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EXECUTIVE SUMMARY

This report was prepared in part, to respond to a simple question - if significant progress is made on the action items of the Financial Recovery Plan for the Power Sector of Ukraine, will the sector become solvent? This deliverable was produced to address the request to prepare "*documentation on financial analysis of the policy options contained in the [Financial Recovery Plan] to investigate the impact of the plan in achieving solvency of the sector*" in fulfillment of the requirement of the Delivery Order

The initial process of formulation of the Financial Recovery Plan for the Ukraine's electricity market involved the discussion of a number of action items which would impact various parts of the sector in order to bring it to a state of solvency and improved financial health While the merits of the individual plan items were agreed upon, and the final composition of the plan was decided and adopted by the Ukrainian government, there was never more than a very general attempt at modeling and quantifying the impact of the plan So the question of "What are the operational and financial results expected from implementing the plan?' or even the more general question of "Does the implementation of the plan lead to solvency of the sector?" could not be answered other than in very broad terms It was for the purpose of better quantifying the answers to these questions, as well as to be able to simulate different scenarios of plan implementation, that the financial model of the electricity sector of Ukraine was constructed

Chapter 1 of this report describes the brief history and development of the financial model used to perform these analyses Chapter 2 offers a detailed description of the model itself, its subsections, and its data requirements, to give an overview of its workings and capabilities Chapter 3 elaborates upon the model and its specific application towards modeling the Financial Recovery Plan A characterization of the modeling parameters of each point of the Financial Recovery Plan is presented Chapter 4 offers detailed analysis of the particular model runs which reflect three different potential implementation scenarios Chapter 5 offers some sensitivity analysis of particular model inputs and specific actions of the Financial Recovery Plan on the final financial health of the sector Chapter 6 offers conclusions

By characterizing the plan through changes in the model's input parameters and running these through the model, it was evidenced that implementation of the Financial Recovery Plan would lead to better total and cash collections for purchased electricity, lower levels of debt to the Energomarket and to the Generators, and higher profitability of the Generating companies In other words, yes, the plan would lead to a more solvent electricity sector

In the process of determining the answers to these questions it was also possible to come to better understand the basic relationships which govern the work of the sector as an inter-related system Several key concepts came forth from this modeling process Firstly, increasing cash collections by small amounts is not likely to produce great improvements in the profitability of the thermal generating companies

Any improvement in the barter mechanisms, which could lower the barter premium for fuel, does have a large impact on generator profits Improvements in plant characteristics can have a large impact on profits, as do increases in the Wholesale Purchase Price that they are paid by the Energomarket, in that they directly affect almost all of the revenues and costs the generators incur

On the Local Electricity Company (distribution) side, the implementation of market-based retail tariffs is a revenue-neutral action, which should not be expected to improve cash or total collections Elimination of occupational-based subsidies affects only a very small portion of payments for electricity Financial Recovery Plan points directly designed to reschedule debt, encourage repayment for electricity consumed, prompt offsets, limit consumption, and disconnect debtors can prove very effective in increasing total and cash collections by the LECs and then to the Energomarket and to the generators Towards this end they do reduce the debt levels both to Energomarket and to the generators

Privatization of the LEC and generating companies has the potential to alter a number of the key factors modeled above However, given the current pace of privatization, it cannot be realistically expected, even under the best scenarios, that significant changes would be implemented which would yield significant operating and financial results by 1999Q4 The current economic problems in Russia, and its effects on Ukraine, might play an important role in the sector's health in the upcoming quarters Potential problems with devaluation of the currency would need to be addressed to maintain a viable and working Energomarket, particularly regarding restatement of debt levels

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CHAPTER 1
INTRODUCTION

1.1 FINANCIAL RECOVERY PLAN

The Financial Recovery Plan for the Energy Sector of Ukraine, was adopted by the Ukrainian Government on April 18, 1998 and was the result of the combined efforts of Ukrainian government and energy officials, (largely represented by the Ministry of Energy - Minenergo), and Western donors and advisors By outlining a multiple-point plan which included such diverse issues as debt restructuring, improvement of cash and total collections, adherence to Wholesale Market Rules, competitive procurement of fuel by the generators, legal reform initiatives, improvement of the transparency of the market processes, privatization of the state owned entities and a general lessening of government interference in the sector, it was hoped that Ukraine's electricity sector would be set on a course towards recovery

Since its start, the progress of this ambitious program has been regularly assessed through the monitoring of the twenty-three actions contained in the plan and a number of key indicators, such as Local Electricity Company (LEC) cash collection rates, debt owed to the market by the LECs, debt owed the generating companies, and the profit levels of the thermal generating companies Continued effective progress in implementing the Financial Recovery Plan (FRP) has also been linked to the final decision on the suspended World Bank Electricity Market Development Project Loan, which is expected on October 15, 1998 A copy of the Cabinet of Ministers Resolution adopting the Financial Recovery Plan, a listing of the detailed items of the Plan, and a table of the Plan's financial indicators are offered in Appendices 1, 2, and 3, respectively

The underlying assumption and hope of the Ukrainian Government and donors was that the adoption and full implementation of the plan would significantly improve the financial condition of the sector While targets for the key indicators have been established and much work has gone into assessing whether the plan is being fully implemented and the extent to which targets are being met, a more complete assessment of the anticipated impact of the Plan's implementation on the sector was needed More specifically, what would be the anticipated specific impact of the different policy options contained in the plan on the debt levels of market entities and on the financial statements of the generating companies? How great an impact would these policies truly have and could they truly lead to solvency of the sector?

1.2 POWER SECTOR FINANCIAL MODEL DEVELOPMENT

With this purpose in mind, Putnam Hayes and Bartlett developed an initial version of a financial model of Ukraine's electricity sector This limited model, designed as a number of inter-linked Excel spreadsheets, was initially designed to follow the operations and financial statements of the National Dispatch Center (NDC), Energoatom, and the four thermal generating companies (Gencos) It did not attempt to model the LECs/Oblenergos or independent energy suppliers (IESs) beyond their total amount and method of payments to NDC It was a shell for doing policy calculations for the NDC and the generators (thermal and nuclear) and provided an excellent start at outlining the basic relationships between their operational side and the financial side In this original form, however, it was not very useful in assessing policies regarding oblenergos, special collections programs or dealing with particular customer categories or classes

The financial model has been modified along several fronts since Hagler Bailly received it from Putnam Hayes and Bartlett in February Firstly, a number of the assumptions and background data were adjusted given our historical data from the Market Funds and System Settlement processes To effectively monitor the Power-Coal program, plan-by-plant heat rates as well as the calorific content of fuel for each plant were integrated into the model structure On the LEC side, a front-end module was developed to more accurately capture the distribution side tariffs, collections, and debts The implementation of market based retail tariffs is reflected on the distribution side All of these changes make the model a more effective and accurate tool for system-wide financial analysis

The consequences of changing some input parameters of the model can be tracked as they flow through the system For instance, an improvement in cash collections on the Oblenergo side would flow through NDC and be split to end up as more cash in the hands of the Gencos with which they could pay salaries or buy fuel In another example, physical parameters, such as low voltage loss levels, would impact the amount of electricity LECs would need to purchase from the Energomarket which then impact the system generation needs With the implementation of market-based retail tariffs, these losses would also be reflected in the retail price and thus in the collections from customers It is in this system-wide sense that the model was used to assess the impact of the significant points of the Financial Recovery Plan

CHAPTER 2
MODEL DESCRIPTION, STRUCTURE, CAPABILITIES

The FRP model consists of eight interconnected files a summary file, a Local Electricity Company (LEC) file, an NDC file, a file for each of the four Gencos, and a file for Energoatom

The time period covered in the model is from the beginning of 1997 to the end of 1999 on a quarterly basis This covers the time period of Financial Recovery Plan implementation and essentially attempts to capture efforts at establishing some measures of solvency in the sector within a shorter time frame Key input data prior to 1998Q1 is largely historically, while input data after this is primarily the result of forecasts and assumptions Output results before 1998Q2 are a mixture of model calculations and actual figures, whereas after 1998Q2 they are all calculated The model was initially designed through the year 2002 and the modeling time frame could be easily extended to address longer time-frame solvency of the sector

The model's basic structure and data components will be outlined below

The summary file provides the general economic and specific input assumptions
1) General Assumptions Sheet (U S and Ukrainian inflation rates, exchange rates, fuel prices)
2) Indicators Sheet (variables taken from other spreadsheets)
3) Specific Assumptions (taken from NDC file and deal with Retail Demand, Contract Prices for Nuclear and Hydro, Wholesale Purchase Price, etc)

For the LECs and IESs, the respective file consists of 12 sheets, which calculate the consumption, generation, prices, sales, and collections on the distribution side of the sector

For NDC the respective file consist of four sheets
1) Input Sheet (input sheet, and relevant variables taken from the other files)
2) Assumptions and Operating Results
3) Financial Statements - Income, Cash Flow, Balance Sheet
4) Output (taken from the previous sheets for use by other files)

For Enegoatom and the four Gencos, the respective files also consist of four sheets
1) Input Sheet (input sheet, and relevant variables taken from the other files)
2) Assumptions and Operating Results (A&R)
3) Financial Statements - Income, Cash Flow, Balance Sheet

4) Output (taken from the previous sheets for use by other files)

The heart of the model consists of the LEC, NDC and Genco files, for which we had the most detailed source information and where almost all the significant calculations take place A more detailed assessment of these files follows

2.1 LEC File

Input Sheet (data collected from other sheets)

- Data imported on the Wholesale market Price, Dollar/Hryvnia Exchange Rate

Basic Data

- Data on Low Voltage Network Operator (LVNO) Fees, Supply Fees, Low Voltage Losses, Administrative Retail Tariffs by customer category, LEC generation, Total and Cash Collection Rates, Total and Cash Payment rates to NDC (all by individual oblenegro)

OblCon1 Sheet

- Calculation of the split of total consumption among the different oblenegros, IES and into current customer categories

OblPrices Sheet

- Calculation of the split of total consumption among the different oblenegros, IES, by customer category, by quarter

LVNO Supply

- Calculation of the LVNO portion of the retail tariff according to licences, by oblenegros, IESs and customer category, by quarter

OblConsump

- Calculation of the projected electricity consumption by oblenegro, IESs and customer category, by quarter

OblGenNeed

- Calculation of the customer consumption needs grossed-up for low voltage losses by oblenegro, IESs, customer category, by quarter

OblTotSales

- Consumption multiplied by prices, Calculation of subsidy totals for the subsidized residential customers

LVNOSupplySales

- Calculation of the LVNO portion of sales

PurchFrmEm

- Calculation of the amount of electricity purchased from Energomarket, by oblenegro, IESs by quarter
- Calculation of Total and Cash Payments by oblenegros, IESs by quarter, and the aggregate % payment

A&R

- Summary information from LEC section

Output
- Details for other spreadsheets collected from A&R

2.2 NDC File

Input Sheet (data collected from other sheets)
- Key assumptions - NDC Collection Rate, total Retail Consumption from LEC sheet
- Details regarding transfer orders, offsets for the individual generators

Assumptions and Operating Results Sheet

Assumptions
- The Wholesale Purchase Prices (paid to thermal generators), Nuclear and Hydro Prices are inputs, the latter two set by National Energy Regulatory Commission (NERC)

NDC dispatch
- Total generation sales = Retail Demand + high and low voltage transmission losses
- Generation sales to NDC = Total generation sales - Combined Heat and Power generation
- Nuclear and Hydro Generation levels are input, thermal generation is the residual
- Generators are paid according to determined contract prices (hydro, nuclear) or the market Wholesale Purchase Price (WPP)
- Wholesale Market Price to Oblenegros (WMP) = WPP + calculated uplift (NERC-determined High Voltage fee, NDC fee + adjustment for bi-lateral contract purchase prices (nuclear and hydro)

NDC MFP
- Oblenegro receipts, cash, Transfer Orders, Offsets, Promissory Notes are added together to get a figure for total NDC distribute receipts
- Calculations of the amount Due to Generators - for current generation, for old debt
- If total NDC distributable receipts are greater than current payment due to Gencos, then the Extra funds are used to pay back old debt to Gencos (according to their accrued debt)
- Calculations of Cash Distribution - taking into account offsets, transfer orders, old debt to particular generators

Financial Statements
- The Financial Statements flow largely from the Operating Results
- NDC is modeled to have no profit or losses

2.3 GENCO FILE

Input (Collected from other sheets)

- Fuel Prices for coal, natural gas, and mazut are taken from the general summary file
- Method of Payment for fuel, since cash is scarce
- Generation split among the generating company's plants
- Fuel consumption characteristics, heat rates by plant and by fuel type

Assumptions and Operating Results

- Offsets completed by the Genco
- Barter Premium - Extra premium on the price of fuel paid for non-cash (debt, transfer orders) fuel purchases
- Payment for Fuel by Cash - represents the cash left over after payment of wages and maintenance costs
- Payment for Fuel by Debt - calculates the portion of non-cash fuel purchases paid for by debt
- Transfer Orders - Portion of non-cash fuel purchases not covered by debt
- Fuel consumption levels and costs for the Gencos are complied by aggregating the fuel needs of the individual stations based on the plant characteristics from the Input sheet,
  and the amount of needed electricity generation from the NDC spreadsheet

Financial Statements

- Financial Statements flow largely from operating results

2.4 ENERGOATOM File

Input (data from the NDC sheet)

- Sales to NDC, Actual Payments by NDC

Assumptions and Operating Results

- Barter premium for non-cash purchasing of fuel
- Key element - Transfer Orders (HR) - If cash is available, it is used to buy fuel
  Otherwise fuel is brought via transfer orders

Financial Statements

- Flow from Operating Results
- Income Statement - Cost of Energy Sales (fuel) is a function of the Mwh generated and the method of payment (cash vs barter)
- Balance sheet

CHAPTER 3
MODELING THE FINANCIAL RECOVERY PLAN

3.1 MODELING OF SPECIFIC PLAN POINTS

While some aspects of the financial recovery plan are amenable to quantitative modeling, other aspects of the plan would be difficult to characterize with data In general, many of the specific points of the FRP would influence one or more of the measurable model inputs - such as the cash collections rate, generation fuel cost and operating costs, etc While the exact effect of each of the individual FRP initiatives on these general inputs is difficult to assess, attributing these values can give a general sense of the impact of the initiative Working with a range of input parameters, one can track how they flow through to the trackable outputs thus allowing for some basic sensitivity analysis In this way, the potential leverage of policy options can be assessed

A number of the points of plan involve the "identification" of levels of debt, offsets, etc as a first step leading to particular actions addressing the problems Modeling of the impact of these aspects of the plan can only truly take place once the magnitude of the problem has been "identified" Below, I will address the Financial Recovery Plan point by point and report on the how the different FRP initiatives were modeled

1) *Require that non-cash financial settlements use the NBU offset mechanism* - Expected to reduce barter costs

There is currently a line item in the GENCO files of the model reflecting the "barter premium" for the purchasing of fuel The value of this premium can be reduced in the model with the implementation of this policy The effects will then be reflected in cost savings for the generating companies

2) *Apply all financial resources after wages, repairs and taxes to cash fuel procurement* - Expected to reduce generation costs

The FRP model is currently set up to account for this for each generating company With the current situation in the sector, this policy option cannot be expected to play a significant role, as there is often not enough cash to cover even the wages and repairs

3) *Generation companies competitively procure fuel* - Reduces costs through lower prices for a given thermal content

Competitive procurement represents a different concept than the elimination of the barter premium By freeing up the Gencos to procure their coal through

competitive tenders, it is expected that prices will decrease If price floors for fuel are in place, the competition could be held on the basis of fuel quality and the calorific content of the fuel would be expected to improve The model contains both fuel price and a fuel calorific content line input for all of the generating companies, which allows modeling of expected improvements

4) *Identify as of 1/1/98 accounts payable of supply and generation companies and provide for this debt to be rescheduled for payment over 5 years* - Reduces unscheduled claims against electricity companies

The accounts payable amounts can easily be directly set in the accounts in the model Currently the model contains estimates of these values Their repayment over a given time period can be readily modeled However, without knowing more details regarding the actual schedules adopted, these debt repayments are modeled based on an assumed repayment schedule While preliminary work on identifying such energy sector accounts has begun (as evidenced by Order #582 of the Cabinet of Ministers) no real action has been taken on this front

5) *Transit to market based retail tariffs* - Ensures that customers pay to cover costs and create conditions for full market operation

The LEC front end to the model has been developed and includes the establishment of retail tariffs on the basis of the Wholesale Market Price, LVNO fee, Supply Fee and Losses (Agricultural and Residential Tariffs will continue to be set by decree and assumptions will be made regarding these rates Retail tariff for the other customers are now expected to be phased in during 1998Q4) These calculations are being done by oblenergo, as this is more convenient and useful for more detailed modeling

6) *Determine amounts due to suppliers and generators according the Wholesale Market Rules Enforce Market Funds Procedure* - Improves operation of wholesale market

These amounts due are regularly accounted for by NDC The model inputs are generally consistent with these figures Currently, however, a number of the market rules are not being entirely followed A bid cap is in place for generators, essentially limiting the Wholesale Purchase Price being paid to generators for their generation Generators are not being compensation for Constrained On and Off generation, but are also not being assessed penalties Correction of these factors would likely raise the effective price being paid to the generators

On the other hand, due to the lack of fuel, generators are essentially being run on the basis of their available fuel stocks and not on the basis of which plants are most efficient An improvement in the fuel situation would, in this case, probably lower the cost of the marginal plant being run, and thus decrease the Wholesale Purchase Price

This policy can be modeled by adjusting the input line for the Wholesale Purchase Price in the model

7) *Cancellation of privileged tariffs based on occupational principle Enforce consumption limits for remaining classes of privileged customers* - annual savings

The LEC front end of the model calculates total subsidies for residential customers based on their consumption and their tariffs in effect Privileged tariffs based on the occupational principle account for only around 10-20% of the total privileges With this the figures for the privileged customers can be roughly adjusted to reflect this policy initiative This would then flow into greater cash and total collections, as well as cash and total payments to the Energomarket

8) *Oblenergos to terminate service to all defaulters Prosecution of interfering local administrations* - improve payment collections

The primary reflection of oblenergos terminating service to defaulters onto the model parameters would be an improvement of total and cash collections as well as total and cash payments to the Energomarket While one might expect a lowering of total consumption as well, the state of pent-up demand in Ukraine is likely to fill in the slack

9) *Limit budget customers consumption to no more than amount provided in cost estimates* - termination of unpaid electricity supply

Enforcing such limits would be most readily reflected in an improvement in total collections from customers and total payments to the Energomarket and a potential lowering of consumption Since budget customers are generally not large payers of cash, cash collections would not be expected to rise very much

10) *Transfer of MFA from NDC to new EnergoMarket Enterprise*

11) *Formalize the compulsory use of clearing accounts*

12) *Prepare Propositions to Rada regarding non-timely payments by budget and residential customers*

The impacts of these points are not accounted for in the model

13) *For defaulted budget institutions, identify and execute offsets For defaulted state-controlled enterprises identify and execute using NBU mechanism*

While the model is designed to handle offsets and process them as they become identified, it is more realistic to reflect this initiative in terms of an improvement in total collections and total payments to the Energomarket These are strictly non-cash transactions thus cash collections and cash payments to the Energomarket would not be affected

14) *For major non-budget customers identify and reschedule arrears of over three months into debt instruments*

It is difficult to directly model the impact of this point until the debt repayment schedules are established Consequently, implementation of this policy point would be best reflected through improvements of total and cash collections and payments to the Energomarket

15) *Establish collection departments at oblenergos to take action against defaulters*

Implementation of this policy point is best reflected through improvements of total and cash collections and payments to the Energomarket

16) *Assure financing to pay budget arrears for electricity and heat within 5 years (w/ Treasury promissory note programs)*

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This can be modeled but not without more detailed knowledge of how this process will be carried out

17) *Transfer management of state owned blocks to tender and competition winners* - more efficient management, increase share value

This action facilitates the privatization process which is covered in points #18 and #19 below

18) Sell oblenergo shares with investment commitments

The impact of this action is difficult to model unless we know the thrust of the investment commitments Assumptions can be made that at least a part of the investment commitments would be directed towards improving the oblenergo's generally poor low voltage loss characteristics This can be modeled on the LEC side, by effectively reducing the amount of electricity the oblenergos need to purchase from the Energomarket to satisfy their demand Collections percentages by the oblenergos would not change, but percentage payments to NDC would improve

With implementation of retail tariffs, the improved loss characteristics would also be reflected in lower retail prices Such improvements, however, would take some time to become realized, particularly when considering the FRP planning horizon

19) *Sell gencos shares with investment commitments*

Once again, it is difficult to model the effect of this privatization unless the thrust of the investment commitments is better known Assumptions about improved heat rates, resulting from refurbishment of equipment, or more available cash with which to purchase fuel can be modeled Within the relevant time frame, on the one hand, privatization might involve a decrease in wages and maintenance expenses, but a privatized company might very well want to increase maintenance expenditures in the short term to prevent deterioration of equipment and assets

20) *Review 17-19 and prepare privatization plan for 1999*

21) Financial Recovery Commission to control implementation and report quarterly

22) Financial indicators prepared

23) Draft appeal to reinstate EMDP loan based in initial performance of FRP, including metering and communications equipment for hourly tariffs and voluntary demand curtailment

These points are not modeled

3.2 DEVELOPMENT OF SCENARIOS

Three scenarios have been put forth to forecast the impact of the Financial Recovery Plan on the sector, each characterized by a particular set of input characteristics, as mentioned in the list above The first, pessimistic, scenario represents non-implementation of the activities of the financial recovery plan, and essentially a continuation of the status quo in the industry The second, middle, scenario represents a partial implementation of the plan The third,

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optimistic scenario envisions progress on all the points of the financial recovery plan In this manner, we can pick out some of the resulting financial indicators, debt levels and financial statements of the gencos in order to assess the true impact of the plan A complementary analysis of the sensitivity of individual variables is undertaken in Chapter 5 of this report Analysis of particular policy options and variables will thus follow the scenario analysis

