	0	0	0	(300)	(300)
July	0	79	(379)	0	0	0	0	(379)	(379)
August	85	75	(370)	0	0	0	0	(370)	(370)
September	591	84	137	0	0	0	0	137	137
October	85	82	85	55	0	0	0	140	140
November	0	76	0	64	0	0	0	64	64
December	75	74	66	0	0	0	0	66	66
January (1997)	98	75	88	0	0	0	0	88	88
February	101	48	101	40	0	0	0	141	141
March	92	75	92	66	0	0	0	159	159
April	148	53	148	92	13	0	0	254	254
May	86	39	86	148	67	0	0	301	301
June	0	33	0	86	148	34	0	268	268
July	96	62	96	0	86	86	34	268	302
August	106	37	106	96	0	49	86	251	371
September	0	48	0	106	48	0	49	153	323
October	125	26	125	0	106	22	0	253	422
November	102	45	102	125	0	61	22	288	479
December	120	47	120	102	78	0	61	300	552
January (1998)	54	24	54	120	102	54	0	330	581
February	(51)	44	(51)	54	120	58	54	180	487
March	(43)	21	(43)	(51)	54	99	58	59	422

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 11 8
Lviv Guard
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	330	241	(195)	233	(171)	(122)	75	(158)	(203)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(262)	(126)	(163)	(278)	(385)	(163)	(208)	43	(436)
Change in Other Short Term Assets	(128)	(75)	(134)	241	109	(69)	(21)	72	(113)
Change in Accounts Payable	304	143	16	(52)	1	412	152	(46)	0
Change in Other Short Term Liabilities	88	36	277	102	318	(220)	73	(49)	536
Depreciation Expense	4	2	0	13	(1)	51	(10)	22	(1)
Net Cash Provided by Operating Activities	3	(19)	(4)	27	43	11	(14)	42	(14)
Cash Flow from Investment Activities									
Completed Plant in Service	0	(2)	0	0	0	0	0	0	0
Change in Construction Work in Progress	0	0	0	0	0	0	0	0	0
Change in Nonutility Property and Intangibles	(9)	(0)	(16)	(11)	(103)	(52)	17	(39)	8
Net Cash Provided by Investment Activities	(9)	(3)	(16)	(11)	(103)	(52)	17	(39)	8
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	0	2	16	(16)	108	(1)	0	2	2
Net Cash Provided by Financing Activities	0	2	16	(16)	106	(1)	0	2	2
Unrealized Cash Differences ¹	(330)	(241)	195	(234)	171	122	(75)	158	201
Net Change in Cash	(6)	(20)	(4)	0	45	(42)	3	5	(6)

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

12. NETWORK ADJUSTMENT

This division has three functions, the first is the adjustment of electric facilities and equipment, the second is to design high voltage installations and the third to fix and regulate electric meters to the final consumer. Its revenues come from both internal contracts and outside clients. The outside clients consist of western Ukrainian oblasts who formally were part of the regional network. The division is also responsible for research and development. One of the projects they have been experimenting with is windmills. The division has approximately 120 employees.

Table 12.1 is the income statement for the network adjustment division. Supporting tables include 12.1 (Other Income and Expenses), 12.2 (Main Production Costs), 12.5 (Aging of Accounts Receivable) and 12.6 (Aging of Accounts Payable).

Table 12.1 is the 1996-1998 quarterly restated income statement. Although sales vary, they have normally ranged between 2 - 7 million UAH. Since the division serves both internal needs and outside clients, the ratio of the revenues from each is important. Over the restatement period, outside clients normally contribute 2/3's and internal transfers 1/3 of revenues. However, this relationship is highly variable from quarter to quarter.

The next section in the income statement deals with operational expenses. As expected for a technical division, the major expenses are wages and operating cost. Wages, normally a stable cost, has been highly variable. Beginning in 1996, the labor costs were 0.2 million UAH. Throughout the next eight quarters absolute costs has increased until the 1st quarter of 1998 the cost grew to 1.4 million. The cause of the increase is both accounting procedures and adjustments for the cost of living (inflation).

Table 12.2 is other income and internal transactions. In the general context of the restatement model, with its primary focus on electricity and heat, this is where revenues from the other, non-energy business revenues are reported.

The next table, 12.3, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine. Within the table are all the basic accounts used to record costs of production. However, discussion of costs will be made within the context of the restated income statement. Discussion of these costs was made under the income statement section above.

Table 12 1
Lviv Adjustment
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	69	188	204	427	88	90	22	65	44
Other Revenues	172	273	273	246	133	199	348	367	259
Total Sales	241	461	477	673	221	289	370	433	303
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	(21)	(58)	(38)	(53)	(46)	(48)	(32)	(134)	(43)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(22)	(55)	(80)	(112)	(106)	(142)	(139)	(168)	(144)
<i>Total Operating Expenses</i>	<i>(43)</i>	<i>(113)</i>	<i>(119)</i>	<i>(165)</i>	<i>(153)</i>	<i>(189)</i>	<i>(171)</i>	<i>(302)</i>	<i>(187)</i>
Maintenance	(4)	(2)	(3)	(1)	0	0	(2)	(5)	(1)
Depreciation	(6)	(6)	(8)	(14)	(13)	(13)	(33)	(8)	(26)
<i>Total Operational Expenses</i>	<i>(10)</i>	<i>(8)</i>	<i>(11)</i>	<i>(15)</i>	<i>(13)</i>	<i>(13)</i>	<i>(35)</i>	<i>(13)</i>	<i>(26)</i>
Operating Income	188	340	347	493	55	87	164	117	89
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	188	340	347	493	55	87	164	117	89
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	0	0	(102)	(229)	(314)	0	(189)	(295)
Taxes & Payments	(7)	(10)	(17)	(12)	(12)	(12)	(13)	(15)	(14)
<i>Total Taxes and Financial Costs</i>	<i>(7)</i>	<i>(10)</i>	<i>(17)</i>	<i>(113)</i>	<i>(241)</i>	<i>(327)</i>	<i>(13)</i>	<i>(204)</i>	<i>(308)</i>
NET INCOME	181	330	330	380	(186)	(240)	151	(87)	(219)

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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Table 12 2
Lviv Adjustment
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	53 4	16	0	0
February	56 3	38	0	0
March	62 0	16	0	0
April	88 2	24	0	0
May	93 5	38	0	0
June	91 3	125	0	0
July	88 8	34	0	0
August	91 7	102	0	0
September	93 0	67	0	0
October	85 7	67	0	0
November	77 3	66	0	0
December	83 5	293	0	0
January (1997)	41 3	17	0	0
February	45 1	64	0	0
March	46 8	7	0	0
April	54 8	11	0	0
May	30 2	24	0	0
June	114 2	56	0	0
July	33 6	15	0	0
August	104 2	1	0	0
September	210 7	6	0	0
October	114 5	2	0	0
November	97 3	7	0	0
December	155 6	57	0	0
January (1998)	73 0	4	0	0
February	93 9	1	0	0
March	92 3	39	0	0

