

## **Infrastructure Monitoring for Ukraine (IMU)**

**No. 2/2001**

Boris Dodonov, Christian von Hirschhausen,  
Petra Opitz, Oleksandr Shcherbakov, Pavlo Sugolov

**December 2001**

*Boris Dodonov*, MA in Economics: Research Associate at the Institute of Economic Research and Policy Consulting (IERPC) in Kyiv. Special focus on the performance of the Ukrainian energy sector.

*Christian von Hirschhausen*, Dr.rer.oec.: Research Associate at the German Institute for Economic Research (DIW), Berlin, member of the German Advisory Group with the Ukrainian Government in Kyiv, and lecturer at Berlin University of Technology (TU Berlin). Specialises in structural and competition policy and enterprise reform.

*Petra Opitz*, Dr. rer. oec.: Research Associate at the German Institute for Economic Research (DIW), Berlin, and member of the German Advisory Group with the Ukrainian Government in Kyiv. Specialises in structural and competition policy and enterprise reform.

*Oleksandr Shcherbakov*, MA in Economics: Research Associate at the Institute of Economic Research and Policy Consulting (IERPC) in Kyiv. Focuses on competition policy and large-sized enterprise restructuring.

*Pavlo Sugolov*, MA in Economics: Research Associate at the Institute of Economic Research and Policy Consulting (IERPC) in Kyiv. Focuses on infrastructure development and regulation, in particular, tariffs reform, development of regulatory institutions, study of the relationship between infrastructure policies and economic growth.



# Infrastructure Monitoring for Ukraine (IMU); No. 2/2001

**Boris Dodonov, Christian von Hirschhausen, Petra Opitz,  
Oleksandr Shcherbakov, Pavlo Sugolov**

Table of contents

<b>1.</b>	<b>Introduction.....</b>	<b>5</b>
<b>2.</b>	<b>Ukrainian infrastructure policies May-November 2001 .....</b>	<b>5</b>
2.1	Telecommunications.....	7
2.1.1	Reforms during May-November 2001.....	7
2.1.2	Prospects .....	8
2.2	Railways .....	9
2.2.1	Reforms during May-November 2001.....	9
2.2.2	Prospects .....	11
2.3	Roads.....	12
2.3.1	Reforms during May-November 2001.....	12
2.3.2	Prospects .....	12
2.4	Power.....	13
2.4.1	Reforms during May-November 2001.....	13
2.4.2	Prospects .....	15
2.5	Gas .....	15
2.5.1	Reforms during May-November 2001.....	15
2.5.2	Prospects .....	17
2.6	Water and wastewater.....	18
2.6.1	Reforms during May-November 2001.....	18
2.6.2	Prospects .....	19
<b>3.</b>	<b>Appendices .....</b>	<b>21</b>



## Summary

This second issue on Infrastructure Monitoring for Ukraine (IMU) contains a brief overview of government policies and an analysis of reform developments in the infrastructure industries. The methodology of evaluation was extensively discussed in the first issue of IMU. However, it should be noted that several marginal changes to the methodology were introduced. These changes have noticeably improved the cross-industry comparability of the grades without having any significant influence on the final grades. The amendments were dictated mainly by the non-homogeneous nature of grade development across industries, which require different degrees of policymaking efforts to complete their reforms. Some changes can also be attributed to the fact that we recently learned more about some key indicators.

**Telecommunications** is the sector, which had a lower reform progress indicator compared to the previous period. Transfer of the government's corporate rights in Ukrtelecom to the State Committee on Communications and Informatisation, the nearly completed integration of Ukrtelecom and Utel, procrastination with privatisation, as well as real cases of discretionary decision-making with respect to interconnection and network access are major causes for this negative development. Continuing private network construction and increasing competition in the mobile sector are probably the only positive trends in the industry to be mentioned.

The **Railways** industry's general indicator has considerably improved. Increased cash payments for freight transportation, the elimination of redundant intermediary companies, and better management of the rolling stock by Ukrzaliznytsia are the major advances. Increases in reported profits and investment activity as well as corporatisation of some auxiliary businesses also represent reform progress. The railways' continuing function as a welfare redistribution mechanism from freight users to passengers and continuing administrative regulation by the central government remain some of the major shortfalls.

The **Roads** sector has failed to show any substantial progress during the second part of the year. Poor regulation and operational management of concession tenders, insufficient budgetary financing of road construction and the suspended process of incumbent corporation unbundling remain serious impediments on the way to reforms. At the same time the road financing discipline is likely to improve in the very near future due to a bilateral agreement with the EBRD and establishment of a special commission with the mandate to pursue reforms in this sector.

The **Power** industry experienced marginal improvements in the areas of potentially competitive businesses and of collection ratios from final consumers where both total and cash payments continued to increase. However, the planned privatisation of 12 regional power distribution companies and 4 fossil power generating companies was postponed. The delay might result in further shadow privatisations of power companies, as was happened for the example with the Luganskoblenego and

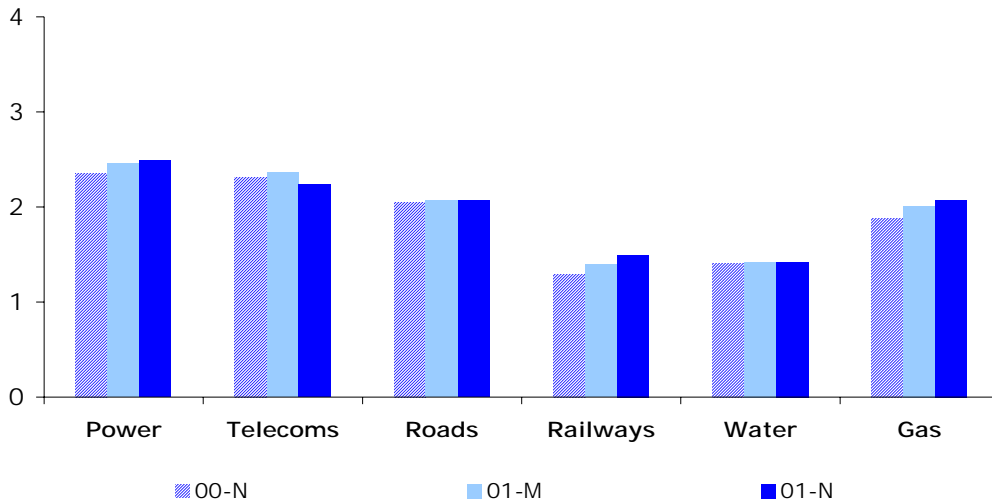


Donbassoblenergo grids and with the three fossil fuel generating plants of Donbassenergo. Other reform problems can be attributed to the unsatisfactory separation of ancillary business and postponement of new tariff setting procedures by NERC, which remains under constant political pressure.

An analysis of the **Gas** sector reveals an increase in the general indicator, mainly caused by substantial improvements in final collections from consumers, and improved intra-industry payment ratios, including cash payments. Some progress was also observed in the ancillary business ownership structure. However, the sector remains highly monopolised, since the NAK Naftogaz Ukrayiny unbundling took place only in a formal way. A distorted final consumer price structure, lack of a legislative framework for market regulation (approaching EU standards) and constant state interference in NAK Naftogaz Ukrayiny remain major problems for this sector.

The **water and wastewater** sector reforms remain suspended despite their urgent necessity. Existing companies are still overwhelmingly owned by municipal administrations. Inefficient water consumption continues due to inappropriate metering and charging procedures. Tariff setting procedures remain opaque and are subject to discretionary decision-making by local authorities. Water supply and wastewater companies are still among the major debtors to the electric power sector.

**Graph 1**  
IERPC's infrastructure indicators for Ukraine



Source: Own estimations



## 1. Introduction

Infrastructure liberalisation is a painful issue both for developed and developing countries. Aside from “conventional” problems of private sector introduction into this sector and efficient pricing, at least three transition economy infrastructure problems stand out. Firstly, strategic investment decisions and institutional frameworks were developed without reference to economic efficiency. Pricing below costs, inefficient operational management and poor transparency are just some of the problems here. Secondly, the overwhelming domination of state ownership has favoured administrative controls over a regulatory environment of the enterprises. The resulting pervasive institutional structures have become self-reinforcing or locked-in in Ukraine. Thirdly, the paternalistic nature of the social security system modifies infrastructure markets to make them a channel through which social transfers are directed toward individuals. Thus, infrastructure restructuring becomes an extremely important issue that requires reliable and permanent monitoring, which must look at the whole picture instead of just some fragmentary pieces. Last but not least, new regulatory models need to be introduced in Ukraine, establishing competition in formerly monopolistic sectors.

The second semi-annual edition of the IMU presents information on restructuring of six infrastructure sectors of the Ukrainian economy in a standardized manner, which allows for cross-industry comparison. When developing the evaluation methodology the Institute for Economic Research and Policy Consulting followed EBRD’s approach<sup>1</sup>. Monitored indicators are qualitative and fall into three broad categories: (1) commercialisation, (2) tariff reform, and (3) regulatory and institutional development. Twenty-one indicators allow for economic and policy-making analysis at different aggregation levels. The indicators are constructed in a way that represents the situation concerning reforms in each sector at corresponding moments of time. Brief descriptions of reform progress in each infrastructures sector supplement the numerical evaluation and provide a broader view of the situation within the different sectors.

In this issue we present short general reviews of government policies and of the development of reforms in the infrastructure industries. In the appendices we summarise our evaluations in tabular form and provide methodological explanations and detailed comments for each indicator.

