

Infrastructure Monitoring for Ukraine (IMU)

No. 10/2008

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List of abbreviations

AMCU - Antimonopoly Committee of Ukraine

bcm - billion cubic meters

bn – billion

CDMA - Code Division Multiple Access

CMU – Cabinet of Ministers of Ukraine

EBRD – European Bank of Reconstruction and Development

ECMT - European Conference of Ministers of Transport

ECU - Energy Company of Ukraine

EU – European Union

GSM - Global System for Mobile Communications

IMU – Infrastructure Monitoring of Ukraine

MTCU – Ministry of Transport and Communications of Ukraine

m - million

NCRC - National Commission for Regulation of Communications

NCRT - National Commission for Regulation of Transport

NERC – National Electricity Regulatory Commission

PFTS – First Securities Trading System

PPP - Public-Private Partnership

RUE - RosUkrEnerg

SPFU – State Property Fund of Ukraine

tcm - thousand cubic meters

TM - trademark

UAH – Ukrainian hryvnia

UCTE - Union for the Co-ordination of Transmission of Electricity

UEFA - Union of European Football Associations

UGE – UkrGasEnerg

USD - United States dollars

UZ - Ukrzaliznytsia

yoy - year-on-year change



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Foreword

This is the tenth “Infrastructure Monitoring for Ukraine” report issued by the Institute for Economic Research and Policy Consulting in Kyiv. It presents information on the restructuring of six key infrastructure sectors of the Ukrainian economy in a standardized manner, which allows for cross-industry comparisons.¹ When developing the evaluation methodology the Institute for Economic Research and Policy Consulting followed the EBRD’s approach. 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 status of the reforms in each sector at a given moment in time. An extensive discussion of the methodology employed was presented in the first issue of IMU.²

Section 1 contains an executive summary that outlines major developments within selected sectors of the infrastructure during the period from September 2007 till August 2008. A general analysis of the Ukrainian infrastructure policies is presented in Section 2. The detailed study of reforms in each of the six sectors includes not only an ex-post analysis, but also an outline of major challenges to future development. A description of the reform progress in each infrastructure sector supplements the numerical evaluation and provides a broader view of the situation. Appendices summarize the evaluations in tabular form and provide methodological explanations and detailed comments for each indicator.

¹ For earlier issues, see Infrastructure Monitoring for Ukraine, which can be downloaded from the Institute’s website at [http://www.ier.kiev.ua/English/IMU_eng.html].

² IMU No. 1, June 2001, see also IER Working Paper No 9 [http://www.ier.kiev.ua/English/WP/2001/WP2001_eng.html].



1 Summary

The indicator for **Telecommunications** has been decreased from 2.53 to 2.46. The decrease is explained by loss in independence of the regulator in the sector. Some reduction of political impact on tariffs setting and exclusion of fixed-line long-distance calls from the list of the state-regulated services were positively assessed, but could not exceed negative impact of previously noted development.

The indicator in the **Railways** has been slightly decreased from 1.79 to 1.77. Ukrzaliznytsia (UZ) continues to face limitations in its profit usage and investment decisions. The poorly drafted program of railways reform prepared by Tymoshenko government, fortunately, has not been adopted yet. Meanwhile, a dispute over a regulator in the sector continues showing unwillingness of the current Cabinet of Ministers to create really independent institution to regulate UZ.

The indicator for **Roads** increased from 2.39 to 2.44. This year we reviewed many sub-indicators for the roads. Between September 2007 and August 2008 the government paid attention towards issues of road network extension and safety standards compliance in the sphere of road transport, motivated by preparations to the UEFA EURO 2012. However, the increase in the indicators is mostly explained by improvements in regulations of automobile transportation.

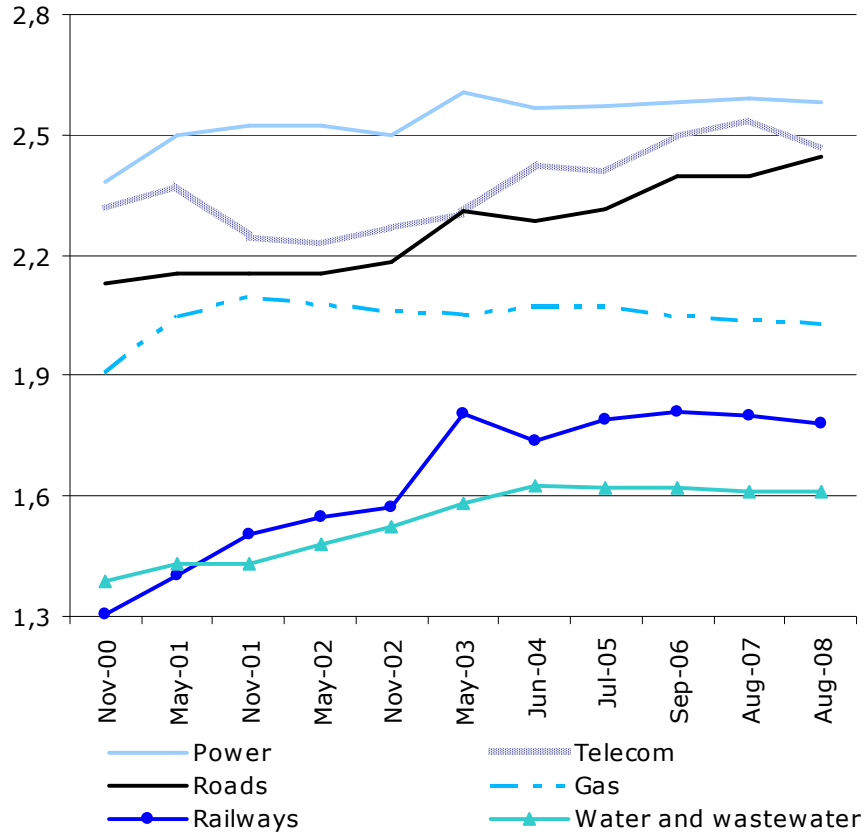
The overall indicator for the **Power** has been slightly decreased from 2.58 to 2.57. The government issued a plan of electricity market liberalization. Some regulatory changes have influenced volumes and direction of electricity export. The CMU failed to implement plan of tariff adjustment to cost covering level.

The indicator for **Gas** has been slightly decreased from 2.03 to 2.02. A succession of new agreements on gas imports were signed, which influenced both the gas sector and economy as a whole. Pricing scheme is still inadequate.

The aggregate indicator for the **Water and wastewater** sector has not been changed; it stays at the level of 1.60.



Figure 1
IER infrastructure indicators for Ukraine



Source: Own estimations



2 Ukrainian Infrastructure Policies between September 2007 and August 2008

Once again a story about structural changes in six infrastructure industries of Ukraine begins with a boring to death phrase: "no significant changes occurred during the period". Between September 2007 and August 2008 most observed changes decreased indices of individual sectors. The infrastructure sectors accelerated their degradation against the background of increasing demand for their services. In spite of adoption of a Concept of Improvement of State Regulation of Natural Monopolies that foresees the mandatory creation of independent regulatory bodies for natural monopolies, no new regulatory body was established. State continued to use profitable infrastructure industries (telecommunications, railways, gas and electricity supply) as a cash cows to finance permanently increasing fiscal obligations. "Poor" industries like water and wastewater continued to be underfinanced. It has to be noted that state of the assets of all the sectors, reach and poor, is unsatisfactory, in many cases even dangerous. Positive changes occurred mostly in tariff setting in attempt to improve cost covering of the services.

Four of six overall industry's indices have been decreased this time. In **telecommunications** the decrease was explained by a political struggle between the President and the CMU over control on the NCRC that has to be independent from any political control. Slight improvement in tariff setting did not overcome negative influence of the conflict over the NCRC.

The new Cabinet has changed a draft program of reform in **railways**. The new draft not only contradicts the spirit of earlier adopted Concept of the Reform but also stops the reform itself. However, there is still hope that this draft will not be adopted. The main reason of a decrease in index for railways is limitations that UZ faced in its investment decisions. The state continues to withdraw significant part of UZ profits, which force UZ raise more expensive money in order to solve accumulated and worsened problems with depreciated assets and rolling stock.

Preparations to the UEFA EURO 2012 caused a splash of talks and plans but so far not serious actions in **road** sector. Last year the government was occupied with issues of road network extension and safety standards compliance in the sphere of road transport. The indicator for roads has been slightly increased only thanks to positive developments in automobile transportation.

Changes in regulations of **power** sector influenced volumes and direction of electricity export but did not influence the overall index of the sector. Attempts to continue privatization of power generating companies and create vertically integrated state company in the nuclear energy sector have failed. The CMU approved a plan of liberalization of power industry. So far steps under this plan has not led to significant changes in the sector.

A succession of new agreements on **gas** imports were signed, which influenced both the gas sector and economy as a whole. The last one has fixed distribution of 80% of imported gas by state monopolist "Naftogaz Ukrainy", which restored its share on the market and should lead to improvement in its



financial state. Continuously increasing price for imported gas mostly effects industrial consumers. Gas price for households rises very slowly and still approximately 5 times lower than industry's one. A raise in imported gas price has become a stimulus for a decrease in gas consumption. Surprisingly, this raise has been also accompanied by contraction of domestic gas extraction. The latter can be directly explained by inadequate policy of the government.

Water and Wastewater sector is the least reformed among the six sectors. During last year this situation has not changed. Despite separate attempts of local managers to improve financial and technical state of the enterprises, tariffs in many places still do not cover cost, cross subsidization persists, and debts for services increase.

The government is reluctant to continue structural reforms in infrastructure for a number of reasons. First, the reforms often lead to a rise in prices on essential goods that might have been cheap or even free for a long time. Second, positive results of the reforms might be seen only in a five or even more years. Third, in Ukraine there is still no common view on aims and instruments of reforms in infrastructure sectors among policymakers, which is the main deterrent of the reform. All these reasons make it hard for frequently changing cabinets to pursue successive infrastructure reform.

Certainly, it is naïve to expect long-term, expensive and unpopular infrastructure reforms under permanent political turbulence and not more than one year old cabinets. However, one should not forget that the later structural reform in infrastructure is started the more expensive, harder and less popular it will be.



2.1 Telecommunications

Communications is fast developing sector that has been demonstrating high growth rates for the last years. In 2000-2006 total nominal output of communication services significantly increased from UAH 7 m to UAH 30 m (Table 1), mainly driven by the growing demand for mobile and Internet services against the background of relatively stable prices for services.

Table 1

The role of communications sector in the economy

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
|---------------------------|-------------------------------------|-------------|--------|--------|--------|--------|--------|----|
| Output | UAH m | 8,965 | 11,587 | 14,268 | 19,703 | 24,956 | 30,309 | |
| | % total output | 2 | 2 | 2 | 2 | 2 | 2 | |
| | % services output* | 5 | 6 | 6 | 6 | 6 | 6 | |
| Value added | % GDP | 3 | 4 | 4 | 4 | 3 | 3 | |
| | % output | 68 | 69 | 67 | 63 | 54 | 53 | |
| Structure of value added: | | | | | | | | |
| | Compensation to employees | % sector VA | 36 | 36 | 34 | 29 | 32 | 36 |
| | Profit, mixed income | % sector VA | 56 | 52 | 56 | 65 | 58 | 54 |
| | Net taxes on production and imports | % sector VA | 8 | 11 | 11 | 6 | 11 | 10 |
| Employment | thous people | 256 | 255 | 252 | 254 | 259 | 262 | |
| | % total employed | 2 | 2 | 2 | 2 | 2 | 2 | |
| Average wage | UAH | 402 | 469 | 548 | 710 | 967 | 1,191 | |
| Exports | UAH m | 499 | 475 | 443 | 665 | 2,407 | 2,940 | |
| | % total exports | - | - | - | - | 1 | 1 | |
| | % sector output | 6 | 4 | 3 | 3 | 10 | 10 | |
| Imports | UAH m | 542 | 533 | 421 | 558 | 1,628 | 1,635 | |
| | % total imports | 1 | 1 | - | - | 1 | 1 | |
| | % sector output | 6 | 5 | 3 | 3 | 6 | 5 | |
| Exports/imports | index | 1 | 1 | 1 | 1 | 2 | 2 | |

Source: State Statistics Committee, own calculations

Notes: * including Construction

- less than 0.5%

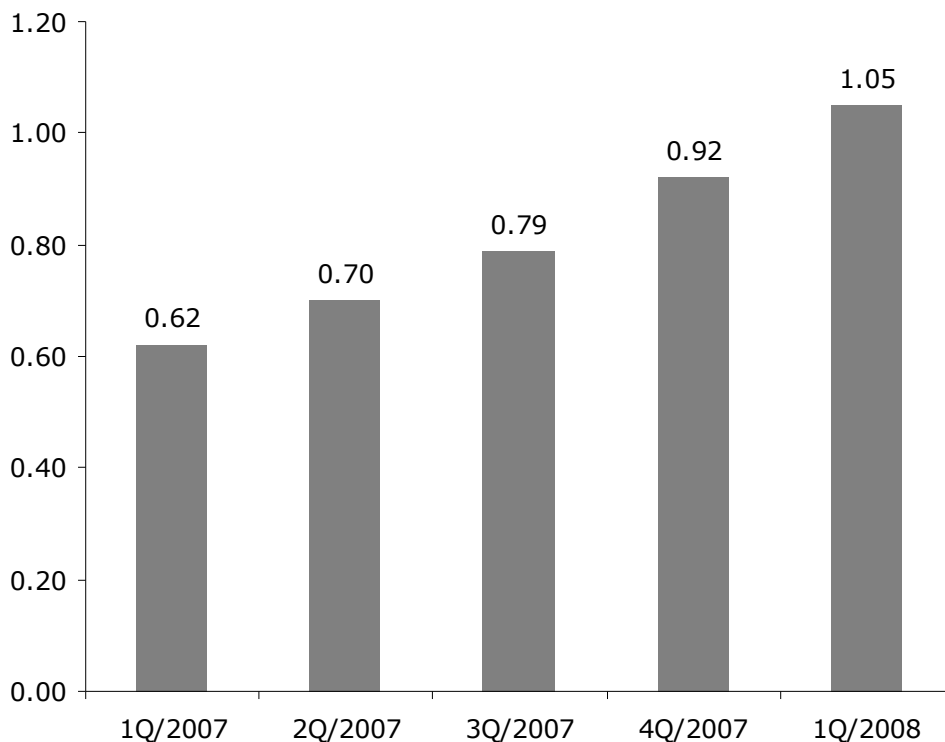
In 2007 Internet (130% yoy) and mobile telecommunications (125% yoy) segments were the most dynamic among the communications sectors. In



December 2007 monthly number of Internet-users³ reached 6.2-6.4 m people (approximately 13.5% of Ukrainian population). In particular, broadband Internet access⁴ develops fast, mainly driven by increasing number of individual subscribers (Figure 2). In 2007 the biggest broadband operators were Ukrtelecom (205.0 thousand of subscribers as of December 31, 2007), Volya (160.0), Optima-Farlep-DCS (68.9), TeNet (23.0), Golden Telecom (18.5), Datagroup (16.5), Fregat (12.5), IPNet (11.5)⁵.