Tables 12.3
Lviv Adjustment
Ukraine Energy Project
Main Production Costs

Month	D irect ion 2	Maintenance 1	Mat erial 5	Fuel 6	Co nstruction M a terial 7	Spare P art s 8	Li stock 9	Agri cult P ro duct s 10	Oh 11	Low stu Item 12	D irect ion of I V Item 13	Tran sport C ost 16	C urrent E xpense 18	S ervice Operation 29	Non In vestment Operation 30	Def er red E xpense 31
January (1986)	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
February	1	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0
March	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0
June	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0
August	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
November	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
December	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
January (1987)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
September	22	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
October	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	2	2	3	0	3	0	0	0	0	0	0	0	0	0	0	0
December	2	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
January (1988)	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	In vestment 31	Non Operational E xpense 43	C ash ¹ 50	Settlement Account 51	Oh r Account 55	Suppl ies 60	Non budget P ayment 65	B udget P ayments 68	Insurance P ayments 69	Salary 70	Cash Advances 71	Debit rs/ Credit rs 76	Int erest Settlement 78	Int erest Settlement 79	Depreciation Fund 86	Oh r
January (1986)	0	0		2		4	0	0	7	0	0	4	0	0	1	0
February	0	0		2		0	0	0	5	0	1	6	0	0	0	0
March	0	0		2		0	0	7	9	1	0	0	0	0	0	10
April	0	0		2		0	0	3	9	1	0	25	0	0	0	0
May	0	0		1		1	0	4	10	0	1	6	0	0	0	0
June	0	0		3		0	0	3	9	26	0	18	0	0	0	0
July	0	0		3		0	0	6	9	23	0	11	0	0	0	0
August	0	0		1		0	0	4	8	21	0	10	0	5	0	0
September	0	0		0		0	3	4	5	14	0	8	0	0	0	0
October	0	0		0		0	1	5	10	29	0	10	0	0	0	0
November	0	0		0		1	2	4	11	30	0	22	0	0	0	0
December	0	0		0		2	0	4	11	21	0	17	1	0	0	0
January (1987)	0	0		0		0	1	4	10	24	0	8	0	0	0	0
February	0	0		0		1	1	3	10	23	0	21	0	0	0	0
March	0	0		0		0	0	4	10	28	0	16	0	0	0	0
April	0	0		0		0	0	4	12	35	0	17	0	0	0	6
May	0	0		0		0	0	4	12	33	0	11	0	0	0	0
June	0	0		1		0	0	5	14	17	0	18	0	0	0	75
July	0	0		0		0	0	2	11	31	0	11	0	0	0	32
August	0	0		0		0	0	0	13	38	0	14	0	0	0	0
September	0	0		1		0	1	10	12	34	0	2	0	0	0	0
October	0	0		0		0	1	4	13	33	0	12	0	0	0	114
November	0	0		0		0	1	5	22	70	0	112	0	0	0	130
December	0	0		0		0	0	5	18	12	0	0	0	0	0	149
January (1988)	0	0		0		0	0	4	13	34	0	9	0	0	0	73
February	0	0		0		0	1	4	13	36	0	15	0	0	0	73
March	0	0		0		0	0	5	11	36	0	17	0	0	0	71

¹ Aspects not included in account 5

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Balance Sheet

Table 12.4 is the restated balance sheet for the sector. For 1998 first quarter results are available at the time this report is being written. Both accounts receivable and payable were aged for the restatement by each business unit. However, the net result would have had insignificant impact on the balance sheet and the original values were used. All other values were taken from the Ukrainian reported financial statements.

Current assets increase from 2 million UAH to 1.8 million UAH during the period examined. Compared to the size of other assets within the current account, cash balances are almost zero. This reemphasizes the severity of the lack of sufficient cash flow generated. The largest and fastest growing account is accounts receivable. Starting in 1996, the balance grew from 2 to 2.2 million UAH. All of it is arrears due for services rendered to outside consumers.

Equity increased due to the revaluation. Most of the increase was included in the Reserve Funds which is the corresponding account to the increase in fixed assets under the fixed asset revaluation mentioned above. As for current liabilities, the company's total increased from 2 to 2.3 million. All of the increase was due to arrears accumulating to the short term creditors. These creditors range from suppliers to labor.

Statement of Changes in Financial Position

Table 12.8 examines the cash flow from all financial activities during the year. Total net income for the entire nine quarters totaled 6 million UAH. As for investment activities, gross assets had a large increase in the second and third quarter of 1996. The increase in fixed assets was caused by the increase in revaluation. Other than this correction for inflation, very little investment occurred. Equity displays very little variation during the period with the exception of an increase by 3 million from the fixed asset revaluation that was added to the reserve account.