## 2. Ukrainian infrastructure policies May-November 2001

Notwithstanding the government’s major privatisation attempts in power and telecommunications, progress achieved in previous periods was not

---

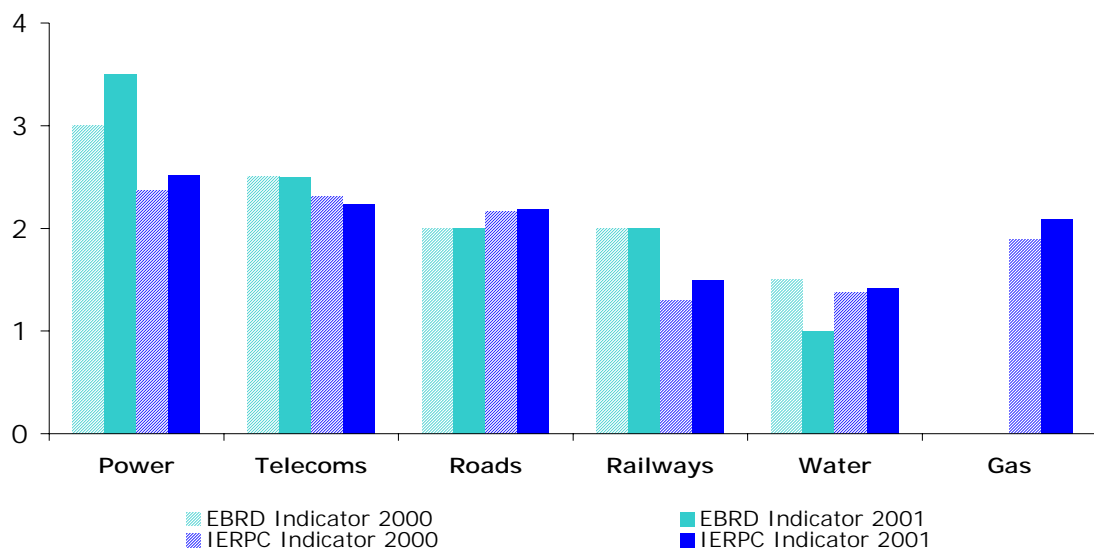
<sup>1</sup> For more details see IMU #1, Working Paper No. 8, June 2001



developed further. Some reform evaluation indicators in several sectors had to be downgraded. At the same time some implemented administrative measures have brought substantial positive results by reducing non-payments and, in particular, non-cash payments in the gas and railway industries<sup>2</sup>. Corporatisation of ancillary businesses in these industries continues at a slow pace. Roads and water supply are among the slowest reformers. These sectors have problems with inadequate government financing while alternative sources of financing are absent.

The EBRD indicators for telecommunications, roads and railways remain stable, while the power sector was upgraded and the water sector was downgraded by half a point (see Graph 2). The EBRD's estimation of the railway sector masks improvements in payments discipline and the start of corporatisation of ancillary businesses, while the EBRD's estimation of the telecommunications sector masks monopolisation tendencies in the industry and a step-back from the move towards separation of major operator management and regulation. Privatisation of six power distribution companies and adoption of profit cap regulations have not resulted in substantial IERPC indicator upgrading, because the new regulations were not properly enforced, the tariff adjustment and cross-subsidization problems were not resolved, and cash payment collection problems persisted. In the water sector no substantial changes were observed, the only progress was improving payments discipline.

**Graph 2**  
Infrastructure indicators for Ukraine



Source: EBRD, Transition report, 2000 and 2001, own estimations

Since this infrastructure review does not cover all infrastructure sectors we would like to briefly mention some major developments in those sectors. For May-November 2001 the major directions of government policy in the

<sup>2</sup> For example, the transportation sector's indebtedness to the central and local governments was reduced by UAH 32 million to 26 million.



**transportation** sector were restructuring of the airlines and of the maritime transportation companies. The Ministry of Transport has started restructuring of the Ukrainian airport industry by merging Ukraine's six largest airports, transferring eleven regional airports to regional communal property, and merging three major Ukrainian airlines. The Black Sea Shipping Line, with debts twice as high as its assets value, will go into bankruptcy procedures, while the Ukrainian Shipping Company was created by merging five smaller shipping companies.

The largest public utility service, **heating**, is among the slowest reformers notwithstanding a number of reform attempts. The heating industry performance is rather similar to the performance of the water and wastewater sector, and like the latter proves to be practically impervious to market reforms. Tariffs are regulated by regional state administrations, are higher for industrial consumers than for residential, non-payments are still rather large, and the quality of service is still very low. Only 3% of consumers are metered, and the practice of charging for services that were not provided (e.g. for lack of heating for several days per month or for heating temperatures substantially below standard) is widespread.

## 2.1 Telecommunications

### 2.1.1 Reforms during May-November 2001

The promising start of reforms in the telecommunications sector with the adoption of the law on privatisation of Ukrtelecom in July 2000 and its implementation progress until May 2001 has not continued with further improvements of the sector's development during the second part of the year<sup>3</sup>. Major impediments to progress still pertain to the fixed-lines segment of the market. Poor transparency and the regulatory environment remained key problems of the sector and no substantial improvements in these directions were noted. An absence of a clear-cut long-term strategy for the telecommunications sector development results in "Brownian motion" in policymaking and, as time goes on without any visible reform progress, ***domestic and foreign investors face more uncertainty and risks.***

- Despite the more or less clearly spelled out decision to sell a 37% share of Ukrtelecom to a strategic investor and 13% in a privileged sale to employees and management, *the privatisation of Ukrtelecom cannot be considered as feasible so far.* Private investors face a high degree of uncertainty due to imperfections in the Law "On the Privatisation of Ukrtelecom". The planned additional emission of shares would dilute the holdings of private investors. Even if the shares bought by the state were transferred to the private investor managements, this would add neither transparency to the privatisation process nor attractiveness to the investments.

---

<sup>3</sup> After dismissal of the previous government, implementation of the Ukrtelecom privatisation slowed down significantly.



- The requirement to provide telecommunications services for privileged categories without compensation<sup>4</sup> may further discourage private investors.

The *privileged subscription* for Ukrtelecom shares (13%) for management and employees *fell far behind schedule*: during October and the first half of November the privileged sale generated only UAH30m compared to the planned goal of UAH160m by the end of November.

*Serious impediments to competition* remain in this sector. Changes in the market structure – integration of Utel into Ukrtelecom in any form – further worsens the competitive environment, because of the possibility of cross-subsidization and access restrictions to primary networks. Poor regulation on interconnection allows numerous loopholes for market power abuse by Ukrtelecom to continue. The legal base for the certification procedure is not satisfactory because international quality standards are not accepted without retesting by Ukrainian laboratories, which creates room for discretionary decision-making.

The already *inadequate regulatory environment is made worse* by the absence of an independent regulator in the sector. The State Committee on Communications & Informatisation of Ukraine (SCCI) is currently in charge of both strategic policymaking and operational management within the sector. The recent transfer of the state management rights in Ukrtelecom to the SCCI represents a serious policy misjudgement because it allows regulation and operation of the business to be concentrated in the same hands.

This deteriorating situation in the natural monopoly markets has had a *negative impact on related markets*. I.e. the Internet and IP Telephony already suffered seriously from the above-mentioned problems. The recent penetration by Ukrtelecom into the ISP segment spreads its monopoly power into this related market, too.

The *mobile communications* branch is a *brighter picture* with respect to competition. This market has shown rapid growth: two major operators UMC & KyivStar GSM increased the number of their subscribers tremendously (by 100% and 230% respectively). Increased competition has pushed consumer prices down, led to increased quality of service, and added to the number of supplementary services (WAP, M-banking, T-mail, etc.) available. However, the mobile telephone market structure has to be carefully monitored, because it seems to follow the textbook 'network effect' case where the "winner takes all and loser gets nothing". Indeed the remaining operators (Golden Telecom, WellCOM and DCC), which have smaller market shares, showed significantly lower growth rates and can be considered as fringe operators. Currently the two largest operators have nearly equal shares of the market, together capturing over 94%.

### 2.1.2 Prospects

The reform progress has significantly slowed down, highlighting that without a strong telecommunications development strategy the sector's

---

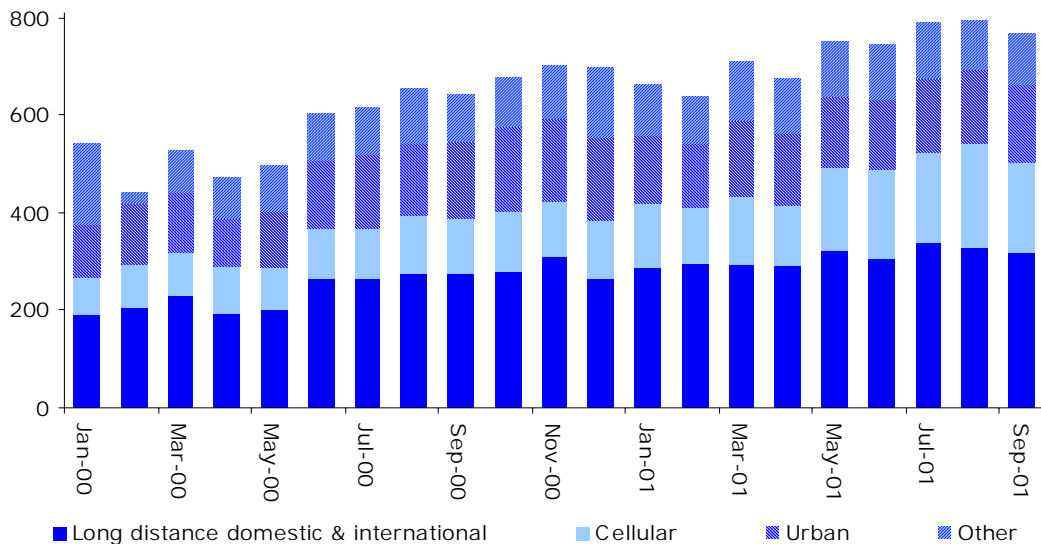
<sup>4</sup> Law "On the Peculiarities of Privatising Ukrtelecom", Article 14.



future looks bleak. Adopting the law on telecommunications<sup>5</sup> should improve the regulatory environment by establishing an independent regulator. Primary priority when developing the legal framework should be devoted to the interconnection regulations. Special attention should also be paid to separating the regulatory and management functions of the SCCI.