All data inputs exogenous to the scope of the plan have been left identical in the three scenarios Therefore information such as the Ukrainian exchange rate, oblenergos generation levels, and the tariff for nuclear generation, are the same in all three cases, and are offered on the Summary/General Assumptions sheet at the end of this section Some data, such as the generation distribution amongst the four thermal generators, or amongst the Gencos' plants is also presumed to stay constant For our purposes, the modeling of such changes would introduce unnecessary complexity

3 2 1 Scenario 1 – Non-Implementation (Pessimistic) Scenario

Table 1, detailing the specific modeling of all of the scenarios, is offered below The pessimistic scenario is characterized firstly, by the failure to implement market-based retail tariffs In this case the administrative tariffs remain in place for the duration of the time period There is no privatization of LECs and thus no improvements in the low-voltage loss characteristics Subsidies based on the occupational principle would remain in effect As none of the collections-improving policies would be implemented, Total and Cash collections by LEC, as well as Total and Cash Payments to the Energomarket would remain at current levels of around 98% total collection and 12% cash collections

Adherence to Market Rules would continue as is today, thus the bid cap for generators would remain in place, and the Wholesale Purchase Price paid to generators would not increase Generating plant technical characteristics would not improve as no private investments would flow to the Gencos Similarly, the barter premium of 20% would remain in effect, effectively making fuel purchasing more expensive in the case of a lack of cash The inability to procure fuel through competitive tenders would also not permit improvements in either the fuel purchase price or in the fuels' calorific content

3 2 2 Scenario 2 – Partial-Implementation Scenario

The characteristics of the middle scenario are shown in Table 1 In contrast to the pessimistic scenario, market-based retail tariffs are implemented, but not until 1999Q2 Administrative tariffs remain in place for industrial customers until this time Privatization of the Oblenergos proceeds slowly and thus, the investments to the LV network would only begin to take place and no improvements in the low-voltage loss characteristics could be expected Subsidies based on the occupational principle would remain in effect until 1999Q2, at which

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point they would be eliminated As the debt-restructuring and collections-improving policies would be only partially-implemented or implemented with some delay, Total and Cash Collections by Oblenergos, as well as Total and Cash Payments to the Energomarket would increase from the current levels, but at a slow pace, beginning in 1999Q2

The bid cap for generators would remain in place, but a dispatch log would be operating and transparent, facilitating payments for constrained operation and other non-compensated services With an improvement in the fuel situation, the generation side would be dispatched more effectively which would work to lower the marginal block price Wholesale Purchase Price paid to generators would not increase

Privatization would begin after a delay, thus generating plant technical characteristics would not improve in the relevant time horizon as private investments would only begin flowing to the Gencos The barter premium would be lowered, from 20% to 15% to 10% beginning in 1999Q4, effectively bringing down Genco fuel costs Limited ability to procure fuel through competitive tenders would permit small improvements in either the fuel purchase price or in the fuels calorific content Presuming the price floor on coal remains in effect, this initiative will be modeled by improving the heat content of coal utilized at thermal generating plants by 5% starting in 1999Q2 Any cash left over after payment of wages, maintenance and taxes is used towards the purchase of fuel, at the non-barter/cash price

3 2 3 Scenario 3 – Full-implementation Scenario

The characterization of the optimistic scenario is also offered in Table 1 It is assumed that market-based retail tariffs are implemented as of 1998Q4 Privatization of the LECs would proceed quickly, investments are made, and by 1999Q4 there are improvements in the low-voltage loss characteristics Subsidies based on the occupational principle would be eliminated by 1998Q4 With the implementation of the various debt-restructuring and collections-improving policies Total and Cash Collections by LECs, as well as Total and Cash Payments to the Energomarket would improve quickly, beginning in 1998Q4

For the full-implementation scenario, Market Rules would be closely followed for the determination of payments to LECs and generators The bid cap for generators would be lifted, payments for additional generation services would be included and an improved fuel situation would allow for more economic dispatching The result of all these factors might be a slight increase in the effective price paid to the Generators (from 1996$33 to 1996$34 per MWh) by 1999Q2 While privatization would proceed, within the given time schedule generating plant technical characteristics would not improve as the effect of technical investment would not yet be felt The barter premium would be lowered beginning in 1998Q4 dropping from 20% to 15% to 10%, effectively making fuel purchasing less expensive in the case of a lack of cash Fuel procurement through competitive tenders would yield lower fuel purchase prices and/or improvements in the fuels' calorific content Given

the current price floors in place for coal prices, this initiative will be modeled by improving the heat content of coal utilized at thermal generating plants by 5% starting in 1998Q4 Any cash left over after payment of wages and maintenance is used towards the purchase of fuel, at the non-barter/cash price

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Table 1

MODEL INPUTS

	Scenarios			
	#1 No Impementation	#2 Partial Implmentation	# 3 Full Implementation	FRP Item

Table 1

MODEL INPUTS

	Scenarios			
	#1 No Impementation	#2 Partial Implmentation	# 3 Full Implementation	FRP Item
LEC SHEET				
NERC information for Retail Tariffs				
Supplier fees (License prices)	not implemented	1999Q1	1998Q4	5
for population				
for other customers				
LVNO fees (License price)	not implemented	1999Q1	1998Q4	5
35-154 kW customers				
< 35 kW customers				
Loss factors	no change	no change	improve	18
35-154 kW customers				
< 35 kW customers				
Seasonal Loss Factors				
Loss % multiplier - voltage level 1	no change	no change	no change	
Loss % multiplier - voltage level 2				
Administratively Set Retail Prices (NERC)				
Industrial > 750 (12/9/97 NERC Order)	no change	eliminated 1999Q1	eliminated 1998Q4	5
Industrial < 750				
Elec Rwy				
Elec Urban				
Non-Ind				
Agricultural (12/9/97 NERC Order)	no change	no change	no change	
Households (from 4/10/98 Order)	no change	no change	no change	
Urban				
Rural				
Electric cookers				
Settlements				
Urban				
Rural				

09/15/98

Table 1

MODEL INPUTS

	Scenarios			
	#1 No Impementation	#2 Partial Implmentation	# 3 Full Implementation	FRP Item
Electric cookers				
Occupational Based Subsidies	no change	eliminated 1999Q2	eliminated 1998Q4	7
Gross Production by LEC Power Plants (MFP)	no change	no change	no change	
Tariffs for Oblenergo Generation (MFP)	no change	no change	no change	
LEC Collections (total) (Min)	no change	increase	increase	8,9,13,14,15
LEC Collections (cash)(Min)	no change	increase	increase	8,14,15
Oblenergo Payments to Energomarket	no change	increase	increase	8,9,13,14,15
Oblenergo Cash Payments to Energomarket	no change	increase	increase	8,14,15
IES Payments to Energomarket	no change	no change	no change	
IES Cash Payments to Energomarket	"	'	"	
Total Retail Sales	no change	no change	no change	
NDC SHEET				
Percentage of thermal production by genco				
Centrenergo	no change	no change	no change	
Donbassenergo				
Dniprenergo				
Zakhidenergo				
Exchange rate [H $]	No difference among scenarious			
US price level [1996=1]	"	"	"	
Ukranian price level [1996=1]	"	"	"	
HV losses, [%]	no change	no change	no change	
Expenses				
Nuclear [$1996/MWh]	no change	no change	no change	
Hydro [$ 1996/MWh]	'	"	"	
Wholesale Market Purchase Price [$/MWh]	no change	no change	increase 1999Q2	6
HV net fee [$ mil] [1997]	no change	no change	no change	
NDC/ESE fee [$ mil] [1997]	"	"	"	
Subsidy Requirement [% of NDC sales]	"	"	"	
Average profit on import/export [$/MWh]	"	"	"	

09/15/98

Table 1

MODEL INPUTS

	Scenarios			
	#1 No Impementation	#2 Partial Implmentation	# 3 Full Implementation	FRP Item
NDC Despatch				
Nuclear (MWh)	no change	no change	no change	
Hydro [MWh]	"	"	"	
Cash flow				
Interest expense	no change	no change	no change	
World Bank Drawdown	"	"	"	
World Bank Repayment	"	"	"	
Dividend	"	"	"	
Balance Sheet				
Inventory	no change	no change	no change	
Authorized Capital	"	"	"	
Special Fund& Target Financing	"	"	"	
Other Reserves	"	"	"	
GENCO SHEET				
% Payment for Fuel using debt				
If cash covers less than 50% of expenses	no change	no change	no change	
If cash covers >50% and <80% of expenses	'	"	'	
If cash covers >80% of total expenses	"	"	"	
Percent generation by plant	no change	no change	no change	
Zuev - % of Donbass generation				
Starobesh - % of Donbass generation				
Slaviansk - coal - % of Donbass generation				
Slaviansk - oil/gas - % of Donbass generation				
Kurakhov - % of Donbassenergo generation				
Luhansk - % of Donbassenergo generation				
Fuel Consumption (g / kwh)	no change	no change	no change	
Luhansk				
Starobesh				
Slaviansk				
Kurakhov				
Zuev				
Coal / Mazut / Gas - Portion of total Fuel (%)	no change	no change	no change	

09/15/98

Table 1

MODEL INPUTS

	Scenarios			
	#1 No Impementation	#2 Partial Implmentation	# 3 Full Implementation	FRP Item
Luhansk				
Starobesh				
Slaviansk				
Kurakhov				
Zuev				
Coal / Mazut / Gas - Fuel Calorific Value (Kcal/kg	no change	improve 1999Q2	improve 1998Q4	3
Luhansk				
Starobesh				
Slaviansk				
Kurakhov				
Zuev				
Assumptions				
World bank loan drawdown [$ mln]	no change	no change	no change	
Payout rate [%]	"	"	"	
Required Cash Balance [% of Revenue]	"	"	"	
Capital increase	"	"	"	19
Offsets complete [Mil Hv]	"	"	"	
Wages [1996Hv/Q]	"	"	'	19
Maintenance[1996Hv/Q]	"	"	"	19
Major maintenance[1996Hv/Q]	"		"	19
Barter Premium	no change	lower 1999Q2	lower 1998Q4	1,2
GENERAL SHEET				
Ukranian inflation [%]	no change	no change	no change	
Ukranian price level [1996=1]	"	"	"	
US inflation %	"			
US price level [1996=1]	"	"	"	
Exchange rate [H $]	"	"	"	
Fuel prices	no change	no change	lower	2
Coal [1996 $/t]				
Mazut [1996 $/t]				
Gas [1996 $/tcm]				

09/15/98

CHAPTER 4
FINANCIAL FORECASTS AND ANALYSES

DESCRIPTION OF RESULTS

The scenarios reflecting the different levels of implementation of the Financial Recovery Plan were run through the model of Ukraine's electricity sector, as outlined in the previous section The model-input characteristics were changed as described in Table 1, for the time periods discussed previously The following sets of results, for each of the three scenarios, are included as tables at the end of this section

1) Summary/Indicators – the modeling results of particular variables of interest, such as debt levels to the Energomarket and to Generators, after tax generator profit levels, sales figures, and cash payments to generators These are offered both in current Hryvnia and in 1996 U S dollars to separate the impact of changes in the exchange rate

2) Thermal Genco Financial Statements – Income Statements and Balance Sheets for Zakhidenergo, Dniproenergo, Donbassenergo, Centerenergo

3) Energoatom Financial Statements – Income Statements and Balance Sheets

4) LEC information – general information from the Oblenergo/LEC side of the sector

5) NDC Financial Statements – Income Statement and Balance Sheets

4.2 GENERAL ANALYSIS

The financial tables resulting from the model runs indicate that the Financial Recovery Plan, as modeled in the optimistic Scenario 3, does lead to improvements in some key financial indicators of the Energomarket and its participants The plan, fully implemented, thus results in a healthier, more solvent electricity sector Several examples of this improvement, as evidenced in the data, are offered below

CHART 1

LEC Arrears to the Energomarket

(Million Hr)

	1998Q1	1998Q2	1998Q3	1998Q4	1999Q1	1999Q2	1999Q3	1999Q4
Scenario 1 Non – Implementation	3,165	3,117	3,165	3,188	3,234	3,297	3,358	3,388
Scenario 2 Partial Implementation	3,165	3,117	3,165	3,188	3,208	3,209	3,182	3,072
Scenario 3 Full Implementation	3,165	3,117	3,145	3,099	3,050	3,004	2,928	2,755

Chart 1 indicates the quarterly status of LEC arrears to the Energomarket over the remaining time period of the Financial Recovery Plan Through 1998Q2, the plans are identical in their results and the data corresponds to collected historical data The impact of the plan's implementation begins to be felt in 1998Q3 under the optimistic Scenario 3 LEC arrears to the Energomarket are most directly related to their total payment levels to the Energomarket over time The points of the plan related to total collections, particularly the ones terminating service to debtors, rescheduling debt, and realizing budget payments, would begin taking effect by the third quarter, helping raise total collections By 1998Q4, these effects on total collections are heightened, occupational-based subsidies are cancelled and market-based retail tariffs are introduced Total collections rate improvements continue as the plan comes into full effect in 1999 By the fourth quarter of 1999, Total Payments of LECs to the Energomarket in the Scenarios 3 are calculated to be running close to 106% of their purchases from the market for the period

A slight improvement in the Wholesale Purchase Price paid to the generators (by increasing the price charged oblenergos), would also yield greater payments to the market

Better total collections result in the accelerated paying off of debt to the Energomarket, which drops to 2755 million Hr by 1999Q4 This is an improvement of more than 600 Hr over the pessimistic non-implementation Scenario 1

For the partial-implementation Scenario 2, the implementation of the plan moves along more slowly and does not start taking effect until 1999Q1 By 1999Q4, however, Total LEC Payments to Energomarket are calculated to be close to 104% and over 300 million Hr less is owed by LECs to the Energomarket than under Scenario 1 Under the non-implementation Scenario 1, Total LEC payments were presumed to not change much from the historical data and stay at around 98% of their purchases from the Energomarket

CHART 2

Energomarket Arrears to Generators

(Million Hr)

	1998Q1	1998Q2	1998Q3	1998Q4	1999Q1	1999Q2	1999Q3	1999Q4
Scenario 1 Non – Implementation	2,986	2,896	2,944	2,967	3,013	3,076	3,137	3,167
Scenario 2 Partial Implementation	2,986	2,896	2,944	2,967	2,987	2,988	2,961	2,851
Scenario 3 Full Implementation	2,986	2,896	2,924	2,878	2,829	2,786	2,707	2,534

Chart 2 indicates the amounts that the Energomarket owes the generators (Energoatom, hydro, thermal) for their generation sales This data is clearly related to the preceding table, as Energomarket collection of payments and debt from the LECs is subsequently passed on to pay off the market's debt to the Gencos It is clear that the generators fare better under the full implementation Scenario 3

CHART 3

Thermal Generator Revenue Collected in Cash

(Percent)

	1998Q1	1998Q2	1998Q3	1998Q4	1999Q1	1999Q2	1999Q3	1999Q4
Scenario 1 Non – Implementation	1 4	7 2	3 8	4 6	4 5	3 8	3 7	4 7
Scenario 2 Partial Implementation	1 4	7 2	3 8	4 6	5 4	6 8	8 5	10 8
Scenario 3 Full Implementation	1 4	7 2	4 6	7 8	9 7	10 8	11 8	13 8

Chart 3 deals with a different set of issues, namely the amount of cash that ends up flowing to the thermal generating companies This indicator is affected most significantly by the level of cash collections by the LECs, the amount of cash that gets passed on to the Energomarket and how this cash is distributed between the generators By 1999Q4, as a result of FRP implementation, LEC Cash payments to Energomarket improve to almost 25% of what they owe for purchased electricity For the non-implementation Scenario 1, this figures stays at around 12%, while the partial implementation Scenario 2 has cash payments rise to almost 21% by 1999Q4

Scenario 3 shows a marked improvement in the amount of cash eventually making its way to the generators Firstly, a number of the Financial Recovery Plan points focus on raising cash collections Elimination of occupational-based subsidies brings more cash, as individual residential customers are generally cash-payers

Additionally, stricter adherence to Market Rules would lead to a slight increase in the Wholesale Purchase Price paid to the generators, increasing total as well as cash payments into the market These would also flow through to the generators

With additional cash, and after paying off wages and maintenance costs, Gencos can theoretically purchase fuel at a cheaper price and avoid the barter premium However, looking at the operational sheets of the generators within the model, even in the optimistic Scenario 3 the cash left over can only cover, at best, 10-15% of total necessary fuel costs If it is presumed that Gencos must also cover taxes with cash, then essentially almost no cash would be left over for fuel purchases

CHART 4

Thermal Generator After Tax Profit

(Million Hr)

	1998Q1	1998Q2	1998Q3	1998Q4	1999Q1	1999Q2	1999Q3	1999Q4
Scenario 1 Non – Implementation	-72	-28	10	69	96	39	35	34
Scenario 2 Partial Implementation	-72	-28	10	69	96	133	189	135
Scenario 3 Full Implementation	-72	-28	10	170	287	245	245	73*

* Note Income taxes are presumed to be paid in Q4 for the full year of profits

Finally, Chart 4 addresses the issues of how thermal generator profitability is impacted by the different scenarios of implementation of the Financial Recovery Plan As is evident from the quarterly profit figures above, implementation of the FRP yields more profitable thermal generating companies

Profitability is, in principle, affected by the level of cash collections Implementation of the plan's activities improving cash collections would yield more cash flowing to the Gencos, as noted in the tables above With this additional cash, the Gencos could save money on fuel purchases by avoiding the barter premium However, as also noted above, the amount of fuel affected by this, and thus the additional profits from this cash are negligible Total collections by the LECs, as modeled, do not affect Genco profits If the Energomarket does not collect enough funds to allow the Gencos to cover costs, the Gencos end up running up their debts As there is no interest charged on debt, this does not affect profits

Profitability is also directly affected by the amount of money the Energomarket pays the thermal Gencos per megawatt-hour of their production Better enforcement of market rules would be expected to slightly increase the market's Wholesale Purchase Price, leading to additional operating payments, and thus increasing revenue

Implementation of the aspects of the Financial Recovery Plan standardizing offsets and barter operations begins in 1998Q4 for Scenario 1 and in 1999Q2 for Scenario 2 The resulting reduction in barter premium would affect most of the fuel purchased by Gencos and thus lower costs and improve profitability The purchasing of coal via competitive tender would give the Gencos more control as to the quality of the coal, and this is modeled by a 5% increase in the calorific content of coal, in 1998Q4 for Scenario 1 and in 1999Q2 for Scenario 2 With the improved calorific content the Gencos would essentially need to buy less coal to generate the needed amount of electricity, improving their profits Naturally, the generating companies more dependent upon natural gas and Mazut to power their plants would be less likely to benefit

As it is, the four Gencos differ in their profitability level, which primarily results from their different quality of purchased coal and the different technical characteristics and heat rates at the individual plants Looking at their financial statements, Centerenergo comes out as the most profitable

Finally, the model currently levies income taxes at the end of the fourth quarter of the year, explaining the drop-off in fourth quarter profits

OTHER OBSERVATIONS

As a whole, the Financial Recovery Plan is modeled with less of an impact on Energoatom than on the other entities in the sector Firstly, there are no changes of Energoatom's contract price with the Energomarket for electricity sold to the market This price is fixed by NERC and adjusts with the exchange rate There is also no discussion of purchasing nuclear fuel via a tender process, thus no cost savings from such a process A decrease in the barter premium does positively affect Energoatom's finances, in that it lowers the price it pays for its nuclear fuel However, for nuclear plants, fuel comprises a smaller portion of total costs than in thermal plant A much greater portion of Energoatom's costs fall under the category of Fixed Operating Costs and thus the impact of this point of the plan is weaker Finally, as with the thermal generators, the impact of increased cash flowing to Energoatom would have a positive impact on their profits

4.4 FINANCIAL STATEMENTS

Scenario 1 - Non Implementation

Summary
General assumption

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Ukranian inflation [%]	3 1	3 1	3 1	3 1	3 1	3 1	3 1	3 1	3 1	3 1	3 1	3 1	13	13	8
2 Ukranian price level [1996=1	1 03	1 06	1 1	1 13	1 16	1 2	1 24	1 28	1 32	1 36	1 4	1 44	1 13	1 28	1 44
3 US inflation %	0 74	0 74	0 74	0 74	0 74	0 74	0 74	0 74	0 74	0 74	0 74	0 74	3	3	3
4 US price level [1996=1]	1 01	1 01	1 02	1 03	1 04	1 05	1 05	1 06	1 07	1 08	1 08	1 09	1 03	1 06	1 09
5 Exchange rate [H $]	1 84	1 89	1 93	1 97	2 02	2 1	2 25	2 45	2 51	2 57	2 63	2 69	1 97	2 45	2 69
7 Fuel prices															
7a Coal [1996 $/t]	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 9	33 87	33 87	33 87
7b Mazut [1996 $/t]	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9	112 9
7c Gas [1996 $/tcm]	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
7d Coal [Hv/t]	62 9	64 8	66 8	68 9	71	74 3	80 2	88	90 8	93 6	96 5	99 5	65 84	78 41	95 06
7 Mazut [H/t]	209 52	216 01	222 71	229 62	236 73	247 81	267 48	293 41	302 51	311 88	321 55	331 52	219 47	261 36	316 87
7f Gas [H/tcm]	154 03	158 81	163 73	168 8	174 04	182 18	196 64	215 7	222 39	229 29	236 39	243 72	161 34	192 14	232 95

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Zakhidenergo Financial Statement [Hv Min]