Table 12.4
Lviv Adjustment
Ukraine Energy Project
Balance Sheet as of
(000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Long Term Assets										
Fixed Assets	2 702	2 706	2 049	2 053	2 053	2 053	2 055	2 059	2 245	2 289
Less Accumulated Depreciation	680	717	638	647	660	673	686	718	595	621
Net Fixed Assets	2 021	1 989	1 411	1 406	1 394	1 380	1 370	1 341	1 650	1 668
Assets Under Construction	0	0	0	0	0	0	93	201	0	19
Net Utility Plant	2 021	1 989	1 411	1 406	1 394	1 380	1 463	1 542	1 650	1 687
Other Property and Investments										
Nonutility Property and Intangibles	115	108	137	13	15	18	20	22	24	23
Less Accumulated Depreciation	6	14	17	1	2	3	3	3	6	6
Net Nonutility Property and Intangibles	110	94	120	12	12	15	17	19	18	17
Long Term Financial Investments	0	0	0	0	0	0	0	0	0	0
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	110	94	120	12	12	15	17	19	18	17
Current Assets										
Cash and Short Term Investments	104	89	95	10	30	13	47	37	1	33
Accounts Receivable	909	1 094	500	181	161	205	264	385	565	660
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	909	1 094	500	181	161	205	264	385	565	660
Inventory	167	155	200	23	260	676	819	879	191	203
Government Employee and Other Receivables	0	4	0	0	144	256	266	24	133	74
Other Current Assets	9	439	754	45	2	32	39	59	1	22
Total Current Assets	1 189	1 780	1 549	259	598	1 181	1 434	1 384	891	992
TOTAL ASSETS	3 320	3 863	3 080	1 677	2 004	2 577	2 914	2 945	2 559	2 696
CAPITALIZATION AND LIABILITIES										
Stockholders Equity										
Statutory Capital (Net)	1 422	1 422	142	142	142	142	142	142	142	142
Additional Capital	0	0	0	0	0	0	0	0	0	0
Reserve Funds	827	840	130	1 304	1 558	1 994	2 220	2 271	1 800	1 811
Retained Earnings	0	181	511	841	1 220	1 034	794	946	858	639
Unrealized Differences ¹		(181)	(510)	(841)	(1 220)	(1 035)	(794)	(945)	(872)	(639)
Total Equity	2 249	2 262	273	1 446	1 700	2 136	2 362	2 413	1 928	1 953
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	2 249	2 262	273	1 446	1 700	2 136	2 362	2 413	1 928	1 953
Current Liabilities										
Short Term Debt	0	0	0	0	0	0	0	0	0	0
Accounts Payable	624	958	1 654	30	40	178	265	228	265	291
Less Bad Debt Allowance										
Net Payables	624	958	1 654	30	40	178	265	228	265	291
Wages and Social Insurance Payable	295	546	909	144	176	209	215	219	237	289
Taxes and Non-Budget Payable	66	85	208	38	52	54	52	55	54	100
Government Employee and Other Payable	9	11	10	1	1	0	0	1	1	1
Advances from Customers	0	0	0	0	0	0	0	0	36	0
Other Current Liabilities	78	1	27	18	35	1	20	29	38	62
Total Current Liabilities	1 072	1 602	2 807	231	304	441	552	532	631	743
TOTAL CAPITALIZATION AND LIABILITIES	3 320	3 863	3 080	1 677	2 004	2 577	2 914	2 945	2 559	2 696

Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

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**Table 12.5
Levy Adjustment
Financial Ratios**

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Short Term Liquidity									
Current Ratio	1.1	0.6	1.1	2.0	2.7	2.6	2.6	1.4	1.3
Collection Rate	135%	53%	44%	30%	110%	77%	43%	36%	38%
% Accounts Receivable Over 60 Days	0%	0%	11%	33%	69%	18%	34%	45%	52%
% Accounts Payable Over 60 Days	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capital Structure and Long Term Solvency									
Debt to Equity	0.7	10.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4
Debt to Total Assets	41%	91%	14%	15%	17%	19%	18%	25%	28%
Times Interest Earned (Cash)									
Operating Performance Ratios									
Average Ratio of Sales Tariff to Purchase Price (Electricity)									
Operating Profits to Sales	78.0%	73.8%	72.7%	73.3%	24.9%	30.0%	44.3%	27.1%	29.5%
Net Unrealized Accounts to Sales	0.0%	0.0%	0.0%	15.1%	103.6%	108.7%	0.0%	-43.7%	97.4%
Net Income to Sales	75.2%	71.5%	69.1%	56.5%	84.3%	83.0%	40.9%	20.2%	72.4%
Asset Utilization									
Sales to Current Assets (Annualized)	0.5	1.2	7.4	4.5	0.7	0.8	1.1	1.9	1.2
Sales to Net Utility Plant (Annualized)	0.5	1.3	1.4	1.9	0.6	0.8	1.0	1.0	0.7
Sales to Total Assets (Annualized)	0.2	0.6	1.1	1.3	0.3	0.4	0.5	0.7	0.4
Common Size Income Statement (% of Total Sales)									
Purchases Energy to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating and Maintenance to Sales	7.2%	12.2%	7.4%	7.8%	21.0%	16.5%	8.1%	29.8%	13.9%
Fuel to Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wages and Social Cost to Sales	9.2%	12.0%	16.9%	16.6%	48.1%	49.0%	37.6%	38.9%	47.7%
Depreciation to Sales	2.5%	1.3%	1.7%	2.0%	6.0%	4.5%	9.0%	1.9%	8.5%
Operating Income to Sales	78.0%	73.8%	72.7%	73.3%	24.9%	30.0%	44.3%	27.1%	29.5%
Net Income to Sales	75.2%	71.5%	69.1%	56.5%	84.3%	83.0%	40.9%	20.2%	72.4%
Common Size Balance Sheet (% of Total Assets)									
Accounts Receivable	28.3%	16.2%	10.8%	8.1%	7.9%	9.0%	13.1%	22.1%	24.5%
Current Assets	46.1%	50.3%	15.4%	29.8%	45.8%	49.2%	47.0%	34.8%	36.8%
Net Fixed Assets	51.5%	45.8%	83.8%	69.5%	53.6%	50.2%	52.4%	64.5%	62.6%
Current Liabilities	41.5%	91.1%	13.8%	15.2%	17.1%	18.9%	18.1%	24.7%	27.6%
Long Term Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity	58.5%	8.9%	86.2%	84.8%	82.9%	81.1%	81.9%	75.3%	72.4%

Table 12 6
Lviv Adjustment
Ukraine Energy Project
Determination and Aging of Accounts Receivable
(000 HRs)

Month	1 Total Revenues (000 UAH)	2 Realization Received (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	69	108	(39)					(39)	(39)
February	94	113	(58)	0				(58)	(58)
March	78	104	(84)	0	0			(84)	(84)
April	113	94	(66)	0	0	0		(66)	(66)
May	132	84	(18)	0	0	0	0	(18)	(18)
June	216	65	134	0	0	0	0	134	134
July	123	66	123	68	0	0	0	191	191
August	194	66	194	123	2	0	0	319	319
September	160	80	160	194	45	0	0	399	399
October	153	72	153	160	167	0	0	480	480
November	144	65	144	153	160	102	0	558	558
December	376	62	376	144	153	98	102	771	873
January (1997)	58	94	58	376	144	59	98	637	837
February	109	72	109	58	376	72	59	615	874
March	54	78	54	109	58	298	72	519	850
April	66	93	66	54	74	0	298	194	822
May	54	58	54	66	54	16	0	189	818
June	170	71	170	54	48	0	16	272	917
July	49	51	49	170	51	0	0	270	915
August	105	53	105	49	168	0	0	322	967
September	216	54	216	105	49	114	0	484	1 129
October	116	51	116	216	103	0	114	436	1 195
November	104	28	104	116	216	75	0	512	1 271
December	212	75	212	104	116	141	75	574	1 408
January (1998)	77	34	77	212	104	82	141	475	1 451
February	95	33	95	77	212	71	82	455	1 513
March	131	48	131	95	77	164	71	467	1 596