**Graph 3**

Telecommunications sector incomes, UAH millions



Source: Derzhkomstat, own calculations

Nevertheless, the growing income in the telecommunications sector represents a positive trend (see graph above). Despite decreasing prices in the mobile telephone branch, the quality of service is improving and profits of the major operators go up. However, speedy resumption of reforms could increase these growth rates even more.

## 2.2 Railways

### 2.2.1 Reforms during May-November 2001

Recent developments in the railway industry show that - notwithstanding economic policy improvements within the industry itself - these efforts are not enthusiastically supported by the central government. The major reason behind this is the political desire to continue to cross-subsidise certain passenger categories since their direct subsidisation by the state is impossible due to a lack of funds. As a result, the railways continue functioning as a welfare redistributing mechanism from freight users to passengers. A more transparent mechanism would be to use straight state subsidies for passenger fares out of the railway operators' taxes. This

<sup>5</sup> Parliamentary debate of the law on telecommunications after having failed to pass first reading has not yet resumed.



situation clearly demonstrates that the central government is not yet ready to regulate the industry, and hence leaves both the regulatory and the management functions at the industry level.

Certain *improvements in industry management* were observed during the period, including payments discipline.

- In freight transportation the company switched to cash payments and eliminated intermediary companies that had significantly inflated the price of freight transportation.
- Ukrzaliznytsia improved the railway car management. It expects to receive some USD 500 million by the end of 2001 from leasing about 12,000 freight cars to Russia. Also, Ukrzaliznytsia has taken 30 refrigerator cars worth UAH 43.7 million out of operation for three years because of lack of market demand<sup>6</sup>.

Constraints to capital leakage from the industry resulted in an *increase in reported profits and in investment activity*.

- Ukrzaliznytsia reported a gross profit of UAH 153 million for the first half of 2001<sup>7</sup>, for the first three-quarters of 2001 the reported gross profit was UAH 536.4 million<sup>8</sup>.
- Ukrzaliznytsia has undertaken substantial investment during the period. For the first time in the last several years Ukrzaliznytsia has purchased 30 new passenger cars at UAH 1.6 million per car<sup>9</sup>. Besides, Ukrzaliznytsia has completed the reconstruction of the Kyiv railway station, spending UAH 683 million on the reconstruction project, which has increased the passenger capacity of the station from 7,500 to 18,000 per day. The project took only six months to complete.

First steps in unbundling of Ukrzaliznytsia were taken by *corporatising some auxiliary businesses*. Nine enterprises belonging to Ukrzalizprom<sup>10</sup> were transformed from state enterprises into open joint stock companies. A state holding company Ukrzalizremmash was formed. Two of the joint stock companies, which can be privatised, formed its statutory fund. Another seven companies will also be managed by this holding company.

Ukrzaliznytsia has failed in its attempts either to raise freight *transportation tariffs* or to rebalance the freight and passenger

---

<sup>6</sup> In total Ukrreftrans operates about 500 refrigerator cars at present. Most of Ukrreftrans' previous clients now use truck transport and attempts to lease the refrigerator cars to Russian companies have failed.

<sup>7</sup> For the first half of 2000 the reported profit was UAH 100 million

<sup>8</sup> Information disclosed by the National Security and Defense Council.

<sup>9</sup> For the last years Ukrzaliznytsia repaired old cars rather than buying new ones due to a shortage of funds. In the last ten years Ukrzaliznytsia has purchased a total of 108 new passenger cars, though the demand for new cars is 1000 annually.

<sup>10</sup> Ukrzalizprom is composed of enterprises specializing in the repair of the railway rolling stock, the production of automated equipment, remote control equipment, and other equipment for Ukrzaliznytsia.



transportation tariffs<sup>11</sup>. The central government, which is responsible for approving tariffs, left the conflict of interest unresolved. Ukrzaliznytsia requested either higher tariffs for passenger transportation, or passenger subsidisation by the state, or tariff increases for freight transportation. The inter-departmental working group set up by the Cabinet of Ministers to study the procedures for setting freight tariffs has proposed to impose a moratorium on raising freight tariffs and to introduce a new tariff system that would enable it to lower tariffs. However, the inter-departmental working group did not develop detailed proposals. While the tariff re-balancing issue remains burning, there remain questions about the need for higher tariffs, because higher profitability could also be achieved through more efficient (hence costs reducing) policies.

### 2.2.2 Prospects

The government of Ukraine still has not seen fit to introduce reforms to railway tariff setting procedures. Such reforms should primarily introduce cost accounting and tariff re-balancing to eliminate cross-subsidisation. The fact that significant investment has actually taken place and that profits were made, although the enormous passenger transportation subsidisation continued, supports the view that the burden of freight tariffs in the industry is heavy. The decision of the government to withhold freight tariff increases was therefore correct. But this does not negate the need to take further steps towards tariff re-balancing.

Management of the railway industry can become more efficient once the infrastructure is completely separated from the maintenance and transportation enterprises. Separation and corporatisation of the maintenance enterprises and the social infrastructure should be accelerated. Also, it can be expected that some maintenance companies will be privatised. Longer-term perspectives for the industry include separation of the freight and passenger transportation enterprises from infrastructure management. Regional transportation companies could be established and be restricted to financing only regional infrastructure networks.

A more independent commercial behaviour of Ukrzaliznytsia heavily depends on its managers. Current positive developments can be easily reversed. To guarantee stable progress the Railways Administration (Ukrzaliznytsia) should be separated from the Ministry of Transport. After that, Ukrzaliznytsia can be separated into two bodies - a regulatory and a railway infrastructure managing body.

---

<sup>11</sup> Ukrzaliznytsia suffered a UAH 1.8 billion loss from transporting passengers last year. The majority of this loss (UAH 891.1 million) comes from transporting passengers on suburban (electric) trains.



## 2.3 Roads

### 2.3.1 Reforms during May-November 2001

The absence of changes to the road financing policy resulted in an absence of progress in this sector. Although concessions have been announced for the Lviv-Brody, Kyiv-Kharkiv-Dovzhanskyi and Kyiv-Vinnytsia highways, they are not likely to result in investment prospects. The reasons for this are problems concerning regulation of the concessions and poor government management of the concession tenders. At the same time the central government under-funded the state road construction corporation (in fact, only 80% of the planned amount was made available). Even at the time when the budget was adopted, it was already clear that the planned funds were unavailable.

Improvements to *road financing discipline* are expected. On October 18 the Cabinet of Ministers created a commission to reform the financing system for road construction and maintenance. This followed the ratification of an agreement between the Ukrainian government and the EBRD, which provides for rehabilitation of the Kyiv-Chop highway<sup>12</sup>. One of the conditions of this agreement is full financing (in accordance with the budget) of the state corporation for road construction and maintenance, Ukrautodor.

Roads sector regulation and roads management are expected to be separated. This is proposed by the President's Decree "On Roads Management Improvement" of November 8, 2001.

### 2.3.2 Prospects

*Road financing* remains a central issue for the Ukrainian government. Unfortunately, the present Ukrainian legislation does not provide for attractive conditions for private road construction investment, since it underestimates the role of forecasting road usage demand. Improved government discipline concerning road financing, and attracting funds from international financial organisations are the only ways to attract investments.

Attempts to attract investment for new road construction rather than road rehabilitation demonstrate wrong *priorities* of the government. The credit agreement with the EBRD, which prioritises roads rehabilitation, can play a positive role here. Transfer of road project financing knowledge could later on be used in road concessions design.

The separation of road management and construction could be accelerated based on *separation of road industry regulations from management* as spelled out in the President's Decree. It is also hoped that corporatisation of the state road construction corporation will soon start. ***Before corporatisation starts, it may be necessary to unbundle the existing corporation*** first and then corporatise and privatise separate

---

<sup>12</sup> Connects Kyiv and Ukraine's western border and is a part of the international transportation corridor No. 5



companies. Road construction efficiency could be improved by issuing contracts to private enterprises based on transparently handled tendering procedures. And it would not matter which way the private companies had been created – through privatisation of state enterprises or creation of private ones from scratch.

## 2.4 Power

### 2.4.1 Reforms during May-November 2001

Problems with establishing efficient corporate governance have been a major issue during the last months. **Privatisation** of an additional 12 regional power distribution companies (oblenergo) and power generating companies according to the privatisation plan, as well as the sale of parts of particular assets of these companies, were **postponed on presidential order**. Officially, this decision was explained with dissatisfaction with the results of the privatisation of six oblenergos during April 2001. The number of participants in the tendering process was lower than had been expected and consequently the state's revenues were lower as well. However, it is not quite clear why the privatisation process was postponed. Politically the tariff increases, which had to be adopted as part of the privatisation agreements, were obviously one obstacle.

The huge debts accumulated by the generating companies became a powerful instrument for take-overs. The debt equity swaps, which were a part of 3 of the 5 Donbasenergo's fossil fuel power generating plants (Luhansk, Zuyev and Kurakhov) added to undermining the transparency of the privatisation process. These plants were sold at auctions for their gas debts. All attempts of the state to return these power stations to Donbasenergo have failed. As a result, Donbasenergo lost a significant part of its capitalization. Its sale also caused a sharp drop in the share prices of all other power utilities – the stock index of the electricity sector decreased by 32% since the beginning of the year. In May 2001 the Cabinet of Ministers prohibited further debt equity swap privatisations of power companies. However, bankruptcy procedures are still allowed to be carried out. Recently bankruptcy procedures have been initiated against two other power generating companies.

