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Research Center of the Institute for Privatization and Management
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Belarus Infrastructure Monitoring (BIM)

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List of abbreviations

BNT	Belarusian Network of Telecommunications
BR	Belarusian Railways
CPI	Consumer Price Index
EBRD	European Bank for Reconstruction and Development
GET	German economic team
MDC	Mobile Digital Communication
MTS	Mobile TeleSystems
PPI	Producer Price Index
IPM RC	Research Center of the Institute for Privatization and Management

Weights, measures and other abbreviations

bcm	billion cubic meters
bn	billion
BYR	Belarusian ruble
eop	end of period
kW	kilowatt
kWh	kilowatt-hour
m	million
trn	trillion
tcm	thousand cubic meters
USD	United States dollar
yoy	year-on-year



Contents

Foreword	5
1. Summary	6
2. Independent regulatory bodies in infrastructure sectors	8
3. Belarusian infrastructure policies in 2005	11
3.1. Railways	12
3.2. Roads	13
3.3. Telecommunications	16
3.4. Gas	19
3.5. Electricity	22
Appendix 1	26
Appendix 2	29
Appendix 3	38

Foreword

This is the third issue of Belarusian Infrastructure Monitoring (BIM). BIM was designed by the IPM Research Center, which is an independent research body, together with the German Economic Team in Belarus (GET). BIM is a tool used to assess the progress of structural reforms in key infrastructure industries and has as its goal the monitoring of annual changes in the infrastructure sector. The indicators developed within BIM are intended both for monitoring the government's infrastructure policy and for research purposes.

The methodology used in BIM follows the concept of Infrastructure Monitoring for Ukraine (IMU) developed by the Institute for Economic Research and Policy Consulting (IER) in Kiev, Ukraine¹. This concept, in turn, was based on an approach developed by the EBRD, which estimates infrastructure indices for all transition countries. Since 1998, these indices have been published annually in the EBRD Transition Report.

This report presents information on the restructuring of five infrastructure sectors of the Belarusian economy in a standardized manner, which allows for cross-industry comparisons. The monitored 21 indicators are qualitative and fall into three broad categories: (1) commercialization, (2) tariff reform, and (3) regulatory and institutional development. The aggregated index calculated on the basis of indicators presents the status of the reforms in each sector at a given period.

A short summary outlines the major developments within selected sectors of the infrastructure. The second section provides arguments for establishing independent regulatory bodies within the different infrastructure sectors. A general analysis of the present Belarusian infrastructure situation is presented in the third section. This detailed review of the reforms in each of the five sectors includes not only ex-post analysis, but also an outline of the major challenges and prospects for future sustainable 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 evaluation in tabular form and provide methodological explanations and detailed comments for each indicator.

¹ See www.ier.kiev.ua.

1. Summary

During the year 2005 the infrastructure industries demonstrated a lack of substantial structural changes and resistance to introducing market mechanisms. The regulatory framework for private sector transportation companies became slightly less favorable. Telecommunications, electricity and railways also continued to be resistant to implementing market reforms. While the overall reform process slowed down, the gas sector demonstrated slight success towards market reforms.

For the **Railway sector**, the indicator has not changed, remaining at 1.4 both for 2004 and 2005. The railway operator Belarusian Railways maintained its monopoly status. There were no changes in the ownership, operation, state financing, or the tariff setting procedure. The process of eliminating cross-subsidization, started in 2001, continued in 2005 as well.

The **Road sector's** indicator remained at the level of 1.7. In general, reforms in this sector had moved at a greater rate than in other infrastructure sectors prior to 2003. In 2005 the situation for private passenger transportation companies became more difficult due to unclear licensing requirements, high import duties on buses, and restrictive technical requirements for buses. Because of this, their market share continued to shrink in 2005. The regulatory environment regarding the import of heavy trucks remained unfavorable for carrier companies of the private sector. This led to firms continuing to relocate their freight transportation business from Belarus to Russia.