Sources (By Column)

- 1 Actual figures provided by company
- 2 Defined as actual cash received plus NDC non payments plus (non cash received minus non cash NDC payments) 75% This correction discounts non cash transactions to an equivalent value that can be used to pay creditors
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

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Table 12 7
Lviv Adjustment
Ukraine Energy Project
Determination and Aging of Accounts Payable

(000 HRs)

Month	1 Total Expenses (000 UAH)	2 Realization Paid (000 UAH)	3 End of Month Unpaid Balance (000 UAH)	4 30 Days Unpaid Balance (000 UAH)	5 60 Days Unpaid Balance (000 UAH)	6 90 Days Unpaid Balance (000 UAH)	7 Write-Offs (000 UAH)	8 Total Receivable (000 UAH)	9 Receivable Without Write-Offs (000 UAH)
January (1996)	19	108	(89)					(89)	(89)
February	20	113	(182)	0				(182)	(182)
March	31	104	(255)	0	0			(255)	(255)
April	42	94	(308)	0	0	0		(308)	(308)
May	28	84	(364)	0	0	0	0	(364)	(364)
June	62	65	(367)	0	0	0	0	(367)	(367)
July	58	66	(375)	0	0	0	0	(375)	(375)
August	52	66	(389)	0	0	0	0	(389)	(389)
September	37	80	(432)	0	0	0	0	(432)	(432)
October	60	72	(443)	0	0	0	0	(443)	(443)
November	70	65	(438)	0	0	0	0	(438)	(438)
December	61	62	(439)	0	0	0	0	(439)	(439)
January (1997)	51	94	(482)	0	0	0	0	(482)	(482)
February	64	72	(490)	0	0	0	0	(490)	(490)
March	63	78	(505)	0	0	0	0	(505)	(505)
April	67	93	(531)	0	0	0	0	(531)	(531)
May	64	58	(526)	0	0	0	0	(526)	(526)
June	3	71	(593)	0	0	0	0	(593)	(593)
July	27	51	(617)	0	0	0	0	(617)	(617)
August	78	53	(592)	0	0	0	0	(592)	(592)
September	81	54	(564)	0	0	0	0	(564)	(564)
October	(47)	51	(662)	0	0	0	0	(662)	(662)
November	351	28	(339)	0	0	0	0	(339)	(339)
December	(117)	75	(531)	0	0	0	0	(531)	(531)
January (1998)	(2)	34	(567)	0	0	0	0	(567)	(567)
February	3	33	(597)	0	0	0	0	(597)	(597)
March	8	48	(637)	0	0	0	0	(637)	(637)

Sources (By Column)

- 1 Actual figures provided by company
- 2 Actual figures provided by company
- 3 Column 1 Column 2
- 4 6 Assumed that money paid goes first to the oldest unpaid balance
- 7 After 90 days the debt is written off and treated as income to the firm
- 8 Sum of columns 3 4 5 and 6
- 9 Cumulative accounts receivable without write-offs

Table 12.8
Lviv Adjustment
Ukraine Energy Project
Statement of Cash Flows for the Period Ending
Ukraine Energy Project

	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	4/1/98
Cash Flow from Operating Activities									
Net Income	181	330	330	380	(186)	(240)	151	(87)	(219)
Adjustments to Reconcile Net Income to Net Cash Flow									
Change in Accounts Receivable	(185)	594	319	20	(43)	(59)	(122)	(180)	(95)
Change in Other Short Term Assets	(421)	(357)	886	(339)	(557)	(160)	162	637	26
Change in Accounts Payable	334	696	(1 624)	10	138	87	(37)	37	28
Change in Other Short Term Liabilities	196	510	(953)	63	(1)	24	17	62	86
Depreciation Expense	45	(76)	(7)	14	14	13	33	(120)	28
Net Cash Provided by Operating Activities	(32)	1 367	(1 377)	(232)	(450)	(95)	53	436	69
Cash Flow from Investment Activities									
Completed Plant In Service	(4)	657	(4)	(0)	0	(2)	(4)	(186)	(44)
Change in Construction Work In Progress	0	0	0	0	0	(93)	(108)	201	(19)
Change in Nonutility Property and Intangibles	7	(28)	124	(2)	(4)	(2)	(2)	(2)	1
Net Cash Provided by Investment Activities	3	628	120	(2)	(4)	(97)	(114)	13	(62)
Cash Flow from Financing Activities									
Short Term Loans	0	0	0	0	0	0	0	0	0
Long Term Loans	0	0	0	0	0	0	0	0	0
Equity	13	(1 989)	1 174	254	437	226	51	(471)	11
Net Cash Provided by Financing Activities	13	(1 989)	1 174	254	437	226	51	(471)	11
Unrealized Cash Differences ¹	(181)	(329)	(330)	(380)	186	240	(151)	73	233
Net Change in Cash	(16)	6	(85)	20	(17)	34	(10)	(36)	32

Note 1 This account measures the unrealized operating losses that exist within the financial statements differences in accounting systems and potential errors in bookkeeping due to lack of auditing

13. ADMINISTRATION

This division has the function of overseeing the entire range of businesses under Lviv Oblenergo. It is mainly an administrative body where the senior management and central accounting functions are performed. It does not generate any income.

Table 13.1 is the consolidated income statement for the administration division. Supporting tables include 13.2 (Other Income and Expenses), 13.3 (Main Production Costs), 13.6 (Aging of Accounts Receivable) and 13.7 (Aging of Accounts Payable).

Table 13.1 is the 1996-1998 quarterly restated income statement. Revenues consist only of internal transfers to cover costs. From the beginning of 1996 until the last quarter of 1997, the internal transfers needed to cover costs declined from 4 million UAH to 14 million. For the first quarter of 1998, the money required increased to 5 million.

The next section in the income statement deals with operational expenses. For the most part, the expenses are wages and operating cost. Wages, normally a stable cost, can be divided into two separate time periods. For 1996, the cost averaged around 0.9 million UAH. Beginning in 1997, the cost increased to 1.6 million and then gradually declined to its previous level in 1996. The reason for the changes in wage levels are accounting changes (1996) and inflation (throughout the entire restatement period).

As for operating costs, for most of the quarters the cost averaged around 3 million UAH. Three quarters were the exception where it was lower by at least half. All other costs were small.

Table 13.2 reports the other revenues. In the general context of the restatement model, with its primary focus on electricity and heat, this is where revenues from the other, non-energy business revenues are reported. For administration all the revenues are internal transfers.

The next table, 13.3, outlines the main production costs associated with the company. The format of the table follows the format used within the generally accepted practices found both within the power sector and in normal accounting for Ukraine.