In response to Donbasenergo's privatisation the Ukrainian Parliament also adopted a law on moratoria of sales of any company property with more than 25% state ownership, including energy companies. Enforcing this law would not only stop the so-called "cold" privatisations (partial transfers of energy company property to creditors for debt redemption), but would also stop the privatisation process completely for the time being. However, this law was vetoed by the President and will now be reviewed again by parliament. Such legislative instability neither improves the government's credibility nor the transparency of the sector's performance.

**Ancillary businesses were not separated** and still remain parts of the natural monopolies or of potentially competitive businesses.

In November the NERC decided to increase the tariffs for transmission and distribution for four of the six recently privatised oblenergos according to a new methodology for electricity tariff setting. This methodology was

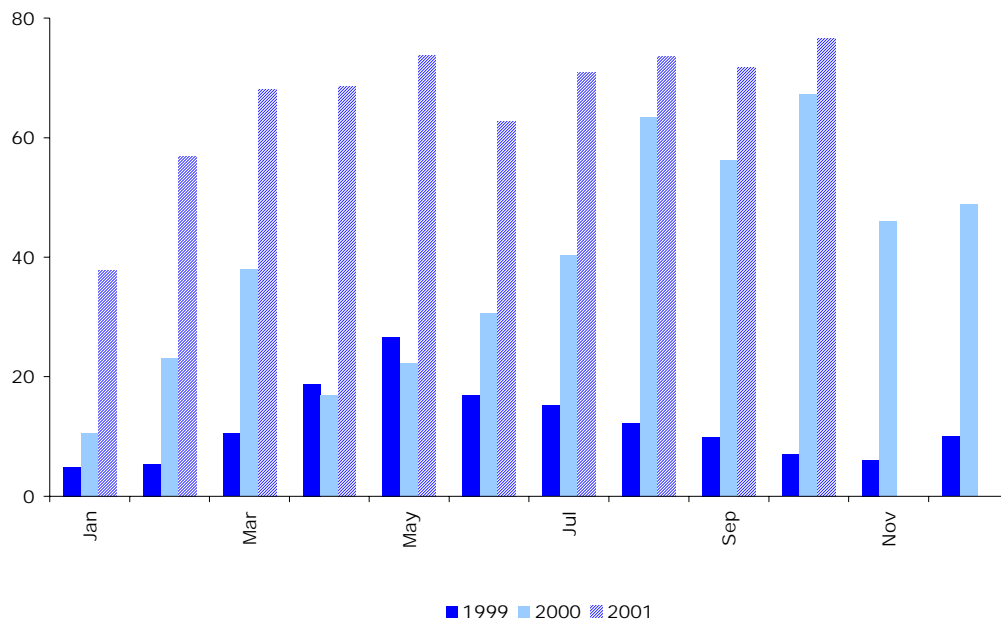


adopted in April 2001. It envisages a rate-of-return regulation and it will apply to cases where the respective oblenergo would purchase 100% its electricity from the wholesale market. No tariff increases apply to the other oblenergos.

The **level of cash payments** by the oblenergos to the wholesale electricity market **increased substantially** between May and October 2001 compared to the previous half year, and has stabilised at 70%. The targeted one hundred percent cash payments will not be reached as long as largest debtors will not be disconnected from the power supply. In June 2001, 75.5% of debtors were disconnected from the grid but they represented only 38.6% of the total debt.

**Graph 4**

Cash payments by the oblenergos as a %age of their electricity purchases



Source: NERC, Interfax

Privileges and subsidies to selected customers are financed through indirect compensation. According to the applicable governmental decree<sup>13</sup>, losses of the regional energy suppliers, which are due to such privileges, have to be paid out of the fees for gas transit service that NAK Naftogaz Ukrayiny is obliged to pay to the state. Since NAK does not fulfil its obligations, the losses of the power distribution companies are not being compensated. Thus, inter-enterprise indebtedness does not decline.

<sup>13</sup> Cabinet of Ministers decree # 52, 24/01/01.



The **legal basis of NERC is still weak and independence is not ensured**.<sup>14</sup> The government still constantly interferes in the NERC operations. A new law concerning the wholesale electricity market has been vetoed by the President. This law envisaged the replacement of the existing pool-model by a system of 'bilateral contracts'.<sup>15</sup>

#### 2.4.2 Prospects

The government plans to continue with the privatisation of the remaining state owned oblenergos, although this might not happen before the parliamentary elections in March 2002. Transparency of the privatisation process is essential in order to attract foreign investors and to avoid that assets will be sold via "cold" privatisations at lower prices.

Despite the unpopularity of tariff increases, the government promised to fulfil its commitments to the new owners. Further delays with electricity tariff increases will likely result in postponing most investment plans of the new owners and decrease the interest of potential owners in the acquiring those oblenergos, which are still owned by state. At the same time, tariffs should be set in accordance with efficiency criteria, i.e. consumers should be charged for the costs of supply plus a reasonable rate of return. The NERC might replace the profit cap regulation by a price cap regulation that will initially provide the same rate of return but simultaneously will also provide stronger incentives for cost minimisation.

Enacting the laws "On the NERC" and "On the wholesale electricity market" would improve the regulatory situation. Regulations for the free access of independent suppliers to the transportation and distribution grids should also be included.

### 2.5 Gas

#### 2.5.1 Reforms during May-November 2001

The gas market remains highly monopolised. The Ukrainian state owns the vertically integrated NAK Naftogaz Ukrayiny company, which in turn owns and operates the Ukrainian gas transportation pipeline net and extracts most of the gas within Ukraine (97%). Its share of the wholesale gas supply market is about 80%, the remaining 20% are captured by ITERA. **Unbundling of NAK Naftogaz Ukrayiny took place only in a formal way** and the question of real unbundling or divestiture of some parts of the business has not been raised during the past half year. However, "Transbudservis.Ltd", a recently created private company, will obtain some contracts for the trunk pipeline, for pumping units and other equipment rehabilitation, and for construction.

---

<sup>14</sup> The NERC operates on the basis of a presidential decree. Government interference in the NERC's responsibilities is common.

<sup>15</sup> If this law had been implemented, its enforcement would have required establishing a complex new legal system, and would have made the earlier investments in the performance of the pool-model obsolete.



Modernisation of the gas transport system, which is substantially unaltered since Soviet times,<sup>16</sup> cannot be achieved without tariff reform. At present **the gas price structure for final consumers is distorted**. Tariffs for private households, for budget organisations of all levels and for communal heating enterprises are much lower than those of industry, although one should expect the costs of supply to the first groups to be much higher. In addition, the natural gas prices for final consumers in Ukraine are distorted not only in their structure but also with respect to their absolute levels, which are far below the corresponding prices levels in neighbouring transition countries (see Table 1).

**Table 1**

Natural gas prices in neighboring transition countries (USD/tcm)\*

2000		
Country	Industrial consumers	Private consumers
Czech Republic	112.0	133.2
Hungary	94.7	112.6
Poland	101.9	155.4
Slovak Republic	76.9	74.7
<i>Ukraine**</i>	<i>63.3</i>	<i>33.6</i>

\* Prices include transportation and distribution

\*\* Supplied by NAK Naftogaz Ukrayiny

Sources: IEA/OECD, Energy Prices & Taxes, Quarterly Statistics, II/2001; Ministry of Economy of Ukraine and own estimates

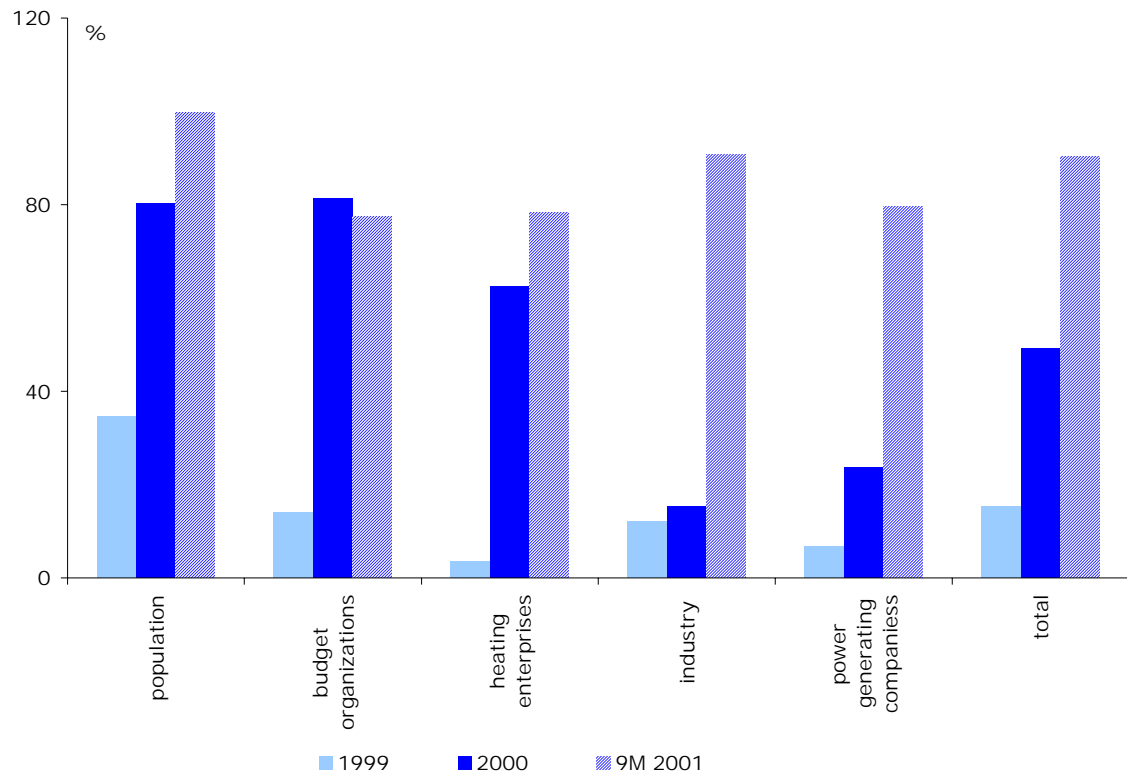
**Total payments and cash payments increased sharply** between January and September 2001, compared to previous periods. During the first nine months of 2001 consumers paid NAK Naftogaz Ukrayiny for 92.7% of the gas they consumed, including about 90% in cash. The corresponding amounts were 77 and 45% for 2000 and 39 and 15% for 1999 respectively (see Graph 5).