Figure 2

Number of broadband users, m



Source: iKS-Consulting

Growth in mobile communications is predominantly driven by the surge in income of population. The share of this sub-sector in communications revenues is constantly increasing (Figure 3). Mobile telecommunications market demonstrates tough competition with constantly growing number of subscribers of GSM as well as CDMA operators (Table 2). According to the State Statistics Committee, the amount of subscribers to these services has reached 55.6 m by January 2008, which exceeds the Ukrainian population,

³ Users, who reviewed a web-page more than once per month.

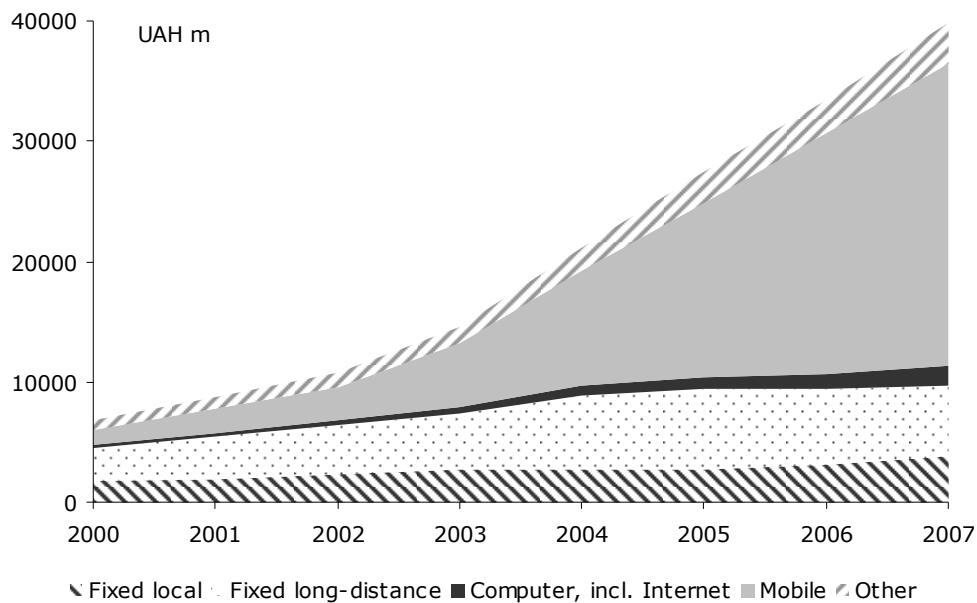
⁴ High-speed Internet access, typically contrasted with dial-up access over a modem.

⁵ iKS-Consulting.



though the real level of penetration is about the level of 70%⁶. Both domestic and foreign companies are among key GSM players: Kyivstar, MTS-Ukraine, Astelit (TM Life:)), URS (TM Beeline) and Golden Telecom. Among key CDMA operators are Velton Telecom, ITC, Intertelecom, Telesystemy Ukrainy, and CST-Invest.

Figure 3
Communications revenues, UAH m



Source: State Statistics Committee, own calculations

In contrast to mobile telecommunications fixed line market demonstrates much lower level of competition. 76.3% of the market belongs to Ukrtelecom. Golden Telecom, Farlep and Optima are the next largest fixed-line operators. The amount of customers of fixed-line communications is also much lower and equals only 12.1 m.

In November 2007 Ukrtelecom started providing 3G⁷ mobile communications under the trademark Utel. At the moment, there are four operators offering

⁶ According to the NCRC.

⁷ 3G is a generic name for third-generation networks or services under the IMT-2000 banner. International Mobile Telecommunications-2000 (IMT-2000) is a "family of standards" for third generation (3G) wireless communications, defined by a set of interdependent ITU Recommendations, offering evolution/revolution options from the major existing 2G network standards. There are five IMT-2000 standards: IMT-MC (cdma2000); IMT-SC (EDGE); IMT-DS (W-CDMA (UMTS)); IMT-TC (TD-SCDMA/UTRA TDD); and IMT-FT (DECT). 3G technologies enable network operators to offer users a wider range of more advanced services (voice telephony, video calls, and broadband wireless data) while achieving greater network capacity through improved spectral efficiency.



advanced services via 3G technologies in Ukraine: MTS, Intertelecom, Telesystemy Ukrainy (TM PEOPLEnet), and Ukrtelecom.

Table 2
Mobile subscribers in Ukraine

| | Number of subscribers, December 31, 2007, m | Growth rate over 2007, % |
|---------------------|--|--------------------------|
| Total | 55.59 | 13.01 |
| Kyivstar | 23.60 | 9.73 |
| MTS-Ukraine | 20.00 | 0.01 |
| Astelit | 8.82 | 58.97 |
| URS | 2.65 | 41.07 |
| Velton Telecom | 0.12 | 23.81 |
| ITC | 0.12 | 92.43 |
| Intertelecom | 0.11 | 202.36 |
| Telesystemy Ukrainy | 0.09 | n/a |
| Golden Telecom | 0.04 | -12.25 |
| CST-Invest | 0.03 | 117.59 |
| Ukrainsk'a hvylya | 0.01 | -25.20 |
| Ukrtelecom | 0.01 | n/a |

Source: NCRC, iKS-Consulting

Notes: n/a – not available

Since 2005 the telecommunications industry has been regulated by the National Commission for the Regulation of Communications (NCRC) that is assumed to be independent. In addition, there are a range of other governmental bodies that define sector and sub-sector policies. In particular, the State Department on Communications and Informatization within the MTCU provides general state sector policy. The National Television and Broadcasting Council of Ukraine is collegial body that supervises and regulates the activities of television and radio broadcasting.

2.1.1 Reforms between September 2007 and August 2008

The monitored period is characterized rather by predominance of the political struggle for the control over the NCRC than by structural changes.

The NCRC did not have a chance to regulate communications market during the monitored period. The discussions on its legal status and subordination, started in August 2007, have not resulted in compromise settlement and finally undermined its formal autonomy. First, new government under the head of Tymoshenko cancelled a number of Decrees⁸, implementation of which was earlier postponed by the President⁹, i.e. a decree on re-subordination of the NCRC to the CMU¹⁰ that created the prerequisites for the government's intervention into the regulator's activities. It was expected that cessation of re-subordination procedure should have lead to higher stability and independency of the regulator. However, later the controversy over right of the CMU to make appointments to the NCRC renewed. At the end of May

⁸ Decree of the CMU, No. 1403, December 24, 2007.

⁹ Decree of the President of Ukraine, No. 708/2007, August 15, 2007.

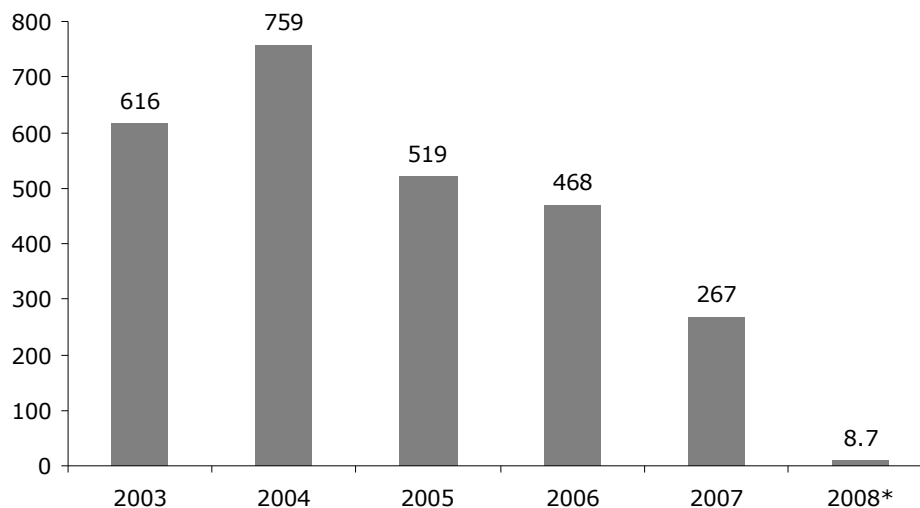
¹⁰ Decree of the CMU, No. 971, July 25, 2007.



2008, the government appointed new head and staff of the regulator¹¹. The President suspended this decision in June 2008¹². As the result, the uncertainty over the NCRC members has deepened, which ultimately hurt the regulator’s efficiency and thus the development of the telecommunications sector¹³. That’s why the indicator “independence of regulator, insulation from political influence” has been decreased from 2.7 to 2.3.

Between September 2007 and August 2008 some changes in communications tariffs setting occurred. The NCRC has increased marginal tariffs for universal post services¹⁴. Also, the Commission plans to raise marginal tariffs for universal telecommunications services¹⁵. These measures are explained by low cost-coverage of the tariffs and necessity to adjust to higher input costs. In particular, due to insufficient cost-coverage in 2008 Ukrtelecom expects much lower profits (Figure 4), pushing its market value downwards.

Figure 4
Net profit of Ukrtelecom, UAH m



* Expected

Source: Ukrtelecom

¹¹ Decree of the CMU, No. 490, May 28, 2008.

¹² Decree of the President of Ukraine, No. 534/2008, June 10, 2008.

¹³ The NCRC can’t conduct its regulatory functions properly, namely to license, to set standards, to supervise, etc. In addition, sector revenues growth has slowed down from 144% in 2004 to 119% in 2007.

¹⁴ Resolution of the NCRC, No. 1025, December 7, 2007.

¹⁵ Resolution of the NCRC, No. 1038, December 13, 2007.



In June 2008 the NCRC excluded fixed-line long-distance calls from the list of state-regulated services¹⁶, which has reduced political influence on the tariffs. The indicator “political vs. regulated operators” was increased from 2.3 to 2.7.

In 2007 the Broadcasting, Radiocommunications & Television Concern (BRT Concern), major operator of on-air television and radio broadcasting networks in Ukraine, introduced some fragments of digital network in Zhytomyr and Kyiv regions. Such efforts were undertaken within framework of Ukrainian preparations to introduction of a complete digital broadcasting within Geneva 2006 Plan¹⁷. Digital technologies will ensure higher services quality and efficiency of spectrum usage, which currently is a scarce resource. At present, Ukraine has got frequency band for its implementation. At the same time, analogue and digital services are interfering, so it is necessary to reduce the number of analogue broadcast transmissions and finally to cease them. This replacement needs transition period, which is defined until June 2015 in the Geneva 2006 Plan. This period is considered as relatively short since it takes time to raise investment and conversion funds, to organize replacement process, to inform all concerned agents, to provide transparent institutional environment, etc. As a first step, Ukraine needs a State Programme on Digital Networks Implementation¹⁸.

In summary, the telecommunications sector indicator has been decreased from 2.53 to 2.46, which is mainly caused by a deteriorating regulatory and institutional environment due to increased political impact on the regulator.

2.1.2 Needed future reforms

Increased demand for modern telecommunication services pushes sector output upwards and attracts new players. So, fair-play rules and free market entry/exit should be guaranteed. At the moment, it is crucial to renew and support independence of the NCRC. The key role in such a process belongs to the Government and to the President of Ukraine. They must be aware of necessity to compromise on the NCRC status and resist the temptation to interfere and overrule its resolutions in future. Besides, a final decision on privatization of Ukrtelecom and on its bid terms and conditions should be made. These are the most urgent sector arrangements.

¹⁶ Resolution of the NCRC, No. 1058, June 10, 2008.

¹⁷ Ukraine signed the Geneva 2006 (GE06) Agreement that establishes a Plan containing frequency allotments and assignments for the transmission of DVB-T and T-DAB services in Band III (174-230 MHz) and DVB-T services in Bands IV/V (470-862 MHz).

¹⁸ On November 28, 2007 the National Television and Broadcasting Council of Ukraine approved a draft State Program on Digital Television Implementation in Ukraine. However, the MTCU prepared alternative draft program, which has resulted in discussions that hinder development of digital television in Ukraine.



2.2 Railways

Transport is one of the major infrastructure sectors, on which the development of the economy as a whole depends. In 2006 it accounted for 6% in total output and 15% in services output. Most of the value added was distributed to employees (56%) and the least share (9%) constituted net taxes (Table 3). The railways are the most important mean of transportation. In 2007 it serviced 53% of total freight turnover and 37% of total turnover of passengers.