Table 13 1
Lviv Administration
Ukraine Energy Project
Income Statement for the Period Ending
(000 UAH)

OPERATING INCOME	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
Sales									
Electricity	0	0	0	0	0	0	0	0	0
Heat	0	0	0	0	0	0	0	0	0
Internal Transfers	396	311	357	255	216	175	130	139	520
Other Revenues	0	0	0	0	0	0	0	0	0
Total Sales	396	311	357	255	216	175	130	139	520
Operational Expenses									
Purchased Electricity	0	0	0	0	0	0	0	0	0
Operating Expenses	(147)	(350)	(309)	(273)	(346)	(144)	(320)	(368)	(54)
Fuel and Raw Materials	0	0	0	0	0	0	0	0	0
Wages & Social Costs	(81)	(98)	(109)	(87)	(160)	(184)	(125)	(71)	(149)
<i>Total Operating Expenses</i>	(228)	(448)	(418)	(360)	(505)	(328)	(445)	(439)	(203)
Maintenance	0	0	0	0	(2)	0	(0)	(1)	(7)
Depreciation	(5)	(11)	(18)	(13)	(10)	(6)	(11)	(20)	(20)
<i>Total Operational Expenses</i>	(5)	(11)	(18)	(13)	(13)	(6)	(11)	(21)	(27)
Operating Income	163	(148)	(79)	(118)	(302)	(159)	(327)	(321)	290
NON-OPERATING INCOME									
Net Non Utility Operating Income	0	0	0	0	0	0	0	0	0
Total Operating Income Before Taxes and Financial Costs	163	(148)	(79)	(118)	(302)	(159)	(327)	(321)	290
Taxes and Financial Costs									
Interest on Long Term Debt	0	0	0	0	0	0	0	0	0
Unrealized Accounts Receivable ¹	0	0	0	0	0	0	0	0	0
Unrealized Accounts Payable ²	0	0	0	0	0	0	0	0	0
Taxes & Payments	(9)	(12)	(16)	(47)	90	(124)	(37)	(74)	(26)
<i>Total Taxes and Financial Costs</i>	(9)	(12)	(16)	(47)	90	(124)	(37)	(74)	(26)
NET INCOME	154	(160)	(95)	(165)	(212)	(283)	(364)	(395)	264

¹ It is assumed that accounts receivable 90 days or older are written off as bad debt expense

² It is assumed that accounts payable 90 days or older are written off and treated as income

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Table 13 2
Lviv Administration
Ukraine Energy Project
Indirect Income and Expenses

Month	Indirect Income		Other Expenses	
	Other Outside Revenues	Internal Sales		
January (1996)	0 0	129	0	0
February	0 0	117	0	0
March	0 0	150	0	0
April	0 0	117	0	0
May	0 0	139	0	0
June	0 0	55	0	0
July	0 0	87	0	0
August	0 0	153	0	0
September	0 0	117	0	0
October	0 0	98	0	0
November	0 0	89	0	0
December	0 0	68	0	0
January (1997)	0 0	62	0	0
February	0 0	71	0	0
March	0 0	83	0	0
April	0 0	67	0	0
May	0 0	71	0	0
June	0 0	37	0	0
July	0 0	40	0	0
August	0 0	56	0	0
September	0 0	34	0	0
October	0 0	51	0	0
November	0 0	31	0	0
December	0 0	57	0	0
January (1998)	0 0	164	0	0
February	0 0	210	0	0
March	0 0	146	0	0

Tables 13.3
Lviv Administration
Ukraine Energy Project
Main Production Costs

Month	Depreciation 2	Maintenance 3	Materials 5	Fuel 6	Construction Material 7	Spares Parts 8	Livestock 9	Agricultural Product 10	Other 11	Low value Items 12	Depreciation of Livestock 13	Transport Costs 16	Crane Expenses 18	Servicing Operation 29	Non-Industrial Operation 30	Deferred Expense 31
January (1986)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	5	0	0	0	0	0	0	0	4	0	0	0	0	0
April	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	11	0	0	0	0	0	0	0	10	0	0	0	0	0
July	0	0	9	0	0	0	0	0	0	0	4	0	0	0	0	0
August	1	0	10	0	0	0	0	0	0	0	12	0	0	0	0	0
September	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
October	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1
November	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
December	3	0	8	0	0	0	0	0	0	1	3	0	0	0	0	0
January (1987)	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
February	2	0	7	0	0	0	0	0	0	0	3	0	0	0	0	0
March	2	0	3	0	0	2	0	0	0	0	1	0	0	0	0	0
April	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
June	1	0	9	0	0	0	0	0	0	0	1	0	0	0	0	0
July	0	0	26	0	0	0	0	0	0	0	1	0	0	0	0	0
August	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	4	0	20	0	0	0	0	0	0	0	1	0	0	0	0	0
October	4	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
November	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
January (1988)	5	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0
February	4	0	1	0	0	3	0	0	0	0	1	0	0	0	0	0
March	4	0	2	0	0	4	0	0	0	0	4	0	0	0	0	0
	Inventories 33	Non-Operational Expenses 43	Cash 50	Settlement Account 51	Other Accounts 54	Supplies 60	Non-budget Payments 65	Budget Payments 68	Insurance Payments 69	Salary 70	Cash Advances 71	Debit vs/ Credit vs 76	Internal Settlements 78	Inter-dept Settlement 79	Depreciation Fund 86	Other 89
January (1986)	0	0		0		1	0	0	6	17	0	5	0	0	0	0
February	0	0		0		6	1	4	5	15	0	13	0	0	0	0
March	0	0		0		9	1	4	10	29	0	104	0	0	0	0
April	0	0		0		6	0	3	7	21	0	63	0	0	0	0
May	0	0		0		17	1	4	11	23	0	146	0	0	0	0
June	0	0		0		10	1	5	9	27	0	67	12	0	0	0
July	0	0		0		19	1	5	10	29	0	63	1	0	0	0
August	0	0		0		2	4	1	8	21	0	66	13	4	0	0
September	0	0		0		19	1	5	10	31	0	108	0	0	0	0
October	0	0		0		17	9	6	12	33	0	78	0	0	0	0
November	0	0		0		14	12	6	11	31	0	50	0	0	0	0
December	0	0		0		44	10	5	0	1	0	54	0	0	0	0
January (1987)	0	0		0		14	38	4	12	34	0	13	0	0	0	0
February	0	0		0		5	41	5	15	45	0	22	0	0	1	0
March	0	0		0		12	26	6	14	40	0	257	5	0	0	0
April	0	0		4		21	9	5	15	42	0	21	0	0	0	0
May	0	0		0		15	98	0	16	44	0	16	0	0	0	0
June	0	0		0		7	0	11	17	49	0	45	4	2	0	0
July	0	0		0		9	18	6	14	36	0	95	11	0	0	0
August	0	0		0		12	1	4	15	46	0	57	12	0	0	0
September	0	0		0		31	4	4	14	0	3	46	0	0	0	0
October	0	0		0		11	9	0	0	3	0	86	0	0	0	0
November	0	0		0		46	0	4	0	3	0	6	0	0	0	0
December	0	0		0		15	56	5	18	48	2	191	4	0	0	0
January (1988)	0	0		0		14	19	0	0	4	0	43	43	0	0	0
February	0	0		0		9	5	6	21	61	0	89	12	0	0	0
March	0	0		0		12	0	7	16	48	0	29	0	2	0	0