<sup>16</sup> According to Ukrainian experts 17% of the main gas pipelines and 25% of the gas pumping units have been fully depreciated, about 35% of the insulation material of the main gas pipelines need to be replaced, more than 30% of the gas distribution stations need reconstruction, and almost all of the underground gas storages facilities must be technically re-equipped. Source: Presentation on the Ukrainian Gas Transportation network made on 10.07.2001 by the Ukrainian members of the FIAC Oil & Gas Working Group. However, representatives of NAK Naftogaz Ukrayiny state that these figures are incorrect because they reflect the planned usage of equipment but that the real depreciation of the equipment is lower.



**Graph 5**

Cash payments to NAK Naftogaz Ukrayiny as a %age of the amount supplied



Source: Ministry of Economy of Ukraine

### 2.5.2 Prospects

The power and the independence of the regulator (NERC) need to be increased and incentives for new entrants must be created. New legislation to regulate third party access (TPA) to the transportation and distribution nets along with a new transparent methodology for setting fees for access and usage of the nets must be designed and implemented. This would allow increasing the competition within the industry and defend new entrants from the incumbent's monopoly power.<sup>17</sup>

The first stage of NAK Naftogaz Ukrayiny's unbundling ought to be the splitting of Ukrgazvydobuvannya, Ukrtransgaz and TD "Gaz Ukrayiny" into independent companies that will not be subordinated to NAK. By splitting NAK Naftogaz Ukrayiny into different and substantially more manageable subgroups Ukraine would be able to improve the attractiveness of the sector for foreign investors. However, resistance by NAK's top management to such restructuring is expected to be very strong.

<sup>17</sup> Thus, Russian oil extracting companies (LUKOIL AND ROSNEFT) are willing to sell natural gas on the Ukrainian market, which would increase competition and probably also lead to price reductions. (Source: Andrey Boyarunetz, 13<sup>th</sup> –24<sup>th</sup> of August 2001, Compulsory Competition, *Komp&n'on*#32-33,pp.45-46)



Although payment discipline substantially increased compared to previous years, the payment rate of some consumers is still below 100%. Achieving this payment target level implies that such unpopular measures as disconnection from the gas supply are enforced. However, with the coming parliamentary elections in March 2001 in mind, disconnection of major debtors such as heating enterprises is fairly unlikely.

While the adoption of legislation for TPA access regulations and a methodology for tariff setting for transportation and distribution services, as well as increases of the final consumer collection ratios might be achieved rather quickly, any divestiture of NAK Naftogaz Ukrayiny is likely to require a lot more time.

## 2.6 Water and wastewater

### 2.6.1 Reforms during May-November 2001

Although there is an urgent need for reforms for water and wastewater services there almost no reforms were achieved. The **existing companies are still mainly in communal ownership or owned by the state.**<sup>18</sup> Only in the few cases where international financial organisations like the World Bank or the EBRD financed rehabilitation projects was corporate governance improved. Although the legislative framework allows these services to be operated as concessions, this form of equity management still has not been implemented.

**Inadequate metering<sup>19</sup> and charging led** to a level of water consumption, which is much higher than in western countries. The actual per capita water consumption of the urban population in Ukraine is between 320 and 600 litres per day whereas this figure is between 150 and 240 litres in industrialised countries.

Water losses in the nets are about 30% but estimated norms of consumption might be substantially higher than real consumption and probably allow companies to cover these losses. Thus, in Kyiv oblast the tariff on water supply includes 5% losses in nets while in Odessavodokanal this portion of the tariff was about 40%. Moreover, the estimated consumption norm might vary by a factor of two between regions or even between cities in one region (e.g. Gorlovka and Mariupol in the Donbass region). This is due to the inability of the Anti-monopoly Committee to effectively protect customers from the power of the market positions held by the natural monopolies.

**The tariffs for water supply and wastewater services** as well as their estimated consumption norms are set by the regional state

---

<sup>18</sup> Before 2000 there were 434 water and waste water companies: 348 in the communal ownership, 56 in collective ownership, 22 in state ownership, 7 private and 1 in the ownership of international organisations and legal entities of foreign states. Source: PADCO, *History of Tariff Reform in Ukraine*, August 2001. It should also be mentioned that knowing the characteristics of collective ownership, it can be equated to state ownership.

<sup>19</sup> On average only 16% of customers have meters installed.



administrations<sup>20</sup>. The methodology “Methodological recommendations on economically justified tariff setting on housing services” defined by an order<sup>21</sup> of the State Committee of Ukraine on Construction, Architecture and Housing Policy (Derzhbud) is only recommendatory and its implementation depends on the attitude of the regional authorities towards it. The methodology envisages a “cost-plus” tariff regulation. This type of regulation is rather inefficient due to the following substantial drawbacks:

- The suppliers overestimate their costs and the amount of estimated consumption of their residential customers (there is no metering equipment), and
- There are no incentives to become more efficient, e.g. by reducing their staff or by decreasing energy consumption, as long as they can shift these costs on to consumers.

The regional administrations are allowed to establish tariffs for residential customers which do not cover 100% of the costs but then they are obliged to simultaneously cover the losses of the supplies.<sup>22</sup>

Thus, the tariffs for industrial consumers are several times higher than those for residential consumers. For example, in Mariupol this ratio is about nine, in Mykolaiyv it is about six and in Poltava it is about three. Tariffs for industrial consumers in some cities are higher, even though the tariff for residential consumers covers actual costs. In practice, the regional state administrations regulate these services according to political considerations, while economic efficiency is largely neglected.

The **water supply and wastewater companies** are still among the **major debtors for electricity consumption**. After several disconnections from the grid by the new private owners of the regional power distribution companies, the water and wastewater companies promised to increase the level of payment for current consumption up to 100% and gradually redeem the old debts. However, they did not fulfil these obligations and could again be disconnected from the electricity supply very soon.

### 2.6.2 Prospects

The number of meters installed must be increased as soon as possible. Then the water supply and wastewater companies will no more be able to compensate for their huge losses and other inefficiencies by unjustified estimated consumption norms, and thus, there will be an incentive to minimise costs. Because these large differences between estimated norms and real consumption are still permitted, there are no incentives for the management of the water and wastewater companies to implement efficient metering at this time.

---

<sup>20</sup> Cabinet of Ministers' decree #1548, of 25 December 1996 “On the setting the power of executive authority bodies and executive authorities of city councils concerning price (tariff) regulation”.

<sup>21</sup> Derzhbud order #78, of 29 March 1999. “Methodological recommendations on economically justified tariff settings on housing services”

<sup>22</sup> Cabinet of Minister's decree #1168, of 28 October 1997. “On the improvement of the state regulation of tariffs on housing services”.



It is necessary for the Ukrainian government and the regional state administrations to enhance the attractiveness of the sector for potential investors. In order to achieve that goal, tariffs need to be substantially modified. (First steps have already been taken in some regions.) The tariffs for industry should be lowered in all regions and increased for residential customers in many regions. Furthermore, replacing the “cost plus” regulations by “price cap” regulations will provide stronger incentives for minimising cost. The service providers should also solve the problem of non-payments, especially concerning consumers who have refused to pay for communal services for a substantial period of time.

Taking steps as these means introducing unpopular measures. On the eve of a parliamentary election that seems fairly unlikely.