#1 Non implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	206	111	217	230 7	268 4	216 4	239 2	387 1	370 4	295 4	300 3	453 9	764 7	1111 1	1419 9
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**206**	**111**	**217**	**230 7**	**268 4**	**216 4**	**239 2**	**387 1**	**370 4**	**295 4**	**300 3**	**453 9**	**764 7**	**1111 1**	**1419 9**
5 Costs															
6 Fuel	177	75	158	208 6	251 7	191 5	202 5	329 5	313 5	249 9	255 3	386 3	618 6	975 2	1205
7 Wages				5 3	5 5	5 7	5 9	6	6 2	6 4	6 6	6 8	5 3	23 1	26 1
8 Maintenance				6	6 1	6 3	6 5	6 7	6 9	7 1	7 4	7 6	6	25 7	29
9 Major maintenance													0	0	0
10 Other	25	10	29	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	74	43 2	48 8
11 Depreciation	6	13	13	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	43 9	47 6	47 6
12 Total costs	**208**	**98**	**200**	**241 8**	**285 6**	**226 1**	**237 8**	**365 5**	**350 2**	**287 3**	**293 6**	**425 4**	**747 8**	**1114 9**	**1356 5**
13 Profit before interest and tax	2	13	17	11 1	17 2	9 7	1 4	21 6	20 2	8 1	6 6	28 4	16 9	3 8	63 3
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	2	13	17	11 1	17 2	9 7	1 4	21 6	20 2	8 1	6 6	28 4	16 9	3 8	63 3
17 Taxation	8	6	7	0	0	0	0	0	0	0	0	19	21	0	19
18 Profit after tax	10	7	10	11 1	17 2	9 7	1 4	21 6	20 2	8 1	6 6	9 5	4 1	3 8	44 3
19 Profit brought forward	34	-44	37	27	38 1	55 2	64 9	63 9	-47 6	32 5	26 5	21 5	34	38 1	47 6
20 Dividends	0	0	0	0	0	0	0 4	5 4	5	2	1 7	2 4	0	5 8	11 1
21 Profit carried forward	-44	37	27	38 1	55 2	64 9	63 9	-47 6	32 5	26 5	21 5	14 4	38 1	-47 6	14 4

Zakhidenergo Financial Statement [Hv Min]

Balance Sheet

#1 Non-implementation	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2962	3424	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977
Depreciation	683	696	709	720 9	732 8	744 7	756 6	768 6	780 5	792 4	804 3	816 2	720 9	768 6	816 2
Net	2279	2728	1268	1509 8	1244 2	1232 3	1220 4	1208 4	1196 5	1184 6	1172 7	1160 8	1509 8	1208 4	1160 8
Other fixed assets	145	270	282	282	282	282	282	282	282	282	282	282	282	282	282
Total	2424	2998	1550	1538 9	1526 2	1514 3	1502 4	1490 4	1478 5	1466 6	1454 7	1442 8	1538 9	1490 4	1442 8
Current assets															
Debtors	**267**	**302**	**327**	**308**	**399**	**410**	**414 8**	**417 6**	**422 8**	**429 4**	**435 5**	**439 1**	**308**	**417 6**	**439 1**
Debtors NDC/ESE	133	168	193	174	265	276	280 8	283 6	288 8	295 4	301 5	305 1	174	283 6	305 1
Debtors other & NDC disp	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	24	31	34	34	34	34	34	34	34	34	34	34	34	34	34
Fuel inventory	58	75	58	58	58	58	58	58	58	58	58	58	58	58	58
Cash	1	0	0	0	0	0	0	0	6 8	5 5	5 6	8 3	0	0	8 3
Total	350	408	419	400	491	502	506 8	509 6	521 5	526 9	533 2	539 4	400	509 6	539 4
Current liabilities															
Due fuel suppliers old	293	293	293	293	293	293	256 4	219 8	183 1	146 5	109 9	73 3	293	219 8	73 3
Due Fuel Suppliers- Offsets	29	85	71	71	71	71	65 1	59 2	53 3	47 3	41 4	35 5	71	59 2	35 5
Due fuel suppliers new				20 9	74 7	116 8	98 2	98 4	97 2	89 9	85 5	95 6	20 9	98 4	95 6
Other Trade Creditors													0	0	0
State	15	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Credit toward Current liabilities				38 9	0	30 6	0	0	0	0	0	0			
Short term borrowing	21	20	1	0	2 7	0	22 3	39 3	68 1	105 2	141 6	161 2	0	39 3	161 2
Total	358	416	383	364	459 4	468 2	460	434 6	419 6	406 9	396 4	383 6	364	434 6	383 6
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	2416	2990	1586	1574 9	1557 8	1548 1	1549 1	1565 4	1580 5	1586 5	1591 5	1598 6	1574 9	1565 4	1598 6
Shareholders funds															
Share capital	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Revaluation reserve	2332	2899	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485
Profit and losses account	-44	37	27	38 1	55 2	-64 9	63 9	-47 6	32 5	26 5	21 5	14 4	38 1	-47 6	14 4
Total	**2416**	**2990**	**1586**	**1574 9**	**1557 8**	**1548 1**	**1549 1**	**1565 4**	**1580 5**	**1586 5**	**1591 5**	**1598 6**	**1574 9**	**1565 4**	**1598 6**
			0	0	0	0	0	0	0	0	0	0			

Dniproenergo Financial Statement [Hv Min]

#1 Non implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	242	253	271	352 8	302 6	318	351 5	568 9	544 3	434 1	441 2	667	1118 8	1540 9	2086 6
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**242**	**253**	**271**	**352 8**	**302 6**	**318**	**351 5**	**568 9**	**544 3**	**434 1**	**441 2**	**667**	**1118 8**	**1540 9**	**2086 6**
5 Costs															
6 Fuel	217	209	249	318 2	274 7	274 1	309 4	502 3	480 5	383 3	389 6	588 9	993 2	1360 6	1842 3
7 Wages				10 8	11 2	11 5	11 9	12 3	12 6	13	13 4	13 8	10 8	46 9	52 9
8 Maintenance				12	12 3	12 7	13 1	13 5	14	14 4	14 8	15 3	12	51 7	58 5
9 Additional maintenance													0	0	0
10 Other	14	21	21	4	4 1	4 3	4 4	4 5	4 7	4 8	5	5 1	60	17 3	19 5
11 Depreciation	5	14	2	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	30 3	37 2	37 2
12 Total costs	**236**	**244**	**272**	**354 3**	**311 7**	**311 9**	**348 1**	**541 9**	**521 1**	**424 8**	**432 1**	**632 4**	**1106 3**	**1513 6**	**2010 4**
13 Profit before interest and tax	6	9	1	1 5	9	6	3 3	27	23 2	9 3	9 2	34 6	12 5	27 3	76 2
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	9	1	1 5	9	6	3 3	27	23 2	9 3	9 2	34 6	12 5	27 3	76 2
17 Taxation	6	1	0	0	0	0	0	8 2	0	0	0	22 9	7	8 2	22 9
18 Profit after tax	0	8	1	-1 5	9	6	3 3	18 8	23 2	9 3	9 2	11 7	5 5	19 1	53 4
19 Profit brought forward	51	51	-43	-44	-45 5	54 5	50	-47 5	33 4	16	9	-2 1	51	-45 5	33 4
20 Dividends	0	0	0	0	0	1 5	0 8	4 7	5 8	2 3	2 3	2 9	0	7	13 3
21 Profit carried forward	51	-43	-44	-45 5	54 5	50	-47 5	33 4	16	9	2 1	6 6	-45 5	-33 4	6 6

Dniproenergo Financial Statement [Hv Min]

#1 Non implementation

Balance Sheet

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1544	1588	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542
Depreciation	887	901	903	912 3	927 5	942 3	956 7	970 8	984 6	998	1011 1	1023 9	912 3	970 8	1023 9
Net	657	687	639	629 7	614 5	599 7	585 3	571 2	557 4	544	530 9	518 1	629 7	571 2	518 1
Other fixed assets	31	34	35	35	35	35	35	35	35	35	35	35	35	35	35
Total	688	721	674	664 7	649 5	634 7	620 3	606 2	592 4	579	565 9	553 1	664 7	606 2	553 1
Current assets															
Debtors	**415**	**361**	**392**	**571**	**517**	**522**	**529 1**	**533 1**	**540 8**	**550 5**	**559 5**	**564 8**	**571**	**533 1**	**564 8**
Debtors NDC/ESE	281	227	258	437	383	388	395 1	399 1	406 8	416 5	425 5	430 8	437	399 1	430 8
Debtors other and NDC di	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	6	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Fuel inventory	148	163	160	160	160	160	160	160	160	160	160	160	160	160	160
Cash	1	1	1	0	0	0	0	0	10 2	8 3	8 5	12 5	0	0	12 5
Total	570	539	567	745	691	696	703 1	707 1	725	732 8	742	751 2	745	707 1	751 2
Current liabilities															
Due fuel suppliers old	367 5	367 5	367 5	367 5	367 5	367 5	321 6	275 6	229 7	183 8	137 8	91 9	367 5	275 6	91 9
Due Fuel Suppliers Offsets i	214 5	153 5	159 5	159 5	159 5	159 5	146 2	132 9	119 6	106 3	93	79 8	159 5	132 9	79 8
Due fuel suppliers new				27	130 6	199 4	159 2	148 7	139 9	125 7	116 8	127 8	27	148 7	127 8
Other Trade Creditors													0	0	0
State	15	21	16	16	16	16	16	16	16	16	16	16	16	16	16
Credit towards current liabilities				0	3 5	86 7	0	0	0	0	0	0			
Short term borrowing	22	33	17	160 2	0	0	2 8	48 4	103 2	163 9	221 3	257 3	160 2	48 4	257 3
Total	619	575	560	730 2	670 1	655 7	645 8	621 7	608 4	595 7	585	572 7	730 2	621 7	572 7
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	639	685	681	679 5	670 5	675	677 5	691 6	709	716	722 9	731 6	679 5	691 6	731 6
Shareholders funds															
Share capital	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Revaluation reserve	592	630	627	627	627	627	627	627	627	627	627	627	627	627	627
Profit and losses account	51	-43	-44	-45 5	54 5	50	-47 5	33 4	16	9	2 1	6 6	-45 5	33 4	6 6
Total	639	685	681	679 5	670 5	675	677 5	691 6	709	716	722 9	731 6	679 5	691 6	731 6

Donbassenergo Financial Statement [Hv Min]

#1 Non implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	229	138	352	352 8	330 5	344 5	380 9	616 4	589 8	470 4	478 1	722 7	1071 8	1672 3	2261
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**229**	**138**	**352**	**352 8**	**330 5**	**344 5**	**380 9**	**616 4**	**589 8**	**470 4**	**478 1**	**722 7**	**1071 8**	**1672 3**	**2261**
5 Costs															
6 Fuel	206	106	298	345 3	333 1	329 8	350 9	568	543 4	433 5	440 6	665 9	955 3	1581 9	2083 4
7 Wages				10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	10	43 2	48 8
8 Maintenance				12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	12	51 8	58 6
9 Additional maintenance													0	0	0
10 Other	16	12	34	12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	74	51 8	58 6
11 Depreciation	1	19	13	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	45 6	50 2	50 2
12 Total costs	**223**	**137**	**345**	**391 9**	**380 7**	**378 5**	**400 8**	**619**	**595 6**	**486 9**	**495 2**	**721 9**	**1096 9**	**1779**	**2299 6**
13 Profit before interest and tax	6	1	7	39	50 2	34	19 9	2 6	5 8	16 4	17 1	0 8	25	106 7	38 6
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	1	7	39	50 2	34	19 9	2 6	5 8	16 4	17 1	0 8	25	106 7	38 6
17 Taxation	6	3	5	0	0	0	0	0	0	0	0	0	14	0	0
18 Profit after tax	0	2	2	39	50 2	34	19 9	2 6	5 8	16 4	17 1	0 8	39	106 7	38 6
19 Profit brought forward	122	122	124	122	161	211 3	245 3	265 2	267 7	273 6	290	307 1	122	161	267 7
20 Dividends	0	0	0	0	0	0	0	0	0	0	0	0 2	0	0	0 2
21 Profit carried forward	122	124	122	161	211 3	245 3	265 2	267 7	273 6	290	307 1	306 5	161	267 7	273 6

Donbassenergo Financial Statement [Hv Min]

#1 Non implementation

Balance Sheet

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2074	2127	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084
Depreciation	1043	1062	1075	1087 6	1100 1	1112 7	1125 2	1137 8	1150 3	1162 9	1175 4	1188	1087 6	1137 8	1188
Net	1031	1065	1009	996 4	983 9	971 3	958 8	946 2	933 7	921 1	908 6	896	996 4	946 2	896
Other fixed assets	146	153	174	174	174	174	174	174	174	174	174	174	174	174	174
Total	1177	1218	1183	1170 4	1157 9	1145 3	1132 8	1120 2	1107 7	1095 1	1082 6	1070	1170 4	1120 2	1070
Current assets															
Debtors	**225**	**332**	**360**	**358**	**400**	**405**	**412 7**	**417**	**425 4**	**435 8**	**445 7**	**451 4**	**358**	**417**	**451 4**
Debtors NDC/ESE	102	209	237	235	277	282	289 7	294	302 4	312 8	322 7	328 4	235	294	328 4
Debtors other and NDC	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Other	16	33	46	46	46	46	46	46	46	46	46	46	46	46	46
Fuel inventory	86	92	100	100	100	100	100	100	100	100	100	100	100	100	100
Cash	3	1	1	0	0	0	0	0	11 7	9 5	9 7	14 2	0	0	14 2
Total	330	458	507	504	546	551	558 7	563	583	591 3	601 3	611 5	504	563	611 5
Current liabilities															
Due fuel suppliers old	285	285	285	285	285	285	249 4	213 8	178 1	142 5	106 9	71 3	285	213 8	71 3
Due Fuel Suppliers Offsets	197	304	307	307	307	307	281 4	255 8	230 3	204 7	179 1	153 5	307	255 8	153 5
Due fuel suppliers new				34 5	89 6	158 7	140 9	150 7	154 8	146 6	141 8	161 1	34 5	150 7	161 1
Other Trade Creditors															
State	14	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Credit towards current liabilities				5 1	0	23 1	0	0	0	0	0	0			
Short term borrowing	19	26	6	0	19 5	0	70 9	116 7	187	268 7	349 2	388 2	0	116 7	388 2
Total	515	627	610	633 5	713 2	739 6	754 6	749	762 2	774 4	789	786	633 5	749	786
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	992	1049	1080	1041	990 7	956 7	936 8	934 3	928 4	912	894 9	895 5	1041	934 3	895 5
Shareholders funds															
Share capital	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**
Revaluation reserve	878	937	966	966	966	966	966	966	966	966	966	966	966	966	966
Profit and losses account	122	124	122	161	211 3	245 3	265 2	267 7	273 6	290	307 1	306 5	161	267 7	306 5
Total	992	1049	1080	1041	990 7	956 7	936 8	934 3	928 4	912	894 9	895 5	1041	934 3	895 5

Centerenergo Financial Statement [Hv Min]

#1 Non implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	281	124	314	407 1	364 7	302 2	334 1	540 7	517 3	412 6	419 4	633 9	1126 1	1541 6	1983 2
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**281**	**124**	**314**	**407 1**	**364 7**	**302 2**	**334 1**	**540 7**	**517 3**	**412 6**	**419 4**	**633 9**	**1126 1**	**1541 6**	**1983 2**
													0	0	0
5 Costs													0	0	0
6 Fuel	270	94	303	353 7	324 6	256 8	272 4	442 3	420 3	334 8	342 4	518 3	1020 7	1296 1	1615 8
7 Wages				7 2	7 5	7 7	7 9	8 2	8 4	8 7	9	9 2	7 2	31 2	35 3
8 Maintenance				8 1	8 4	8 6	8 9	9 2	9 5	9 8	10 1	10 4	8 1	35 1	39 7
9 Major maintenance													0	0	0
10 Other	13	10	19	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	52	43 2	48 8
11 Depreciation	6	11	11	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	37 1	36 2	36 2
12 Total costs	**289**	**115**	**333**	**388 1**	**359 8**	**292 8**	**309 2**	**480**	**458 9**	**374 3**	**382 9**	**559 7**	**1125 1**	**1441 9**	**1775 8**
13 Profit before interest and tax	8	9	19	19	4 8	9 4	24 9	60 7	58 4	38 3	36 5	74 2	1	99 7	207 4
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	8	9	19	19	4 8	9 4	24 9	60 7	58 4	38 3	36 5	74 2	1	99 7	207 4
17 Taxation	0	0	0	0 3	0	0	0	29 9	0	0	0	62 2	0 3	29 9	62 2
18 Profit after tax	8	9	19	18 7	4 8	9 4	24 9	30 8	58 4	38 3	36 5	12	0 7	69 8	145 2
19 Profit brought forward	94	102	93	112	93 3	89 7	82 7	64	40 9	2 9	31 6	59	94	93 3	-40 9
20 Dividends	0	0	0	0	1 2	2 3	6 2	7 7	14 6	9 6	9 1	3	0	17 5	36 3
21 Profit carried forward	102	93	112	93 3	89 7	82 7	-64	-40 9	2 9	31 6	59	67 9	93 3	40 9	67 9

Centerenergo Financial Statement [Hv Min]

Balance Sheet

#1 Non implementation	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1450	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503
Depreciation	783	794	823	832 1	841 1	850 2	859 2	868 3	877 3	886 4	895 4	904 5	832 1	868 3	904 5
Net	667	709	680	670 9	661 9	652 8	643 8	634 7	625 7	616 6	607 6	598 5	670 9	634 7	598 5
Other fixed assets	74	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Total	741	788	759	749 9	740 9	731 8	722 8	713 7	704 7	695 6	686 6	677 5	749 9	713 7	677 5
Current assets															
Debtors	**659**	**633**	**669**	**606**	**625**	**599**	**605 7**	**609 6**	**616 9**	**626**	**634 7**	**639 7**	**606**	**609 6**	**639 7**
Debtors NDC/ESE	305	279	315	252	271	245	251 7	255 6	262 9	272	280 7	285 7	252	255 6	285 7
Debtors other & NDC dis	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354
Other	3	6	8	8	8	8	8	8	8	8	8	8	8	8	8
Fuel inventory	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Cash	1	0	0	0	0	0	0	0	9	7 3	7 5	11	0	0	11
Total	748	725	763	700	719	693	699 7	703 6	719 9	727 3	736 2	744 7	700	703 6	744 7
Current liabilities															
Due fuel suppliers old	414	414	414	414	414	414	362 3	310 5	258 8	207	155 3	103 5	414	310 5	103 5
Due Fuel Suppliers Offsets	234	196	223	223	223	223	204 4	185 8	167 3	148 7	130 1	111 5	223	185 8	111 5
Due fuel suppliers new				35 4	88 8	136 3	118 2	123	124 3	116 6	112 1	126 6	35 4	123	126 6
Other Trade Creditors													0	0	0
State	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Credit towards current liabilities				126 1	173 3	262 8	195 3	158 1	125 7	77 9	30 6	0			
Short term borrowing	17	18	0	0	0	0	0	0	0	0	0	15 7	0	0	15 7
Total	673	638	647	556 2	562 6	520 5	499 5	471 2	434 7	404 4	376 7	367 2	556 2	471 2	367 2
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	816	875	875	893 7	897 3	904 3	923	946 1	989 9	1018 6	1046	1054 9	893 7	946 1	1054 9
Shareholders funds														0	0
Share capital	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Revaluation reserve	826	876	895	895	895	895	895	895	895	895	895	895	895	895	895
Profit and losses account	102	93	112	93 3	89 7	82 7	64	-40 9	2 9	31 6	59	67 9	93 3	-40 9	67 9
Total	816	875	875	893 7	897 3	904 3	923	946 1	989 9	1018 6	1046	1054 9	893 7	946 1	1054 9

Energoatom Financial Statement [Hv Min]

#1 Non implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Electricity sales to NDC	584	918	1071	771 2	973 8	948 2	1023 5	1122 7	1157 5	1193 4	1230 4	1268 5	3344 2	4068 2	4849 8
2 Electricity Sales Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Other Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**584**	**918**	**1071**	**771 2**	**973 8**	**948 2**	**1023 5**	**1122 7**	**1157 5**	**1193 4**	**1230 4**	**1268 5**	**3344 2**	**4068 2**	**4849 8**
5 Costs															
6 Costs of energy sales	256	471	461	417 6	450 9	439 8	471 6	512 5	520 1	537 5	559 1	575 7	1605 6	1874 7	2192 4
7 Cost of other sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Depreciation	45	47	117	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	292 5	334 1	334 1
9 Gross Profit	**283**	**400**	**493**	**270 1**	**439 4**	**424 9**	**468 4**	**526 7**	**553 8**	**572 4**	**587 8**	**609 3**	**1446 1**	**1859 4**	**2323 3**
10 Fixed Operating Costs	212	246	228	235 1	242 4	249 9	257 6	265 6	273 8	282 3	291 1	300 1	921 1	1015 4	1147 3
11 Interest Expense													0	0	0
12 Other Income	26	30	38	38	38	38	38	38	38	38	38	38	132	152	152
13 Profit before tax	45	124	227	3	159	137	172 8	223 1	242	252 1	258 7	271 2	393	691 9	1024
14 Taxation	68	72	178	0	0	0	0	207 6	0	0	0	307 2	318	207 6	307 2
15 Profit after tax	23	52	49	3	159	137	172 8	15 5	242	252 1	258 7	36	75	484 3	716 8
16 Dividends	0	0	0	0	39 8	34 3	43 2	3 9	60 5	63	64 7	0	0	121 1	188 2
17 Retained profit	23	52	49	3	119 3	102 8	129 6	11 6	181 5	189	194	36	75	363 3	528 6
18 Profit Carried Forward	151	99	50	53	66 3	169 1	298 6	310 3	491 8	680 8	874 8	838 9	53	310 3	838 9

Energoatom Financial Statement [Hv Min]