Table 13.4
Lviv Administration
Ukraine Energy Project
 Balance Sheet as of
 (000 UAH)

ASSETS	1/1/96	1/4/96	1/7/96	1/10/96	1/1/97	1/4/97	1/7/97	1/10/97	1/1/98	1/4/98
<i>Long Term Assets</i>										
Fixed Assets	(26 807)	(26 845)	(198 114)	7 611	2 431	2 556	2 627	2 642	2 686	2 784
Less Accumulated Depreciation	(6 925)	(7 289)	(64 826)	379	388	398	(3 213)	374	475	506
Net Fixed Assets	(19 881)	(19 555)	(133 288)	7 233	2 043	2 158	5 839	2 268	2 211	2 278
Assets Under Construction	1	1	1	0	(274)	1	(1)	(1)	0	0
Net Utility Plant	(19 880)	(19 554)	(133 287)	7 233	1 769	2 159	5 838	2 267	2 211	2 278
<i>Other Property and Investments</i>										
Nonutility Property and Intangibles	(1 142)	(1 074)	(1 325)	66	79	90	91	80	105	116
Less Accumulated Depreciation	(58)	(138)	(152)	33	39	44	46	48	49	57
Net Nonutility Property and Intangibles	(1 085)	(936)	(1 173)	34	40	47	45	33	56	59
Long Term Financial Investments	0	0	0	0	0	(1)	31	0	30	30
Other Non-Current Assets	0	0	0	0	0	0	0	0	0	0
Total Other Property and Investments	(1 085)	(936)	(1 173)	34	40	46	76	33	86	89
<i>Current Assets</i>										
Cash and Short Term Investments	311	26	(183)	403	808	538	444	460	1 942	417
Accounts Receivable	20 593	32 442	63 222	71 242	82 466	95 131	88 629	86 923	85 231	98 688
Less Bad Debt Allowance	0	0	0	0	0	0	0	0	0	0
Net Receivables	20 593	32 442	63 222	71 242	82 466	95 131	88 629	86 923	85 231	98 688
Inventory	1 517	1 578	6 216	5 033	72	87	109	107	158	115
Government Employee and Other Receivables	5 199	16 295	(14 013)	(16 537)	(2 853)	(23 327)	(23 262)	(20 601)	(15 404)	(16 354)
Other Current Assets	7 690	842	(129 216)	(127 949)	3 302	(1 950)	(2 788)	(4 014)	35	(1 348)
Total Current Assets	32 277	48 027	(86 406)	(77 874)	83 794	70 480	63 132	62 874	71 962	81 518
TOTAL ASSETS	28 607	27 537	(220 865)	(70 608)	85 603	72 685	69 046	65 173	74 259	83 885
CAPITALIZATION AND LIABILITIES										
<i>Stockholders Equity</i>										
Statutory Capital (Net)	(13 232)	(201)	1 077	(1 269)	(1 276)	(1 269)	(25 898)	(1 269)	(25 900)	(25 898)
Additional Capital	0	0	0	0	165 285	120 638	149 113	115 102	22 456	21 619
Reserve Funds	7 192	1 015	(119 892)	(121 781)	(162 322)	(120 126)	(119 987)	(116 515)	(745)	74
Retained Earnings	(3 867)									
Unrealized Differences		(35 724)	(165 695)	(4 032)	(7 335)	(12 635)	(11 484)	(16 250)	(13 473)	(14 128)
Total Equity	(9 908)	(34 909)	(284 510)	(127 082)	(5 648)	(13 392)	(8 257)	(18 932)	(17 662)	(18 333)
Long Term Debt	0	0	0	0	0	0	0	0	0	0
Other Long Term Liabilities	0	0	0	0	0	0	0	0	0	0
Total Capitalization	(9 908)	(34 909)	(284 510)	(127 082)	(5 648)	(13 392)	(8 257)	(18 932)	(17 662)	(18 333)
<i>Current Liabilities</i>										
Short Term Debt	7	770	663	618	500	410	341	276	218	172
Accounts Payable	35 989	57 899	55 499	49 331	86 801	81 774	74 827	77 619	84 416	96 010
Less Bad Debt Allowance										
Net Payables	35 989	57 899	55 499	49 331	86 801	81 774	74 827	77 619	84 416	96 010
Wages and Social Insurance Payable	(248)	(442)	(756)	135	69	186	329	116	121	177
Taxes and Non-Budget Payable	2 730	2 070	7 040	5 563	1 734	505	633	5 400	1 525	1 427
Government Employee and Other Payable	96	1 738	827	389	2 271	1 797	773	341	(310)	(219)
Advances from Customers	1	0	1	1	(507)	0	(1)	0	(36)	0
Other Current Liabilities	(61)	411	372	437	384	1 404	400	353	5 987	4 651
Total Current Liabilities	38 514	62 446	63 645	56 474	91 252	86 076	77 302	84 105	91 921	102 218
TOTAL CAPITALIZATION AND LIABILITIES	28 607	27 537	(220 865)	(70 608)	85 603	72 685	69 046	65 173	74 259	83 885

¹ Unrealized differences represents the unreconcilable difference after conversion of the Ukrainian accounting system into International Accounting Standards

Within the table are all the basic accounts used to record costs of production. However, discussion of costs will be made within the context of the restated income statement. The costs have been discussed in the income statement section.

Balance Sheet

Table 13.4 is the restated balance sheet for the sector. Although officially this division has no balance sheet, several adjustments occur at this level before the consolidated balance sheet is made public. Therefore, the balance sheet present here is actually a summary of the impact of these adjustments. Although there are several minor adjustments, only three have had a significant impact on the financial position of the company. The first were adjustments to the gross fixed asset account prior to the revaluation. Both the last quarter of 1995 and the first quarter of 1996 the value of fixed assets were adjusted downward by approximately 27 million UAH. However, in the quarter of the fixed assets revaluation, the adjustment to the value of fixed assets decreased by 198 million UAH. After this point, the adjustments in value are positive and average around 2.7 million UAH.