### 3. Appendices

#### Appendix 1. Infrastructure Indicator evaluation

	Indicator	Telecom				Railways				Roads				Power				Gas				Water and Waste water			
		11/99	11/00	05/01	11/01	11/99	11/00	05/01	11/01	11/99	11/00	05/01	11/01	11/99	11/00	05/01	11/01	11/99	11/00	05/01	11/01	11/99	11/00	05/01	11/01
	<b>EBRD Indicator</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>1.5</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>1.5</b>	<b>2.0</b>	<b>2.0</b>	<b>2.5</b>	<b>3.0</b>	<b>3.5</b>							<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>1.0</b>	
	<b>IERPC Indicator</b>	<b>2.3</b>	<b>2.4</b>	<b>2.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>		<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.4</b>	<b>2.5</b>	<b>2.5</b>	<b>1.9</b>	<b>2.0</b>	<b>2.1</b>				<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	
<b>1</b>	<b>Commercialization and privatization</b>	<b>2.0</b>	<b>2.0</b>	<b>1.9</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>		<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.4</b>	<b>2.5</b>	<b>2.5</b>	<b>1.6</b>	<b>1.7</b>	<b>1.8</b>				<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	
<b>1.1</b>	<b>Ownership</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>		<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>				<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	
1.1.1	Natural monopoly	1.3	1.3	1.7	1.0	1.0	1.0		1.0	1.0	1.0	3.0	3.3	3.3	1.3	1.3	1.3				1.0	1.0	1.0	1.0	
1.1.2	Potentially competitive businesses	2.7	2.7	2.3	1.3	1.3	1.3		2.7	2.7	2.7	2.3	2.3	2.7	2.7	2.7	2.7				1.0	1.0	1.0	1.0	
1.1.3	Ancillary businesses	2.0	2.0	2.0	1.3	1.7	1.7		2.3	2.3	2.3	1.3	1.3	1.3	1.3	1.3	1.7				1.3	1.3	1.3	1.3	
<b>1.2</b>	<b>Operation</b>	<b>1.8</b>	<b>1.9</b>	<b>1.7</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>		<b>1.6</b>	<b>1.8</b>	<b>1.8</b>	<b>2.5</b>	<b>2.6</b>	<b>2.6</b>	<b>1.4</b>	<b>1.8</b>	<b>1.8</b>				<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	
1.2.1	Natural monopoly	1.7	2.0	1.7	1.3	1.3	1.7		1.3	1.7	1.7	3.0	3.3	3.3	2.0	2.0	2.0				1.7	1.7	1.7	1.7	
1.2.2	Natural monopoly planning and investment decisions	2.0	2.0	1.7	1.0	1.3	1.3		1.7	1.7	1.7	2.7	2.7	2.7	1.0	2.0	2.0				1.0	1.0	1.0	1.0	
1.2.3	Private sector participation in service contracts	1.7	1.7	1.7	1.3	1.7	1.7		1.7	2.0	2.0	1.7	1.7	1.7	1.3	1.3	1.3				1.3	1.3	1.3	1.3	
<b>1.3</b>	<b>Organizational structure</b>	<b>2.2</b>	<b>2.2</b>	<b>2.1</b>	<b>1.4</b>	<b>1.6</b>	<b>1.6</b>		<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>				<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	
1.3.1	Separation of natural monopoly and potentially competitive businesses	2.3	2.3	2.0	1.0	1.0	1.0		3.7	3.7	3.7	3.7	3.7	3.7	2.0	2.0	2.0				1.0	1.0	1.0	1.0	
1.3.2	Separation of ancillary businesses	2.0	2.0	2.0	1.3	1.7	1.7		2.0	2.0	2.0	1.3	1.3	1.3	1.3	1.3	1.3				1.0	1.0	1.0	1.0	
1.3.3	Decentralization	2.3	2.3	2.3	2.0	2.0	2.0		1.3	1.3	1.3										2.7	2.7	2.7	2.7	
<b>2</b>	<b>Tariff reform</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>1.4</b>	<b>1.5</b>	<b>1.7</b>		<b>2.2</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>2.5</b>	<b>2.6</b>	<b>2.0</b>	<b>2.2</b>	<b>2.3</b>				<b>1.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	
<b>2.1</b>	<b>Structure of tariffs</b>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>		<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>				<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	
2.1.1	Political vs. regulated operator's	2.0	2.0	2.0	1.0	1.0	1.0		1.7	1.7	1.7	3.0	3.0	3.0	2.0	2.0	2.0				1.0	1.0	1.0	1.0	
2.1.2	Natural monopoly pricing	2.3	2.3	2.3	1.0	1.0	1.0		1.7	1.7	1.7	2.7	2.7	2.7	2.3	2.3	2.3				1.7	1.7	1.7	1.7	
2.1.3	Potentially competitive businesses pricing	2.7	3.0	3.0	1.0	1.0	1.0		2.7	2.7	2.7	2.3	2.3	2.3	2.3	2.3	2.3				1.3	1.3	1.3	1.3	
<b>2.2</b>	<b>Payments</b>	<b>3.0</b>	<b>3.1</b>	<b>3.1</b>	<b>1.7</b>	<b>1.9</b>	<b>2.3</b>		<b>2.5</b>	<b>2.3</b>	<b>2.3</b>	<b>1.9</b>	<b>2.8</b>	<b>2.9</b>	<b>1.9</b>	<b>2.7</b>	<b>3.0</b>				<b>1.9</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	
2.2.1	Intraindustry payments ratios	3.0	3.0	3.0	1.3	1.7	2.3		3.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.3				2.0	2.3	2.3	2.3	
2.2.2	Final consumers collection ratios	3.0	3.3	3.3	2.0	2.3	2.7		2.7	2.7	2.7	2.0	3.0	3.3	2.0	2.7	3.3				2.0	2.3	2.3	2.3	
2.2.3	State indebtedness	3.0	3.0	3.0	1.7	1.7	2.0		1.7	1.3	1.3	1.7	2.3	2.3	1.7	2.3	2.3				1.7	2.3	2.3	2.3	
<b>2.3</b>	<b>State funding</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>1.7</b>	<b>1.7</b>	<b>1.9</b>		<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>				<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	
2.3.1	Subsidies level	2.7	2.7	2.7	1.3	1.3	1.7		2.0	2.0	2.0	2.3	2.3	2.3	2.0	2.0	2.0				1.7	1.7	1.7	1.7	
2.3.2	Subsidies procedure	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	1.7	1.7	1.7				2.0	2.0	2.0	2.0	
<b>3</b>	<b>Regulatory and institutional development</b>	<b>2.4</b>	<b>2.4</b>	<b>2.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.3</b>		<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.1</b>	<b>2.2</b>	<b>2.2</b>				<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	
<b>3.1</b>	<b>Effective regulatory institution</b>	<b>2.4</b>	<b>2.6</b>	<b>2.3</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>		<b>2.0</b>	<b>2.1</b>	<b>2.1</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>1.9</b>	<b>2.0</b>	<b>2.0</b>				<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	
3.1.1	Management selection of competitive businesses	2.7	2.7	2.3	1.3	1.3	1.3		2.3	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0				1.3	1.3	1.3	1.3	
3.1.2	Independence of regulator, insulation from political influence	2.3	2.7	2.3	1.0	1.0	1.3		2.0	2.0	2.0	3.0	3.0	3.0	2.3	2.3	2.3				1.3	1.3	1.3	1.3	
3.1.3	Transparency of regulation	2.3	2.3	2.3	1.7	2.0	2.0		1.7	2.0	2.0	3.0	3.0	3.0	1.3	1.7	1.7				1.0	1.0	1.0	1.0	
<b>3.2</b>	<b>Access regulation</b>	<b>2.3</b>	<b>2.3</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>		<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>				<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	





## Appendix 2. General description of the infrastructure indicators

This appendix presents a brief description of the criteria for scoring each indicator.

### 1. Commercialisation and privatisation

#### 1.1 Ownership

1.1.1 **Natural monopoly.** A natural monopoly is a network operator. A score of one means that the whole network is state owned; the score increases with an increasing share of corporatised, privatised and newly constructed private fixed networks in the total length of networks. The maximum score is reached with private ownership of all networks.

1.1.2 **Potentially competitive business.** A potentially competitive business is an operator using networks to provide its services; it is a market related to a natural monopoly. A score of one implies that the businesses are part of the state owned natural monopoly. The score increases with separation, corporatisation and privatisation of existing operators, or with increased market penetration by newly established private agents. The maximum is reached when all the businesses are in private ownership.

1.1.3 **Ancillary business.** Ancillary businesses are concerned with network construction, its maintenance, inputs supplies, and social infrastructure. A score of one means that these businesses are state owned. The score increases with the degree of separation, corporatisation and privatisation, or the increase in new private establishments.

#### 1.2 Operation

1.2.1 **Natural monopoly.** A score of one is given when the natural monopoly is operated as a government department. The score increases with reorganisation into an independent state agency or a company and establishing of an independent regulator. The maximum score is assigned if a private company manages the natural monopoly, and only an independent regulator, established by law, can intervene.

1.2.2 **Natural monopoly planning and investment decisions.** A score of one implies political interference in making business and investment decisions. The score increases as commercial objectives such as profitability and operational efficiency grow in importance. The highest score applies if network extensions and new investment projects are realised solely based on profitability considerations and reflect marginal social costs.



1.2.3 **Private sector participation in service contracts.** A score of one means that the private sector does not participate in construction, maintenance or rehabilitation etc. The score increases with increasing participation in these activities by the private sector.

### 1.3 Organisational structure

1.3.1 **Separation of natural monopoly and potentially competitive businesses.** A score of one means no separation between the infrastructure and the service providers' managements, as well as separation between the managements of different service providers. The score increases with unbundling of the industry. The highest score applies when different services are provided by separate private companies.

1.3.2 **Separation of ancillary businesses.** A score of one means no separation of ancillary business from the natural monopoly or potentially competitive businesses. The score increases with increasing degrees of separation. The maximum score is assigned when ancillary services for the natural monopoly and for potentially competitive businesses are supplied by the market.

1.3.3 **Decentralisation.** A score of one implies no or minimal decentralisation and increases with increasing decentralisation. Decentralization is both regional and functional and implies autonomy of decision making at the regional level concerning tariffs and investments. The highest score is assigned when the industry is divided into competing regional operators.

## 2 Tariffs reform

### 2.1 Structure of tariffs

2.1.1 **Political vs. regulated operators.** A score of one implies strong political interference in tariff setting. The score increases with declining political interference and its transfer from the central government to the corresponding government agency and finally to the regulatory body. The maximum score is reached for full cost reflective tariff setting by an infrastructure operator regulated by an independent regulator.

2.1.2 **Natural monopoly pricing.** A score of one corresponds to pricing below cost accompanied by a substantial amount of cross-subsidisation. The score increases as the tariff approaches the long-run marginal cost reflecting cost covering levels, with cross-subsidisation declining.

2.1.3 **Potentially competitive businesses pricing.** A score of one means a lack of cost reflective pricing. The score increases with markets becoming increasingly competitive and prices approaching market equilibrium levels.

### 2.2 Payments



- 2.2.1 **Intra-industry payment ratios.** A score of one implies that arrears are constantly accumulating and transactions between companies within an industry are basically non-monetary. The score increases as monetary settlements are carried out and arrears are approaching zero.
- 2.2.2 **Final consumer collection rates.** A score of one means low revenue collection from final consumers (households, companies, budgetary organizations) and constantly accumulating arrears. The score increases as progress with revenue collection is made and services are fully paid for. Apart from a non-linear pattern of evaluation grades with respect to payment percentage improvements in each sector, there is non-homogeneity of the patterns across sectors. The six sectors were divided into two groups in accordance with the potential efforts needed to reach higher payment levels. Telecommunications and roads represent the first group, where high levels of payments are relatively easy to achieve. The railroad, power, gas, and water supply sectors were put into the second group, where comparatively small improvements can be defined as considerable successes.
- 2.2.3 **State indebtedness.** A score of one corresponds to growing arrears for state compensations to privileged consumers. The score improves as this indebtedness is reduced zero.