Table 3

The role of the transport sector in the economy

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
|---------------------------|-------------------------------------|-------------|--------|--------|--------|--------|--------|----|
| Output | UAH m | 35,520 | 38,353 | 49,155 | 59,554 | 70,342 | 82,096 | |
| | % total output | 7 | 7 | 7 | 7 | 6 | 6 | |
| | % services output* | 20 | 19 | 20 | 17 | 16 | 15 | |
| Value added | % GDP | 11 | 10 | 11 | 10 | 9 | 8 | |
| | % output | 61 | 59 | 59 | 58 | 54 | 54 | |
| Structure of value added: | | | | | | | | |
| | Compensation to employees | % sector VA | 38 | 50 | 47 | 39 | 51 | 56 |
| | Profit, mixed income | % sector VA | 47 | 40 | 44 | 50 | 40 | 35 |
| | Net taxes on production and imports | % sector VA | 16 | 11 | 10 | 11 | 9 | 9 |
| Employment | thous people | 791 | 759 | 742 | 719 | 733 | 730 | |
| | % total employed | 6 | 6 | 6 | 6 | 6 | 6 | |
| Average wage | UAH | 460 | 573 | 685 | 843 | 1,057 | 1,328 | |
| Exports | UAH m | 15,903 | 18,576 | 20,008 | 23,189 | 25,526 | 29,855 | |
| | % total exports | 14 | 15 | 13 | 11 | 11 | 12 | |
| | % sector output | 45 | 48 | 41 | 39 | 36 | 36 | |
| Imports | UAH m | 2,196 | 3,469 | 4,805 | 11,226 | 12,684 | 18,405 | |
| | % total imports | 2 | 3 | 3 | 6 | 6 | 7 | |
| | % sector output | 6 | 9 | 10 | 19 | 18 | 22 | |
| Exports/imports | index | 7 | 5 | 4 | 2 | 2 | 2 | |

Source: State Statistics Committee, own calculations

Notes: * including Construction

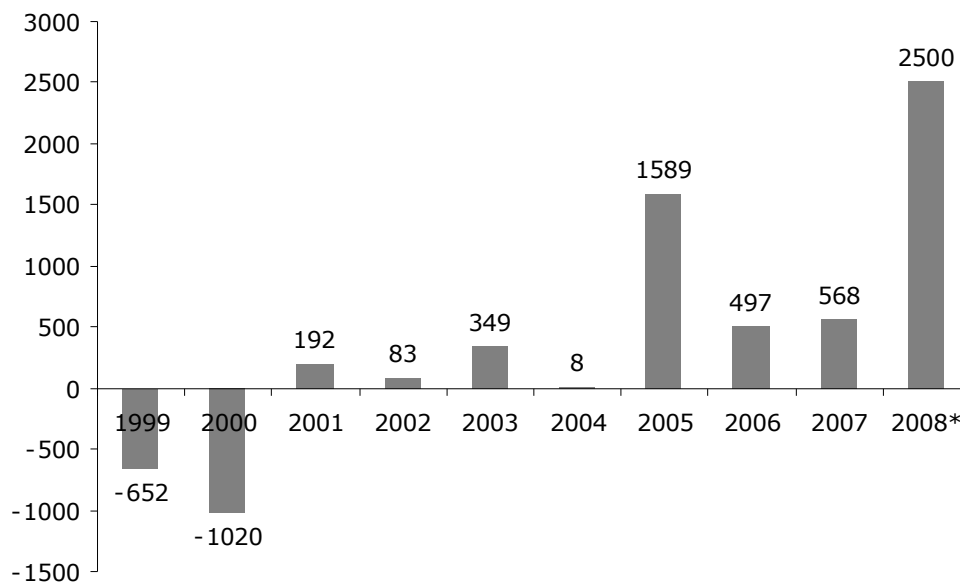
State railways monopolize the railway transportation in Ukraine. Six regional railways are regulated by the State Railways Administration (Ukrzaliznytsia), which is integrated into the Ministry of Transport and Communications of



Ukraine (MTCU). Railways infrastructure, freight, and passenger operations are strongly integrated. The Ukrainian railways also incorporate ancillary services and quite an extensive social infrastructure. In 2007 net profit of Ukrzaliznytsia (UZ) constituted UAH 568.3 m (Figure 5), which is comparable with 2006 (UAH 497.2 m), but is much less than in 2005 (UAH 1.6 bn). Changes in the last year may be explained by increase in costs of services provision, in particular maintenance costs of obsolete equipment. In 2008 it is planned to get UAH 2.5 bn of net profits.

Figure 5

Net profits of Ukrzaliznytsia, UAH m



* Expected in financial plan of UZ

Source: Ministry of Transport and Communications

2.2.1 Reforms between September 2007 and August 2008

During the monitored period imminent railways reforms have been postponed. Only slight changes in tariff setting and modernization of the Ukrainian railways' fixed assets occurred. The state has not started Ukrainian railways reforms that had been declared earlier. The government renewed practice of using the railways as a cash cow to cover its fiscal obligations (see Figure 6).

During the monitored period no final version of the State Programme on Reforms of Ukrainian Railways Transport has been prepared by the MTCU, though the Concept of the Reforms was adopted in 2006¹⁹. The Concept²⁰ complies with modern approach to network industries reforms and practice of

¹⁹ Order of the CMU, No. 651-p, December 27, 2006.

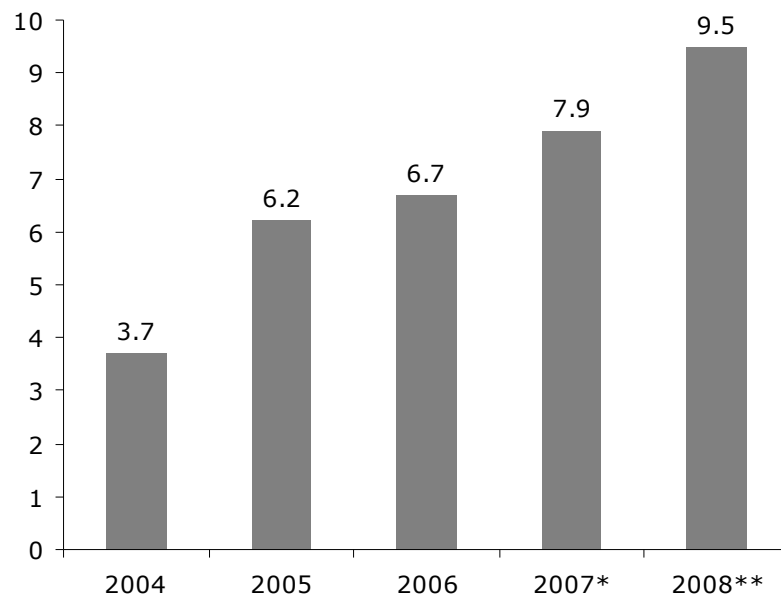
²⁰ See details of the Concept in the Infrastructure Monitoring for Ukraine No. 9 http://www.ier.kiev.ua/English/imu_eng.cgi



railways development. However, current draft programme²¹ completely distorts the spirit of previously suggested railways reforms. It is foreseen to separate the government’s regulatory and operational activities of the railways through creation of the State Department of Railways Transport of Ukraine within the MTCU, autonomous from UZ. It is planned to create the state enterprise “Ukrainian Railways”, which would unite all regional railways and ancillary businesses and would be the only national rail carrier of goods and passengers, centralizing and strengthening the power of the incumbent. There is also no intention to conduct vertical unbundling, to separate freight and passenger transportations into different companies, to introduce market selection of suppliers through free entry and exit. Given these quasi-reforms it will be definitely impossible to achieve declared goals such as strengthening competition, increasing role of private participation and growing investments into the railways sector. We did not change any indicator since suggested draft programme has not been adopted yet.

Figure 6

Payments of Ukrzaliznytsia to the budget, UAH bn



* Estimated on the basis of financial plan of UZ (2007)

** Expected in financial plan of UZ

Source: Ministry of Transport and Communications

Change of Ukrainian governments over the monitored period has resulted in change of views on the issue of an independent regulatory body in the railway

²¹ Draft State Programme on Reforms of Ukrainian Railways Transport (prepared by government under the head of Tymoshenko)
http://www.mtu.gov.ua/control/uk/publish/article?art_id=92353&cat_id=45922



transport. A range of notorious transport accidents of the last year have sharpened the situation in the sector and have made the President and the National Security and Defence Council of Ukraine oblige the Government to create the independent regulatory body²². In March 2008 draft law On the National Commission for Regulation of Transport of Ukraine (NCRT) was prepared by the CMU²³. It deprived UZ and the MTCU of sector regulation and tariff-setting functions and passed them to the special body responsible for transport network industries regulation. Obviously, the MTCU and UZ opposed this governmental intention²⁴. Moreover, the Ministry actively endeavoured to block creation of the independent transport regulator. In June 2008 it advocated creating an advisory body within the Ministry – The Commission on Railways Tariffs Regulation²⁵. The indicator “political vs. regulated operators” has been decreased from 1.7 to 1.3.

The MTCU also strives for its power to interfere into UZ activities. In April 2008 it tried to centralise power of management and control over majority of the state-owned transport enterprises, in particular, in railways sector²⁶, but such decision was abolished by the court in June²⁷. However, indicator “decentralization” has been decreased from 2.0 to 1.7.

In March 2008 UZ presented the Complex Programme of Ukrainian Railway Rolling Stock Replacement for 2008-2020²⁸. According to the programme, UZ plans to invest about UAH 130 bn in rolling stock, 75-80% of which is now outmoded²⁹. So, UZ needs at least UAH 10 bn annually to improve the situation that suppresses growth of the national economy and threatens the safety in the railways sector (Table 4). However, so far it has not succeeded in replacement of obsolete equipment³⁰. One of the reasons is that most machine-building plants have no free capacity as they were contracted by Russian (RZD) and Kazakh (Temir Zholy) Railways that started their modernization programmes earlier. Another reason for this is lack of funds against the background of rising input prices.

²² Resolution of the National Security and Defence Council of Ukraine, September 4, 2007; Orders of the President of Ukraine, No. 824/2007, September 6, 2007 and No. 921/2007, September 24, 2007.

²³ The Ministry of Economy of Ukraine,
http://www.me.gov.ua/control/uk/publish/article?art_id=114314&cat_id=32862

²⁴ Open letter regards the NCRT, March 21, 2008,
http://www.mtu.gov.ua/control/uk/publish/article;jsessionid=CD0480DBC5E460447219008784514479?art_id=85991

²⁵ Press service of the MTCU, June 2, 2008,
http://www.mtu.gov.ua/control/uk/publish/article?art_id=91447&cat_id=34595

²⁶ Resolution of the MTCU, No. 463, April 18, 2008,
http://www.uz.gov.ua/?m=all.work.menu_nakazMTU180408&lng=ru

²⁷ Kyiv administrative court decision, No. 5/280, June 11, 2008// <http://uzinfo.net/ru/press/3065>

²⁸ Press service of UZ,
http://www.uz.gov.ua/index.php?m=services.transcargo.calcvalue&f=Doc.View&p=news_3021.0.news&lng=ru

²⁹ Press service of the MTCU, March 7, 2008,
http://www.mtu.gov.ua/control/uk/publish/article;jsessionid=3F96F326E32C93E74858B9E0862AE7BE?art_id=84911

³⁰ For instance, according to the MTCU, UZ needs to buy 6000-8800 freight gondola cars annually. But in 2006 it bought 353 pieces, in 2007 – 2100, in January-June 2008 – 379.



Lack of own funds has forced UZ to attract outside money. In 2007 UZ raised a USD 550 m syndicated loan organized by Barclays Capital Bank to refresh rolling stock and finish the construction of the bridge over the Dnipro river. At the moment, a USD 385 m EBRD project on rolling stock renewal is under consideration. In addition, wagons' price increase made UZ management appeal to the government for allowance to attract more credits under government guarantees³¹. Thus, UZ is forced to raise more expensive funds on the capital market instead of reinvesting its profits, large share of which has to be paid to the budget. The indicator "natural monopoly planning and investment decisions" has been decreased from 2.3 to 2.0.

Table 4

UZ's needs in capital investments, UAH bn

| | 2006 | 2007 | 2008 (plans as of October 24, 2007) | 2008 (plans as of November 19, 2007) | 2008 (financial plan) | January-March, 2008 (fact) |
|--|------|----------------------------|-------------------------------------|--------------------------------------|-----------------------|----------------------------|
| Capital investments | 4.5 | 10.1 | 16.3 | 19.7 | 10.0 | 1.7 |
| Incl. investments in rolling stock replacement | 1.0 | 4.4 (January-September) | 11.0 | 12.7 | 6.24 | 0.7 |

Source: MTCU

Tariffs for railway services have been changed over the monitored period. Discrimination among tariffs on freight transportation in different directions was eliminated in line with the WTO accession commitments. UZ set equal rates for transit rail transportation services starting from April 1, 2008³². Though, new Price list for freight rail transportation has not been approved yet.

Gradual indexation of freight tariffs, introduced in May 2007³³, has lead to final freight tariffs increase by 20.6% over 2007. In January 2008 the MTCU increased freight tariffs again; they were raised by 12% in February, by 17% in April, by 3% in July³⁴; and by 6.5% in August; further increase is foreseen for October (9.5%)³⁵.

Ukrzaliznytsia has also increased payments for its freight cars depending on the period of their use (by 9.36-216.67%)³⁶ as currently UZ feels a lack of freight cars. At the same time, the Ministry lowered discounts for the freight

³¹ Press service of UZ, July 7, 2008//

http://uz.gov.ua/index.php?m=info.news&f=Doc.View&p=news_3267.0.news&lng=uk

³² Press service of UZ// http://www.uz.gov.ua/index.php?f=Doc.View&p=news_3179.0.news

³³ Resolution of the MTCU, No. 402, May 15, 2007: basic tariffs were raised by 3% each in June, July, and August, by 2% each in September, October, November and December 2007.

³⁴ Resolution of the MTCU, No. 43, January 17, 2008.

³⁵ Resolution of the MTCU, No. 955, July 30, 2008.

³⁶ Resolution of the MTCU, No. 818, July 7, 2008.



forwarders with their own cars from the level of 15-51% to 15-36%³⁷. Tariffs increases against the background of the lack of freight cars lead to further reorientation of transport flows (Table 5) that in turn causes further automobile roads deterioration and has negative environmental impacts.

Table 5

National transport, shares by type of transport, %

| | rail | road | sea | river | air |
|---|------|------|-----|-------|-----|
| Freight turnover, on the basis of tonnes-km performed* | | | | | |
| 2000 | 83.6 | 9.3 | 4.2 | 2.9 | 0.0 |
| 2001 | 84.6 | 8.8 | 4.8 | 1.8 | 0.0 |
| 2002 | 85.0 | 9.1 | 3.9 | 1.9 | 0.2 |
| 2003 | 85.1 | 9.2 | 3.7 | 1.8 | 0.2 |
| 2004 | 84.2 | 10.4 | 3.4 | 2.0 | 0.1 |
| 2005 | 81.3 | 12.8 | 3.5 | 2.3 | 0.1 |
| 2006 | 80.2 | 13.5 | 4.0 | 2.1 | 0.1 |
| Passengers turnover, on the basis of passenger-km performed** | | | | | |
| 2000 | 62.9 | 35.0 | 0.1 | 0.0 | 2.1 |
| 2001 | 60.2 | 37.5 | 0.0 | 0.1 | 2.2 |
| 2002 | 56.8 | 40.3 | 0.0 | 0.1 | 2.8 |
| 2003 | 54.5 | 41.5 | 0.0 | 0.1 | 3.9 |
| 2004 | 49.3 | 45.3 | 0.1 | 0.0 | 5.3 |
| 2005 | 47.3 | 47.1 | 0.1 | 0.0 | 5.5 |
| 2006 | 46.0 | 46.7 | 0.1 | 0.0 | 7.2 |

Source: State Statistics Committee, own calculations

Notes: * excl. pipeline transport

** excl. electric city transport

In 2007 losses from passenger transportation significantly grew: in 2007 they constituted around UAH 4.0 bn that was UAH 1.3 bn more than in 2006. That's why in 2008 the MTCU continued to raise passenger rail tariffs. Starting from January 2008 tariffs were increased by 25% against the level January 2007³⁸. In April tariffs for travels to the CIS and Baltic countries were increased by 5%³⁹. In June⁴⁰ and August⁴¹ tariffs for domestic travels were raised by 5% each time.