The second and third major adjustments are in both the accounts receivable and payable account. During the restatement period large amounts of debt from consumers and to creditors were transferred to the administration. Beginning with accounts receivable, the value transferred increased from 20.6 to 98.7 million UAH from the beginning to the end of the restatement period. For accounts payable, the value increased from 36 to 96 million UAH.

14. TRADING COMPANY

This division is a residual from the old Socialist regime when the company was required to supply everything from housing to recreation centers. In this case a separate division was set up to purchase food and supplies for both the canteens and company stores.

The team visited the site of its headquarters to collect the financial data and found very little of an actual operation or people to answer any questions¹⁵. Therefore, due to its small size, the chaotic condition of its records and the lack of available personnel to answer questions, the restatement of its accounts was determined to be impractical.

¹⁵ After about ½ hour wait someone (by accident) showed up

15. APPENDIX ONE: METHODOLOGY OF RESTATEMENT

In this section, an overview of the methodology used to convert Socialist based financial statements into statements that use International Accounting Standards (IAS) will be discussed. The reader must understand, however, that a restatement is not the simple application of an accounting algorithm with clear inputs entered into a standard model and the IAS financial statements forthcoming once the data has been fully incorporated. This view is much too simplistic and the range of the determining variables too wide to accomplish the task with such ease. In the text below is an outline describing the different levels of restating accounts towards IAS standards. For the restatement of Lviv Oblenergo, a level one restatement (adjustment to accrual basis) was completely achieved. As for level two (adjustment of asset and liability accounts), accounts receivable and payable were partially adjusted to determine the effects of bad debt on the income statement. The reason a more detailed restatement was not performed was cost effectiveness. The degree of restatement described above was sufficient to determine the financial condition of the company and any additional refinement would add little to the overall conclusions of the Oblenergo operating performance time while at the same drastically increasing the cost of performing the work.

INTRODUCTION

The Soviet accounting system is directly related to the cost accounting system of the West. The main purpose of Social Accounting was to understand the costs of production (usually on a per unit basis), how much was delivered and how much taxes is owed on delivered production whereas IAS accounting is concerned with determining ultimate profit from sales. Although each FSU country has adapted the old system to fit its own needs, the Socialist Accounting System is founded on a series of accounts from 1996. The basics within each FSU country remain the same. Each account represents either an asset, liability, equity/fund, sales or cost. For example, account 01 is for fixed assets, account 20 summarizes main production costs, accounts 51-59 are cash accounts and so on. The basics are straightforward, easy to understand and perfectly acceptable way to account for the financial transactions inside a smaller company using manual accounting techniques.

The major difference between the two systems, Socialist and IAS, is the actual reporting. First, in most situations the Socialist system reports on a cash basis whereas the IAS reporting system is accrual. The Socialist reporting system counts only what was both delivered and paid for whereas the IAS system counts what is sold. Second, the Socialist system main objective is calculating (and to some degree maximizing) taxes.

whereas the IAS system is used for determining profit from operations. Under the Socialist system a very large, complex and dynamic set of rules exists on what costs can be included before and after taxable profit. For example during 1996 the rule was changed concerning wage bonuses. Prior to the rule change, wages bonuses were to be deducted after the profit was calculated. The idea behind such a rule is to force taxable profit to be a larger value. After the rule change the companies were allowed to include bonuses as wage expense and deduct before taxable profit was determined. To overcome such a large obstacle, the actual Socialist income statement is ignored and the raw data based on the ledgers is collected and used. By following such a procedure, much of the reporting bias is eliminated and a more accurate picture of sales and costs can be determined.

The most significant problem is not the Socialist Accounting System itself, but its application. Although a strict set of rules exists as to how the accounting system should be applied the range of applications are as many as the number of chief accountants that apply them. In effect, everybody does it differently. To compound this problem, within the power sector they used a variation on the old system and its application was just as varied. Therefore, one had to first understand how the accounting procedures should have been applied and then examine the records to see how they actually were applied. Within this context in some circumstances chief accountants (and their staff) would use intermediary accounts whereas others would not. Therefore, the threat of either double counting or not including the cost at all always existed and the only way to prevent such an occurrence would be to understand the specific application on an individual basis. These actions, in itself, were extremely time consuming.

DEGREES OF IAS RESTATEMENT

As stated before, an IAS restatement is not a simple procedure. Too many variables exist concerning the actual application of the Socialist rules to allow it to be a standard methodology. Therefore, as with most things, basic economic principles apply to financial restatements as well. At some point within the analysis, the marginal cost of doing a task exceeds the marginal benefit derived from the cost. Because of this, an IAS restatement can be thought of as a matter of degree and described below is a general outline the different levels (or degrees) of restatement. For illustrative purposes, four levels of increasing complexity will be discussed.

The first (and simplest) level would be to adjust the sales and costs to an accrual basis. It is also the most cost effective. In situations where the company is either marginally profitable or losing money, this would be appropriate course to take since increasing the scope of the restatement will only intensify the problem (unprofitability) that has already been identified by a limited restatement. When the problem of unprofitability has been identified, it is a waste of resources to more precisely measure the loss. The available resources can be used in more beneficial ways.

However, if the firm is profitable on an accrual basis the restatement can go to the second level by examining the asset and liability accounts. In particular, the value of fixed assets needs to be assessed and in most cases increased to near fair value. Under the old system, extremely low values were given to fixed assets that under today's current economic situation have little association with replacement cost. To compound the problem, very low depreciation rates are allowed by tax law. All of this combined has the result of vastly understating the fixed charges of a company. For capital intensive industry this will significantly overstate profit. In addition, both accounts receivable and payable need to be evaluated and all accounts on an individual basis need to be aged. Bad debt should be charged against earnings if the account is not collectable. Finally, inventories need to be evaluated using a clear inventory costing strategy. All of this additional work is very time intensive and should only be completed once the company has been established as profitable with excellent future prospects.

If the business continues to be profitable after examination of the income, expenses and the balance sheet, the third level should be the application of the current taxes within the country. As with the examination of assets and liabilities, this can be a labor intensive task and should only be undertaken on business that have promising profit potential. Otherwise, it would be a waste of resources.

The fourth and final level of a restatement is both the most complete, labor intensive and expensive of the four choices. It is an audit of the company financial records. Within the Socialist system, a financial team would have to reconstruct the entire financial history for a period of time. In essence, all accounting transactions for the period under evaluation would have to be completed a second time under IAS. In addition, initial trial balances would have to be created.