### 2.3 State funding

- 2.3.1 **Subsidies level.** A score of one means that some groups of consumers are heavily subsidised by the state in an explicit or implicit form. Both the depth of the subsidisation and the distribution of subsidies are important. The government may pursue a constant practice of debt's forgiving and restructuring. Abstention from implicit and explicit subsidies leads to improved scores.
- 2.3.2 **Subsidies procedure.** A score of one is assigned when the subsidies are directed to service suppliers and are provided in non-transparent ways. The score improves as the process becomes more transparent and income compensations replace price compensations.

## 3 Regulatory and institutional development

### 3.1 Effective regulatory institutions

- 3.1.1 **Management selection of competitive businesses.** A score of one means that the management is appointed by state officials. The score increases when the management is elected by the shareholders and reaches its maximum when the shareholders are private companies or individuals.
- 3.1.2 **Independence of regulator, insulation from political influence.** A score of one is assigned when a government department provides the service. The score increases as a state



commission is introduced and an independent regulator is established. The highest score applies when an independent regulator acts according to law.

- 3.1.3 **Transparency of regulation.** A score of one implies an absence of legislation defining clear rules of the game for business and obligations of government bodies. The score increases with the development of legislation and its enforcement, including when the decision-making becomes public. The maximum score is reached when the performance of natural monopolies in an industry is regulated only by an independent regulator in accordance with law and all decisions are disclosed.
- 3.2 **Access pricing regulation method.** A score of one means that the access right is arbitrarily determined by the state or the state-owned operator. The score increases as access is regulated by an independent regulator, later negotiated, finally determined by market mechanisms.



## Appendix 3. Explanations for the infrastructure indicator evaluations given in Appendix 1 (May-November 2001)

### TELECOMMUNICATIONS

#### **1.0 Commercialisation and privatisation**

##### **1.1 Ownership**

- 1.1.1 The fixed communication networks remain 100% state owned. Development of private local fixed line networks is only marginal. The indicator increased from 1.3 to 1.7.
- 1.1.2 The international calls market includes several private operators; however, the integration of Utel & Ukrtelecom makes the largest international calls operator state-owned. Internet providers and mobile operators are mostly privately owned. The indicator was downgraded from 2.7 to 2.3.
- 1.1.3 Fixed line construction and maintenance is provided by publicly owned companies. Newcomers construct private local call networks, but their share is insignificant, especially taking into account the high rate of network development by state enterprises.

##### **1.2 Operation**

- 1.2.1 The SCCI performs three tasks: (1) strategic policymaking, (2) operational regulation, and (3) management of the state corporate rights in Ukrtelecom, all of which should not be done by one single authority. Simultaneous execution of regulatory and managerial functions had a negative impact on both. The indicator was decreased from 2.0 to 1.7.
- 1.2.2 Networks extension, the integration of Utel & Ukrtelecom and other investment decisions are increasingly influenced by the political desire to obtain higher privatisation revenues. The indicator was decreased from 2.0 to 1.7.
- 1.2.3 Fixed line construction and maintenance is managed by a public fixed line operator and partially by private companies, the mobile network is developed by private operators.

##### **1.3 Organisational structure**

- 1.3.1 The integration of Ukrtelecom and Utel and Ukrtelecom's new business strategy to penetrate into the Internet service provider market are evidence of enlargements in the sector. The indicator was downgraded from 2.3 to 2.0.
- 1.3.2 The social infrastructure was split off but other services are not contracted out yet. No substantial improvements can be observed.



1.3.3 There is no progress with decentralization of the long distance and local phone services, in addition, deterioration can be expected due to recent changes in the industry structure and management. Mobile services operate on a regional basis.

## **2.0 Tariffs reform**

### **2.1 Structure of tariffs**

2.1.1 Telecommunication tariffs are regulated; the share of privileged consumer categories in the fixed-line segment remained stable.

2.1.2 Local calls are subsidised by long distance calls. Rural user pricing for fixed phone lines remains below cost.

2.1.3 Telephone tariffs became more flexible, by-the-minute charges have been introduced. Mobile telecommunications charges are going down most likely due to competition in the market.

### **2.2 Payments**

2.2.1 Phone usage is normally paid for, barter operations are reduced.

2.2.2 No substantial progress compared to the previous period especially for privileged categories. Government agency arrears are stable, which was the reason for Ukrtelecom's complaints.

2.2.3 The indebtedness level is low but constant and is still not eliminated. Most problems arise as a result of discretionary decision-making at the municipal level.

### **2.3 State funding**

2.3.1 The number of privileged categories of phone users as well as the subsidy level remain substantial.

2.3.2 Municipal subsidies are paid to the fixed phone line operators with low degrees of transparency and high probabilities of discretionary decisions.

## **3.0 Regulatory and institutional development**

### **3.1 Effective regulatory institutions**

3.1.1 The management is selected by shareholders, although for major state owned operators the government's involvement increased. The indicator was decreased from 2.7 to 2.3.

3.1.2 The State Committee for Telecommunications and Information now became responsible for the business activity of Ukrtelecom, which may seriously hamper competition in the sector. The indicator was downgraded from 2.7 to 2.3.

3.1.3 According to the legislation, tariffs and access regulation principles did not change and remained substantially non-transparent.

**3.2 Access regulation** Access is provided by spectrum of allocation tenders and operations licensing. However, the opportunity for Ukrtelecom to abuse its market power increased, like in the cases of Golden Telecom and the IP telephony operators. The estimate of the indicator was decreased from 2.3 to 2.0.



## **RAILWAYS**

### **1.0 Commercialisation and privatisation**

#### **1.1 Ownership**

- 1.1.1 The rail lines are 100% state owned.
- 1.1.2 Passenger and freight transportation are 100% state owned.
- 1.1.3 The construction, maintenance and service enterprises are being corporatised, privatisation is foreseen at a second stage.

#### **1.2 Operation**

- 1.2.1 The railways are regulated by the State Railways Administration, which is integrated into the Ministry of Transport. Due to administrative reforms it became a more independent decision making body, separate from the government. The indicator increased from 1.3 to 1.7.
- 1.2.2 The Ministry of Transportation is more interested in transport improvements and investment volumes rather than operational efficiency and profitability of the industry.
- 1.2.3 Rail line construction and rolling stock maintenance is provided by enterprises being corporatised (Ukrzalizprom, Ukrzalizremmash, Ukrzaliztrans), although the progress of corporatisation is very slow.

#### **1.3 Organisational structure**

- 1.3.1 The railway infrastructure, passenger and freight transportation services are integrated in Ukrzaliznytsia.
- 1.3.2 695 apartment buildings with public utility infrastructure and 207 nursery schools will in time be transferred to communal property. Measures are being taken to improve operator licensing procedures.
- 1.3.3 The railways are split into 6 regional companies each with the right to set tariffs independently for their services. Municipal authorities may regulate privileged category tariffs while providing offsetting compensation.

### **2.0 Tariffs reform**

#### **2.1 Structure of tariffs**

- 2.1.1 Transportation service tariffs are set for political reasons – to cross-subsidise privileged passengers, since there are not enough funds in the state coffers.
- 2.1.2 Fixed costs are not covered, cross subsidisation of passenger transportation with freight transportation persists. Although tariffs are not intended to be rebalanced, cross subsidisation is not allowed to increase.
- 2.1.3 Tariffs do not reflect infrastructure and rolling stock costs. Although administrative measures were taken to improve rolling stock utilisation, UAH 500 million is planned to be generated from freight cars rentals by the end of 2001.

#### **2.2 Payments**



- 2.2.1 Ukrzaliznytsia's indebtedness to Ukrzalizprom is still UAH 17 million. However the indebtedness to the state was reduced by 79%. The indicator was significantly increased from 1.7 to 2.3.
- 2.2.2 Final consumer indebtedness for freight has reduced by UAH 154 million. Cash payments for freight transportation have reached 92.8%. For January-September 2001, Ukrzaliznytsia reduced the level of barter operations to 2.8% compared to 27.4% for the same period of 2000<sup>23</sup>. The indicator was increased from 2.3 to 2.7.
- 2.2.3 State subsidies are provided at almost the budgeted levels. The indicator was increased from 1.7 to 2.0.

### **2.3 State funding**

- 2.3.1 There are 16 categories of privileged passengers, although within these categories the number of the privileged is restricted. The government still relies on passenger transportation funding at the expense of Ukrzaliznytsia. The indicator was increased from 1.3 to 1.7.
- 2.3.2 Subsidies are paid to the railways (service providers).

## **3.0 Regulatory and institutional development**

### **3.1 Effective regulatory institutions**

- 3.1.1 The President appoints the management, although the government body operating the railways is formally independent.
- 3.1.2 The railways regulator is a part of the government and integrated with the rail line operator. Recent administrative reforms increased the independence of the railway administration in operational decision-making. The indicator was upgraded from 1.0 to 1.3.
- 3.1.3 Tariffs are fixed by legislation; tariffs changes are discussed within the government.

### **3.2 Access is regulated with government permission.**

## **ROADS**

### **1.0 Commercialisation and privatisation**

#### **1.1 Ownership**

- 1.1.1 Roads are 100% in state and communal ownership.
- 1.1.2 Transportation enterprises are 90% corporatised. Freight and transportation enterprises are about 30% private. Local passenger transportation has increased by 158,600 trips (5%), while intercity trips have reduced by 14,300.
- 1.1.3 The social infrastructure, services, and automobile maintenance enterprises are mostly private. Publicly owned companies provide road maintenance and construction.