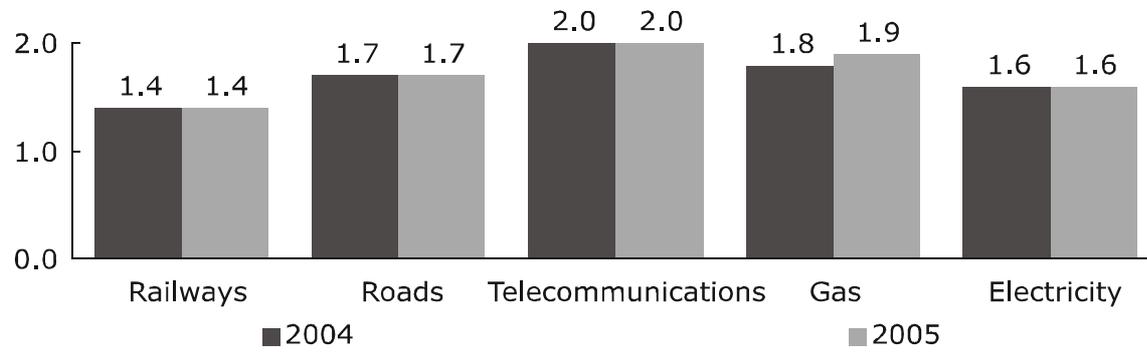
The **Telecommunications'** index remained at the 2004 level: 2.0. Beltelecom remains the main operator in the telecommunications sector. The government managed to postpone the Beltelecom privatization, which has now been rescheduled for 2007. Moreover, the state's share in the sector is constantly increasing. The beginning of operations by a fully state-owned mobile operator increased the state's presence in this sector. Despite the relatively high profitability of the telecommunications companies, the continuing cross-subsidization in the stationary lines segment and providing privileges to selected consumers are not fostering reforms and sustainable growth in the telecommunications sector.

In 2005 no significant reforms were implemented in the **Gas sector**. Household tariffs exceeded costs, however, preferential tariffs for some industrial consumers negatively affect the financial situation of the energy service providers. Improvements in the payment discipline continued, although the debts of some consumers for the consumption of previous years were not fully repaid, which limits the funds available for investments in assets modernization. Slight changes in the tariff policy have led to an increase in the index from 1.8 to 1.9.

The ability to procure cheap Russian gas is the cause of the absence of any market reforms in the **Electricity sector**. Same as last year, some positive changes were made through administrative measures, such as maintaining full and on-time payments for current electricity consumption. The concern Belenergo liquidated its external overdue debts, however, the debts of domestic consumers carried by Belenergo remain problematic. The cost coverage of household tariffs declined slightly while remaining below cost. The practice of providing preferential tariffs for selected industrial consumers was continued. The index remained at the level of 2004: 1.6.

Figure 1

IPM Research Center's infrastructure reform indices for Belarus



Source: RC IPM estimates.

2. Independent regulatory bodies in infrastructure sectors

Why state intervention is needed?

Classical economics suggests leaving the task of balancing the opposite interests of consumers and producers to market forces i.e. to competition. However on markets such as infrastructure services competition cannot simply balance the interests of consumers and providers because such services are susceptible to a number of market failures. Providing infrastructure services is very costly since it needs substantial 'entry investments'; markets are often locally separated and limited availability and access rights to the necessary networks create several bottlenecks. Thus infrastructure service providers are in a monopoly position and state regulation is necessary to prevent abuses of market power. Possession of monopoly power by an enterprise may require prices and service quality to be controlled. Some infrastructure services may also give rise to public health and safety, environmental or other concerns.

The best way to balance the interests of all stakeholders is to transfer regulatory power to an independent central institution that will be in charge of price setting and performance control. This institution must be independent from political interference (both from central Ministries, as well as from local administrations and other authorities), endowed with the legal power necessary to implement its instructions in the market, and obliged to make its decisions in a clear and transparent way so that they will be accepted as fair and legitimate. Endowed with such support, this central regulator can balance the interests of consumers and service providers by guaranteeing economically justified cost-covering tariff levels and providing sufficient incentives for improving the efficiency through appropriate regulatory schemes.

Institute of independent regulation

What is effective regulation?

The role of independent regulation within natural monopoly markets is very important. It balances the interests of all stakeholders in the particular sector and guarantees the sustainable development of the sector. Thus, it attempts to protect consumers from monopoly pricing while ensuring that the service provider remains viable and has incentives to perform efficiently. Using its regulatory powers the regulator maximizes total welfare, which consists of benefits to consumers and producers plus externalities. As a result of well-performing regulation, consumers obtain high quality services at low prices, while producers earn sufficient profits and have incentives to make investments for sustainable development.

Who regulates?

The regulatory power is usually vested in a separate authority, called independent regulator. This institution has to be endowed with the legal power necessary to balance the interests of consumers and service providers. There are six criteria of an effective regulatory system: coherence, predictability, capacity, independence, accountability and transparency². Coherence implies that regulatory policies are based on laws, which are consistently implemented. In particular, there must be clear divisions between national and municipal regulators and government ministries. Predictability means that there will not be sudden changes in the regulatory framework or in the way a regulator makes decisions. Predictability is particularly important for investors. Capacity requires that a regulatory agency is staffed with

² EBRD (2004) Infrastructure. Transition report 2004.

qualified people and has the authority and appropriate levels of funding to implement their mandate effectively. Coherence, predictability and capacity are general prerequisites for effective regulation. The other three criteria are more specific for each sector.