Balance Sheet

	#1 Non implementation	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
	Fixed assets															
1	Gross	12932	12879	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863
2	Depreciation	2887	2934	3051	3134 5	3218	3301 6	3385 1	3468 6	3552 1	3635 7	3719 2	3802 7	3134 5	3468 6	3802 7
3	Other fixed assets	10890	12213	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594
3a	K2/R4 Construction Fund					108 2	213 6	327 3	452	580 6	713 2	849 9	990 9	0	452	990 9
4	Total	20935	22158	22406	22322 5	22347 1	22369	22399 2	22440 4	22485 5	22534 6	22587 7	22645 2	22322 5	22440 4	22645 2
	Current assets															
5	**Debtors**	**1841**	**2034**	**2481**	**1955**	**2348**	**2248**	**2268 6**	**2276 5**	**2292 9**	**2319 5**	**2344 8**	**2354 8**	**1955**	**2276 5**	**2354 8**
6	Debtors NDC/ESE	1125	1318	1765	1239	1632	1532	1552 6	1560 5	1576 9	1603 5	1628 8	1638 8	1239	1560 5	1638 8
7	Debtors other & ND	716	716	716	716	716	716	716	716	716	716	716	716	716	716	716
8	Other current assets	172	224	132	132	132	132	132	132	132	132	132	132	132	132	132
9	Inventory	1494	1574	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654
10	Cash	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
11	Total	3509	3835	4269	3743	4136	4036	4056 6	4064 5	4080 9	4107 5	4132 8	4142 8	3743	4064 5	4142 8
	Current liabilities															
12	Trade Creditors	1804	2018	2232	2232	2232	2232	1953	1674	1395	1116	837	558	2232	1674	558
13	Owed to State	149	190	265	265	265	265	242 9	220 8	198 8	176 7	154 6	132 5	265	220 8	132 5
14	Credit towards current liabilities				556 5	258 1	439 1	216 8	0	0	0	0	0	556 5	0	0
14a	Short term borrowing	49	47	50	0	0	0	0	121 8	302 9	490 5	676 1	1080 6	0	121 8	1080 6
15	Total	2002	2255	2547	1940 5	2238 9	2057 9	1979 1	2016 7	1896 6	1783 2	1667 7	1771 1	1940 5	2016 7	1771 1
16	**Long Term Liabilities**															
17	Long Term Debt	76	113	135	135	135	135	135	135	135	135	135	135	135	135	135
18	**Net Assets**	**22366**	**23625**	**23993**	**23990**	**24109 3**	**24212 1**	**24341 6**	**24353 3**	**24534 8**	**24723 8**	**24917 8**	**24881 9**	**23990**	**24353 3**	**24881 9**
19	**Shareholders funds**															
20	Authorized capital	10062	9897	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831
21	Special Fund & Target F	325	226	416	416	416	416	416	416	416	416	416	416	416	416	416
22	Other Reserves	12130	13601	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796
23	Profit (Loss) Cumulativ	151	99	50	53	66 3	169 1	298 6	310 3	491 8	680 8	874 8	838 9	53	310 3	838 9
24	Total	22366	23625	23993	23990	24109 3	24212 1	24341 6	24353 3	24534 8	24723 8	24917 8	24881 9	23990	24353 3	24881 9

LEC Assumption and Results

#1 Non implementation

			97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Retail Sales	million MWh	37	32	31	33	33	32	31	35 5	33 7	32 6	31 6	36 2		131 5	134 1
2	Oblenergo Sales at Retail Tariffs	mill Hr				1855 6	1887 5	1883 3	2154 6	2639 7	2549 7	2519	2486 4	2901 4		8 565	10 457
3	Subsidy Amount (from 50% 100% discount)	mill Hr				152 1	152 6	147 2	144 5	170 1	161 7	154 5	150 8	176 6		615	644
3a	Occup--based Subsidies (10% of subs)	mill Hr				15 2	15 3	14 7	14 5	17	16 2	15 4	15 1	17 7			
3b	Occupl-based Subsidies (% of NDC purch)	%															
4a	Oblenergo Cash Collections (Minn)	mill Hr				329 7	327 9	340	371 3	470 4	453 7	447 3	441	514 2		1 509	1 856
5a	Oblenergo Total Collections (Minn)	mill Hr				1789 8	1613 1	1772 3	2326 9	2867 5	2769 5	2735 6	2700	3150 6		8 580	11 356
	LEC costs																
6	LVNO and Supply costs	mill Hr				253 7	253 7	246	238 3	272 9	258 7	250 9	243 1	278 3		1 011	1 031
7	Self Generation	million MWh	2 4	1 4	1 2	2 6	2 4	1 4	1 2	2 6	2 4	1 2	1 2	2 6		7 6	7 3
8	Self Generation costs	mill Hr				108 3	98	60 8	53 4	108 3	98	60 8	53 4	108 3		321	321
9	LEC purchases from NDC	million MWh				30 61	30 39	27 45	27 31	33 13	31 04	28 03	27 88	33 85		118 3	120 8
10	Wholesale Market Price	Hr / Mwh				57 3	61	65	71 5	80 1	83 8	83 6	86 1	90 6		69 4	86
11a	LEC purchases from NDC	mill Hr				1753 55	1853	1784 8	1953 2	2655 1	2601 6	2342 3	2399 6	3067 6		8 246	10 411
12	LEC Payments to NDC Total	%				100 4%	66 1 %	103 0%	97 6%	99 1%	98 3 %	97 3 %	97 5%	99 0%		91 0%	98 0%
13	LEC Payments to NDC Total	mill Hr				1760 6	1224 8	1838 4	1905 4	2631 8	2556 2	2278 5	2339 3	3037 7		7 600	10 212
14	LEC Payments to NDC Cash	%				10 6 %	10 4 %	12 2%	11 8%	12 3 %	12 2 %	11 7%	11 8%	12 3%		12 0%	12 0%
15	LEC Payments to NDC Cash	mill Hr				185 9	192 7	217 8	230 9	325 8	316 3	273 6	283 5	376		967	1 249
16	Cash Difference (Minn and NDC)	mill Hr				144	135	122	140	145	137	174	157	138		542	606 8
17	LEC LVNO Supply Self Gen expenses	mill Hr				362	351 7	306 8	291 7	381 2	356 7	311 7	296 4	386 6		1331	1351 5
18	Collections Difference (Minn and NDC)	mill Hr				29 3	388 3	-66 1	421 5	235 8	213 3	457 1	360 7	112 9		244 86	
19	IES purchases form NDC	million MW				8 86	8 73	7 7	7 6	9 53	8 91	7 85	7 75	9 72		34	34 2
20	IES purchases form NDC	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	656 2	667 1	880 7		2340	2950 3
21	IES Payments to NDC Total	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	656 2	667 1	880 7		2340	2950 3
22	IES Payments to NDC Cash	mill Hr				0	0	0	0	0	0	0	0	0		0	0

NDC Financial Statements

#1 Non implementation

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Revenues															
1 Total Energy Sales	1506	1583	2997	2261	2385	2285	2497	3419	3348	2998	3067	3948	8347	10586	13362
2 Sales to LECs	0	0	0	1754	1853	1785	1953	2655	2602	2342	2400	3068		8246	10411
3 Sales to IESs	0	0	0	507	532	501	543	763	746	656	667	881		2340	2950
Expenses															
4 Power purchases				2157	2280	2175	2379	3290	3217	2864	2929	3808	2157	10124	12818
5 HV net fee [Hv mil]				80	81	85	91	99	101	103	106	108	80	355	419
6 NDC/ESE fee [Hv mil]				24	24	25	27	30	30	31	32	32	24	107	126
7 Minus profit on import/export				0	0	0	0	0	0	0	0	0	0	0	0
8 Subsidy Requirement				0	0	0	0	0	0	0	0	0	0	0	0
9 Total Expense	1522	1549	3004	2261	2385	2285	2497	3419	3348	2998	3067	3948	8336	10586	13362
10 Profit before tax	16	34	7	0	0	0	0	0	0	0	0	0	11	0	0
11 Taxation	4	0	6	0	0	0	0	0	0	0	0	0	10	0	0
12 Profit after Tax	20	34	13	0	0	0	0	0	0	0	0	0	1	0	0

NDC Financial Statements

Balance Sheet

		97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Fixed assets Gross	239	235	236	236	236	236	236	236	236	236	236	236	236	236	236
2	Fixed Assets Depr	72	70	71	71	71	71	71	71	71	71	71	71	71	71	71
3	Net assets	167	165	165	165	165	165	165	165	165	165	165	165	165	165	165
4	Other fixed assets	1	8	9	9	9	9	9	9	9	9	9	9	9	9	9
	Short Term Assets															
5	Cash	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Due from LECs	2594	2619	2704	2503	3165	3117	3165	3188	3234	3297	3358	3388	2503	3188	3388
7	Inventory	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4
8	**Due from IESs**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8a	Total Current Assets	2598	2625	2708	2507	3169	3121	3169	3192	3238	3301	3362	3392	2507	3192	3392
	Short Term Liabilities															
	Due to Gencos															
9	Nuclear	1125	1318	1765	1239	1632	1532	1553	1561	1577	1603	1629	1639	1239	1561	1639
10	Hydro				147	158	173	174	174	175	176	177	178	147	174	178
11	Centrenergo	305	279	315	252	271	245	252	256	263	272	281	286	252	256	286
12	Donbassenergo	102	209	237	235	277	282	290	294	302	313	323	328	235	294	328
13	Dniprenergo	281	227	258	437	383	388	395	399	407	416	426	431	437	399	431
14	Zakhidenergo	133	168	193	174	265	276	281	284	289	295	302	305	174	284	305
15	Other Trade Creditors	129	177	128	128	128	128	128	128	128	128	128	128	128	128	128
16	Due to Trade creditors	2075	2378	2640	2356	2858	2768	2816	2839	2885	2948	3009	3039	2356	2839	3039
17	Other Creditors	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3
18	Notes outstanding	617	305	128	64	0	0	0	0	0	0	0	0	64	0	0
19	Short term borrowing	37	36	30	177	401	443	443	443	443	443	443	443	177	443	443
20	NET assets	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81
21	Authorized Capital	174	172	171	171	171	171	171	171	171	171	171	171	171	171	171
22	**Special Fund& Target Financin**	75	83	95	95	95	95	95	95	95	95	95	95	95	95	95
23	Other Reserves	3	5	10	10	10	10	10	10	10	10	10	10	10	10	10
24	Profit (Loss) Cumulative	216	182	195	195	195	195	195	195	195	195	195	195	195	195	195
25	TOTAL	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81

4.5 FINANCIAL STATEMENTS

Scenario 2 - Partial Implementation

Summary Indicators

#2 Partial Implementation

		97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Wholesale Market Selling Price [Hr/MWh]				57 28	60 98	65 02	71 51	80 14	83 81	83 57	86 06	90 63	19 09	69 41	86 02
2	Income Tax Fossil and Nuclear Generators[Hr mil]	88	82	190	0	0	0	0	246	0	0	0	568	360	246	568
3	Generator After Tax Profit [Hr mil]															
3a	Fossil generators	-18	22	-8	-33	-72	-28	10	69	96	133	189	135	-37	-22	554
3b	Energoatom	-23	52	49	-3	159	137	173	16	256	285	271	-42	75	484	771
4	Dividends [Hr Mil]	0	0	0	40	35	47	11	82	97	101	47	51	40	176	296
5	NDC sales [Hr Mil]	1506	1583	2997	2261	2385	2285	2497	3419	3348	2998	3067	3948			
5a	To LECs				1754	1853	1785	1953	2655	2602	2342	2400	3068	1754	8246	10411
5b	To IESs				507	532	501	543	763	746	656	667	881	507	2340	2950
6	LEC arrears to ESE, [Hr Mil]	2594	2619	2704	2503	3165	3117	3165	3188	3208	3209	3182	3072	2503	3188	3072
7	ESE undisputed arrears to Generators [Hr Mil]	1946	2201	2768	2484	2986	2896	2944	2967	2987	2988	2961	2851	2484	2967	2851
8	Generator Revenue Paid in Cash [%]															
8a	Fossil generators				4 7	1 4	7 2	3 8	4 6	5 4	6 8	8 5	10 8			
8b	Energoatom				14 6	15 2	13 7	16 5	19	21 5	21 5	23 6	29 3			
1	Wholesale Market Selling Price [1996$/MWh]				28 16	29 08	29 62	30 18	30 84	31 28	30 25	30 22	30 86	9 39	29 93	30 65
2	Income Tax Fossil and Nuclear Generators[1996$ Mil]	47 42	42 86	96 32	0 15	0	0	0	94 54	0	0	0	193 3	187	95	193
3	Generator After Tax Profit [1996$ Mil]															
3a	Fossil generators	-10	11	-4	-16	-34	-13	4	26	36	48	66	46	-18	-17	197
3b	Energoatom	-12	27	25	-1	76	62	73	6	96	103	95	-14	38	217	280
4	Dividends [1996 $ Mil]	0	0	0	20	17	21	5	31	36	37	17	17	20	75	107
5	NDC sales [1996 $ Mil]	812	827	1519	1112	1138	1041	1054	1315	1250	1085	1077	1345			
5a	To LECs				862	884	813	824	1022	971	848	843	1045	862	3543	3706
5b	To IESs				249	254	228	229	294	279	238	234	300	249	1005	1050
6	LEC arrears to ESE [1996$ Mil]	1398	1369	1371	1231	1509	1420	1336	1227	1197	1162	1117	1046	1231	1227	1046
7	ESE undisputed arrears to Generators [1996$Mil]	1049	1150	1403	1221	1424	1319	1243	1142	1115	1082	1040	971	1221	1142	971

Zakhidenergo Financial Statement [Hv Min]

#2 Partial Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	206	111	217	230 7	268 4	216 4	239 2	387 1	370 4	295 4	300 3	453 9	764 7	1111 1	1419 9
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**206**	**111**	**217**	**230 7**	**268 4**	**216 4**	**239 2**	**387 1**	**370 4**	**295 4**	**300 3**	**453 9**	**764 7**	**1111 1**	**1419 9**
5 Costs															
6 Fuel	177	75	158	208 6	251 7	191 5	202 5	329 5	313 5	230 9	225	340 2	618 6	975 2	1109 5
7 Wages				5 3	5 5	5 7	5 9	6	6 2	6 4	6 6	6 8	5 3	23 1	26 1
8 Maintenance				6	6 1	6 3	6 5	6 7	6 9	7 1	7 4	7 6	6	25 7	29
9 Major maintenance													0	0	0
10 Other	25	10	29	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	74	43 2	48 8
11 Depreciation	6	13	13	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	43 9	47 6	47 6
12 Total costs	**208**	**98**	**200**	**241 8**	**285 6**	**226 1**	**237 8**	**365 5**	**350 2**	**268 4**	**263 3**	**379 3**	**747 8**	**1114 9**	**1261 1**
13 Profit before interest and tax	2	13	17	-11 1	17 2	9 7	1 4	21 6	20 2	27 1	37	74 6	16 9	3 8	158 8
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	2	13	17	11 1	17 2	9 7	1 4	21 6	20 2	27 1	37	74 6	16 9	3 8	158 8
17 Taxation	8	6	7	0	0	0	0	0	0	0	0	47 6	21	0	47 6
18 Profit after tax	10	7	10	11 1	17 2	9 7	1 4	21 6	20 2	27 1	37	27	-4 1	3 8	111 1
19 Profit brought forward	34	-44	37	27	38 1	55 2	64 9	63 9	-47 6	32 5	12 2	15 5	34	38 1	-47 6
20 Dividends	0	0	0	0	0	0	0 4	5 4	5	6 8	9 2	6 7	0	5 8	27 8
21 Profit carried forward	-44	37	27	38 1	55 2	64 9	63 9	-47 6	32 5	12 2	15 5	35 7	38 1	-47 6	35 7

Zakhidenergo Financial Statement [Hv Min]

Balance Sheet

#2 Partial Implementation	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2962	3424	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977
Depreciation	683	696	709	720 9	732 8	744 7	756 6	768 6	780 5	792 4	804 3	816 2	720 9	768 6	816 2
Net	2279	2728	1268	1509 8	1244 2	1232 3	1220 4	1208 4	1196 5	1184 6	1172 7	1160 8	1509 8	1208 4	1160 8
Other fixed assets	145	270	282	282	282	282	282	282	282	282	282	282	282	282	282
Total	2424	2998	1550	1538 9	1526 2	1514 3	1502 4	1490 4	1478 5	1466 6	1454 7	1442 8	1538 9	1490 4	1442 8
Current assets															
Debtors	**267**	**302**	**327**	**308**	**399**	**410**	**414 8**	**417 6**	**419 8**	**419 9**	**417 4**	**406 8**	**308**	**417 6**	**406 8**
Debtors NDC/ESE	133	168	193	174	265	276	280 8	283 6	285 8	285 9	283 4	272 8	174	283 6	272 8
Debtors - other & NDC disp	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	24	31	34	34	34	34	34	34	34	34	34	34	34	34	34
Fuel inventory	58	75	58	58	58	58	58	58	58	58	58	58	58	58	58
Cash	1	0	0	0	0	0	0	0	6 8	5 1	5	7 3	0	0	7 3
Total	350	408	419	400	491	502	506 8	509 6	518 6	517 1	514 4	506 2	400	509 6	506 2
Current liabilities															
Due fuel suppliers old	293	293	293	293	293	293	256 4	219 8	183 1	146 5	109 9	73 3	293	219 8	73 3
Due Fuel Suppliers Offsets	29	85	71	71	71	71	65 1	59 2	53 3	47 3	41 4	35 5	71	59 2	35 5
Due fuel suppliers new				20 9	74 7	116 8	98 2	98 4	97 2	88	81 3	88 4	20 9	98 4	88 4
Other Trade Creditors													0	0	0
State	15	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Credit toward Current liabilities				38 9	0	30 6	0	0	0	0	0	0			
Short term borrowing	21	20	1	0	2 7	0	22 3	39 3	65 1	83	90	85 1	0	39 3	85 1
Total	358	416	383	364	459 4	468 2	460	434 6	416 6	382 9	340 6	300 2	364	434 6	300 2
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	2416	2990	1586	1574 9	1557 8	1548 1	1549 1	1565 4	1580 5	1600 8	1628 5	1648 7	1574 9	1565 4	1648 7
Shareholders funds															
Share capital	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Revaluation reserve	2332	2899	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485
Profit and losses account	-44	-37	27	38 1	55 2	-64 9	63 9	-47 6	32 5	12 2	15 5	35 7	38 1	-47 6	35 7
Total	**2416**	**2990**	**1586**	**1574 9**	**1557 8**	**1548 1**	**1549 1**	**1565 4**	**1580 5**	**1600 8**	**1628 5**	**1648 7**	**1574 9**	**1565 4**	**1648 7**

Dniproenergo Financial Statement [Hv Min]

#2 Partial Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	242	253	271	352 8	302 6	318	351 5	568 9	544 3	434 1	441 2	667	1118 8	1540 9	2086 6
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**242**	**253**	**271**	**352 8**	**302 6**	**318**	**351 5**	**568 9**	**544 3**	**434 1**	**441 2**	**667**	**1118 8**	**1540 9**	**2086 6**
5 Costs															
6 Fuel	217	209	249	318 2	274 7	274 1	309 4	502 3	480 5	362 6	353 9	534 5	993 2	1360 6	1731 6
7 Wages				10 8	11 2	11 5	11 9	12 3	12 6	13	13 4	13 8	10 8	46 9	52 9
8 Maintenance				12	12 3	12 7	13 1	13 5	14	14 4	14 8	15 3	12	51 7	58 5
9 Additional maintenance													0	0	0
10 Other	14	21	21	4	4 1	4 3	4 4	4 5	4 7	4 8	5	5 1	60	17 3	19 5
11 Depreciation	5	14	2	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	30 3	37 2	37 2
12 Total costs	**236**	**244**	**272**	**354 3**	**311 7**	**311 9**	**348 1**	**541 9**	**521 1**	**404 1**	**396 4**	**578 1**	**1106 3**	**1513 6**	**1899 7**
13 Profit before interest and tax	6	9	1	1 5	9	6	3 3	27	23 2	30	44 8	88 9	12 5	27 3	186 9
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	9	1	1 5	9	6	3 3	27	23 2	30	44 8	88 9	12 5	27 3	186 9
17 Taxation	6	1	0	0	0	0	0	8 2	0	0	0	56 1	7	8 2	56 1
18 Profit after tax	0	8	1	1 5	9	6	3 3	18 8	23 2	30	44 8	32 8	5 5	19 1	130 8
19 Profit brought forward	51	51	-43	-44	-45 5	54 5	50	47 5	33 4	16	6 5	40 1	51	-45 5	-33 4
20 Dividends	0	0	0	0	0	1 5	0 8	4 7	5 8	7 5	11 2	8 2	0	7	32 7
21 Profit carried forward	51	-43	-44	-45 5	54 5	50	-47 5	33 4	16	6 5	40 1	64 7	-45 5	33 4	64 7

Dniproenergo Financial Statement [Hv Min]