Tariffs increases showed preference to cutting losses from transportation over the attempts to limit inflation pressure through low regulated prices. Since current tariffs are likely to cover services supply costs the indicator "natural monopoly pricing" has been slightly increased from 2.3 to 2.7. However, the problems of economic justification and transparency of tariff setting are still unsolved.

³⁷ Resolution of the MTCU, No. 43, January 17, 2008.

³⁸ Resolution of the MTCU, No. 977, October 29, 2007.

³⁹ Resolution of the MTCU, No. 306, March 19, 2008.

⁴⁰ Resolution of the MTCU, No. 533, May 13, 2008 (is not valid any more).

⁴¹ Resolution of the MTCU, No. 913, July 22, 2008.



Overall indicator for railways has been decreased from 1.79 to 1.77 mainly due to delays in reforms and permanent intervention of the government into the railways' operational activities.

2.2.2 Needed future reforms

Plans of railway reform are still unrealized, and recommendations of the previous issues of IMU regarding independent regulator creation and tariff-setting procedure are still relevant. First of all, it is necessary to finish the separation of the government's regulatory function and operational function of UZ. Second, Ukrzaliznytsia has to be transformed into the State Joint-Stock Company. Third, there must be government's intention to unbundle different railways market segments, namely: transportation business and ancillary businesses; infrastructure and transportation operations; passenger and freight segments.



2.3 Roads

The maintenance and construction of roads in Ukraine is provided by the state-owned JSC "Avtomobilni dorogy Ukrainy", which currently incorporates 32 affiliated enterprises and 12 enterprises of special purpose. A state department – State Road Service Ukravtodor – manages the JSC. Road network extensions and regulation are also responsibilities of Ukravtodor. Ukravtodor manages 169.4 thousand km of roads, 20.1 thousand km of which are roads of national importance and 149.3 thousand km – of local importance. They are operated and financed from the State Road Fund, formed at the expense of import duty and excise on oil and vehicles, and from local funds, financed by vehicle tax collection.

The State Road Transport Department (Ukravtotrans) ensures provision, development and regulation of competitive road transport services and infrastructure (mainly bus stations). It is responsible for state policy in road transport development and road routes licensing. In addition, in 2004 special body for safety control of the road transport was created within the MTCU. This body is called the Main State Inspectorate on the Road Transport (Golovavtotransinspeksiya). Its responsibilities include vehicle inspection, monitoring of road transport, road transport carriers licensing, safety standards development, etc. However, the government has been reorganizing those two bodies into the State Road Transport Administration⁴².

2.3.1 Reforms between September 2007 and August 2008

Between September 2007 and August 2008 the main targets of the CMU in the sector were road network extension and safety standards compliance in the sphere of road transport, motivated by preparations to the UEFA EURO 2012.

Traditionally major problems of the sector concern maintenance and sustainable development of roads network. However, the Government did not work actively on ways to attract private funds to roads maintenance, reconstruction, and construction through the mechanisms of public-private participation (PPP). Two draft laws⁴³, which were earlier developed and foresaw creation of necessary institutional and legal grounds for PPP, have not been adopted over the monitored period. That's why the main sources of finance of roads construction and maintenance are still central budget transfers and mainly sovereign guaranteed loans that put the debt burden again on the central coffer (Table 6). Surprisingly increase in finance has not lead to increase in performed roads works (Figure 7), which screams about inefficient or even inadequate use of funds. Given poor state of Ukrainian roads and necessity to prepare to the UEFA EURO 2012, it is hardly disputable that roads infrastructure needs additional funds to be invested in its maintenance and extension, but the efficiency of planned projects to a great extent depends on how transparent the use of these funds will be. So, the indicator "subsidies level" has been decreased from 1.7 to 1.3.

⁴² Decree of the CMU, No. 681, July 23, 2008.

⁴³ Draft Law on Concessions for roads construction and operation, No. 0918, November 11, 2007; Draft Law on General grounds of public-private partnership development, http://www.me.gov.ua/file/link/121706/file/Arv12_09_08.doc

**Table 6**

Central fiscal financing of roads sector, UAH m

| | | Guidance and governance in the roads sector | Roads network development | Redemption of sovereign guaranteed loans |
|------|--------------------|---|------------------------------|--|
| 2004 | plan | 2.46 | 5,294.12 | 0.00 |
| | fact | 2.21 | 5,275.88 | 0.00 |
| 2005 | plan | 4.44 | 3,506.00 | 248.57 |
| | fact | 4.41 | 3,303.17 | 248.57 |
| 2006 | plan | 6.78 | 5,822.51 | 649.04 |
| | fact | 6.68 | 5,821.67 | 645.48 |
| 2007 | plan | 7.51 | 10,020.80 | 1,063.81 |
| | fact | 7.49 | 9,878.46 | 993.08 |
| 2008 | approved budget | 11.03 | 7,853.45 | 1,603.73 |

Source: State Budget 2008⁴⁴, Treasury reports on budget execution

Disproportions in the Road fund distribution among local and central authorities have resulted in extremely poor local road conditions. The government made an attempt to improve their financing by transfer of some local roads under the Ukravtodor jurisdiction⁴⁵, which however has not changed the situation in the whole. The President charged the government with reforming of the roads sector regulation⁴⁶. The MTCU developed and approved the Concept of the State Programme of Reforms of Roads Sector Governance⁴⁷. According to the Concept, reform in roads sector governance will be gradual and last for 4 years. On the first stage (2008-2009) it is planned to prepare necessary legislative grounds for reforms. On the second stage (2009-2010) the separation of national and local roads governance, i.e. transfer of local roads as well as local road-operating enterprises under the responsibility of local authorities, is stipulated. On the third stage (2011) they have intention to close down the JSC "Avtomobilni dorogy Ukrainy". In the whole, the Concept foresees significant improvements in the roads sector governance, which are likely to ensure better financing and operation of both national and local roads. However, imminent reforms are highly dependant on the further government efforts to introduce them as well as from local authorities' capability to act transparently. So, neither indicators of commercialization and privatization, nor indicators of regulatory and institutional developments have been changed.

⁴⁴ Law on amendments to the Law on State budget 2008 and amendments to some legislative acts of Ukraine, No. 341-VI, July 31, 2008

⁴⁵ Order of the CMU, No. 735-p, September 11, 2007.

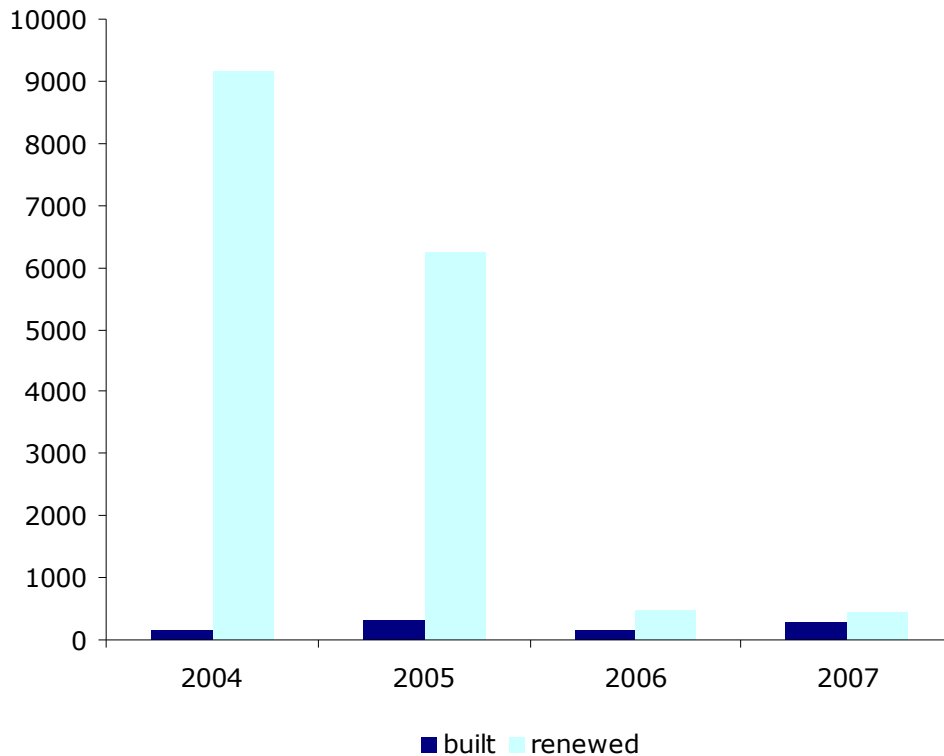
⁴⁶ Decree of the President, No. 62/2008, January 29, 2008.

⁴⁷ Resolution of the MTCU, No. 806, July 3, 2008.



Figure 7

Works performed on roads development, km



Source: Ukravtodor

In September 2007 the CMU adopted new Rules for Passenger Road Transport Services Supply⁴⁸ in order to put them in line with the Law On Road Transport, adapted to the EU norms⁴⁹. In particular, new rules aimed at prevention of illegal road transportations through tightened inspection of irregular transportations. Later, the MTCU adopted new licensing rules for road passenger and freight carriers⁵⁰ and order of their maintenance⁵¹. In particular, licensing rules became the same both for road carriers and taxi companies. Also, the licensing body (Golovavtotransinspeksiya) got additional power of control⁵². Now it can conduct pre-trial investigations of accidents and offences against road transport legislation and call the carriers to administrative liability.

⁴⁸ Decree of the CMU, No. 1184, September 26, 2007

⁴⁹ Law On amendments to the Law On road transport, No. 3492-IV, February 23, 2006

⁵⁰ Resolution of the State Committee of Ukraine for Regulatory Policy and Entrepreneurship and the MTCU, No. 9/119, February 1, 2008

⁵¹ Resolution of the State Committee of Ukraine for Regulatory Policy and Entrepreneurship and the MTCU, No. 10/120, February 1, 2008.

⁵² Decree of the CMU, No.1319, November 14, 2007



With regards to international road carriers, the MTCU endeavoured to distribute limited number of the ECMT⁵³ permits for trucks, which comply with the EU safety requirements, on the transparent basis⁵⁴. It decreased the ECMT permits price and the permits reserve. In the whole, it is expected that road transportation market will be more structured and safety level will be increased as well as access to road infrastructure will be improved. As a result, indicator "access pricing regulation method" has been increased from 3.0 to 3.3.

Taking into consideration the government's efforts to secure safe road transportation at fair cost-covering price, the overall indicator for roads sector has been increased from 2.39 to 2.44.

2.3.2 Needed future reforms

The efficiency of roads maintenance and construction is still low. In order to increase efficiency a couple of necessary steps should be made. First, regulatory and management functions in the road sector have to be separated. Second, competition in the sector should be enhanced through increased private participation, so different forms of PPP are to be allowed by law and implemented. Third, maintenance and extension of local road network should be conducted at local level at the expense of local road funds.

⁵³ The European Conference of Ministers of Transport

⁵⁴ Resolution of the MTCU, No. 1176, December 20, 2007



2.4 Power

Nominal output of the power sector has been growing since 2000 while its share in total output continuously declines. Employment of the sector has remained almost constant. In 2006 exports increased to UAH 1525 m, which is 4.9% of the total sector's output.

Table 7

The role of the power sector in the economy

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------------------------------|---------------------|--------|--------|--------|--------|--------|--------|
| Output | UAH m | 19,557 | 19,764 | 20,561 | 22,703 | 26,189 | 34,473 |
| | % total output | 4 | 4 | 3 | 3 | 2 | 3 |
| | % industrial output | 7 | 7 | 6 | 5 | 4 | 4 |
| Value added | % GDP | 5 | 4 | 4 | 3 | 3 | 3 |
| | % output | 48 | 48 | 47 | 48 | 49 | 49 |
| Structure of value added: | | | | | | | |
| Compensation of employees | % sector VA | 26 | 33 | 35 | 56 | 49 | 48 |
| Gross operating surplus, mixed income | % sector VA | 72 | 65 | 65 | 36 | 38 | 30 |
| Net taxes on production and imports | % sector VA | 2 | 2 | - | 8 | 13 | 22 |
| Employment* | thous people | 529 | 528 | 529 | 528 | 527 | 520 |
| | % total employed | 4 | 4 | 5 | 5 | 5 | 5 |
| Average wage* | UAH | 476 | 562 | 651 | 767 | 969 | 1,228 |
| Exports | UAH m | 389 | 387 | 608 | 639 | 945 | 1,525 |
| | % total exports | - | - | - | - | - | 1 |
| | % sector output | 2 | 2 | 3 | 3 | 4 | 5 |
| Imports | UAH m | 16 | 15 | 14 | 2 | 0 | 0 |
| | % total imports | - | - | - | - | 0 | 0 |
| | % sector output | - | - | - | - | 0 | 0 |
| Exports/imports | index | 24 | 26 | 43 | 320 | n/a | n/a |

Source: State Statistics Committee, own calculations

Notes: - less than 0.5%

n/a not applicable

In 2007 Ukraine's power plants generated 195 TWh, which is 1.6% more than in 2006 (Table 8). Hydropower plants produced 21.3% less electricity than in 2006 while other power plants increased their generation. During 2007 the domestic consumption of electricity constituted 186 TWh, which is 3% more than in 2006. The rest of electricity, approximately 9 TWh, were exported.


Table 8

Electricity generation and consumption breakdown in 2007, TWh

| | TWh | Growth, %, yoy |
|--|-----|----------------|
| Total generation | 195 | 1.6 |
| Power stations subordinated to the Ministry of Fuel and Energy | 187 | 1.3 |
| Nuclear Power Plants | 93 | 2.6 |
| Thermal Power Plants | 84 | 3.4 |
| Hydropower Plants | 10 | -21.3 |
| Combined Heat and Power Plants | 8 | 8.8 |
| Renewable resources | 0 | -10.2 |
| Gross consumption | 186 | 2.3 |
| Net consumption | 148 | 3.4 |
| Industry | 83 | 3.5 |
| Metals | 45 | 4.8 |
| Fuel and energy | 10 | -2.8 |
| Manufacturing | 7 | 0.4 |
| Chemicals and petrochemicals | 7 | -0.9 |
| Food processing | 5 | 5.1 |
| Construction materials | 3 | 12.4 |
| Other industrial consumers | 6 | 7.8 |
| Agriculture | 3 | 1.6 |
| Transport | 10 | 3.1 |
| Construction | 1 | 7.3 |
| Public utilities | 17 | 3.9 |
| Other non-industrial consumers | 6 | 8.1 |
| Households | 29 | 2.3 |

Source: Energobusiness

2.4.1 Reforms between September 2007 and August 2008

No major changes occurred in power-generating sector during the monitored period. The plan of electricity market liberalization issued by the Government has not been launched yet. The introduction of auctions in electricity exports appeared to be temporary.