RESTATEMENT OF SALES

The objective of restating sales is to convert them to an accrual basis. In principle, this is accomplished by determining how much electricity was delivered at what price. Within the context of the Oblenergo restatement, form 46 was used to accomplish this part of the task. Form 46 is the monthly report to Minnenergo of electricity sales by consumer group. It has both the tariff used and amount sold. In addition, the company generates fees and other income for various reasons. Late fees and transmission fees are example. This information is taken from the Combined Report on Sales submitted to Minnenergo on a monthly basis. For the business units not involved in the marketing of either electricity or heat, sales are taken from the general ledger account 45 (goods delivered) or 46 (services).

Finally, since the restatement was completed for each individual business unit

inside the Oblenergo consolidated company, some internal transaction adjustments were required. The data for internal transfers was supplied by the accounting staff at each business unit. However, when the actual consolidation of the individual business units was made, the amounts for internal transfers were not included as part of sales.

RESTATEMENT OF COSTS

Under normal Socialist accounting procedures, this information is relatively easy to collect from account 20, main production costs, within the general ledger. However, for the Oblenergo, this was not the case. The first problem is that the electricity sector has its own individual accounting system that was significantly different from what is normally found in other companies. To further compound the problem was each business unit that used the energy accounting system actually used its own variation. In addition, some of the non-electricity business units used a general ledger. The result is that internally the company had no consistent application of accounting procedure.

To overcome this problem of inconsistent accounting and reporting, it was determined that certain accounts were basic cost accounts while other summarized the basic costs by function. For example, account 2 (depreciation), account 6 (fuels) or account 70 (wages) are basic cost accounts. They represent an actual cost for production. However, account 26 (general expenses) summarized the basic cost accounts associated with the management and support staff. In almost all the business units the data was collected using the basic cost accounts. The only exception was the CHP-2 unit. For this business unit, the Minnenergo cost forms were used for three reasons. First, the system they were using was impossible to logically follow. Second, they changed their procedures for accounting and reporting in 1997. This means that if the large amount of time and resources had been committed to learning their present system, it would have only applied to 1/2 of their data. A similar amount of resources would have to be committed to learn what they actually did prior to the change. Finally, a large amount of the required historical data was missing. Since the size of the business was small and the Minnenergo forms had proved to be accurate in the other parts of the business, the most cost effective path to use were the Minnenergo Report Forms were used.

PURCHASED ENERGY / FUEL

Because of its importance and relative size when compared with other costs of production, more detailed statistics was collected on both electricity purchases (for electricity distribution) and fuel purchases (heat) The additional data included amount of electricity/fuel purchased, the average price for the month and the total amount of the cost The main reason for collecting more detailed data for the largest cost is to provide a more transparent view of the business for the interested reader

MONEY IN / MONEY OUT

The purpose of collecting such data is twofold, first, to complete an aggregate aging of both accounts receivable and payable The second reason is to more closely examine the structure of the flow of funds through the company Money In can be defined as the amount of value¹⁶ collected from a consumer that will offset the outstanding accounts receivable of the consumer Money Out is the amount of value paid out to creditors that offsets an outstanding accounts payable Because of the nature of the payments system (or lack thereof) in Ukraine, attempting to follow the value passing through a company is at best an imprecise science The combination of barter deals and the uncertain prices associated with them, and multi-party offsets would require a highly sophisticated system of accounting that is far exceeds the capabilities of the hand written ledgers normally kept at the lower levels of the company To compound the problem even more are the cash collection procedures (transit account) that returns only a small portion of actual cash collected to the Oblenergo, and the regressive and complex tax system and the constant threat of inflation which erodes the actual value of money collected

As for Money In, the data was collected in two forms, cash and non cash payments Based on these figures, certain assumptions relating to its value in satisfying creditors was used Cash was assumed to have 100% value in payment to creditors As for the non cash payments received, it was assumed to have 100% value up to the amount owed for electricity Any amounts above this were discounted 25% to account for the transaction cost of disposing of the non cash item The three amounts – cash, non cash used to pay electricity and non cash (discounted) were added together to obtain an estimate of the amount of value actually received against sales for the same period and is the figure used in the aggregate aging of accounts receivable

Money Out was collected within four types of categories, cash paid for electricity, non-cash paid for electricity, cash paid to other creditors and non cash paid to other

The term value is used because what is actually collected from consumers can be in the form of cash, barter, and offsets

creditors. These four figures were added up and compared with the total expenses from the general accounts to determine the aggregate aging of accounts payable. Also, since the Oblenergo is allowed to recover book value depreciation on within their tariffs, the value of the asset is equal to the amount of future cost recovery. Therefore, the enterprises largest asset, plant and equipment, is already stated somewhat close to the fair value within the tariff structure.

The main purpose for examining the aggregate flow of money is to broadly calculate the aging of accounts receivable and payable to estimate how much (if any) bad debt should be written off against income and to compare it with the trend in each account on the balance sheet. In addition, the growth in each account as calculated within the aging was approximately equal to the actual growth on the balance sheet. Because this close relationship between calculated and actual, the original balances were used in the restated Balance Sheet. However, it should be pointed out that for some of the individual business units bad debt did exist and was charged off against earnings.

BALANCE SHEET

With the exception of accounts receivable and payable, no other account on the balance sheet was examined in detail. Two reasons exist for not extending to assets and liabilities. First, as a going concern¹⁷, the real value of a business comes from its ability to earn a profit and not from its liquidation of assets. Therefore, the most important variables to examine are sales and costs and in this case most of the major problems were identified. The second reason is cost effectiveness. As stated above, most of the major problems were identified after restating sales and costs. Since restating the balance sheet accounts is a time consuming (and expensive) process, the value of extending the restatement was small. For the most part, the values from Form #2 (Socialist Balance Sheet) were taken without adjustment and categorized according to IAS accounts that Western investors are familiar with and understand.

Although the values are the same, the restated Balance Sheet has one major difference that needs explanation. Form #2 was compiled using a certain set of assumptions that are different under IAS. As expected, under these assumptions the assets will equal liabilities plus equity. However, the income statement is restated and the results must be incorporated into the balance sheet as part of retained earnings. Once this IAS step is performed the assets equal liabilities plus equity relationship does not exist any more. To correct for this situation, a new account, Unrealized Differences, is introduced to the balance sheet to aid in reestablishing balance within the statement. The account itself can be approximately viewed as an equity account similar to retained earnings. For

This is an assumption of IAS accounting

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this restatement, it becomes the offset to the accumulated restated net income included in retained earnings