Balance Sheet

#2 Partial Implementation	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1544	1588	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542
Depreciation	887	901	903	912 3	927 5	942 3	956 7	970 8	984 6	998	1011 1	1023 9	912 3	970 8	1023 9
Net	657	687	639	629 7	614 5	599 7	585 3	571 2	557 4	544	530 9	518 1	629 7	571 2	518 1
Other fixed assets	31	34	35	35	35	35	35	35	35	35	35	35	35	35	35
Total	688	721	674	664 7	649 5	634 7	620 3	606 2	592 4	579	565 9	553 1	664 7	606 2	553 1
Current assets															
Debtors	**415**	**361**	**392**	**571**	**517**	**522**	**529 1**	**533 1**	**536 4**	**536 6**	**533**	**518 1**	**571**	**533 1**	**518 1**
Debtors NDC/ESE	281	227	258	437	383	388	395 1	399 1	402 4	402 6	399	384 1	437	399 1	384 1
Debtors other and NDC di	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	6	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Fuel inventory	148	163	160	160	160	160	160	160	160	160	160	160	160	160	160
Cash	1	1	1	0	0	0	0	0	10 2	7 9	7 7	11 4	0	0	11 4
Total	570	539	567	745	691	696	703 1	707 1	720 6	718 5	714 7	703 5	745	707 1	703 5
Current liabilities															
Due fuel suppliers old	367 5	367 5	367 5	367 5	367 5	367 5	321 6	275 6	229 7	183 8	137 8	91 9	367 5	275 6	91 9
Due Fuel Suppliers Offsets i	214 5	153 5	159 5	159 5	159 5	159 5	146 2	132 9	119 6	106 3	93	79 8	159 5	132 9	79 8
Due fuel suppliers new				27	130 6	199 4	159 2	148 7	139 9	125 2	115 9	126 4	27	148 7	126 4
Other Trade Creditors													0	0	0
State	15	21	16	16	16	16	16	16	16	16	16	16	16	16	16
Credit towards current liabilities				0	3 5	86 7	0	0	0	0	0	0			
Short term borrowing	22	33	17	160 2	0	0	2 8	48 4	98 8	134 7	152 7	152 8	160 2	48 4	152 8
Total	619	575	560	730 2	670 1	655 7	645 8	621 7	604	566	515 5	466 8	730 2	621 7	466 8
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	639	685	681	679 5	670 5	675	677 5	691 6	709	731 5	765 1	789 7	679 5	691 6	789 7
Shareholders funds															
Share capital	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Revaluation reserve	592	630	627	627	627	627	627	627	627	627	627	627	627	627	627
Profit and losses account	51	-43	-44	-45 5	54 5	50	47 5	33 4	16	6 5	40 1	64 7	-45 5	33 4	64 7
Total	639	685	681	679 5	670 5	675	677 5	691 6	709	731 5	765 1	789 7	679 5	691 6	789 7
		0	0	0	0	0	0	0	0	0	0	0			

Donbassenergo Financial Statement [Hv Min]

#2 Partial Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	229	138	352	352 8	330 5	344 5	380 9	616 4	589 8	470 4	478 1	722 7	1071 8	1672 3	2261
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**229**	**138**	**352**	**352 8**	**330 5**	**344 5**	**380 9**	**616 4**	**589 8**	**470 4**	**478 1**	**722 7**	**1071 8**	**1672 3**	**2261**
5 Costs															
6 Fuel	206	106	298	345 3	333 1	329 8	350 9	568	543 4	400	388 9	587 4	955 3	1581 9	1919 7
7 Wages				10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	10	43 2	48 8
8 Maintenance				12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	12	51 8	58 6
9 Additional maintenance													0	0	0
10 Other	16	12	34	12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	74	51 8	58 6
11 Depreciation	1	19	13	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	45 6	50 2	50 2
12 Total costs	**223**	**137**	**345**	**391 9**	**380 7**	**378 5**	**400 8**	**619**	**595 6**	**453 4**	**443 5**	**643 4**	**1096 9**	**1779**	**2135 9**
13 Profit before interest and tax	6	1	7	39	50 2	34	19 9	2 6	5 8	17	34 6	79 3	25	106 7	125 1
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	1	7	39	50 2	34	19 9	2 6	5 8	17	34 6	79 3	25	106 7	125 1
17 Taxation	6	3	5	0	0	0	0	0	0	0	0	37 5	14	0	37 5
18 Profit after tax	0	2	2	39	50 2	34	19 9	2 6	5 8	17	34 6	41 8	39	106 7	87 6
19 Profit brought forward	122	122	124	122	161	211 3	245 3	265 2	267 7	273 6	260 8	234 8	122	161	267 7
20 Dividends	0	0	0	0	0	0	0	0	0	4 3	8 6	10 5	0	0	23 4
21 Profit carried forward	122	124	122	161	211 3	245 3	265 2	267 7	273 6	260 8	234 8	203 5	161	267 7	203 5

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Donbassenergo Financial Statement [Hv Min]

Balance Sheet

#2 Partial Implementation

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2074	2127	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084
Depreciation	1043	1062	1075	1087 6	1100 1	1112 7	1125 2	1137 8	1150 3	1162 9	1175 4	1188	1087 6	1137 8	1188
Net	1031	1065	1009	996 4	983 9	971 3	958 8	946 2	933 7	921 1	908 6	896	996 4	946 2	896
Other fixed assets	146	153	174	174	174	174	174	174	174	174	174	174	174	174	174
Total	1177	1218	1183	1170 4	1157 9	1145 3	1132 8	1120 2	1107 7	1095 1	1082 6	1070	1170 4	1120 2	1070
Current assets															
Debtors	**225**	**332**	**360**	**358**	**400**	**405**	**412 7**	**417**	**420 6**	**420 8**	**418 2**	**407 2**	**358**	**417**	**407 2**
Debtors NDC/ESE	102	209	237	235	277	282	289 7	294	297 6	297 8	295 2	284 2	235	294	284 2
Debtors other and NDC	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Other	16	33	46	46	46	46	46	46	46	46	46	46	46	46	46
Fuel inventory	86	92	100	100	100	100	100	100	100	100	100	100	100	100	100
Cash	3	1	1	0	0	0	0	0	11 7	8 8	8 6	12 6	0	0	12 6
Total	330	458	507	504	546	551	558 7	563	578 2	575 6	572 8	565 8	504	563	565 8
Current liabilities															
Due fuel suppliers old	285	285	285	285	285	285	249 4	213 8	178 1	142 5	106 9	71 3	285	213 8	71 3
Due Fuel Suppliers Offsets	197	304	307	307	307	307	281 4	255 8	230 3	204 7	179 1	153 5	307	255 8	153 5
Due fuel suppliers new				34 5	89 6	158 7	140 9	150 7	154 8	143 2	134 4	148 4	34 5	150 7	148 4
Other Trade Creditors															
State	14	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Credit towards current liabilities				5 1	0	23 1	0	0	0	0	0	0			
Short term borrowing	19	26	6	0	19 5	0	70 9	116 7	182 3	227 1	255 8	252 1	0	116 7	252 1
Total	515	627	610	633 5	713 2	739 6	754 6	749	757 5	729 5	688 2	637 3	633 5	749	637 3
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	992	1049	1080	1041	990 7	956 7	936 8	934 3	928 4	941 2	967 2	998 5	1041	934 3	998 5
Shareholders funds															
Share capital	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**
Revaluation reserve	878	937	966	966	966	966	966	966	966	966	966	966	966	966	966
Profit and losses account	122	124	122	161	211 3	245 3	265 2	267 7	273 6	260 8	234 8	203 5	-161	267 7	203 5
Total	992	1049	1080	1041	990 7	956 7	936 8	934 3	928 4	941 2	967 2	998 5	1041	934 3	998 5
			0	0	0	0	0	0	0	0	0	0			

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Centerenergo Financial Statement [Hv Min]

#2 Partial Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	281	124	314	407 1	364 7	302 2	334 1	540 7	517 3	412 6	419 4	633 9	1126 1	1541 6	1983 2
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**281**	**124**	**314**	**407 1**	**364 7**	**302 2**	**334 1**	**540 7**	**517 3**	**412 6**	**419 4**	**633 9**	**1126 1**	**1541 6**	**1983 2**
													0	0	0
5 Costs													0	0	0
6 Fuel	270	94	303	353 7	324 6	256 8	272 4	442 3	420 3	313 7	306 1	462 9	1020 7	1296 1	1503
7 Wages				7 2	7 5	7 7	7 9	8 2	8 4	8 7	9	9 2	7 2	31 2	35 3
8 Maintenance				8 1	8 4	8 6	8 9	9 2	9 5	9 8	10 1	10 4	8 1	35 1	39 7
9 Major maintenance													0	0	0
10 Other	13	10	19	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	52	43 2	48 8
11 Depreciation	6	11	11	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	37 1	36 2	36 2
12 Total costs	**289**	**115**	**333**	**388 1**	**359 8**	**292 8**	**309 2**	**480**	**458 9**	**353 2**	**346 5**	**504 4**	**1125 1**	**1441 9**	**1663**
13 Profit before interest and tax	8	9	19	19	4 8	9 4	24 9	60 7	58 4	59 4	72 8	129 6	1	99 7	320 2
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	8	9	19	19	4 8	9 4	24 9	60 7	58 4	59 4	72 8	129 6	1	99 7	320 2
17 Taxation	0	0	0	0 3	0	0	0	29 9	0	0	0	96 1	0 3	29 9	96 1
18 Profit after tax	8	9	19	18 7	4 8	9 4	24 9	30 8	58 4	59 4	72 8	33 5	0 7	69 8	224 1
19 Profit brought forward	94	102	93	112	93 3	89 7	82 7	64	-40 9	2 9	47 4	102	94	93 3	-40 9
20 Dividends	0	0	0	0	1 2	2 3	6 2	7 7	14 6	14 8	18 2	8 4	0	17 5	56
21 Profit carried forward	102	93	112	93 3	89 7	82 7	64	-40 9	2 9	47 4	102	127 2	93 3	-40 9	127 2

Centerenergo Financial Statement [Hv Min]

Balance Sheet

#2 Partial Implementation	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1450	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503
Depreciation	783	794	823	832 1	841 1	850 2	859 2	868 3	877 3	886 4	895 4	904 5	832 1	868 3	904 5
Net	667	709	680	670 9	661 9	652 8	643 8	634 7	625 7	616 6	607 6	598 5	670 9	634 7	598 5
Other fixed assets	74	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Total	741	788	759	749 9	740 9	731 8	722 8	713 7	704 7	695 6	686 6	677 5	749 9	713 7	677 5
Current assets															
Debtors	**659**	**633**	**669**	**606**	**625**	**599**	**605 7**	**609 6**	**612 7**	**612 9**	**610 6**	**601**	**606**	**609 6**	**601**
Debtors NDC/ESE	305	279	315	252	271	245	251 7	255 6	258 7	258 9	256 6	247	252	255 6	247
Debtors other & NDC dis	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354
Other	3	6	8	8	8	8	8	8	8	8	8	8	8	8	8
Fuel inventory	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Cash	1	0	0	0	0	0	0	0	9	6 9	6 7	9 9	0	0	9 9
Total	748	725	763	700	719	693	699 7	703 6	715 7	713 8	711 3	704 9	700	703 6	704 9
Current liabilities															
Due fuel suppliers - old	414	414	414	414	414	414	362 3	310 5	258 8	207	155 3	103 5	414	310 5	103 5
Due Fuel Suppliers Offsets ı	234	196	223	223	223	223	204 4	185 8	167 3	148 7	130 1	111 5	223	185 8	111 5
Due fuel suppliers new				35 4	88 8	136 3	118 2	123	124 3	114 5	107 1	118	35 4	123	118
Other Trade Creditors													0	0	0
State	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Credit towards current liabilities				126 1	173 3	262 8	195 3	158 1	129 9	105 2	93 6	74 7			
Short term borrowing	17	18	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	673	638	647	556 2	562 6	520 5	499 5	471 2	430 5	375	308 8	268 2	556 2	471 2	268 2
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	816	875	875	893 7	897 3	904 3	923	946 1	989 9	1034 4	1089	1114 2	893 7	946 1	1114 2
Shareholders funds														0	0
Share capital	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Revaluation reserve	826	876	895	895	895	895	895	895	895	895	895	895	895	895	895
Profit and losses account	102	93	112	93 3	89 7	82 7	64	-40 9	2 9	47 4	102	127 2	93 3	-40 9	127 2
Total	816	875	875	893 7	897 3	904 3	923	946 1	989 9	1034 4	1089	1114 2	893 7	946 1	1114 2
		0	0	0	0	0	0	0	0	0	0	0			

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Energoatom Financial Statement [Hv Min]

#2 Partial Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Electricity sales to NDC	584	918	1071	771 2	973 8	948 2	1023 5	1122 7	1157 5	1193 4	1230 4	1268 5	3344 2	4068 2	4849 8
2 Electricity Sales Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Other Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**584**	**918**	**1071**	**771 2**	**973 8**	**948 2**	**1023 5**	**1122 7**	**1157 5**	**1193 4**	**1230 4**	**1268 5**	**3344 2**	**4068 2**	**4849 8**
5 Costs															
6 Costs of energy sales	256	471	461	417 6	450 9	439 8	471 6	512 5	506 2	504 6	546 5	558 3	1605 6	1874 7	2115 6
7 Cost of other sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Depreciation	45	47	117	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	292 5	334 1	334 1
9 Gross Profit	**283**	**400**	**493**	**270 1**	**439 4**	**424 9**	**468 4**	**526 7**	**567 8**	**605 3**	**600 3**	**626 7**	**1446 1**	**1859 4**	**2400 1**
10 Fixed Operating Costs	212	246	228	235 1	242 4	249 9	257 6	265 6	273 8	282 3	291 1	300 1	921 1	1015 4	1147 3
11 Interest Expense													0	0	0
12 Other Income	26	30	38	38	38	38	38	38	38	38	38	38	132	152	152
13 Profit before tax	45	124	227	3	159	137	172 8	223 1	256	285	271 3	288 6	393	691 9	1100 8
14 Taxation	68	72	178	0	0	0	0	207 6	0	0	0	330 2	318	207 6	330 2
15 Profit after tax	23	52	49	3	159	137	172 8	15 5	256	285	271 3	-41 6	75	484 3	770 6
16 Dividends	0	0	0	0	39 8	34 3	43 2	3 9	64	71 2	67 8	0	0	121 1	203
17 Retained profit	23	52	49	3	119 3	102 8	129 6	11 6	192	213 7	203 4	-41 6	75	363 3	567 5
18 Profit Carried Forward	151	99	50	53	66 3	169 1	298 6	310 3	502 2	716	919 4	877 8	53	310 3	877 8

Energoatom Financial Statement [Hv Min]

Balance Sheet

ion		97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
	Fixed assets															
1	Gross	12932	12879	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863
2	Depreciation	2887	2934	3051	3134 5	3218	3301 6	3385 1	3468 6	3552 1	3635 7	3719 2	3802 7	3134 5	3468 6	3802 7
3	Other fixed assets	10890	12213	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594
3a	K2/R4 Construction Fund					108 2	213 6	327 3	452	580 6	713 2	849 9	990 9	0	452	990 9
4	Total	20935	22158	22406	22322 5	22347 1	22369	22399 2	22440 4	22485 5	22534 6	22587 7	22645 2	22322 5	22440 4	22645 2
	Current assets															
5	**Debtors**	**1841**	**2034**	**2481**	**1955**	**2348**	**2248**	**2268 6**	**2276 5**	**2283 5**	**2284 1**	**2270 1**	**2212 1**	**1955**	**2276 5**	**2212 1**
6	Debtors NDC/ESE	1125	1318	1765	1239	1632	1532	1552 6	1560 5	1567 5	1568 1	1554 1	1496 1	1239	1560 5	1496 1
7	Debtors other & ND	716	716	716	716	716	716	716	716	716	716	716	716	716	716	716
8	Other current assets	172	224	132	132	132	132	132	132	132	132	132	132	132	132	132
9	Inventory	1494	1574	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654
10	Cash	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
11	Total	3509	3835	4269	3743	4136	4036	4056 6	4064 5	4071 5	4072 1	4058 1	4000 1	3743	4064 5	4000 1
	Current liabilities															
12	Trade Creditors	1804	2018	2232	2232	2232	2232	1953	1674	1395	1116	837	558	2232	1674	558
13	Owed to State	149	190	265	265	265	265	242 9	220 8	198 8	176 7	154 6	132 5	265	220 8	132 5
14	Credit towards current liablities				556 5	258 1	439 1	216 8	0	0	0	0	0	556 5	0	0
14a	Short term borrowing	49	47	50	0	0	0	0	121 8	283	420 1	556 9	899	0	121 8	899
15	Total	2002	2255	2547	1940 5	2238 9	2057 9	1979 1	2016 7	1876 8	1712 7	1548 4	1589 5	1940 5	2016 7	1589 5
16	**Long Term Liabilities**															
17	Long Term Debt	76	113	135	135	135	135	135	135	135	135	135	135	135	135	135
18	**Net Assets**	**22366**	**23625**	**23993**	**23990**	**24109 3**	**24212 1**	**24341 6**	**24353 3**	**24545 2**	**24759**	**24962 4**	**24920 8**	**23990**	**24353 3**	**24920 8**
19	**Shareholders funds**															
20	Authorized capital	10062	9897	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831
21	Special Fund & Target F	325	226	416	416	416	416	416	416	416	416	416	416	416	416	416
22	Other Reserves	12130	13601	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796
23	Profit (Loss) Cumulativ	151	99	50	53	66 3	169 1	298 6	310 3	502 2	716	919 4	877 8	53	310 3	877 8
24	Total	22366	23625	23993	23990	24109 3	24212 1	24341 6	24353 3	24545 2	24759	24962 4	24920 8	23990	24353 3	24920 8

LEC Assumption and Results

#2 Partial Implementation

			97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Retail Sales	million MWh	37	32	31	33	33	32	31	35 5	33 7	32 6	31 6	36 2		131 5	134 1
2	Oblenergo Sales at Retail Tariffs	mill Hr				1855 6	1887 5	1883 3	2154 6	2639 7	2549 7	2390 2	2393 7	2962 7		8 565	10 296
3	Subsidy Amount (from 50% 100% discount)	mill Hr				152 1	152 6	147 2	144 5	170 1	161 7	154 5	150 8	176 6		615	644
3a	Occup--based Subsidies (10% of subs)	mill Hr				15 2	15 3	14 7	14 5	17	16 2	15 4	15 1	17 7			
3b	Occupl-based Subsidies (% of NDC purch)	%										0 7%	0 6%	0 6%			
4a	Oblenergo Cash Collections (Minn)	mill Hr				329 7	327 9	340	371 3	470 4	504 7	518 1	565 3	752 7		1 509	2 341
5a	Oblenergo Total Collections (Minn)	mill Hr				1789 8	1613 1	1772 3	2326 9	2867 5	2795	2648 5	2676 3	3343		8 580	11 463
	LEC costs																
6	LVNO and Supply costs	mill Hr				253 7	253 7	246	238 3	272 9	258 7	250 9	243 1	278 3		1 011	1 031
7	Self Generation	million MWh	2 4	1 4	1 2	2 6	2 4	1 4	1 2	2 6	2 4	1 2	1 2	2 6		7 6	7 3
8	Self Generation costs	mill Hr				108 3	98	60 8	53 4	108 3	98	60 8	53 4	108 3		321	321
9	LEC purchases from NDC	million MWh				30 61	30 39	27 45	27 31	33 13	31 04	28 03	27 88	33 85		118 3	120 8
10	Wholesale Market Price	Hr / Mwh				57 3	61	65	71 5	80 1	83 8	83 6	86 1	90 6		69 4	86
1a	LEC purchases from NDC	mill Hr				1753 55	1853	1784 8	1953 2	2655 1	2601 6	2342 3	2399 6	3067 6		8 246	10 411
12	LEC Payments to NDC Total	%				100 4 %	66 1 %	103 0%	97 6%	99 1 %	99 3%	99 9%	101 1%	103 6%		91 0%	101 0%
13	LEC Payments to NDC Total	mill Hr				1760 6	1224 8	1838 4	1905 4	2631 8	2582 2	2340 8	2426 4	3178 1		7 600	10 527
14	LEC Payments to NDC Cash	%				10 6 %	10 4 %	12 2%	11 8%	12 3%	14 2%	16 3%	18 4%	20 8 %		12 0%	17 0%
15	LEC Payments to NDC Cash	mill Hr				185 9	192 7	217 8	230 9	325 8	368 3	382 7	442 5	639 1		967	1 833
16	Cash Difference (Minn and NDC)	mill Hr				144	135	122	140	145	136	135	123	114		542	508 2
17	LEC LVNO Supply Self Gen expenses	mill Hr				362	351 7	306 8	291 7	381 2	356 7	311 7	296 4	386 6		1331	1351 5
18	Collections Difference (Minn and NDC)	mill Hr				29 3	388 3	-66 1	421 5	235 8	212 8	307 7	250	164 9		244 86	
19	IES purchases form NDC	million MW				8 86	8 73	7 7	7 6	9 53	8 91	7 85	7 75	9 72		34	34 2
20	IES purchases form NDC	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	656 2	667 1	880 7		2340	2950 3
21	IES Payments to NDC Total	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	656 2	667 1	880 7		2340	2950 3
22	IES Payments to NDC Cash	mill Hr				0	0	0	0	0	0	0	0	0		0	0

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NDC Financial Statements

#2 Partial Implementation

		97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
	Revenues															
1	Total Energy Sales	1506	1583	2997	2261	2385	2285	2497	3419	3348	2998	3067	3948	8347	10586	13362
2	Sales to LECs	0	0	0	1754	1853	1785	1953	2655	2602	2342	2400	3068		8246	10411
3	Sales to IESs	0	0	0	507	532	501	543	763	746	656	667	881		2340	2950
	Expenses															
4	Power purchases				2157	2280	2175	2379	3290	3217	2864	2929	3808	2157	10124	12818
5	HV net fee [Hv mil]				80	81	85	91	99	101	103	106	108	80	355	419
6	NDC/ESE fee [Hv mil]				24	24	25	27	30	30	31	32	32	24	107	126
7	Minus profit on import/export				0	0	0	0	0	0	0	0	0	0	0	0
8	Subsidy Requirement				0	0	0	0	0	0	0	0	0	0	0	0
9	Total Expense	1522	1549	3004	2261	2385	2285	2497	3419	3348	2998	3067	3948	8336	10586	13362
10	Profit before tax	16	34	7	0	0	0	0	0	0	0	0	0	11	0	0
11	Taxation	4	0	6	0	0	0	0	0	0	0	0	0	10	0	0
12	Profit after Tax	20	34	13	0	0	0	0	0	0	0	0	0	1	0	0