In November 2007, the government approved the Schedule for Electricity Market Liberalization till 2014⁵⁵. The Cabinet of Ministries plans to allow bilateral contracts between generating companies and consumers and to create a balancing electricity market. Between 2008 and 2009 the legislative and normative base for the new market model should be developed. Under the plan an electricity exchange that foresees marginal pricing and real time electricity trading should be created till 2011. By 2014 the schedule envisages establishment of day-ahead trading market and signing bilateral contracts at unregulated prices. Those changes should be good for the market as restructuring and competition program which often go hand in hand with liberalization, will decrease operating costs, physical network losses, price

⁵⁵ CMU Decree No 1056, November, 28, 2007, On approval of the plan of measures of the Concept of functioning and development of the electricity wholesale market in Ukraine.

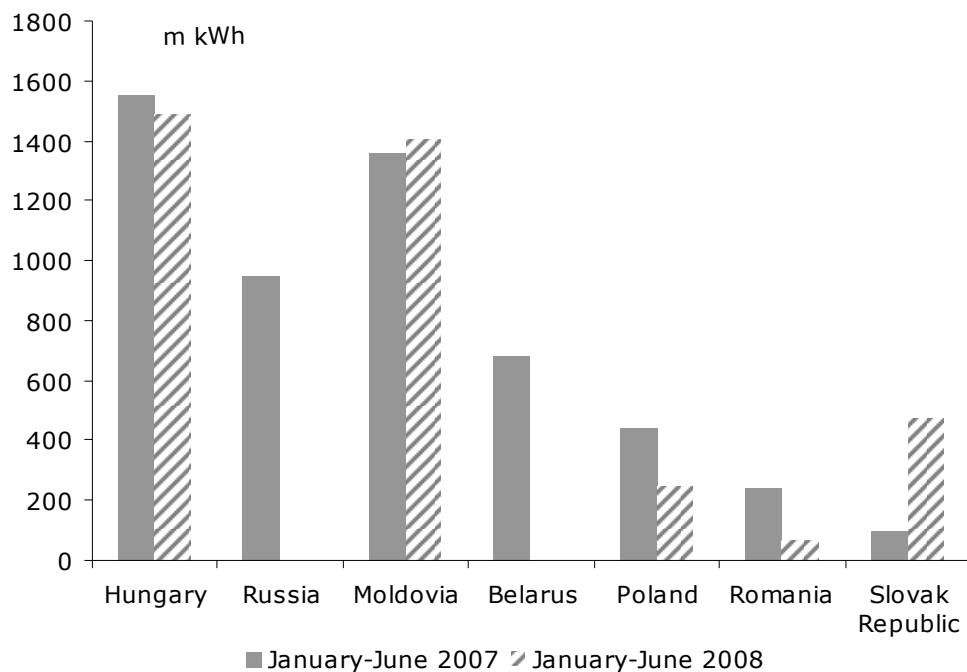


levels, and improve service quality of electricity companies. We have not changed any indicators as no real steps have been made yet.

In the first half of 2008 electricity export fell by 31% yoy, and constituted 3.68 TWh (Figure 8). The main reason of this is a suspension of electricity export to Belarus from July 2007, Poland from October 2007, and Russia from October 2007 (Figure 8). Exports to those countries were stopped as electricity price has increased responding to higher domestic demand for electricity. Exports to Poland were then renewed in April, 2008.

Figure 8.

Electricity exports in 2006-2007, m kWh.



Source: Energobusiness

Attempt to introduce auctions in electricity exports have failed. In 2007 Ukraine started to sell electricity generated by Burshtyn power station at auctions to the best price bidder. First two open auctions held in March and June 2007 were won by Hungarian company Energy Capital ZRt that bought all offered electricity at 9 US cents per kWh⁵⁶. At the same time, long-term contract with the company was ripped up by Ukrainian side. Later in October 2007 Energy Capital ZRt defended its right to buy electricity under that long-term contract at lower price in the court. As a result, in November 2007 state company "Ukrinterenergo" and Energy Capital ZRt signed a new agreement envisaging delivery of 105 MW of electric power during 2008-2010 at wholesale market price plus 20%, which is approximately 1.5 times lower than a price set at auction. As no extra supply of electricity was available for

⁵⁶ Initially, price was USD 0.054 per kWh



auctioning, the practice of auctions ceased. The auctions showed that electricity export contracts were under-priced, and auction practice is more profitable for the industry. However, to change this situation terms and conditions of long term contracts have to be appropriately renegotiated first. The indicator "natural monopoly pricing" has been decreased from 3.3 to 3.0.

The government failed to raise electricity tariffs for residential consumers to cost covering level as it was planned in 2006⁵⁷. It was envisaged that tariffs would go up by 25% each half a year until April 2008. However, strong opposition from trade unions forced the government to revise these plans. The failure has resulted in increase of cross-subsidization, which prevents distribution companies to expand their investment into maintenance and upgrades of transmitting and distributing facilities. Taking into consideration an announced liberalization of electricity prices within the electricity industry reform planned for 2009-2014, the rise in household electricity tariffs in late 2008 or early 2009 is still expected.

The government made an unsuccessful attempt to continue privatization of power generating companies. In March 2008 the CMU issued a Decree to sell controlling stakes (60%+1) in four energy-generating companies: Donbasenergo, Zahidenergo, Dniproenergo and Centerenergo⁵⁸. However, the privatization was suspended by the President's Decree⁵⁹. Hindered privatization prevents development of competition on the market, diminishes investment incentives, which worsens the problem of asset depletion and efficiency levels decline.

The attempt to establish the vertically integrated state company in the nuclear energy sector has, fortunately, failed. In August 2007 the President suspended⁶⁰ the CMU decision⁶¹ On creation of "Ukratomprom"⁶², which was aimed to attract investments in nuclear industry. The official reason was to prevent possible alienation of property, in particularly, of power stations operating within the country's power grid and to ensure its integrity, as such alienation would contradict to Law On Foundations of National Security in Ukraine. In December 2007 the new government abolished the decision of the previous cabinet⁶³. Suspension of vertical integration is positively assessed as according to the EU directives vertically integrated companies should be unbundled and disaggregated.

The overall indicator for power industry has been slightly decreased from 2.58 to 2.57 mainly due to failures to improve tariff setting in the sector.

⁵⁷ See details of the plan in IMU-9.

⁵⁸ CMU Decree No 478, March 10, 2008.

⁵⁹ President decree No 316, April 11, 2008, On suspension of decisions of CMU No 367-r from February 22, 2008 and No 478-r from March 19, 2008".

⁶⁰ Presidential Decree № 706, August 13, 2007.

⁶¹ CMU Decree No 456, March 14, 2007, On Some issues on the state concern "Ukratomprom".

⁶² "Ukratomprom" consolidates uranium-mining enterprises, industrial companies and scientific institutions

⁶³ CMU Decree No 1403, December 24, 2007



2.4.2 Needed future reforms

In the power sector it is necessary to continue tariff reform, stimulate competition in electricity generation, and introduce incentive regulation in electricity transmission. The state should make a commitment as for further privatization in the sector. Liberalization steps declared in the plan of liberalization of the electricity market have to be done.



2.5 Gas

Being most energy-intensive country in Europe, Ukraine heavily depends on gas as a key source of energy used in the country. Though Ukraine possesses decent natural gas reserves, the most of consumed gas is imported from Russia and Central Asia, relying on Russian transit services.

Table 9
Role of the gas supply sector in the economy

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------------------------------|---------------------|-------|-------|-------|-------|-------|-------|
| Output | UAH m | 2,367 | 2,439 | 2,112 | 2,129 | 2,356 | 3,807 |
| | % total output | 1 | - | - | - | - | - |
| | % industrial output | 1 | 1 | 1 | - | 1 | - |
| Value added | % GDP | - | 1 | - | - | 1 | - |
| | % output | 43 | 53 | 54 | 52 | 67 | 59 |
| Structure of value added: | | | | | | | |
| Compensation of employees | % sector VA | 58 | 56 | 68 | 75 | 47 | 61 |
| Gross operating surplus, mixed income | % sector VA | 35 | 16 | 2 | 1 | 47 | 20 |
| Net taxes on production and imports | % sector VA | 7 | 28 | 30 | 24 | 6 | 20 |
| Employment* | Thous. people | 529 | 528 | 529 | 528 | 527 | 520 |
| | % total employed | 4 | 4 | 5 | 5 | 5 | 5 |
| Average wage* | UAH | 476 | 562 | 651 | 767 | 969 | 1,228 |

Source: State Statistics Committee, IER estimates

Notes: *Data is for gas, water and power sectors together

- less than 0.5%

Starting from 2005 annual consumption of gas gradually decreases as gas price increases. In 2007 it decreased to 69.8 bcm, 78% of which were imported from the Russian Federation and Central Asia.

2.5.1 Reforms between September 2007 and August 2008

During the monitored period the organization of domestic gas supply sector of Ukraine has been changed. A succession of new agreements on gas imports influenced both the gas sector and economy as a whole.

In December 2007 the CMU and Russian "Gazprom" signed an agreement on gas supply to Ukraine, according to which 55 bcm of gas is to be imported into Ukraine in 2008 at a new price of USD 179.5 per tcm at the Ukrainian-Russian border⁶⁴ (in contrast to USD 130 in 2007). Such an increase in gas price was partially caused by the higher price for Turkmen gas and anticipated rise of

⁶⁴ CMU Order No 1403, 24 December, 2007



Kazakh and Uzbek gas prices. The price of gas transit through the territory of Ukraine was also increased from USD 1.6 to USD 1.7 per tcm per 100 km.

Later in February 2008 "Gazprom" threatened to cut gas supply to Ukraine if NJCS "Naftogaz Ukrayiny" did not pay its debt accumulated at the end of 2007 and in the beginning of 2008. The company also stated that Ukraine should pay for gas consumed in 2008 USD 315 rather than USD 179.5 per tcm on a basis of a claim that "Naftogaz Ukrayiny" and gas delivering company "UkrGasEnergo" have not signed contracts on gas delivery, so "Naftogaz Ukrayiny" illegally consumed gas that happened to be more expensive Russian gas. On March 13, Gazprom and "Naftogaz Ukrayiny" reached a preliminary agreement on natural gas supply⁶⁵, according to which price of Central Asian gas is preserved at USD 179.5 per tcm in 2008⁶⁶. "Naftogaz Ukrayiny" also agreed to pay for gas consumed at the beginning of the year at USD 315 per tcm with an option to make in-kind payment through transfer of gas kept in storage facilities (1.4 bcm). However, "Naftogaz Ukrayiny" has not yet paid for that gas. Important part of the agreement was that Gazprom agreed to supply 49.8 bcm of Central Asian gas directly to Naftogaz Ukrayiny (i.e. without intermediary UkrGazEnergo), at least 7.5 bcm of which is to be supplied to industrial consumers through a new intermediary - subsidiary of Gasprom - "Gazpromsbyt Ukraine". Later the NERC issued a license for the intermediary to supply 7.5 bcm of natural gas in 2008 to industrial consumers⁶⁷. The license of UkrGazEnergo, was cancelled.⁶⁸ All this enabled "Naftogaz Ukrayiny" to restore its share of the market of industrial gas consumers and improve its financial state. On the negative side, persistent non-transparency of gas price formation and payment schemes increases uncertainty. Only establishment of a clear formula of price for imported gas and long-term contracts of gas imports can ensure the stable gas supply in the future.

Continuously increasing price for imported gas mostly affects industrial consumers. In 2008 they pay around USD 300 per tcm⁶⁹. Higher price for industry has adversely influenced enterprises profits and overall industrial dynamics. However, high world steel and chemicals prices maintained, softening the impact and preventing substantial undermining of the business activities of major Ukrainian gas consumers.

⁶⁵ Agreement On development of relationships in the gas sphere.

⁶⁶ CMU Decree On realization of imported natural gas on the territory of Ukraine No 163, March 5, 2008

⁶⁷ NERC Decree On license issuance on natural gas delivery under unregulated tariff of limited liability company "Gazpromsbyt Ukraine, No 547, April 24, 2008

⁶⁸ CMU Order NO 260, February 6, 2008 cancelled CMU Order On issues of provision of domestic consumers with natural gas, No 28, January 24, 2006.

⁶⁹ In 2008 gas price for industrial consumers were raised up to 934 UAH (without VAT, transportation and delivery fees, special tax and costs of natural gas sales). The Ministry of Fuel and Energy allowed the NJSC "Naftogaz Ukrayiny" to increase costs of natural gas sales passed on customers to UAH 105 per tcm since May 2008⁶⁹. Also, the special tax on gas sales for industrial consumers was revised three times since the beginning of the year. The tax escalated from 0.01% in January to 6% in June for chemical industry, and from 2% to 12% for other industrial consumers. As a result, starting from June the price of natural gas for chemical industry consumers and other industrial consumers rose to UAH 1386.98 and UAH 1431.85 per tcm respectively reaching almost USD 300 per tcm



Gas price for households is still approximately 5 times lower than industry's ones and rises very slowly. Starting from September 1, the NERC increased the tariffs by 13-14%, and now most households pay UAH 358 per tcm (app. USD 75 per tcm).⁷⁰ Disproportion in industry and households gas tariffs undermines development of industry, provokes inefficient use of gas by households, and hinder development of domestic gas extraction.

Table 10

Consumption of gas in Ukraine during 2003-2007, bcm

| | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|-------------|-------------|-------------|-------------|-------------|
| All Consumers | 68.7 | 68.1 | 68.9 | 65.9 | 63.9 |
| Industry (excluding power) | 27.3 | 28.2 | 29.0 | 24.3 | 25.8 |
| Metals industry | 9.9 | 9.9 | 9.6 | 9.3 | 9.8 |
| Chemical industry | 8.5 | 8.3 | 8.8 | n/a | n/a |
| Other industrial users | 9.0 | 10.0 | 10.7 | n/a | n/a |
| Power industry | 7.0 | 6.7 | 5.7 | 8.6 | 8.4 |
| including Ministry of Fuel and Energy | 7.1 | 6.6 | 5.7 | n/a | n/a |
| Local government | 34.3 | 33.1 | 34.1 | 34.2 | 29.7 |
| Households | 19.9 | 18.9 | 19.2 | 19.3 | 19.2 |
| Including district heating companies | 14.4 | 13.5 | 13.7 | 12.8 | 10.5 |
| Technical use | 7.6 | 7.6 | 7.4 | 8.1 | 7.0 |
| Total consumption | 76.3 | 75.8 | 76.4 | 73.9 | 69.9 |
| Households, tcm per capita | 0.42 | 0.40 | 0.41 | 0.41 | 0.41 |
| Total consumption, tcm per capita | 1.60 | 1.60 | 1.63 | 1.58 | 1.51 |

Source : Energobusiness , Ministry of Fuel and Energy

Notes: n/a – not available.