#### **1.2 Operation**

---

<sup>23</sup> Information disclosed by the National Security and Defense Council.



- 1.2.1 A government department manages roads; road network extensions and regulation are the responsibility of a state agency (Ukrautodor).
- 1.2.2 The road network extension is the only priority, efficiency is not taken into account. UAH 805 million was spent on roads maintenance and construction (43 km of new roads built).
- 1.2.3 Road construction and maintenance is provided by state owned companies being corporatised, although contracts are still placed in non-transparent ways.

### **1.3 Organisational structure**

- 1.3.1 The roads operation is split off from freight and passenger transportation services.
- 1.3.2 Road construction and maintenance are separated from transportation, few services are contracted out. Truck and bus maintenance is separated from transportation in most cases.
- 1.3.3 Roads are financed and operated at both the central and regional levels. Municipal authorities can make investment decisions on local road construction although in reality they usually lack funds.

## **2.0 Tariffs reform**

### **2.1 Structure of tariffs**

- 2.1.1 Tariffs for passenger transportation are set by the government, the government intends to rebalance the tariffs.
- 2.1.2 Officially road funding derives from an excise tax on fuel, although the law is not yet enacted. The tax is directed to the general state coffers. The cross subsidisation level is low.
- 2.1.3 The trucking and bus transportation markets are competitive, licensing procedures are improving.

### **2.2 Payments**

- 2.2.1 Payment arrears between enterprises are modest.
- 2.2.2 Payment arrears by final consumers persist in urban transportation.
- 2.2.3 The state has financed the sector at the 80% level; it is therefore under-funding it by UAH 50 million. This under-funding continues to increase. Only 43 km of roads were built compared to 84 km for the same period in 2000, and 2103 km fewer roads were repaired.

### **2.3 State funding**

- 2.3.1 The subsidised number of privileged passenger categories remains substantial.
- 2.3.2 Subsidies are paid to the road operator.

## **3.0 Regulatory and institutional development**

### **3.1 Effective regulatory institutions**

- 3.1.1 Only the management of the road operator is appointed by the government.



- 3.1.2 Ukrautodor as road operator is organisationally separated from the government.
- 3.1.3 Tariff regulation principles are publicly discussed, but only whenever a state budget is being adopted. The level of administrative tariff regulation is intended to be reduced.
- 3.2 **Access regulation** Access is regulated by licensing. The procedures are non-transparent, but are hoped to improve.

## **POWER**

### **1.0 Commercialisation and privatisation**

#### **1.1 Ownership**

- 1.1.1 The President suspended privatisation and parliament passed the similar law, which was vetoed by the President.
- 1.1.2 Three fossil fuel generating plants belonging to Donbassenergo were sold non-transparently. However, this privatisation resulted in the share of private ownership in the industry increasing and hence the grade was raised from 2.3 to 2.7. Dniproenergo and Tsentrenergo are the subject of bankruptcy procedures now: Their privatisation might take place in the same manner.
- 1.1.3 Social infrastructure, construction and maintenance are treated as part of the natural monopoly.

#### **1.2 Operation**

- 1.2.1 Regional distribution companies are stock companies and some of them are in private hands, all are regulated by the NERC. The grid is operated as a part of Ukrenergo.
- 1.2.2 Decision-making is still politically influenced but is likely to decrease due to pressure from private investors (guaranteed profitability).
- 1.2.3 Construction and maintenance is managed by the oblenergos.

#### **1.3 Organisational structure**

- 1.3.1 Generation, transmission and distribution are separated into independent companies.
- 1.3.2 There is a minimal degree of separation.
- 1.3.3 Decentralisation is not a high priority in this industry.

### **2.0 Tariffs reform**

#### **2.1 Structure of tariffs**

- 2.1.1 Political interference in tariff setting for certain types of consumers persists through pressure exerted on the independent regulator.
- 2.1.2 Cross subsidisation of households, agricultural producers and of closing coal mines by the industry still takes place and cost reflection is not unambiguous.
- 2.1.3 The performance of the wholesale electricity market is far removed from market requirements.



## **2.2 Payments**

- 2.2.1 The situation improved significantly, but some settlements are still made in non-cash form.
- 2.2.2 The collection rate and the cash payment ratio had increased significantly by May 2001 compared to 2000, and continued to increase from May to November 2001 but remained below 100%. The grade increase from 2.0 in 2000 to 3.0 in May 2001 was further increased to 3.3 therefor.
- 2.2.3 The state budget foresees 100% payment for consumed power but the actual payments are below this level

## **2.3 State funding**

- 2.3.1 The poorest people are subsidised, the number of privileged categories remains substantial.
- 2.3.2 Subsidies are paid to the oblenergós.

## **3.0 Regulatory and institutional development**

### **3.1 Effective regulatory institutions**

- 3.1.1 The management is appointed by the state
- 3.1.2 The NERC is governed by decrees from the President and the Cabinet of Ministers, there is no law defining its rights and obligations.
- 3.1.3 Tariffs are set according to an old methodology. The new methodology based on a rate-of-return regulation has not yet been implemented due to strong political interference.

- 3.2 **Access regulation** Access is regulated by the NERC, but without a strong legislative base.

## **GAS**

### **1.0 Commercialisation and privatisation**

#### **1.1 Ownership**

- 1.1.1 The trunk pipeline and the distribution net are 100% state property, however, NAK Naftogaz is corporatised.
- 1.1.2 The share of state property in gas extraction is very high, private companies have been involved in gas imports.
- 1.1.3 Construction, maintenance and service efforts are carried out mainly by NAK Naftogaz but unrelated businesses were split off. The newly created private company will obtain some contracts on trunk pipeline modernisation. Therefore, the grade for November 2001 was increased from 1.3 to 1.7.

#### **1.2 Operation**

- 1.2.1 NAK Naftogaz is subject to supervision by the government and the President; it can however operate as a market company.



1.2.2 Commercial objectives are weak, however, commercialisation has increased and debt accumulation for consumed Russian gas was stopped, as was illegal siphoning.

1.2.3 Employing private companies to repair and maintain the pipelines has started. The private sector is involved in gas deliveries to enterprises.

### **1.3 Organisational structure**

1.3.1 NAK Naftogaz was split into extraction, transportation and sales.

1.3.2 There is a minimal degree of separation.

1.3.3 Decentralisation is not foreseen for this industry.

### **2.3 Tariffs reform**

#### **2.4 Structure of tariffs**

2.1.1 There still is government interference in tariff setting for some types of consumers.

2.1.2 Industrial enterprises have choices; NERC determines the price of transportation. Households and utilities are invoiced at below-cost prices; as a result under-investment in the network persists.

2.1.3 A private company carries out a substantial part of gas imports.

#### **2.5 Payments**

2.2.1 Arrears accumulation, non-payments or payments in non-cash form and problems associated with them have continuously decreased. The grade was therefor increased from 3.0 to 3.3

2.2.2 Final consumer indebtedness for gas is substantial, but the payment collection rate (including cash payments) increased substantially and the debt for consumed Russian gas has not increased. Supply to households and utilities between May and November 2001 depended to a large extent on their payment behaviour. Therefore, the indicator was increased from 2.7 to 3.3

2.2.3 The state has not redeemed debts accumulated in the past; however, its indebtedness remained stable.

#### **2.3 State funding**

2.3.1 The poorest households are subsidised; debt delay for enterprises persists.

2.3.2 Subsidies are paid to the public sector.

### **3.0 Regulatory and institutional development**

#### **3.1 Effective regulatory institutions**

3.1.1 The government appoints the management, although NAK Naftogaz is formally independent.

3.1.2 NAK Naftogaz is subject to government control.

3.1.3 Gas auctions were abolished, distribution costs and the price of natural gas obtained as a fee for Russian gas transit are non-transparent.



- 3.2 Access regulation** Access is regulated by the NERC, but without a strong legislative base

## **WATER AND WASTE WATER**

### **1.0 Commercialisation and privatisation**

#### **1.1 Ownership**

- 1.1.1 Natural monopoly (water distribution and drainage systems) under communal ownership.
- 1.1.2 Potentially competitive businesses (water supply and wastewater treatment) too are in communal ownership.
- 1.1.3 Construction and maintenance are part of the natural monopoly.

#### **1.2 Operation**

- 1.2.1 Water and wastewater services are provided by one company except in a few cities.
- 1.2.2 Strong political influence in decision making still persists.
- 1.2.3 Private sector participation in service contracts is practically nil.

#### **1.3 Organisational structure**

- 1.3.1 No separation
- 1.3.2 No separation.
- 1.3.3 Companies perform under the supervision of municipal authorities. However, intervention by the regional administrations is often the case.

### **2.0 Tariffs reform**

#### **2.1 Structure of tariffs**

- 2.1.1 The level of tariffs is determined by municipal officials, primarily in accordance with political considerations. The tariffs for industrial consumers are several times higher than for residential.
- 2.1.2 Tariffs for residential consumers are at below-cost levels. Natural monopolies charge all costs to consumers and have no incentives for minimising costs.
- 2.1.3 Potentially competitive businesses are part of the natural monopoly, which sets prices for all services.

#### **2.2 Payments**

- 2.2.1 Payment arrears are significant due to low collection rates.
- 2.2.2 Collection rates for households remain at a rather low level.
- 2.2.3 The state has not completely fulfilled its obligation concerning financing privileged consumers out of state funds.

#### **2.3 State funding**

- 2.3.1 The poorest households are subsidised. The amount of subsidisation varies substantially between regions.



2.3.2 Subsidies are paid to the providers of the services.

### **3.0 Regulatory and institutional development**

#### **3.1 Effective regulatory institutions**

3.1.1 Regional authorities appoint the management.

3.1.2 There is no independent regulator.

3.1.3 Tariffs are set arbitrarily, justifications for the decisions are not disclosed.

**3.2 Access regulation** There are no rules for access.