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NDC Financial Statements

Balance Sheet

	#2 Partial Implementation	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Fixed assets Gross	239	235	236	236	236	236	236	236	236	236	236	236	236	236	236
2	Fixed Assets Depr	72	70	71	71	71	71	71	71	71	71	71	71	71	71	71
3	Net assets	167	165	165	165	165	165	165	165	165	165	165	165	165	165	165
4	Other fixed assets	1	8	9	9	9	9	9	9	9	9	9	9	9	9	9
	Short Term Assets															
5	Cash	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Due from LECs	2594	2619	2704	2503	3165	3117	3165	3188	3208	3209	3182	3072	2503	3188	3072
7	Inventory	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4
8	**Due from IESs**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8a	Total Current Assets	2598	2625	2708	2507	3169	3121	3169	3192	3212	3213	3186	3076	2507	3192	3076
	Short Term Liabilities															
	Due to Gencos															
9	Nuclear	1125	1318	1765	1239	1632	1532	1553	1561	1568	1568	1554	1496	1239	1561	1496
10	Hydro				147	158	173	174	174	175	175	173	167	147	174	167
11	Centrenergo	305	279	315	252	271	245	252	256	259	259	257	247	252	256	247
12	Donbassenergo	102	209	237	235	277	282	290	294	298	298	295	284	235	294	284
13	Dniprenergo	281	227	258	437	383	388	395	399	402	403	399	384	437	399	384
14	Zakhidenergo	133	168	193	174	265	276	281	284	286	286	283	273	174	284	273
15	Other Trade Creditors	129	177	128	128	128	128	128	128	128	128	128	128	128	128	128
16	Due to Trade creditors	2075	2378	2640	2356	2858	2768	2816	2839	2859	2860	2833	2723	2356	2839	2723
17	Other Creditors	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3
18	Notes outstanding	617	305	128	64	0	0	0	0	0	0	0	0	64	0	0
19	Short term borrowing	37	36	30	177	401	443	443	443	443	443	443	443	177	443	443
20	NET assets	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81
21	Authorized Capital	174	172	171	171	171	171	171	171	171	171	171	171	171	171	171
22	**Special Fund& Target Financin**	75	83	95	95	95	95	95	95	95	95	95	95	95	95	95
23	Other Reserves	3	5	10	10	10	10	10	10	10	10	10	10	10	10	10
24	Profit (Loss) Cumulative	216	182	195	195	195	195	195	195	195	195	195	195	195	195	195
25	TOTAL	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81

4.6 FINANCIAL STATEMENTS

Scenario 3 - Full Implementation

Summary

Indi #3 Full Implementation

		97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Wholesale Market Selling Price [Hr/MWh]				57 28	60 98	65 02	71 51	80 14	83 81	84 93	87 45	92 2		69 41	87 1
2	Income Tax Fossil and Nuclear Generators [Hr Mil]	88	82	190	0	0	0	0	274	0	0	0	720	360	274	720
3	Generator After Tax Profit [Hr Mil]															
3a	Fossil generators	-18	22	-8	-33	-72	-28	10	170	287	245	73	133	-37	79	850
3b	Energoatom	-23	52	49	-3	159	137	173	29	276	289	302	-37	75	498	830
4	Dividends [Hr Mil]	0	0	0	40	35	47	15	111	144	137	61	36	40	209	377
5	NDC sales [Hr Mil]	1506	1583	2997	2261	2385	2285	2497	3419	3348	3047	3116	3954			
5a	To LECs				1754	1853	1785	1953	2655	2602	2380	2439	3071	1754	8246	10492
5b	To IESs				507	532	501	543	763	746	667	678	883	507	2340	2974
6	LEC arrears to ESE [Hr Mil]	2594	2619	2704	2503	3165	3117	3145	3099	3050	3004	2928	2755	2503	3099	2755
7	ESE undisputed arrears to Generators [Hr Mil]	1946	2201	2768	2484	2986	2896	2924	2878	2829	2783	2707	2534	2484	2878	2534
8	Generator Revenue Paid in Cash [%]															
8a	Fossil generators				4 67	1 35	7 17	4 57	7 81	9 7	10 8	11 8	13 8			
8b	Energoatom				14 61	15 22	13 74	19 15	24 38	25 1	24 8	27 9	34 3			

1	Wholesale Market Selling Price [1996$/MWh]				28 16	29 08	29 62	30 18	30 84	31 28	30 74	30 71	31 4		29 93	31 03
2	Income Tax Fossil and Nuclear Generators[1996$ Mil]	47 42	42 86	96 32	0 15	0	0	0	105 6	0	0	0	245 1	187	106	245
3	Generator After Tax Profit [1996$ Mil]															
3a	Fossil generators	-10	11	-4	-16	-34	-13	4	65	107	89	86	25	-18	22	307
3b	Energoatom	-12	27	25	-1	76	62	73	11	103	105	106	-13	38	222	301
4	Dividends [1996 $ Mil]	0	0	0	20	17	21	6	43	54	49	22	12	20	87	137
5	NDC sales [1996 $ Mil]	812	827	1519	1112	1138	1041	1054	1315	1250	1103	1094	1347			
5a	To LECs				862	884	813	824	1022	971	862	856	1046	862	3543	3735
5b	To IESs				249	254	228	229	294	279	241	238	301	249	1005	1059
6	LEC arrears to ESE [1996$ Mil]	1398	1369	1371	1231	1509	1420	1328	1192	1138	1087	1028	938	1231	1192	938
7	ESE undisputed arrears to Generators [1996$Mil]	1049	1150	1403	1221	1424	1319	1234	1107	1056	1007	950	863	1221	1107	863

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Zakhidenergo Financial Statement [Hv Min]

#3 Full Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	206	111	217	230 7	268 4	216 4	239 2	387 1	370 4	304 4	309 4	454 9	764 7	1111 1	1439
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**206**	**111**	**217**	**230 7**	**268 4**	**216 4**	**239 2**	**387 1**	**370 4**	**304 4**	**309 4**	**454 9**	**764 7**	**1111 1**	**1439**
5 Costs															
6 Fuel	177	75	158	208 6	251 7	191 5	202 5	304 5	276 7	219 6	223 6	329 6	618 6	950 3	1049 4
7 Wages				5 3	5 5	5 7	5 9	6	6 2	6 4	6 6	6 8	5 3	23 1	26 1
8 Maintenance				6	6 1	6 3	6 5	6 7	6 9	7 1	7 4	7 6	6	25 7	29
9 Major maintenance													0	0	0
10 Other	25	10	29	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	74	43 2	48 8
11 Depreciation	6	13	13	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	11 9	43 9	47 6	47 6
12 Total costs	**208**	**98**	**200**	**241 8**	**285 6**	**226 1**	**237 8**	**340 5**	**313 4**	**257 1**	**261 9**	**368 7**	**747 8**	**1089 9**	**1201**
13 Profit before interest and tax	2	13	17	11 1	17 2	9 7	1 4	46 6	56 9	47 3	47 5	86 2	16 9	21 1	238
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	2	13	17	11 1	17 2	9 7	1 4	46 6	56 9	47 3	47 5	86 2	16 9	21 1	238
17 Taxation	8	6	7	0	0	0	0	6 3	0	0	0	71 4	21	6 3	71 4
18 Profit after tax	10	7	10	11 1	-17 2	9 7	1 4	40 2	56 9	47 3	47 5	14 8	-4 1	14 8	166 6
19 Profit brought forward	34	-44	37	27	38 1	55 2	64 9	63 9	33 7	9	44 5	80 1	34	38 1	33 7
20 Dividends	0	0	0	0	0	0	0 4	10 1	14 2	11 8	11 9	3 7	0	10 4	41 6
21 Profit carried forward	-44	37	27	38 1	55 2	-64 9	63 9	33 7	9	44 5	80 1	91 3	-38 1	33 7	91 3

Zakhidenergo Financial Statement [Hv Min]

Balance Sheet

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2962	3424	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977
Depreciation	683	696	709	720 9	732 8	744 7	756 6	768 6	780 5	792 4	804 3	816 2	720 9	768 6	816 2
Net	2279	2728	1268	1509 8	1244 2	1232 3	1220 4	1208 4	1196 5	1184 6	1172 7	1160 8	1509 8	1208 4	1160 8
Other fixed assets	145	270	282	282	282	282	282	282	282	282	282	282	282	282	282
Total	2424	2998	1550	1538 9	1526 2	1514 3	1502 4	1490 4	1478 5	1466 6	1454 7	1442 8	1538 9	1490 4	1442 8
Current assets															
Debtors	**267**	**302**	**327**	**308**	**399**	**410**	**412 8**	**408 4**	**403 7**	**399 4**	**392 1**	**375 7**	**308**	**408 4**	**375 7**
Debtors NDC/ESE	133	168	193	174	265	276	278 8	274 4	269 7	265 4	258 1	241 7	174	274 4	241 7
Debtors other & NDC disp	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	24	31	34	34	34	34	34	34	34	34	34	34	34	34	34
Fuel inventory	58	75	58	58	58	58	58	58	58	58	58	58	58	58	58
Cash	1	0	0	0	0	0	0	0	6	4 9	5	7 1	0	0	7 1
Total	350	408	419	400	491	502	504 8	500 4	501 8	496 3	489 1	474 8	400	500 4	474 8
Current liabilities															
Due fuel suppliers old	293	293	293	293	293	293	256 4	219 8	183 1	146 5	109 9	73 3	293	219 8	73 3
Due Fuel Suppliers- Offsets i	29	85	71	71	71	71	65 1	59 2	53 3	47 3	41 4	35 5	71	59 2	35 5
Due fuel suppliers - new				20 9	74 7	116 8	98 2	96	91 9	83 5	78 3	85 5	20 9	96	85 5
Other Trade Creditors													0	0	0
State	15	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Credit toward Current liabilities				38 9	0	30 6	0	0	0	0	0	0			
Short term borrowing	21	20	1	0	2 7	0	20 4	18 6	12	10	3 1	1 1	0	18 6	1 1
Total	358	416	383	364	459 4	468 2	458 1	411 5	358 3	305 4	250 7	213 3	364	411 5	213 3
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	2416	2990	1586	1574 9	1557 8	1548 1	1549 1	1579 3	1622	1657 5	1693 1	1704 3	1574 9	1579 3	1704 3
Shareholders funds															
Share capital	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Revaluation reserve	2332	2899	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485
Profit and losses account	-44	37	27	38 1	55 2	64 9	63 9	33 7	9	44 5	80 1	91 3	38 1	33 7	91 3
Total	**2416**	**2990**	**1586**	**1574 9**	**1557 8**	**1548 1**	**1549 1**	**1579 3**	**1622**	**1657 5**	**1693 1**	**1704 3**	**1574 9**	**1579 3**	**1704 3**

Dniproenergo Financial Statement [Hv Min]

#3 Full Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	242	253	271	352 8	302 6	318	351 5	568 9	544 3	447 3	454 6	668 5	1118 8	1540 9	2114 7
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**242**	**253**	**271**	**352 8**	**302 6**	**318**	**351 5**	**568 9**	**544 3**	**447 3**	**454 6**	**668 5**	**1118 8**	**1540 9**	**2114 7**
5 Costs															
6 Fuel	217	209	249	318 2	274 7	274 1	309 4	475 1	435 1	346 2	352 3	518 4	993 2	1333 4	1652
7 Wages				10 8	11 2	11 5	11 9	12 3	12 6	13	13 4	13 8	10 8	46 9	52 9
8 Maintenance				12	12 3	12 7	13 1	13 5	14	14 4	14 8	15 3	12	51 7	58 5
9 Additional maintenance													0	0	0
10 Other	14	21	21	4	4 1	4 3	4 4	4 5	4 7	4 8	5	5 1	60	17 3	19 5
11 Depreciation	5	14	2	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	9 3	30 3	37 2	37 2
12 Total costs	**236**	**244**	**272**	**354 3**	**311 7**	**311 9**	**348 1**	**514 7**	**475 6**	**387 7**	**394 8**	**562**	**1106 3**	**1486 5**	**1820 1**
13 Profit before interest and tax	6	9	1	1 5	9	6	3 3	54 1	68 7	59 6	59 8	106 6	12 5	54 5	294 6
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	9	1	1 5	9	6	3 3	54 1	68 7	59 6	59 8	106 6	12 5	54 5	294 6
17 Taxation	6	1	0	0	0	0	0	16 3	0	0	0	88 4	7	16 3	88 4
18 Profit after tax	0	8	1	1 5	9	6	3 3	37 8	68 7	59 6	59 8	18 2	5 5	38 1	206 2
19 Profit brought forward	51	51	-43	-44	-45 5	54 5	50	-47 5	-19 1	32 3	77 1	121 9	51	-45 5	19 1
20 Dividends	0	0	0	0	0	1 5	0 8	9 4	17 2	14 9	14 9	4 5	0	11 8	51 6
21 Profit carried forward	51	-43	44	-45 5	54 5	50	-47 5	19 1	32 3	77 1	121 9	135 5	-45 5	19 1	135 5

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Dniproenergo Financial Statement [Hv Min]

Balance Sheet

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1544	1588	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542	1542
Depreciation	887	901	903	912 3	927 5	942 3	956 7	970 8	984 6	998	1011 1	1023 9	912 3	970 8	1023 9
Net	657	687	639	629 7	614 5	599 7	585 3	571 2	557 4	544	530 9	518 1	629 7	571 2	518 1
Other fixed assets	31	34	35	35	35	35	35	35	35	35	35	35	35	35	35
Total	688	721	674	664 7	649 5	634 7	620 3	606 2	592 4	579	565 9	553 1	664 7	606 2	553 1
Current assets															
Debtors	**415**	**361**	**392**	**571**	**517**	**522**	**526 2**	**519 9**	**513 4**	**507 2**	**497 1**	**473 9**	**571**	**519 9**	**473 9**
Debtors NDC/ESE	281	227	258	437	383	388	392 2	385 9	379 4	373 2	363 1	339 9	437	385 9	339 9
Debtors other and NDC di	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
Other	6	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Fuel inventory	148	163	160	160	160	160	160	160	160	160	160	160	160	160	160
Cash	1	1	1	0	0	0	0	0	9 3	7 6	7 7	11 1	0	0	11 1
Total	570	539	567	745	691	696	700 2	693 9	696 7	688 8	678 8	658 9	745	693 9	658 9
Current liabilities															
Due fuel suppliers - old	367 5	367 5	367 5	367 5	367 5	367 5	321 6	275 6	229 7	183 8	137 8	91 9	367 5	275 6	91 9
Due Fuel Suppliers Offsets i	214 5	153 5	159 5	159 5	159 5	159 5	146 2	132 9	119 6	106 3	93	79 8	159 5	132 9	79 8
Due fuel suppliers new				27	130 6	199 4	159 2	148	138 7	124 4	115 4	124 7	27	148	124 7
Other Trade Creditors													0	0	0
State	15	21	16	16	16	16	16	16	16	16	16	16	16	16	16
Credit towards current liabilities				0	3 5	86 7	0 1	0	0	0	0	0			
Short term borrowing	22	33	17	160 2	0	0	0	21 7	27 7	35 2	35 4	39 1	160 2	21 7	39 1
Total	619	575	560	730 2	670 1	655 7	642 9	594 2	531 7	465 7	397 7	351 5	730 2	594 2	351 5
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	639	685	681	679 5	670 5	675	677 5	705 9	757 3	802 1	846 9	860 5	679 5	705 9	860 5
Shareholders funds															
Share capital	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Revaluation reserve	592	630	627	627	627	627	627	627	627	627	627	627	627	627	627
Profit and losses account	51	43	-44	-45 5	54 5	50	-47 5	19 1	32 3	77 1	121 9	135 5	-45 5	19 1	135 5
Total	639	685	681	679 5	670 5	675	677 5	705 9	757 3	802 1	846 9	860 5	679 5	705 9	860 5

Donbassenergo Financial Statement [Hv Min]

#3 Full Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	229	138	352	352 8	330 5	344 5	380 9	616 4	589 8	484 7	492 6	724 4	1071 8	1672 3	2291 5
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**229**	**138**	**352**	**352 8**	**330 5**	**344 5**	**380 9**	**616 4**	**589 8**	**484 7**	**492 6**	**724 4**	**1071 8**	**1672 3**	**2291 5**
5 Costs															
6 Fuel	206	106	298	345 3	333 1	329 8	350 9	524 1	478 2	380 6	387 3	569 9	955 3	1538	1816
7 Wages				10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	10	43 2	48 8
8 Maintenance				12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	12	51 8	58 6
9 Additional maintenance													0	0	0
10 Other	16	12	34	12	12 4	12 8	13 2	13 6	14	14 4	14 9	15 3	74	51 8	58 6
11 Depreciation	1	19	13	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	45 6	50 2	50 2
12 Total costs	**223**	**137**	**345**	**391 9**	**380 7**	**378 5**	**400 8**	**575 1**	**530 4**	**434**	**442**	**625 9**	**1096 9**	**1735 1**	**2032 2**
13 Profit before interest and tax	6	1	7	39	50 2	34	19 9	41 3	59 4	50 7	50 6	98 5	25	62 8	259 3
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	6	1	7	39	50 2	34	19 9	41 3	59 4	50 7	50 6	98 5	25	62 8	259 3
17 Taxation	6	3	5	0	0	0	0	0	0	0	0	77 8	14	0	77 8
18 Profit after tax	0	2	2	39	50 2	34	19 9	41 3	59 4	50 7	50 6	20 8	39	62 8	181 5
19 Profit brought forward	122	122	124	122	161	211 3	245 3	265 2	234 2	189 6	151 6	113 6	122	161	234 2
20 Dividends	0	0	0	0	0	0	0	10 3	14 8	12 7	12 7	5 2	0	10 3	45 4
21 Profit carried forward	122	124	122	161	211 3	245 3	265 2	234 2	189 6	151 6	113 6	98	161	234 2	98

Donbassenergo Financial Statement [Hv Min]

Balance Sheet

	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	2074	2127	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084
Depreciation	1043	1062	1075	1087 6	1100 1	1112 7	1125 2	1137 8	1150 3	1162 9	1175 4	1188	1087 6	1137 8	1188
Net	1031	1065	1009	996 4	983 9	971 3	958 8	946 2	933 7	921 1	908 6	896	996 4	946 2	896
Other fixed assets	146	153	174	174	174	174	174	174	174	174	174	174	174	174	174
Total	1177	1218	1183	1170 4	1157 9	1145 3	1132 8	1120 2	1107 7	1095 1	1082 6	1070	1170 4	1120 2	1070
Current assets															
Debtors	**225**	**332**	**360**	**358**	**400**	**405**	**409 5**	**404 9**	**400 2**	**395 7**	**388 2**	**371 3**	**358**	**404 9**	**371 3**
Debtors NDC/ESE	102	209	237	235	277	282	286 5	281 9	277 2	272 7	265 2	248 3	235	281 9	248 3
Debtors other and NDC	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Other	16	33	46	46	46	46	46	46	46	46	46	46	46	46	46
Fuel inventory	86	92	100	100	100	100	100	100	100	100	100	100	100	100	100
Cash	3	1	1	0	0	0	0	0	10 4	8 4	8 6	12 3	0	0	12 3
Total	330	458	507	504	546	551	555 5	550 9	556 5	550 1	542 8	529 6	504	550 9	529 6
Current liabilities															
Due fuel suppliers old	285	285	285	285	285	285	249 4	213 8	178 1	142 5	106 9	71 3	285	213 8	71 3
Due Fuel Suppliers Offsets	197	304	307	307	307	307	281 4	255 8	230 3	204 7	179 1	153 5	307	255 8	153 5
Due fuel suppliers new				34 5	89 6	158 7	140 9	146 3	145 5	135 3	129 1	143 2	34 5	146 3	143 2
Other Trade Creditors															
State	14	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Credit towards current liabilities				5 1	0	23 1	0	0	0	0	0	0			
Short term borrowing	19	26	6	0	19 5	0	67 8	75 4	85 9	100 3	110	115 6	0	75 4	115 6
Total	515	627	610	633 5	713 2	739 6	751 5	703 3	651 8	594 8	537	495 6	633 5	703 3	495 6
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	992	1049	1080	1041	990 7	956 7	936 8	967 8	1012 4	1050 4	1088 4	1104	1041	967 8	1104
Shareholders funds															
Share capital	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**	**236**
Revaluation reserve	878	937	966	966	966	966	966	966	966	966	966	966	966	966	966
Profit and losses account	122	124	122	161	211 3	245 3	265 2	234 2	189 6	151 6	113 6	98	161	234 2	98
Total	992	1049	1080	1041	990 7	956 7	936 8	967 8	1012 4	1050 4	1088 4	1104	1041	967 8	1104

Centerenergo Financial Statement [Hv Min]

#3 Full Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Revenues															
2 Electricity sales	281	124	314	407 1	364 7	302 2	334 1	540 7	517 3	425 1	432 1	635 4	1126 1	1541 6	2009 9
3 Heat sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**281**	**124**	**314**	**407 1**	**364 7**	**302 2**	**334 1**	**540 7**	**517 3**	**425 1**	**432 1**	**635 4**	**1126 1**	**1541 6**	**2009 9**
													0	0	0
5 Costs													0	0	0
6 Fuel	270	94	303	353 7	324 6	256 8	272 4	414 5	376 5	298 8	304 3	448 6	1020 7	1268 3	1428 2
7 Wages				7 2	7 5	7 7	7 9	8 2	8 4	8 7	9	9 2	7 2	31 2	35 3
8 Maintenance				8 1	8 4	8 6	8 9	9 2	9 5	9 8	10 1	10 4	8 1	35 1	39 7
9 Major maintenance													0	0	0
10 Other	13	10	19	10	10 3	10 6	11	11 3	11 6	12	12 4	12 8	52	43 2	48 8
11 Depreciation	6	11	11	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	9 1	37 1	36 2	36 2
12 Total costs	**289**	**115**	**333**	**388 1**	**359 8**	**292 8**	**309 2**	**452 2**	**415 1**	**338 3**	**344 7**	**490**	**1125 1**	**1414 1**	**1588 2**
13 Profit before interest and tax	8	9	19	19	4 8	9 4	24 9	88 4	102 2	86 8	87 3	145 4	1	127 5	421 7
14 Interest on loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Foreign exchange losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Profit before tax	8	9	19	19	4 8	9 4	24 9	88 4	102 2	86 8	87 3	145 4	1	127 5	421 7
17 Taxation	0	0	0	0 3	0	0	0	38 2	0	0	0	126 5	0 3	38 2	126 5
18 Profit after tax	8	9	19	18 7	4 8	9 4	24 9	50 2	102 2	86 8	87 3	18 8	0 7	89 2	295 2
19 Profit brought forward	94	102	93	112	93 3	89 7	82 7	64	26 4	50 2	115 4	180 9	94	93 3	-26 4
20 Dividends	0	0	0	0	1 2	2 3	6 2	12 5	25 5	21 7	21 8	4 7	0	22 3	73 8
21 Profit carried forward	102	93	112	93 3	89 7	82 7	64	26 4	50 2	115 4	180 9	195	93 3	26 4	195