The increase in gas price has stimulated contraction of gas consumption in Ukraine (Table 10). Starting from 2005 Ukrainian consumers shortened volumes of gas consumed from 76.4 in 2005 to 69.9 bcm in 2007. The most successful in shortening of gas consumption were households and public utilities – consumers obtaining gas through local governments. At the moment it is difficult to say whether a reduction of the consumption level was explained by increased efficiency of gas use by households or by other factors (like weather), but the tendency is reassuring.

In 2007 domestic gas extraction by the monopolistic "Naftogas Ukrayiny" decreased to 19.2 bcm (-0,5% yoy) (Figure 9). At the same time, the share of domestic gas extraction in total gas consumption remained the same during the last years (around 27%). The main reason stagnation in domestic gas extraction is an obligation of gas extraction companies with more than 50% of state ownership to sell gas to households at a very low price⁷¹. Besides, rent payments on gas extraction continue to increase; in 2007 by 38.9% to UAH 50 per tcm.⁷² The rent is higher for companies that sell their gas to other consumers than households. Thus, the lack of legal guaranties towards free

⁷⁰ NERC Decree No 934, August 2, 2008.

⁷¹ Marginal price of natural gas extracted in Ukraine constitutes UAH 182 for Ukgazvydobyvannya, UAH 272.6 for Ukrnafta and UAH 289 for Chernomornaftogaz NERC Decree from 31.01 2008 № 157 "About approval of natural gas price for branch establishment "Chornomornaftogas" for 2008.

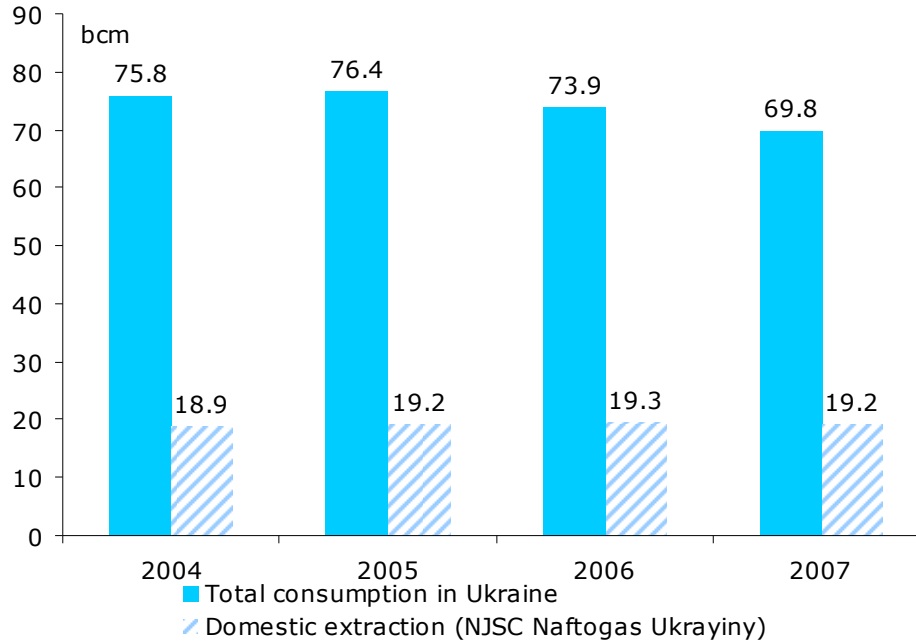
⁷² Law On State budget of Ukraine for 2007, No 489-VII, December 19, 2006.



usage of gas extracted and inadequate pricing policy does not create stimulus for investment initiatives. This has led to decrease in indicator “natural monopoly pricing” from 2.0 to 1.7.

Figure 9

National Gas Consumption and Extraction*, bcm



Source : Energobusiness , Ministry of Fuel and Energy
 * - extracted by the NJSC “Naftogas Ukrayiny”

Thanks to lower indicator “natural monopoly pricing”, overall index for gas industry slightly decreased from 2.03 to 2.02.

2.5.2 Needed future reforms

There is a series of urgent reforms in the sector. First of all, prices on gas extracted in Ukraine should be economically reasonable to signal consumers the true value of energy. The government should minimize its interference into the sector to facilitate investments into domestic gas extraction. It will help to foster competition and attract private capital in the sector. Moreover, Ukraine should express willingness to pay economically reasonable prices at internationally competitive levels. For this it should specify a transparent and predictable pricing mechanism for all suppliers to Ukraine, allowing the establishment of politically independent relations between Ukrainian buyers and gas suppliers and thus securing gas imports over the long run.



2.6 Water and wastewater

In nominal terms the output of the water supply and water treatment had been increasing from 2003. The share of the sector output in the total output and industrial output has been steadily decreasing during the last few years indicating that the development of sector increasingly lagged behind other sectors' growth.

Table 11

The role of the water and wastewater sector in the economy

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------------------------|---------------------|-------|-------|-------|-------|-------|-------|
| Output | UAH m | 2,240 | 2,178 | 2,320 | 2,451 | 3,734 | 4,180 |
| | % total output | - | - | - | - | - | - |
| | % industrial output | 1 | 1 | 1 | 1 | 1 | 1 |
| Value added | % GDP | - | - | - | - | - | - |
| | % of output | 37 | 37 | 38 | 38 | 39 | 52 |
| Structure of value added: | | | | | | | |
| Compensation to employees | % sector VA | 58 | 60 | 76 | 76 | 56 | 53 |
| Profit, mixed income | % sector VA | 25 | 14 | 5 | 7 | 28 | 32 |
| Net taxes on production and imports | % sector VA | 17 | 26 | 19 | 17 | 15 | 15 |
| Employment* | thous. people | 529 | 528 | 529 | 528 | 527 | 520 |
| | % total employed | 4 | 4 | % | 5 | 5 | 5 |
| Average wage* | UAH | 476 | 562 | 651 | 767 | 969 | 1,228 |
| Exports | UAH m | 0 | 0 | 0 | 0 | 9 | 10 |
| | % total exports | 0 | 0 | 0 | 0 | - | - |
| | % sector output | 0 | 0 | 0 | 0 | - | - |

Source: State Statistics Committee, own calculations.

Note: * Data for electricity, gas, and water supply.

- less than 0.5%

Poor physical infrastructure and frequent equipment failures that has lead to significant leakages, and poor financial state of the enterprises are the main characteristics of water and wastewater treatment sector⁷³. During the period under consideration the situation in the sector has not changed a lot.

⁷³ See the other IER publications, e.g. IMU No 9, June 2007, http://www.ier.kiev.ua/English/imu_eng.cgi



2.6.1 Reforms between September 2007 and August 2008

Between 2007 and 2008 some attempts were made to initiate changes in regulation of the water supply and wastewater treatment industry.

In September 2007 the President approved a Concept on Improvement of Natural Monopolies State Regulation⁷⁴ that foresees the mandatory creation of independent regulatory bodies for natural monopolies. Although the same issue is covered by the Law On Natural Monopolies, the Concept extends the law providing regulator with additional authority to determine price-setting procedures, issue licenses, and settle disputes. However, adoption of the Concept has not lead to creation of an independent regulator in any of the utilities sector, including water and wastewater sector.

Table 10

Minimum and maximum of water supply costs and household and industry tariffs in 2007-2008.

| | Jul-2007 | | Jul-2008 | |
|------------------|----------|------|----------|-------|
| | min | max | min | max |
| Unit costs | 0,76 | 2,03 | 1,01 | 3,44 |
| Household tariff | 0,74 | 2,43 | 0,94 | 3,9 |
| Industry tariff | 1,26 | 9,96 | 1,56 | 11,96 |

Source: Ministry of Housing and Utility Services.

On July 16 the CMU approved Regulations on State Housing and Public Utilities Inspection – special subdivision in the Ministry of Housing and Utility Services⁷⁵. The main task of the new body is to control natural monopolies in spheres of central water supply and wastewater treatment sector, determine rules of price setting and set utility services tariffs. However, the newly created body will again be closely associated with executive power and thus potentially politically influenced, which distorts the idea of creation of independent regulator.

Some attempts were made to change tariffs in order to bring tariffs for public utility services to economically justified level. Some municipalities have raised water and wastewater tariffs between 2007 and 2008 to cover operating and capital costs. Nevertheless in most regions tariffs still do not cover cost; tariffs for industry are much higher than for households in spite of the fact that costs of water deliveries are lower for industry (Table 10).

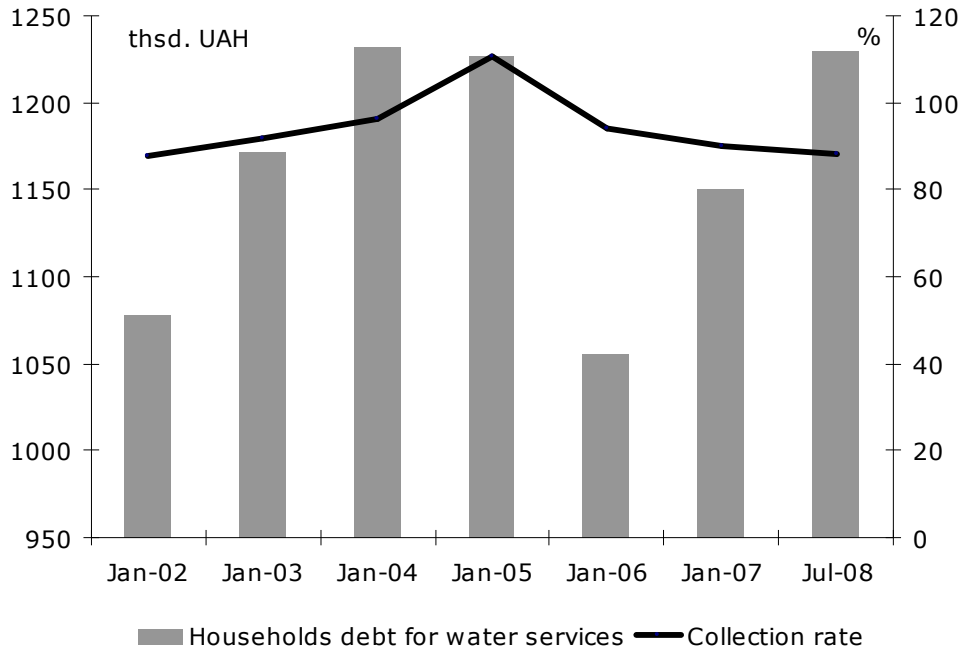
⁷⁴ President Decree No 921, September 27,2008 "On concept of improvement of natural monopolies state regulation"

⁷⁵ Inspection was created by CMU Decree №527 June 4, 2008 "About creation of State housing and public utilities inspection".



Figure 10

Debt of households for for water services and collection rate



Source: State Statistics Committee, own calculations

The total debt of households for water supply and wastewater services continues to increase (Figure 10), while the payment collection rate for water services remained stable since 2006, which is explained by the tariff increase in the sector.

Taking into account that announced intentions to reform the sector have not realised, and tariff policy has not changed, we leave the overall indicator for the sector untouched.

2.6.2 Needed future reforms

Reforms in the sectors are yet to be started. Water and wastewater tariffs has to cover the services costs at 100% in order to improve financial state of the industry and to get rid of cross-subsidization between different consumer groups. An independent regulator in the industry has to be created. The regulator has to be politically independent and be granted with rights to be able to balance interests of all the market participants, guarantee economically justified cost-covering tariff levels, and provide sufficient incentives for improving efficiency through appropriate regulation schemes.



Appendices

Appendix 1 Infrastructure Indicator evaluation

| Indicator | Telecommunications | | | | | | | | | | Railways | | | | | | | | | | Roads* | | | | | | | | | | | | | |
|--|--------------------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|------|------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 00N | 01M | 01N | 02M | 02N | 03M | 04J | 05J | 06J | 07A | 08A | 00N | 01M | 01N | 02M | 02N | 03M | 04J | 05J | 06J | 07A | 08A | 00N | 01M | 01N | 02M | 02N | 03M | 04J | 05J | 06J | 07A | 08A | |
| EBRD indicator | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| IERP indicator | 2.31 | 2.36 | 2.28 | 2.22 | 2.26 | 2.29 | 2.41 | 2.40 | 2.50 | 2.53 | 2.46 | 1.29 | 1.39 | 1.49 | 1.54 | 1.36 | 1.79 | 1.73 | 1.78 | 1.80 | 1.79 | 1.77 | 1.77 | 2.12 | 2.15 | 2.15 | 2.14 | 2.17 | 2.30 | 2.28 | 2.30 | 2.39 | 2.39 | 2.44 |
| 1 Commercialization and privatization | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 |
| 1.1 Ownership | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.3 | 2.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.5 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 |
| 1.1.1 Natural monopoly | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 1.1.2 Potentially competitive businesses | 2.7 | 2.7 | 2.3 | 2.3 | 2.7 | 3.0 | 2.7 | 2.7 | 3.0 | 3.3 | 3.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 3.0 | 3.0 | 3.0 |
| 1.1.3 Ancillary businesses | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 1.2 Operation | 1.8 | 1.9 | 1.7 | 1.7 | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.2 | 1.4 | 1.6 | 1.7 | 1.7 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.6 | 1.8 | 1.8 | 1.9 | 1.9 | 2.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 1.2.1 Natural monopoly | 1.7 | 2.0 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 1.2.2 Natural monopoly planning and investment | 2.0 | 2.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.0 | 1.3 | 1.3 | 1.7 | 1.7 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.3 | 2.3 |
| 1.2.3 Private sector participation in service | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 1.3 Organizational structure | 2.2 | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 1.4 | 1.6 | 1.6 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 1.3.1 Separation of natural monopoly and potentially competitive businesses | 2.3 | 2.3 | 2.0 | 2.0 | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 1.3.2 Separation of ancillary businesses | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 1.3.3 Decentralization | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 2 Tariff reform | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.9 | 1.4 | 1.5 | 1.7 | 1.8 | 1.8 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1 | 2.2 | 2.3 | 2.3 |
| 2.1 Structure of tariffs | 2.3 | 2.4 | 2.4 | 2.4 | 2.6 | 2.6 | 2.9 | 2.9 | 3.0 | 2.9 | 3.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.8 | 1.7 | 1.7 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 1.9 | 2.1 | 2.2 | 2.2 | 2.4 |
| 2.1.1 Political vs. regulated operators | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.7 | 1.3 | 1.3 | 1.7 | 1.7 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 |
| 2.1.2 Natural monopoly pricing | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 3.0 | 3.0 | 3.3 | 3.3 | 3.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 2.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 |
| 2.1.3 Potentially competitive businesses pricing | 2.7 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.3 | 3.3 | 3.3 | 3.0 | 3.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 3.0 |
| 2.2 Payments | 3.0 | 3.1 | 3.1 | 3.1 | 3.2 | 3.2 | 3.3 | 3.3 | 3.3 | 3.2 | 3.2 | 1.7 | 1.9 | 2.3 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.4 | 2.4 | 2.4 | 2.4 | 2.2 | 2.2 | 2.1 | 2.2 | 2.5 | 2.5 | 2.5 | 2.7 | 2.7 | 2.7 |
| 2.2.1 Intra-industry payments ratios | 3.0 | 3.0 | 3.0 | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 1.30 | 1.70 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 3.0 | 3.0 | 3.0 |
| 2.2.2 Final consumers collection rates | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 2.0 | 2.3 | 2.7 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| 2.2.3 State indebtedness | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 2.3 | 2.3 |
| 2.3 State funding | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.7 |
| 2.3.1 Subsidies level | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 |
| 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 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 3 Regulatory and institutional development | 2.4 | 2.4 | 2.2 | 2.1 | 2.1 | 2.1 | 2.3 | 2.3 | 2.5 | 2.6 | 2.4 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.6 | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.6 | 2.5 | 2.5 | 2.7 | 2.7 |
| 3.1 Effective regulatory institution | 2.4 | 2.6 | 2.3 | 2.2 | 2.2 | 2.2 | 2.6 | 2.6 | 2.7 | 2.6 | 2.4 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 3.1.1 Management selection for competitive businesses | 2.7 | 2.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.3 | 2.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 3.1.2 Independence of regulator; insulation from political influence | 2.3 | 2.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.3 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 3.1.3 Transparency of regulation | 2.3 | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.7 | 2.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| 3.2 Access regulation | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.7 | 2.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 3.0 | 3.0 |

* the indicators for Roads has been reviewed since last issue



Appendix 1 Infrastructure Indicator evaluation (continuation)

| Indicator | Power | | | | | | | | | | | | Gas | | | | | | | | | | | | Water and Wastewater | | | | | | | | | | | |
|--|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|------|------|------|------|------|------|------|--|--|--|
| | 00-N | 01-M | 01-N | 02-M | 02-N | 03-M | 04-J | 05-J | 07-A | 08-A | 00-N | 01-M | 01-N | 02-M | 02-N | 03-M | 04-J | 05-J | 07-A | 08-A | 00-N | 01-M | 01-N | 02-M | 02-N | 03-M | 04-J | 05-J | 07-A | 08-A | | | | | | |
| EBRD indicator | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | | | | |
| IERPC indicator | 2.37 | 2.49 | 2.51 | 2.51 | 2.49 | 2.60 | 2.56 | 2.56 | 2.57 | 2.58 | 2.57 | 1.88 | 2.04 | 2.09 | 2.06 | 2.05 | 2.04 | 2.06 | 2.06 | 2.04 | 2.03 | 2.02 | 1.38 | 1.42 | 1.42 | 1.47 | 1.51 | 1.57 | 1.61 | 1.61 | 1.61 | 1.60 | 1.60 | | | |
| 1 Commercialization and privatization | 2.4 | 2.5 | 2.5 | 2.5 | 2.7 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 1.6 | 1.7 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | | | |
| 1.1 Ownership | 2.2 | 2.3 | 2.4 | 2.4 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 1.8 | 1.8 | 1.9 | 1.9 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.1.1 Natural monopoly | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.1.2 Potentially competitive businesses | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.1.3 Ancillary businesses | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.2 Operation | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 1.4 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | | |
| 1.2.1 Natural monopoly | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 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 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | | | |
| 1.2.2 Natural monopoly planning and investment decisions | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.2.3 Private sector participation in service | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | | |
| 1.3 Organizational structure | 2.5 | 2.5 | 2.5 | 2.5 | 2.7 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | | | |
| 1.3.1 Separation of natural monopoly and | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 1.3.2 Separation of ancillary businesses | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | |
| 1.3.3 Decentralization | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | |
| 2 Tariff reform | 2.2 | 2.5 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 2.7 | 2.0 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | | | |
| 2.1 Structure of tariffs | 2.7 | 2.7 | 2.7 | 2.7 | 2.9 | 2.9 | 2.9 | 2.9 | 3.0 | 3.1 | 3.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 1.9 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| 2.1.1 Political vs. regulated operators | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 2.1.2 Natural monopoly pricing | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 3.0 | 3.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | | |
| 2.1.3 Potentially competitive businesses pricing | 2.3 | 2.3 | 2.3 | 2.3 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 2.2 Payments | 1.9 | 2.8 | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 1.9 | 2.7 | 3.0 | 2.8 | 3.0 | 3.2 | 3.2 | 3.0 | 3.0 | 3.0 | 3.0 | 1.9 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.8 | 2.8 | 2.7 | 2.7 | 2.7 | | | |
| 2.2.1 Intra-industry payments ratios | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.0 | 3.0 | 3.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | | | |
| 2.2.2 Final consumers collection rates | 2.0 | 3.0 | 3.3 | 3.3 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 2.0 | 2.7 | 3.3 | 2.7 | 3.3 | 2.7 | 3.3 | 3.3 | 3.0 | 3.0 | 3.0 | 2.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.0 | | | |
| 2.2.3 State indebtedness | 1.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.7 | 2.3 | 2.3 | 2.3 | 2.3 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 1.7 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | | | |
| 2.3 State funding | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | | | |
| 2.3.1 Subsidies level | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 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 | 1.7 | 1.7 | 1.7 | 1.7 | 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 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| 3 Regulatory and institutional development | 2.5 | 2.5 | 2.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | | | |
| 3.1 Effective regulatory institution | 2.7 | 2.7 | 2.7 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | | | |
| 3.1.1 Management selection for competitive | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | | |
| 3.1.2 Independence of regulator, insulation from | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 3.1.3 Transparency of regulation | 3.0 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | |
| 3.2 Access regulation | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | |



Appendix 2. General description of the infrastructure indicators

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

1.0 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 businesses.** 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 businesses.** 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 the establishment 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 businesses 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.

2.0 Tariff 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 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 for competitive businesses.** A score of one means that state officials appoint the management. 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 regulations.** A score of one implies an absence of legislation defining clear rules of the game for businesses, 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 an independent regulator alone regulates the performance of the natural monopolies in an industry in accordance with law, and all decisions are disclosed.
- 3.2 Access regulation.** 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 (September 2007 - August 2008)

TELECOMMUNICATIONS

1.0 Commercialisation and privatisation

1.1 Ownership

- 1.1.1 The state-owned telecommunications incumbent Ukrtelecom still controls about 76.3% of the fixed-line telephone market and owns the largest primary network. The indicator remains unchanged at 1.7.
- 1.1.2 Expected privatization of Ukrtelecom⁷⁶ was again postponed. Also, Ukrtelecom started providing 3G mobile communications services, though it experienced rather tough competition on this segment of market. The indicator is unchanged – 3.3.
- 1.1.3 The ownership structure in the ancillary businesses has not changed significantly. The indicator remains at 2.0.

1.2 Operation

- 1.2.1 Fixed-line network is under control of state-owned JSC “Ukrtelecom”. Established market regulator – the NCRC – is responsible for licensing, tariff-setting for universal communications services, managing of frequencies, rules making and their enforcement. The indicator remains unchanged at 2.0.
- 1.2.2 The adoption of financial plan for 2008 was rather long and politically influenced, and Ukrtelecom’s calculations regarding future profit/loss are not considered. At the same time, financial audit conducted by the Main Control and Revision Office of Ukraine revealed misuse of company’s funds, violation of state-regulated rules. The indicator remains at 1.7.
- 1.2.3 The private sector continues to increase its participation in many competitive segments and service contracts. E.g., Ukrtelecom has developed a few projects, based on advanced technologies (e.g., fiber optic network, 3G networks) in cooperation with private companies (Nokia, Cisco, etc). The indicator remains at 2.3 level.

1.3 Organizational structure

- 1.3.1 There are no significant changes. The indicator remains at 2.0.
- 1.3.2 The organizational structure of the ancillary businesses remained unchanged, and so did the indicator – 2.0.
- 1.3.3 The indicator remains unchanged at 2.3.

⁷⁶ Order of the CMU, No. 81-p, January 16, 2008; Order of the CMU, No. 249-p, February 6, 2008.



2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 The NCRC excluded tariffs for long-distance calls from the list of the state-regulated services. Such a decision increases Ukrtelecom's power to make independent commercial decisions. Moreover, the regulator set new tariffs for post services, which are to cover costs to a greater extent. The indicator is slightly increased from 2.3 to 2.7.
- 2.1.2 There are no changes of the indicator - 3.3.
- 2.1.3 The regulation on interconnections and inter-payments allows avoiding deviations from equilibrium pricing in many cases. The indicator remains 3.0.

2.2 Payments

- 2.2.1 There were no major developments in intra-industry payments. The indicator has remained 3.3.
- 2.2.2 The indicator remains unchanged at 3.7.
- 2.2.3 On the date of January 1, 2008 the budget institutions had arrears to Ukrtelecom at the level of UAH 138.7 m, which is UAH 47.5 m less yoy. The state's indebtedness indicator is unchanged - 2.7.

2.3 State funding

- 2.3.1 The level of state subsidization is planned to decrease through the increase in tariffs. The indicator remains at 2.7.
- 2.3.2 The subsidies procedure has not experienced significant changes during monitored period, and the indicator remains unchanged - 2.0.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 The management selection procedure for competitive businesses has not changed. So, the indicator remains the same - 2.3.
- 3.1.2 The political and financial independence of the NCRC was undermined by confrontation between the Government and the President of Ukraine. The Commission has not been able to regulate market during the monitored period. The indicator was reduced from 2.7 to 2.3.
- 3.1.3 The decision-making process of the NCRC was blocked, so it is difficult to assess its transparency. So, the indicator remains unchanged - 2.7.

- 3.2 **Access pricing regulation method.** Expected privatization of Ukrtelecom and increased number of competitors on the telecommunications market have sharpened the issue of access to telephone channels, controlled by the state-owned telecommunication incumbent. Private operators often experienced difficulties while trying to get it since access procedure is not transparent. Hence the score has been slightly decreased from 2.7 to 2.3.



RAILWAYS

1.0 Commercialisation and privatisation

1.1 Ownership

- 1.1.1 The basic rail network is 100% state owned. Sales/transfers of branch lines take place occasionally. The indicator has not been changed – 1.0.
- 1.1.2 Passenger and freight transportation are 100% state-owned. Forwarding enterprises are mostly private. Freight railway cars are partially in private ownership (26-30%). The indicator has not been changed - 2.0.
- 1.1.3 The construction, maintenance and service enterprises are corporatized, but remained state-owned. The indicator has not been changed – 1.7.

1.2 Operation

- 1.2.1 The railways are regulated by the State Railways Administration, which is integrated into the MTCU. The indicator has not been changed – 1.7.
- 1.2.2 The State Railways Administration “UZ” strives for operational efficiency and profitability of the industry. However, political interference in investment and operational activities has been increased during monitored period. The indicator has been decreased from 2.3 to 2.0.
- 1.2.3 Rail line construction and rolling stock maintenance is provided by state enterprises and joint stock ventures. At the same time UZ tries to involve private sector in catering and maintenance services. The indicator remained the same - 1.7.

1.3 Organisational structure

- 1.3.1 The railway infrastructure, passenger and freight transportation services are integrated within UZ, but keep separate accounts. Cross-subsidization is transparent, separate accounts for freight and passenger transportation are available. The indicator has not been changed – 1.7.
- 1.3.2 UZ has been charged with the management of more ancillary businesses. The indicator remained the same - 1.7.
- 1.3.3 The railways are split into 6 regional companies and some ancillary enterprises. They set tariffs for a range of services, except for transportation (e.g. prices for use of bed linen, tariffs for carriage feed). However, recently the MTCU has tried to centralise power of management and control over majority of state-owned transport enterprises, in particular in railways sector. The indicator has been decreased from 2.0 to 1.7.

2.0 Tariff reform

2.1 Structure of tariffs



- 2.1.1 Freight rail tariffs are at the cost-covering level, and passenger rail tariffs are constantly growing. However, the tariff-setting procedure remains non-transparent and political interference is still noticeable. Moreover, the MTCU opposed the proposal of independent transport regulator's establishment and offered creating the Commission on railways tariffs regulation within its structure. The indicator has been decreased from 1.7 to 1.3.
- 2.1.2 The tariffs are steadily moving to the infrastructure and rolling stock operating costs; however overall, the costs are covered. Cross-subsidisation of passenger transportation by freight transportation is reduced. The indicator has been increased from 2.3 to 2.7.
- 2.1.3 Tariffs for both freight and passenger transportation are having been adjusted to the cost-covering level. The indicator remained the same - 2.0.

2.2 Payments

- 2.2.1 Intra-industry payments are stable. The indicator has not been changed - 2.7.
- 2.2.2 Monetary payments are almost 100%, except for payments for commuter rail services. However, UZ introduced some measures aimed at increasing of collection payments for commuter rail services. The indicator has not been changed - 2.7.
- 2.2.3 State subsidies are provided partially at levels set in the central state budget and almost not - by local authorities. For 2007 only 42.2% (UAH 125.0 m) of the costs of railroad transportation of privileged passengers have been compensated from the state budget, and for 5 months of 2008 - 33.8% (UAH 47.9 m). The indicator has not been changed - 1.7.

2.3 State funding

- 2.3.1 The government still relies on (privileged) passenger transportation funding at the expense of UZ. The indicator has not been changed - 1.7.
- 2.3.2 Subsidies are paid to the railways (service provider). The indicator has not been changed - 2.0.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 The Cabinet of Ministers appoints the top management, although the government body operating the railways is formally independent. The indicator has not been changed - 1.7.
- 3.1.2 There is no independent regulatory body in the sphere of railways. The body, responsible for railways regulation, is part of the MTCU. The indicator has not been changed - 1.7.



- 3.1.3 Tariffs for both freight and passenger transportations are fixed by legislation. A transport tariff policy is being developed to increase cost-covering level. The indicator has not been changed – 2.0.
- 3.2 Access pricing regulation method.** Access is regulated by government permission. The index remained at 1.3.