Centerenergo Financial Statement [Hv Min]

Balance Sheet

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Fixed assets															
Gross	1450	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503
Depreciation	783	794	823	832 1	841 1	850 2	859 2	868 3	877 3	886 4	895 4	904 5	832 1	868 3	904 5
Net	667	709	680	670 9	661 9	652 8	643 8	634 7	625 7	616 6	607 6	598 5	670 9	634 7	598 5
Other fixed assets	74	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Total	741	788	759	749 9	740 9	731 8	722 8	713 7	704 7	695 6	686 6	677 5	749 9	713 7	677 5
Current assets															
Debtors	**659**	**633**	**669**	**605**	**625**	**599**	**603**	**599**	**594 8**	**590 9**	**584 5**	**569 8**	**606**	**599**	**569 8**
Debtors NDC/ESE	305	279	315	252	271	245	249	245	240 8	236 9	230 5	215 8	252	245	215 8
Debtors other & NDC dis	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354
Other	3	6	8	8	8	8	8	8	8	8	8	8	8	8	8
Fuel inventory	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Cash	1	0	0	0	0	0	0	0	8 1	6 6	6 7	9 6	0	0	9 6
Total	748	725	763	700	719	693	697	693	697	691 5	685 2	673 4	700	693	673 4
Current liabilities															
Due fuel suppliers old	414	414	414	414	414	414	362 3	310 5	258 8	207	155 3	103 5	414	310 5	103 5
Due Fuel Suppliers Offsets	234	196	223	223	223	223	204 4	185 8	167 3	148 7	130 1	111 5	223	185 8	111 5
Due fuel suppliers new				35 4	88 8	136 3	118 2	120 3	118 2	109 1	103 5	114 3	35 4	120 3	114 3
Other Trade Creditors													0	0	0
State	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Credit towards current liabilities				126 1	173 3	262 8	198 1	180 5	189 8	190	194 9	170 4			
Short term borrowing	17	18	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	673	638	647	556 2	562 6	520 5	496 8	446 1	364 4	284 8	203 9	168 9	556 2	446 1	168 9
Long Term Liabilities															
World Bank Loan			0	0	0	0	0	0	0	0	0	0	0	0	0
Net assets	816	875	875	893 7	897 3	904 3	923	960 6	1037 2	1102 4	1167 9	1182	893 7	960 6	1182
Shareholders funds														**0**	**0**
Share capital	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Revaluation reserve	826	876	895	895	895	895	895	895	895	895	895	895	895	895	895
Profit and losses account	102	93	112	93 3	89 7	82 7	64	26 4	50 2	115 4	180 9	195	93 3	26 4	195
Total	816	875	875	893 7	897 3	904 3	923	960 6	1037 2	1102 4	1167 9	1182	893 7	960 6	1182

Energoatom Financial Statement [Hv Min]

#3 Full Implementation

Income Statement

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1 Electricity sales to NDC	584	918	1071	771 2	973 8	948 2	1023 5	1122 7	1157 5	1193 4	1230 4	1268 5	3344 2	4068 2	4849 8
2 Electricity Sales Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Other Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Total revenues	**584**	**918**	**1071**	**771 2**	**973 8**	**948 2**	**1023 5**	**1122 7**	**1157 5**	**1193 4**	**1230 4**	**1268 5**	**3344 2**	**4068 2**	**4849 8**
5 Costs															
6 Costs of energy sales	256	471	461	417 6	450 9	439 8	471 6	492 7	486	500 3	516 1	528 3	1605 6	1854 9	2030 6
7 Cost of other sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Depreciation	45	47	117	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	83 5	292 5	334 1	334 1
9 Gross Profit	**283**	**400**	**493**	**270 1**	**439 4**	**424 9**	**468 4**	**546 5**	**588**	**609 6**	**630 8**	**656 7**	**1446 1**	**1879 1**	**2485 1**
10 Fixed Operating Costs	212	246	228	235 1	242 4	249 9	257 6	265 6	273 8	282 3	291 1	300 1	921 1	1015 4	1147 3
11 Interest Expense													0	0	0
12 Other Income	26	30	38	38	38	38	38	38	38	38	38	38	132	152	152
13 Profit before tax	45	124	227	3	159	137	172 8	242 9	276 1	289 3	301 7	318 6	393	711 7	1185 7
14 Taxation	68	72	178	0	0	0	0	213 5	0	0	0	355 7	318	213 5	355 7
15 Profit after tax	23	52	49	3	159	137	172 8	29 4	276 1	289 3	301 7	37 1	75	498 2	830
16 Dividends	0	0	0	0	39 8	34 3	43 2	7 3	69	72 3	75 4	0	0	124 5	216 8
17 Retained profit	23	52	49	3	119 3	102 8	129 6	22	207 1	217	226 3	37 1	75	373 6	613 2
18 Profit Carried Forward	151	99	50	53	66 3	169 1	298 6	320 7	527 8	744 7	971	933 9	53	320 7	933 9

Energoatom Financial Statement [Hv Min]

Balance Sheet

		97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
	Fixed assets															
1	Gross	12932	12879	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863	13863
2	Depreciation	2887	2934	3051	3134 5	3218	3301 6	3385 1	3468 6	3552 1	3635 7	3719 2	3802 7	3134 5	3468 6	3802 7
3	Other fixed assets	10890	12213	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594	11594
3a	K2/R4 Construction Fund					108 2	213 6	327 3	452	580 6	713 2	849 9	990 9	0	452	990 9
4	Total	20935	22158	22406	22322 5	22347 1	22369	22399 2	22440 4	22485 5	22534 6	22587 7	22645 2	22322 5	22440 4	22645 2
	Current assets															
5	**Debtors**	**1841**	**2034**	**2481**	**1955**	**2348**	**2248**	**2260 2**	**2235 5**	**2209 7**	**2185 5**	**2145 5**	**2054 2**	**1955**	**2235 5**	**2054 2**
6	Debtors NDC/ESE	1125	1318	1765	1239	1632	1532	1544 2	1519 5	1493 7	1469 5	1429 5	1338 2	1239	1519 5	1338 2
7	Debtors other & ND	716	716	716	716	716	716	716	716	716	716	716	716	716	716	716
8	Other current assets	172	224	132	132	132	132	132	132	132	132	132	132	132	132	132
9	Inventory	1494	1574	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654	1654
10	Cash	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
11	Total	3509	3835	4269	3743	4136	4036	4048 2	4023 5	3997 7	3973 5	3933 5	3842 2	3743	4023 5	3842 2
	Current liabilities															
12	Trade Creditors	1804	2018	2232	2232	2232	2232	1953	1674	1395	1116	837	558	2232	1674	558
13	Owed to State	149	190	265	265	265	265	242 9	220 8	198 8	176 7	154 6	132 5	265	220 8	132 5
14	Credit towards current liabilities				556 5	258 1	439 1	225 2	0	0	0	0	0	556 5	0	0
14a	Short term borrowing	49	47	50	0	0	0	0	70 4	183 7	292 6	380 6	685	0	70 4	685
15	Total	2002	2255	2547	1940 5	2238 9	2057 9	1970 7	1965 2	1777 4	1585 3	1372 2	1375 5	1940 5	1965 2	1375 5
16	**Long Term Liabilities**															
17	Long Term Debt	76	113	135	135	135	135	135	135	135	135	135	135	135	135	135
18	**Net Assets**	**22366**	**23625**	**23993**	**23990**	**24109 3**	**24212 1**	**24341 6**	**24363 7**	**24570 8**	**24787 7**	**25014**	**24976 9**	**23990**	**24363 7**	**24976 9**
19	**Shareholders funds**															
20	Authorized capital	10062	9897	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831	10831
21	Special Fund & Target F	325	226	416	416	416	416	416	416	416	416	416	416	416	416	416
22	Other Reserves	12130	13601	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796	12796
23	Profit (Loss) Cumulativ	151	99	50	53	66 3	169 1	298 6	320 7	527 8	744 7	971	933 9	53	320 7	933 9
24	Total	22366	23625	23993	23990	24109 3	24212 1	24341 6	24363 7	24570 8	24787 7	25014	24976 9	23990	24363 7	24976 9

LEC Assumption and Results

#3 Full Implementation

			97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Retail Sales	million MWh	37	32	31	33	33	32	31	35 5	33 7	32 6	31 6	36 2		131 5	134 1
2	Oblenergo Sales at Retail Tariffs	mill Hr				1855 6	1887 5	1883 3	2108 2	2659 3	2569 9	2414 3	2418 1	2995 5		8 538	10 398
3	Subsidy Amount (from 50% 100% discount)	mill Hr				152 1	152 6	147 2	144 5	170 1	161 7	154 8	151 2	177 1		615	645
3a	Occup–based Subsidies (10% of subs)	mill Hr				15 2	15 3	14 7	14 5	17	16 2	15 5	15 1	17 7			
3b	Occupl-based Subsidies (% of NDC purch)	%								0 6%	0 6%	0 7%	0 6%	0 6%			
4a	Oblenergo Cash Collections (Minn)	mill Hr				329 7	327 9	340	407 5	575 6	603 2	619 1	666 9	879 9		1 651	2 769
5a	Oblenergo Total Collections (Minn)	mill Hr				1789 8	1613 1	1772 3	2276 9	2948 4	2875	2723 4	2751 9	3439 8		8 611	11 790
	LEC costs																
6	LVNO and Supply costs	mill Hr				253 7	253 7	246	238 3	272 9	258 7	250 9	243 1	278 3		1 011	1 031
7	Self Generation	million MWh	2 4	1 4	1 2	2 6	2 4	1 4	1 2	2 6	2 4	1 2	1 2	2 6		7 6	7 3
8	Self Generation costs	mill Hr				108 3	98	60 8	53 4	108 3	98	60 8	53 4	108 3		321	321
9	LEC purchases from NDC	million MWh				30 61	30 39	27 45	27 31	33 13	31 04	28 03	27 88	33 31		118 3	120 3
10	Wholesale Market Price	Hr / Mwh				57 3	61	65	71 5	80 1	83 8	84 9	87 5	92 2		69 4	87 1
1a	LEC purchases from NDC	mill Hr				1753 55	1853	1784 8	1953 2	2655 1	2601 6	2380 4	2438 5	3071		8 246	10 492
12	LEC Payments to NDC Total	%				100 4%	66 1%	103 0%	98 6%	101 8%	101 9%	101 9%	103 1%	105 6%		92 0%	103 0%
13	LEC Payments to NDC Total	mill Hr				1760 6	1224 8	1838 4	1924 9	2701 9	2650 4	2426 3	2514 2	3243 9		7 690	10 835
14	LEC Payments to NDC Cash	%				10 6%	10 4%	12 2%	13 8%	16 9%	18 8%	20 3%	22 4%	24 8%		13 0%	22 0%
15	LEC Payments to NDC Cash	mill Hr				185 9	192 7	217 8	269 9	449	488 5	483 9	547	762 1		1 129	2 282
16	Cash Difference (Minn and NDC)	mill Hr				144	135	122	138	127	115	135	120	118		521	487 5
17	LEC LVNO Supply Self Gen expenses	mill Hr				362	351 7	306 8	291 7	381 2	356 7	311 7	296 4	386 6		1331	1351 5
18	Collections Difference (Minn and NDC)	mill Hr				29 3	388 3	-66 1	352	246 5	224 5	297 1	237 7	196		230 15	
19	IES purchases form NDC	million MW				8 86	8 73	7 7	7 6	9 53	8 91	7 85	7 75	9 58		34	34 1
20	IES purchases form NDC	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	666 9	677 9	883 1		2340	2974 2
21	IES Payments to NDC Total	mill Hr				507 3	532 4	500 5	543 5	763 5	746 3	666 9	677 9	883 1		2340	2974 2
22	IES Payments to NDC Cash	mill Hr				0	0	0	0	0	0	0	0	0		0	0

NDC Financial Statements

#3 Full Implementation

	97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
Revenues															
1 Total Energy Sales	1506	1583	2997	2261	2385	2285	2497	3419	3348	3047	3116	3954	8347	10586	13466
2 Sales to LECs	0	0	0	1754	1853	1785	1953	2655	2602	2380	2439	3071		8246	10492
3 Sales to IESs	0	0	0	507	532	501	543	763	746	667	678	883		2340	2974
Expenses															
4 Power purchases				2157	2280	2175	2379	3290	3217	2913	2979	3813	2157	10124	12922
5 HV net fee [Hv mil]				80	81	85	91	99	101	103	106	108	80	355	419
6 NDC/ESE fee [Hv mil]				24	24	25	27	30	30	31	32	32	24	107	126
7 Minus profit on import/export				0	0	0	0	0	0	0	0	0	0	0	0
8 Subsidy Requirement				0	0	0	0	0	0	0	0	0	0	0	0
9 Total Expense	1522	1549	3004	2261	2385	2285	2497	3419	3348	3047	3116	3954	8336	10586	13466
10 Profit before tax	16	34	7	0	0	0	0	0	0	0	0	0	11	0	0
11 Taxation	4	0	6	0	0	0	0	0	0	0	0	0	10	0	0
12 Profit after Tax	20	34	13	0	0	0	0	0	0	0	0	0	1	0	0

NDC Financial Statements

Balance Sheet

		97Q1a	97Q2a	97Q3a	97Q4	98Q1	98Q2	98Q3	98Q4	99Q1	99Q2	99Q3	99Q4	1997	1998	1999
1	Fixed assets Gross	239	235	236	236	236	236	236	236	236	236	236	236	236	236	236
2	Fixed Assets Depr	72	70	71	71	71	71	71	71	71	71	71	71	71	71	71
3	Net assets	167	165	165	165	165	165	165	165	165	165	165	165	165	165	165
4	Other fixed assets	1	8	9	9	9	9	9	9	9	9	9	9	9	9	9
	Short Term Assets															
5	Cash	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Due from LECs	2594	2619	2704	2503	3165	3117	3145	3099	3050	3004	2928	2755	2503	3099	2755
7	Inventory	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4
8	**Due from IESs**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8a	Total Current Assets	2598	2625	2708	2507	3169	3121	3149	3103	3054	3008	2932	2759	2507	3103	2759
	Short Term Liabilities															
	Due to Gencos															
9	Nuclear	1125	1318	1765	1239	1632	1532	1544	1519	1494	1469	1429	1338	1239	1519	1338
10	Hydro				147	158	173	174	171	168	165	161	150	147	171	150
11	Centrenergo	305	279	315	252	271	245	249	245	241	237	230	216	252	245	216
12	Donbassenergo	102	209	237	235	277	282	287	282	277	273	265	248	235	282	248
13	Dniprenergo	281	227	258	437	383	388	392	386	379	373	363	340	437	386	340
14	Zakhidenergo	133	168	193	174	265	276	279	274	270	265	258	242	174	274	242
15	Other Trade Creditors	129	177	128	128	128	128	128	128	128	128	128	128	128	128	128
16	Due to Trade creditors	2075	2378	2640	2356	2858	2768	2796	2750	2701	2655	2579	2406	2356	2750	2406
17	Other Creditors	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3
18	Notes outstanding	617	305	128	64	0	0	0	0	0	0	0	0	64	0	0
19	Short term borrowing	37	36	30	177	401	443	443	443	443	443	443	443	177	443	443
20	NET assets	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81
21	Authorized Capital	174	172	171	171	171	171	171	171	171	171	171	171	171	171	171
22	**Special Fund& Target Financin**	75	83	95	95	95	95	95	95	95	95	95	95	95	95	95
23	Other Reserves	3	5	10	10	10	10	10	10	10	10	10	10	10	10	10
24	Profit (Loss) Cumulative	216	182	195	195	195	195	195	195	195	195	195	195	195	195	195
25	TOTAL	36	78	81	81	81	81	81	81	81	81	81	81	81	81	81

CHAPTER 5
SENSITIVITY ANALYSIS – INDIVIDUAL VARIABLES AND THEIR FINANCIAL IMPACT

While the analysis of scenarios conducted in Chapter 4 is an effective way of assessing the overall impact of the Financial Recovery Plan, it would also be useful to be able to disaggregate the impacts of the some of the major plan initiatives Performing a general sensitivity analysis using the models input parameters can give a better sense of what aspects of the plan act as more effective levers in leading the sector to better financial health The FRP points with greatest potential impact could then be identified

A number of the different key model input parameters are offered below with an assessment of the strength of their impact on debt levels and profitability

Improving Total Collections / LEC Total payments to Energomarket
This action has an immediate and direct impact on the debt levels – both of LECs to the Energomarket as well as of the Energomarket to Gencos Collection levels of over 100% would allow the full covering of current expenses as well as the paying off of old debt These actions, however, have no impact on generator profits, since without interest payments there is little direct financial disincentive for taking on debt

Improving Cash Collections / LEC Cash payments to the Energomarket
Cash collections do not, per se, impact the overall accumulated Energomarket debt levels as their effect is captured in total collections The final impact of Cash collections on Genco profits also proves to be very small as noted in the scenario analysis above At best, only 10-15% of the fuel can be purchased with cash, avoiding the barter premium, and improving profit levels (unless it is presumed that a payment in cash can lead to a reduction in the price of all fuel purchased and not just the increment) If, as the FRP stipulates, only cash left over after paying wages and maintenance is used to buy fuel, then there also exists a threshold in the profit benefit of cash collections Wages and maintenance generally account for a little less than 10% of Gencos costs Thus, Gencos need to be collected at least around 8%-10% of their revenues in cash before any affect in profits is felt If income taxes must also be paid in cash, then there will be essentially no available for purchasing of fuel

Spending of cash collected could have longer-term implications For instance, in the optimistic scenario, with privatization, the cash flowing to the Gencos could be used for larger scale maintenance, or more serious plant refurbishment Benefits from this would not show up in a two-year analysis Alternately, the Gencos can decide to save money on the maintenance in the current year with cost consequences for future years What is immediately apparent from the

model, is that improving plant design parameters can have large payoffs in terms of profits, as they affect every unit of electricity sold

Introduction of market-based retail tariffs

The introduction of market-based retail tariffs will largely make the issues of retail price setting much more understandable and transparent There may be a mistaken belief that such tariffs will also work to improve the levels of total collections and through this, collections to the Energomarket and the Gencos Essentially, the introduction of these tariffs is expected to be revenue-neutral, and just serve to reallocate who will be paying the costs This is borne out in the model, and is evidenced in the data from the model runs, offered below in the Table 5

CHART 5

Oblenergo Sales at Retail tariffs

(million Hr)	1998	1999
Scenario 1 Non – Implementation	8,565	10,457
Scenario 2 Partial Implementation	8,565	10,296
Scenario 3 Full Implementation	8,538	10,398

In all three scenarios, the same amount of electricity was sold in the end to the consumers, so the difference in LEC electricity revenues was strictly the result of differences in tariff schemes The difference in revenues between a year of market based retail tariffs (Scenario 3), and a year with the old administrative tariffs (Scenario 1) came out to around one half a percent

Elimination of occupational-based subsidies

Total residential subsidies are calculated within the LEC subsection, and generally run at about 10% or less of the level of total sales It is estimated that only around 10% of these subsidies are occupational-based Thus if all of these customers subsequently paid their electricity bills in full, there would only be around a 1% increase in total collections

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Improvement in low voltage losses
Improvement of low voltage loss levels in the distribution system will serve to lower the amount of electricity that LECs need to purchase from Energomarket while providing the same services to the final customer Customers would not change their paying behavior and it could be expected that the Energomarket and thus the Gencos would see higher collections However, with market based retail tariffs, this lowering of losses might be reflected in the license prices in the form of lower retail tariffs In the end, the financial impact of this point is very small

Reducing Barter Premium for Gencos
Factors influencing the barter premium for Genco fuel purchases have a direct and large impact on Genco profits as barter affects almost all of the fuel the Gencos need to purchase Fuel costs generally comprise roughly 85% of total Genco costs, thus any reduction in the price they pay for fuel would greatly impact profits

Gencos purchasing fuel via Competitive Tender
This action is presumed to improve the quality of coal that is purchased by the Gencos This would have a significant and direct impact on Genco profits, as coal constitutes a very large portion of the gencos fuel needs Better coal means that less coal is needed to generate a given amount of electricity, and thus less coal needs to be purchased To the extent that this impacts all the coal purchased, improving coal heat rates at big plants can have very large payoff

Adherence to Market Rules / Increase in the Wholesale Purchase Price
Raising the Wholesale Purchase Price has the effect of improving Genco profits directly as it raises the revenues from electricity sales As this affects all the electricity sold, the impact is large

Exchange rate issues
Ukraine's national currency has been feeling the effects of the recent economic crisis in Russia, and the Hryvnia/Dollar Exchange rate has risen dramatically in August This latest change has been reflected in inputs to the model, and affects a number of model parameters

Ukraine's currently established administrative non-residential retail tariffs are designated in dollar terms, and thus increase with the exchange rate The Wholesale Purchase Price paid to the generators as well as fuel prices paid by generating companies are similarly set in dollar terms These aspects are all reflected in the model On the other hand, administratively set residential tariffs (which were remain in place even in the case of full implementation of the Financial Recovery Plan), are denominated in Hryvnia, and would lead to lower effective collections on the LEC side unless cross-subsidized (as they would be with Subsidy Certificates)