ROADS

1.0 Commercialisation and privatisation

1.1 Ownership

- 1.1.1 Roads of the public use are 100% in state and communal ownership. The indicator has not been changed – 1.0.
- 1.1.2 Freight transportation is mostly provided by private companies. The share of private sector in passenger transportation is constantly increasing. The indicator has not been changed – 3.0.
- 1.1.3 The social infrastructure, services, and automobile maintenance enterprises are mostly private. Publicly owned companies provide most of the road maintenance and construction (at least as main contractors). At the same time, there are plans to set transparent tender procedure both for state-owned and private construction companies. The indicator has not been changed – 2.3.

1.2 Operation

- 1.2.1 Regulation and management of the road network are separated from each other. The regulatory body (State Road Service) is the principal managing body of the State Joint Stock Company "Avtomobilny dorogy Ukrainy". The indicator has not been changed – 2.0.
- 1.2.2 There were no significant changes in the procedures of natural monopoly planning and investment decisions making. The indicator has not been changed – 2.3.
- 1.2.3 Road maintenance is provided mostly by local subsidiaries of the State JSC "Avtomobilny dorogy Ukrainy". And construction work is sometimes done by private contractors. The indicator has not been changed – 2.3.

1.3 Organisational structure

- 1.3.1 Roads management is separated from freight and passenger transportation services. The indicator has not been changed – 3.3.
- 1.3.2 Road construction and maintenance are separated from transportation; some services are contracted out. The indicator has not been changed – 2.0.
- 1.3.3 Roads are financed and operated at both central and regional levels. Municipal authorities can make investment decisions on local road construction using the vehicle tax funds they collect. But in practice they usually get less from Road fund than they collect. That's why part



of local roads was transferred under the Ukravtodor jurisdiction. The indicator has not been changed – 2.0.

2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 Local authorities approve tariffs for local passenger transportation. However, private companies had chance to negotiate with local authorities an optimal price. Moreover, in July the government allowed free tariff-setting on interregional passenger travels. The indicator has been increased from 2.0 to 2.3.
- 2.1.2 Officially road funding derives from an excise tax and import duty on mineral oils and vehicles. And they are directed towards road construction and maintenance. The indicator has not been changed – 2.0.
- 2.1.3 The level of tariffs can be considered as cost-effective since passenger companies have chance to negotiate the price level. In addition, road transport market is developing in contrast to falling attractiveness of rail services. The indicator has been increased from 2.7 to 3.0.

2.2 Payments

- 2.2.1 In 2007 bills receivable of the JSC “Avtomobilni dorogy Ukrainy” as well as its arrears (mainly due to increase of credits) increased. Also, in 2007 volumes of construction in progress increased twice and reached UAH 350.05 m. The indicator has not been changed – 3.0.
- 2.2.2 Payments are mostly monetary but the enterprises that conduct roads maintenance and construction also receive capital transfers from the budget. Compensation for privileged passenger transportation remains significant issue. The indicator has not been changed – 2.7.
- 2.2.3 Despite substantial increase of investments in roads in recent years, financing remains insufficient, taking into consideration the poor state of the sector and preparations for the UEFA EURO 2012. The indicator remained at 2.3.

2.3 State funding

- 2.3.1 The number of privileged passengers remains high, and compensation levels from the budget are inadequate. Moreover, the government softened budget constraints for Ukravtodor. It allowed attracting huge volumes of sovereign guaranteed loans for roads construction in the middle of budget year and despite their previous inadequate use. The indicator has been decreased from 1.7 to 1.3.
- 2.3.2 Subsidization of privileged passengers is frequently put onto the shoulders of service providers. However, the MTCU developed draft law On amendments to some legislative acts regards privileges in the road transport. If it is adopted, target subsidies will be introduced since 2009. The indicator is the same – 2.0.



3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 The management of the State Road Service is appointed by the government. The indicator has not been changed – 2.3.
- 3.1.2 The State Road Service of Ukraine, the regulatory body in the sector and department of the MTCU, also includes the State JSC “Avtomobilni dorogy Ukrainy”, infrastructure operator. The indicator has not been changed – 2.0.
- 3.1.3 The MTCU does not support the idea of independent transport regulator creation. That’s why this process is slowed. The indicator has not been changed – 2.7.

3.2 Access pricing regulation method. Access is regulated by licensing. Tenders for serving routes were introduced. The MTCU made some decisions structuring road transport market, preventing from illegal road transportations. It also worked on simplifying of ECMT permits distribution for trucks, travelling abroad. The indicator has been slightly increased from 3.0 to 3.3.

POWER

1.0 Commercialisation and privatisation

1.1 Ownership

- 1.1.1 The CMU made a decision to sell controlling stakes in four energy-generating companies: Donbasenergo, Zahidenergo, Dniproenergo and Centerenergo, which was later suspended by the President order. The indicator has not been changed - 3.3.
- 1.1.2 The nuclear and hydro generating plants remain 100% state property, the state remained the major owner of the three fossil fuel generating companies. The indicator has not been changed - 2.7.
- 1.1.3 Social infrastructure, construction and maintenance are still treated as part of the natural monopoly. The indicator has not been changed - 1.7.

1.2 Operation

- 1.2.1 The regional distribution companies are corporatized, some of them are in private hands, all of them are regulated by the NERC. Privatization of regional distribution companies planned for 2008 was suspended. The grid is operated as a part of Ukrenergo. The indicator has not been changed - 3.3.
- 1.2.2 Decision-making is still politically determined. The indicator has not been changed - 2.7.
- 1.2.3 Construction and maintenance are managed by the oblenergos. There are no rules of access of operators with unregulated tariffs. The indicator has not been changed - 2.3.

1.3 Organisational structure

- 1.3.1 Generation, transmission and distribution are separated into independent companies. State stakes in the power sector, with the



exception of nuclear stations united in the Energy Company of Ukraine. The indicator has not been changed – 3.0.

- 1.3.2 There is a minimal degree of separation. The private sector is marginally involved. The indicator has not been changed - 1.7.
- 1.3.3 Decentralisation is not a high priority in this industry.

2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 Cost-effectiveness of households tariffs did not changed. The NERC still acts on the basis of decrees of the Cabinet of Ministers. The indicator has not been changed – 3.0.
- 2.1.2 Cross-subsidisation of households by industrial consumers without changes. Open auctions conduction on power export was banned. The indicator has been decreased from 3.3 to 3.0
- 2.1.3 Real competition at the wholesale power market is noted. Power generating companies compete by bidding. At the same time the absence of modern meters allowing instantaneous consumption measurements prevents the customers' consumption to be billed according to the load curve. WEM is preparing for transformation to operate on bilateral contractual basis. The indicator has not been changed – 3.0.

2.2 Payments

- 2.2.1 The indicator has not been changed – 3.0.
- 2.2.2 The average level of cash payments by the oblenergos to the wholesale electricity market is stable. The indicator has not been changed - 3.7.
- 2.2.3 The law On state budget foresees 100% payment for consumed power but the actual payments are below this level - 2.3.

2.3 State funding

- 2.3.1 The poorest people are subsidised, the number of privileged categories remains substantial. The indicator has not been changed - 2.3.
- 2.3.2 Subsidies are paid to the oblenergos. The indicator has not been changed - 2.0.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 The management is appointed by the state. The indicator has not been changed - 2.0.
- 3.1.2 The NERC is governed by decrees issued by the President and the Cabinet of Ministers. The indicator has not been changed – 3.0.
- 3.1.3 More transparency has been introduced into the distribution of moneys for power supplied to the wholesale market. The indicator has not been changed - 2.7.



3.2 Access pricing regulation method. Access is regulated by the NERC, but without a strong legislative base. The indicator has not been changed - 2.3.

GAS

1.0 Commercialisation and privatisation

1.1 Ownership

1.1.1 The trunk pipeline and the distribution system are 100% owned by the state. NJSC "Naftogaz Ukrayiny" is corporatized, minor shares of some regional gas distribution companies are privately owned. The indicator has not been changed - 1.3.

1.1.2 All the import to Ukraine is conducted by RUE (which is 50% owned by "Gazprom" and 50% by private persons). RUE imports gas to Ukraine according to agreements signed at national level. The indicator has not been changed - 1.7.

1.1.3 The role of the subsidiary UkrGasEnergo was ceased, NJSC "Naftogas Ukrayiny" obtained the right to sell gas to industrial companies. New subsidiary of Gazprom "Gaspromsbyt of Ukraine" was created. The construction, maintenance and service efforts are carried out mainly by NAK Naftogaz. The indicator has not been changed - 1.7.

1.2 Operation

1.2.1 NJSC "Naftogaz Ukrayiny" is still supervised by the government and the President; it can however operate as a market company. The indicator has not been changed - 2.0.

1.2.2 The indicator remained unchanged - 2.0.

1.2.3 Some private companies are involved to repair and maintenance of the pipelines. The indicator has not been changed - 1.3.

1.3 Organisational structure

1.3.1 The structure of gas deliveries was changed. The majority of gas delivery both to industry and households is now performed by NJSC "Naftogas Ukrayiny". The indicator has not been changed - 2.0.

1.3.2 There is a minimal degree of separation. The indicator has not been changed - 1.3.

1.3.3 Decentralisation is not foreseen for this industry.

2.0 Tariff reform

2.1 Structure of tariffs

2.1.1 The government interference in tariff settings is substantial. The indicator has not been changed - 2.0.

2.1.2 The pricing of gas extracted in Ukraine is low which does not create stimulus for development of domestic gas extraction. Gas tariffs for households were slightly changed, while it has been rising for industrial consumers. The problem of cross-subsidization still persists. The indicator has been changed from 2.0 to 1.7.



2.1.3 NERC sets ceiling prices on natural gas for final consumers according to a Cabinet of Ministers' decree. The indicator has not been changed – 2.0.

2.2 Payments

2.2.1 Currently, gas transit fee is paid in cash however, however NJSC "Naftogaz Ukrainy" agreed to pay USD 315 per tcm for Russian gas consumed at the beginning of the year (1.4 bcm) with an option to conduct in-kind payment through transfer of gas kept in storage facilities. The indicator was not changed – 3.0.

2.2.2 District heating companies highly indebted for gas delivered by "Gas of Ukraine". The most indebted to subsidiary "Gas of Ukraine" for gas consumed during 2007-2008 companies of Kharkiv (the level of indebtedness – 57%), Donetsk (67%), Dnepropetrovsk (67%), Lugansk (59%), Lviv (69%). And there were no progress with revenue collection made by other groups of consumers. The indicator has not been changed – 3.0.

2.2.3 The state remains among the debtors; Naftogaz bears the costs of supplying gas to households. The state only partially covered expenses made by NJSC Naftogas to provide households with gas at low price in 2007 which negatively influenced financial state of the company. The indicator has not been changed – 3.0.

2.3 State funding

2.3.1 The poorest households are subsidised. Gas tariffs for households were slightly raised in September 2008, but still they do not cover economic costs of gas delivery. The indicator has not been changed – 2.0.

2.3.2 There was no change in subsidy procedures. The indicator has not been changed - 1.7.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

3.1.1 The government appoints the management of the NJSC "Naftogaz Ukrainy" although it is formally independent. The indicator has not been changed – 2.0.

3.1.2 NJSC "Naftogaz Ukrainy" is still subject to government control. The indicator has not been changed - 2.3.

3.1.3 NERC is the regulator of the sector which regulates the performance of the natural monopolies in an industry is not in fact independent, and all decisions are politically determined. The indicator has not been changed - 1.7.

3.2 Access pricing regulation method. Access is regulated by the NERC, but without a strong legislative base. The indicator has not been changed - 2.3.

WATER AND WASTEWATER

1.0 Commercialization and privatization

1.1 Ownership



- 1.1.1 The natural monopolies (water distribution and drainage systems) are mostly in communal ownership. There was no change in privatisation of networks. Thus the indicator has not been changed - 1.3.
- 1.1.2 Most potentially competitive businesses (water supply and wastewater treatment) are still integrated with the natural monopolies and are mostly in communal ownership. The indicator has not been changed and remained at level 1.3.
- 1.1.3 Construction and maintenance are integrated with the natural monopolies and are also mostly in communal ownership. The index remains at the same level - 1.3

1.2 Operation

- 1.2.1 Water and wastewater services are provided by local monopolists administered by local governments, which are also the owners of the companies in most cases. There is no independent regulator in the sector still in spite on the legislative initiatives. So, the indicator has not been changed - 2.3
- 1.2.2 The political influence on decision-making is very strong, local governments pursue goals of social support. The indicator has not been changed - 1.3.
- 1.2.3 Private sector participation in service contracts is low; where it exists it is mostly due to the participation of international financial institutions. The indicator has not been changed - 1.7.

1.3 Organisational structure

- 1.3.1 Infrastructure and the service providers' management are still not separated. The indicator has not been changed - 1.3.
- 1.3.2 There is no separation of ancillary businesses from the natural monopoly and for potentially competitive businesses. The indicator has not been changed - 1.0.
- 1.3.3 Companies operate under the supervision of the local authorities. Local governments became less dependent on the central executive powers due to a legal change concerning tariffs and investments. The indicator has not been changed - 3.0.

2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 All tariffs were slightly increased by municipal officials. However, as a whole tariffs do not cover costs of water supply to residual customers. Political interference in tariff setting is still high. The indicator has not been changed - 1.7.
- 2.1.2 Tariffs for residential consumers were increased caused mainly by the inflation. The indicator has not been changed - 1.7.
- 2.1.3 Potentially competitive businesses are integrated parts of the natural monopolies, pricing of the services is not separated. The indicator has not been changed - 1.3.



2.2 Payments

- 2.2.1 Major creditors of the industry are the power distribution companies. The indicator has not been changed - 2.3.
- 2.2.2 The collection rate from households remained at the same level. The indicator has not been changed - 3.0.
- 2.2.3 The indicator has not been changed - 2.7.

2.3 State funding

- 2.3.1 The poorest households are subsidised. The amount of subsidisation varies substantially between regions. The indicator has not been changed - 1.7.
- 2.3.2 Subsidies are paid to the water supply and sewage companies. The indicator has not been changed - 2.0.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 Local officials continue to appoint the management of the water supply and wastewater monopolies. The indicator has not been changed and remained at level 1.7.
- 3.1.2 There is no independent regulator in the sector. The indicator has not been changed - 1.3.
- 3.1.3 Although clear tariff regulation guidelines are available they are not obligatory for local administrations: tariffs continue to be set arbitrarily. The indicator has not been changed - 1.3.

- 3.2 Access pricing regulation method.** There are no rules for access. The indicator has not been changed and remained at level 1.0.