One unresolved issue, which the model does not address, is the revaluation of debt in light of currency devaluation All of the Energomarket debt is currently established in Hryvnia With the higher exchange rate, the debts LECs owe the Energomarket, as well as the payments owed the Gencos significantly decreased in dollar terms Failure to act upon this in the face of further devaluation would most negatively affect the thermal Gencos, whose debts for fuel are largely

denominated in dollars In real dollar terms, the amounts owed to the Gencos by the Energomarket would be dropping while their obligations would remain steady

A recent Energomarket Working Group convened at the beginning of September, with several Hagler Bailly staff in attendance, to address this very issue In the end, a single satisfactory method had not been decided upon Some the central problems brought up by this issue are discussed in more

CHAPTER 6
CONCLUSIONS

Modeling of any complex system involves simplifications and assumptions It is presumed that during the process the essential elements and relationships of the system are retained so that different possible scenarios can be simulated The benefits of effective modeling are thus the gaining of a general sense of the likely outcomes of different scenarios as well as a more complete understanding of the workings and inter-relationships of the system

The modeling of the effects of the Financial Recovery Plan has provided both of these benefits The process of categorizing the elements of the plan and arraying them as changes to the model's input parameters has involved simplifications and assumptions, as has the modeling of the basic relationships among the members of the Energomarket Tracking the changes as they flow through the system has provided insight into the potential effect of the different points of the plan Finally, modeling of the scenarios has allowed a larger assessment of the potential effectiveness of the Financial Recovery Plan

Several key concepts have stemmed from this modeling process Firstly, increasing cash collections by small amounts is not likely to produce great improvements in the profitability of the gencos Even under the optimistic scenario, the amount of cash left over after wages, maintenance and taxes is very small Unless this small amount of cash can be leveraged into better overall purchasing conditions for all the fuel purchased, rather than just the saving of a barter premium on the fuel directly purchased with the cash, the effect will be almost negligible, given the low levels of cash collection Any improvement in the barter mechanisms, which could lower the barter premium for all fuel purchased, have a large impact on generator profits Improvements in plant heat rates can have a large impact on profits, as would increases in the Wholesale Purchase Price that is paid by the Energomarket, in that they directly affect almost all of the revenues and costs the gencos incur

On the LEC side, the implementation of market-based retail tariffs is a revenue-neutral action, which should not be expected to improve cash or total collections Elimination of occupational-based subsidies affects only a very small portion of payments for electricity Financial Recovery Plan Points directly designed to reschedule debt, encourage repayment for electricity consumed, prompt offsets, limit consumption, and disconnect debtors can prove very effective in increasing total and cash collections by the LECs and then to the Energomarket and to the gencos In this end they do reduce the debt levels both to Energomarket and to gencos However, to the extent that there are no interest payments on this debt, profits are not directly affected

Privatization of the LEC and generating companies has the potential to alter a number of the key factors modeled above However, given the current pace of privatization, it cannot be realistically expected, even under the best scenarios, that significant changes would be implemented which would yield significant operating and financial results by 1999Q4

The current economic problems in Russia, and the extent to which they have affected and will affect the economic situation in Ukraine, should also be kept in mind as a backdrop for the upcoming quarters Potential problems with devaluation of the currency would need to be addressed to maintain a viable and working Energomarket, particularly regarding restatement of debt levels

In conclusion, however, the Financial Recovery Plan as modeled above, if implemented, should improve the financial health and solvency of the sector as measured by indicators through the fourth quarter of 1999 Debt owed by the LECs to the market, to the generators, and to fuel suppliers would also show significant decreases, and the profitability of the generators would show marked improvement, even in the partial/delayed implementation case Such results should reassure the Ukrainian government that they have chosen a viable and sound economic plan, and that the channeling of resources and political will for its effective implementation should be of very high priority

APPENDIX A
FINANCIAL RECOVERY PLAN- CABINET OF MINISTERS RESOLUTION

CABINET OF MINISTERS OF UKRAINE

RESOLUTION

18 April 1998 #508

The City of Kyiv

ON APPROVING FINANCIAL RECOVERY PLAN FOR THE POWER SECTOR OF UKRAINE

The Cabinet of Ministers **RESOLVES:**

To approve the Financial Recovery Plan for the Power Sector of Ukraine (see attached hereto).

Responsibility for the organization of implementation of action stipulated by this Plan should be vested in ministries and other central bodies of executive power according to their scope.

The Commission created by Instructions of the Cabinet of Ministers of Ukraine of 19 January 1998 #32 shall control implementation of this Plan and report quarterly to the Cabinet of Ministers on the status of its implementation.

A. Golubchenko
First Vice-Prime Minister
of Ukraine

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APPENDIX B
FINANCIAL RECOVERY PLAN - ACTION ITEMS

APPROVED

by Resolution of the Cabinet of Ministers
of Ukraine
18 April 1998, #508

**FINANCIAL RECOVERY PLAN FOR
THE POWER SECTOR OF UKRAINE**

Actions	Executors	Control	Deadline	Expected Results
Cost Reduction				
1 Require that all noncash financial settlements, including offsets, be executed by, or on behalf of, electricity companies using NBU bank offset mechanism	Electricity Companies	NBU	1 May 1998 onward	Reduce barter costs, saving UAH100-300 million per year, including the effects of action 2
2 For each generation company, apply all financial resources which remain available after payment of wages, repairs and taxes, to cash fuel procurement	Electricity Companies	Minenergo MinFin	15 May 1998 onward	Reduces electricity production cost by UAH100-300 million per year, including the effects of action 1
3 Generation companies conduct all cash purchases of all types of fuel from suppliers based on competition	Electricity Companies	Minenergo	1 June 1998 onward	Reduces electricity cost by lower prices for given thermal content Ultimately save UAH100 million per year

Actions	Executors	Control	Deadline	Expected Results
4 Identify as of 1 January 1998 accounts payable of electricity supply and generation companies and provide for this debt to be rescheduled for payment over 5 years in accordance with the effective law	Electricity Companies Minenergo Creditor Ministries	MinFin	15 May 1998 onward to identify and agree debt amounts 1 August 1998 to reschedule debt and record in financial statements	Reduces unscheduled claims against Electricity Companies
Retail Tariffs				
5 Transit to market-based retail tariffs according to the Electricity Law and the NERC issued licenses, while providing for a single tariff for the population in the entire territory of Ukraine	Oblenergo and other Regulated Tariff Suppliers	NERC	Start 1 May 1998, continue 1 August 1998, to be completed by the end of 1998, on a schedule to be approved by CoM	Ensures customers pay the cost of electricity generation, transmission and supply to create conditions for a full operation of the wholesale market

Actions	Executors	Control	Deadline	Expected Results
6 Determine amounts due from all electricity suppliers and generators according to the Wholesale Market Rules Enforce provisions for all payments received by Wholesale Market Members to be distributed according to Market Funds Administration Procedure	NDC	NERC	1 May 1998 onward	Allows all well managed Companies to earn a profit and minimises regulatory intervention in the wholesale market operation
7 Draft and submit for consideration in line with the established procedure law to cancel privileged electricity tariffs based on the occupational principle and to set and enforce consumption limits for all remaining classes of privileged customers	Minenergo NERC MinEcon Ministry of Labor		1 June 1998	Annual saving of UAH 53 million
Strengthening of Payment Discipline				
8 Oblenergos to promptly terminate service to all defaulters except as provided by the Law of Ukraine, and local administrations interfering with this process are to be prosecuted	Oblenergos, MinJus		15 May 1998 onward	Improved payment collections
9 Limit supply of electricity to budget-funded customers to no more than the actual amount provided for in cost estimates for this purpose	Oblenergos	Minenergo MinFin	15 May 1998 onward	Termination of unpaid electricity supply

Actions	Executors	Control	Deadline	Expected Results
10 Transfer the Market Funds Administrator from NDC to a new, NERC-licensed Energomarket Enterprise	Minenergo NERC NDC		1 July 1998	Creation of a reliable and transparent structure for administrating UAH10 billion per year of wholesale market funds
11 Formalise and enforce compulsory use of clearing accounts for all oblenergos' receipts specified in the Wholesale Market Funds Administration Procedure	Minenergo MinFin NBU		1 June 1998	Assure collection of funds from RTSs
12 Prepare propositions to the Rada to renew responsibility for non-timely electricity payments by budget organisations and residential customers	Minenergo		1 June 1998	Improve payment discipline, reduce consumer electricity debt
Collect Arrears				

Actions	Executors	Control	Deadline	Expected Results
13 For defaulted state and local budget-funded institutions and organisations, identify and execute offsets with the electricity supply companies For all defaulted state-controlled enterprises identify and execute offsets with the electricity supply companies using the NBU bank offset mechanism	Electricity Companies Minenergo MinFin Local Administra-tions	NBU	1 June 1998 for all budget-funded organisation s and institutions 1 November 1998 for all self-sustained state enterprises	Reduce arrears
14 For major nonbudget customers who are receiving electricity service, identify arrears over 3 months and reschedule them as legally enforceable, interest bearing, saleable debt instruments	Oblenergos Minenergo		1 May 1998 for all customers with over UAH 1 million arrears 1 August 1998 for all customers with over UAH 100,000 arrears	Accelerate collection of nonbudget arrears
15 Establish collection departments with litigation staffs at all oblenergos to take vigorous, systematic legal actions in the court against all defaulters	NDC Oblenergos Minenergo		1 June 1998	Collect debts due

Actions	Executors	Control	Deadline	Expected Results
16 Assure financing to pay budget arrears for electricity and heat within 5 years by means including Treasury promissory note program and promissory notes of local state administrations	MinFin CoM of the Crimea Oblast Administrations Kiev and Sevastopol City Administrations		1 October 1998	Provides assured cash flow to Electricity Companies against which they can borrow
Privatisation				
17 Transfer to winners of competitions and tenders management of state owned blocks of shares in the Electricity Companies to be privatised, using Section 104 of the State Privatisation Program, providing for the control interest to be held by investors	SPF Minenergo		Within two months after sales of each company's first block of shares	Improve efficiency of management of Electricity Companies and increase the value of state shares of electricity enterprises to be privatised

Actions	Executors	Control	Deadline	Expected Results
18 For all oblenergos, sell by open tenders or competitions against investment commitments on a schedule specified by the State Property Fund and Minenergo, at least 25% of the shares plus one share, providing for a possibility of transferring management of state shares to the winner Provide by the terms of tenders and competitions for an amount not less than the initial selling price to go for companies' development For efficient sale of shares, divide oblenergos into two groups	SPF MinFin Minenergo		First six months of 1999, complete all sales in line with the procedures stipulated by law By 1 January 1999, complete sale of the 1st group of 15 of companies	Implement Privatisation Program to obtain maximum proceeds from sales of state shares and financial recovery of the power sector to the state budget
19 Sell at least 24% of 4 fossil generators against investment commitments by tenders and competitions Provide by the terms of tenders and competitions for an amount not less than 50% of the initial selling price to go for companies' development	SPF Minenergo MinFin		First six months of 1999, complete all sales in line with the procedures stipulated by law	Implement Privatisation Program to obtain maximum proceeds from sales of state shares and financial recovery of the power sector to the state budget

Actions	Executors	Control	Deadline	Expected Results
20 Review the results of items 17-19 of this Plan's implementation and prepare draft electricity company privatisation plan for 1999 for consideration by CoM	FRC		15 November 1998	Improve efficiency of privatisation program implementation
Management				
21 Financial Recovery Commission ("FRC") to control implementation of the Financial Recovery Plan and report quarterly to the CoM on the process of its implementation	FRC		1 May 1998 onward	Improve effectiveness and credibility of the Plan implementation
22 Prepare financial performance indicators of the industry's financial recovery process as is set forth in the Appendix	Minenergo		15th calendar day of each month for the prior month	Provide systematic monitoring of reaching the key financial indicators

Actions	Executors	Control	Deadline	Expected Results
23 Draft appeal to the World Bank to reinstate EMDP loan based on the initial performance of the Financial Recovery Plan, including a request for reallocation of loan proceeds for acquisition of metering and communication technology required to implement hourly tariffs and voluntary demand curtailment	Minenergo MinFin		1 August 1998	$ 241 million available under the EMDP loan

APPENDIX C
FINANCIAL RECOVERY PLAN - INDICATORS TABLE

KEY FINANCIAL INDICATORS AND BENCHMARKS

	1997			1998													1999	
	Q3	Dec	Q4	Jan	Feb	March	Q1	April	May	June	Q2	July	Aug	Sept	Q3	Q4	Q1	Q2
1 Oblenergo electricity collection rate to transit accounts excl Kievenergo [% of amount billed]																		
1 1 Total	93 9	108 2	100 4	55 3	84 0				100	100	100	102	102	102	102	104	106	106
1 2 Cash	10 2	12 6	10 6	7 8	11 6				15	16	15	17	18	19	18	22	25	30
2 Energoatom collection rate [% of amount billed]																		
2 1 Total	106 5	122 1	89 7	43 9	65 4				100	100	100	102	102	102	102	104	106	106
2 2 Cash	9 3	7 5	7 2	5 8	5 7				15	16	15	17	18	19	18	22	25	30
3 Four fossil generators collection rate [% of amount billed]																		
3 1 Total	87 9	112 1	88 2	61	138 3				100	100	100	102	102	102	102	104	106	106
3 2 Cash	7 9	8 7	8 2	7	5 6				15	16	16	17	18	19	18	22	25	30
4 Retail tariff adherence [actual tariff as % of market	84	84	84	84	84	84	84	84	92	92	87	92	100	100	95	100	100	100
5 Fuel Cost 4 Fossil Generators [1997$/MWh sold]	[28]	[28]	[28]	[28]	[28]	[28]	[28]	[28]	27	27	27	26	26	25	26	24	24	22
6 After tax profit of 4 fossil generators [1997$/quarter	5										10				20	30	50	50
7 Oblenergo debt to Energomarket [1997$ million]	1 368	1,320	1 320	1 450	1 484						1 290				1 280	1 227	1 120	1 006
8 Oblenergo debt to Energomarket [days annual]		120	120	120	135						118				118	112	102	92
9 Energomarket debt to generators [1997$ million]	1 321	1 295	1 295	1 438	1 484						1 290				1 288	1 227	1,120	1,006
Information Indicators																		
10 Wholesale Purchase Price (from Fossil Generators) [US cents/kWh]	3 22	3 15	3 18	3 15	3 00													
11 Energoatom Sale Price [US cents/kWh]	2 4	2 4	2 4	2 7	2 7													
12 Hydro Sale Price [US cents/kWh]	0 96	0 96	0 96	0 96	0 96													
13 Wholesale Price (to Suppliers) [US cents/kWh]	2 93	2 93	2 93	3 03	2 89													
14 Average retail tariff (NERC planned) [US cents/kWh	3 76	3 76	3 76	3 95	3 95													

Note The payments collection benchmarks for Energoatom are to be finalized following EBRD's Operation Commission review of the proposed Khmelnitsky 2 / Rovno 4 nuclear completion project

APPENDIX D
EXCHANGE RATE IMPACT ON POWER SECTOR FINANCES

ISSUES SURROUNDING THE FINANCIAL STABILITY OF UKRAINE'S ELECTRIC COMPANIES IN THE CASE OF THE DEVALUATION OF THE HRYVNIA

It was suggested at the Energomarket Working group meeting on 9/1/98 that debts of Energomarket to generating companies, debts of suppliers to the Energomarket, and Energomarket wholesale prices, should be set in US dollars High inflation recently resulted in huge losses for generation companies, whose debts to their fuel suppliers are calculated in US dollars, with debts of Energomarket to generating companies being fixed in hryvnyas

Currently the majority of prices used in settlements between electric companies are set in dollars, but all payments are made in hryvnyas at the National Bank of Ukraine exchange rate at the day of payment Financial accounting is also performed in hryvnyas The Market Funds Procedure (MFP), used to allocate cash collected among market member, operates in hryvnyas, and debts are also accumulated in hryvnyas According to the current MFP algorithm the amount of Energomarket debts to generators influences the amount of cash they receive from the market daily

There are two reasons why generating companies lose money in the present settlement procedure due to fast exchange rate increases
1 Delay between calculation of the purchase price in hryvnyas and actual payment
2 Accumulation of debts in hryvnyas

Generating companies pay for fuel in dollars, and submit bids to Energomarket in dollars Energomarket purchase prices which are paid to generators are expressed also in dollars, but for the Market Funds Procedure their bids are expressed in hryvnyas at the rate of the day when they are submitted Because of the delay between the calculation of the purchase price and actual time of settlement, generating companies lose significant amount of money

Regulated tariff suppliers with their debts to Energomarket in hryvnyas, and retail prices for industrial and commercial consumers set in dollars (payments are made in hryvnyas at the National Bank of Ukraine exchange rate at the day of payment) appear to have an unjustified advantage Prices at which oblenergos buy electricity from the market are also set in dollars, so hryvnya amounts that they have to pay every day increase Their debts are fixed in hryvnyas, so their dollar value in principle may even decrease with in the case of non-payments, if the exchange rate increases fast enough

Calculation of debts in US dollars, on the other hand, puts oblenergos into a difficult situation as considerable part of their customers are residential customers whose tariffs are set in hryvnyas Their prices cannot be increased just because of the exchange rate increase,

mainly for political reasons Current opinion is residential tariff increases are impossible until after the next presidential elections in Ukraine

At the 9/1/98 Working Group meeting NERC representatives suggested that the way to overcome this difficulty is at least to improve collection rate for residential customers, as present tariffs are sufficient to cover oblenergo cost for electricity purchases, network maintenance and supply Anyway, even with 100% collections and frozen residential tariffs in hryvnyas oblenergos will have considerable disadvantage having to purchase electricity from Energomarket set in dollar terms

The quick analysis of payment structure in the system shows that in general there is an approximate dollar-hryvnya balance Twenty-one percent of electricity is consumed by residential consumers and paid for in hryvnya terms Ninety percent of the price of electricity is paid to generating companies Eighty-five perecent of generator costs are for fuel (paid in dollars), while the other 15% are for salary and other hryvnya-expressed costs So 10% of oblenergo transmission and supply cost plus another 90%*15%=13 5% of the total electricity cost - 23 5% in total are covered in hryvnyas License transmission and supply tariffs that are used in the MFP currently as a basis of payments to the retail tariff suppliers from the market, are set in hryvnyas

Typicallly, retail tariff suppliers that have lower percentage of their own costs (LVNO and supply) in the total cost of electricity they sell also have smaller shares of residential customer consumption Currently, they generally see higher electricity purchase prices as set by NERC

At the first glance, the setting of the all wholesale prices and the fixing of debts in dollars while a considerable part of retail prices remains in hryvnyas not tied to the exchange rate, would seem to create unfair advantages for generating companies and disadvantages to regulated tariff suppliers However, the system of price regulation by NERC that is actually in place (which is in conflict with license conditions), allows the effect of low prices for residential consumers to be spread evenly between generators and suppliers Tax implications also decrease advantages and disadvantages that may accumulate between the periods when NERC sets purchase prices for oblenergos and bid caps for generators

For particular companies the resulting disbalance may be considerable Some oblenergos (e g Kyivoblenergo, Vinnytsyaoblenergo) sell around 50% of electricity to residential customers Presently the relevant percentages are taken into account by NERC when setting prices at which oblenergos purchase electricity from Energomarket These prices are based on how much each oblenergo can pay for electricity with funds they collect at effective retail prices, and are changed monthly Higher costs in hryvnya terms also result in lower taxes and more cash available

Generation companies seem to have an advantage if all their receivables are expressed in dollar terms and less than 100% of their costs are tied to dollar This situation will result in a considerable increase of their hryvnya amount of profit (and amount of taxes due) With 100% payment, the increase in profit would improve their financial state and even create some possibilities for investment However, with the current non-payment situation the increase of the book (and not actually received) profit will force generating companies to pay more cash as taxes

Profit	5%	10%
Tax (30% of profit)	1 5%	3%
Cash receivables	4 5%	4 5%
Cash after tax	3%	1 5%

The example illustrates how doubling of profit results in the percentage of available cash being halved Tax implications for the retail tariff suppliers may be the opposite in the case of low cash collections

In the case of the transition to the license system for retail tariffs, the effect of overly low prices for residential consumers would be spread over all consumers through the subsidy certificates Higher profit for generation companies and excessively high prices for industrial and commercial consumers can be avoided by means of the lower bid cap set by NERC

Other factors that may influence financial stability in the case of growing hryvnya/USD exchange rate, are lowering of payment capability of industrial and residential customers, that may decrease further cash collection rates On the other hand, with the hryvnya devaluing many customers may prefer to pay for electricity in hryvnyas rather than in kind

We see from the approximate analysis that setting debts and making calculations in the MFP algorithms in dollars would remove some of the considerable disadvantages for generating companies Having a significant part of retail prices fixed in hryvnyas does not create disadvantages for Energomarket participants in the current system of price regulation or with introduction of the license based system It is, however, necessary to develop accurate procedures for conversion of the current debts and amounts due into relevant currencies

Options for adjustment of the current debt amounts because of Hrn/USD exchange rate increase

1 Straightforward procedure

The NBU exchange rate increase from January 1998 to September 1998 is (2 25 - 1 86)/1 86 = 21%, so hryvnya amounts of debts on 9/1/98 are to be increased by 21% and then fixed in US dollars at the 2 25 Hrn/USD rate

2 Month by month amount increase

January 1, 1998 debt amounts are nominated in dollars at 1 86 Hrn/USD rate, and then the dollar value of debt increase for each month until September 1, 1998 is added at the average monthly exchange rate, or at the rate on the last day of the month

3 Significant exchange rate increase points

Dates of significant (more than two points) exchange rate increase dates are found between 1/198 and 9/1/98 January 1, 1998 debt amounts are nominated in dollars at 1 86 Hrn/USD rate, and then the dollar value of debt amounts per periods between these dates are added at the exchange rate at the end of the period

The last method will be more accurate, but it will cause more controversy as debt amounts are not very accurate, due to 15 day cycle of the Market Funds procedure I would recommend to use the Option 2 at the rate on the last day of the month