To perform effectively, the regulator must be independent from political interference (i.e. from central ministries, local governments and other authorities) as well as from the determined influences of industry, investors and/or customers. To ensure this, the institution needs financial autonomy, a fixed term of office, pre-specified appointment criteria, and sufficient resources. The regulator's activities must also be accountable, which means that it enforces its ruling fairly while protecting the legal rights and economic interests of the state, operators and users. Transparency covers several issues. It involves the right of all stakeholders to be informed about decisions affecting them, and also relates to the scope for corruption and secretive decision-making.

In principle, there can be different, specific regulators for each industry requiring regulation; else, there could be a general regulator who overlooks all such industries. The tradeoff is that branch-specific regulators have deeper knowledge about their specific industry while the general regulator is easier (and cheaper) to be created and less vulnerable to vested, branch specific interests.

Current tendencies in regulation

What to Regulate and How?

The objective of the regulator should be to protect consumers from monopoly prices while ensuring that the service provider can operate under economically sufficient conditions. To achieve this, regulation can focus on costs and profits of operations, output prices, productivity levels (measured e.g. in factor productivities), on other parameters such as quality levels, or on a mix of them. It can act either prescriptively, i.e. by fixing certain 'accepted' profit levels, or stimulating, i.e. by providing incentives for increasing productivity or reducing costs. However, since the specific tasks facing each regulator can be very different, i.e. depending on the circumstances under which a respective industry is operating, there is no general blueprint for successful regulatory policy under all possible conditions. Instead, the choice of an appropriate design of regulation is crucial for success in every specific situation. The most commonly used forms of regulation are the following:

First, price levels can be set to cover costs plus some given profit (cost-plus or profit-cap regulation). This purely prescriptive type of regulation is the easiest to implement. If specified in a sufficiently predictable and accountable manner, it is capable to attract investors for large infrastructure projects because it minimizes operating risks for both, investors and government. On the other hand, the fixed rewarding system does not provide incentives to reduce costs or raise productivity and quality levels. Since cost-plus regulation usually sets firm-specific price levels, it also fails to improve competition between different firms. Rather, it can even stimulate manipulation by reporting/creating higher costs. Hence, cost-plus regulation is appropriate only for industries with high external risks and uncertainty, but private participation based on cost-plus regulation should be arranged for short periods only.

The second approach is to simply set the maximum tariff that the firm is allowed to charge (price-cap regulation). In general, this provides an incentive to reduce costs and to raise factor productivity in order to increase profits. Over time, however, price-caps have to be adjusted to prevent abnormal profits. The problem is that if this correction is done for each firm separately, price-cap regulation does not provide strong incentives for cost reduction any more, because higher profits

due to lower costs will be reduced through lower output prices. On the other hand, if price-caps are adjusted based on industry averages, this can lead to insufficient treatment of firms, which have to operate under specific conditions such as relatively long networks, low consumer density per square meter etc. Hence, the challenge facing the regulator in price-cap schemes is to find sufficient clusters of firms that are sufficiently big, so that incentives to reduce costs for each firm are not too much reduced by adjusted maximum prices, and still specific enough to consider the natural characteristics of different firms. Obviously, such a regulatory approach is much more complex to be implemented since the regulator needs to monitor external (i.e. labor and energy costs) as well as sector-internal developments (i.e. changes in productivity) in order to adjust the price cap. This type of regulation also implies higher risks for business operations.

The third approach is to compare the productivity levels of different firms that for reasons such as regional separation cannot directly compete with one another (yardstick competition). Based on this comparison the regulator identifies the practices of best-performing firms in the sample. Then, he adjusts the firm-specific targets of other firms accordingly in order to force them to adopt the identified best practices. In this way, the regulator sets tailor-made, firm-specific development targets without distorting incentives by hurting the best performers. In other words, all firms are put in conditions conducive to competition. As a result, a seemingly monopolized industry can still reap the fruits of competition such as enhancing technological advances, improving product and service quality, and reducing production costs. However, this methodology is obviously rather complex to apply and cannot be implemented over night.

In summary, cost-plus regulation is easy to implement but fails to stimulate cost reduction. Price-cap regulation delivers such incentives, however to a limited degree and at the expense of complexity. Finally, yardstick competition is the most complex approach to implement, but it also creates the strongest incentives towards cost reduction and productivity increases.

3. Belarusian infrastructure policies in 2005

Despite some macroeconomic progress, market oriented structural reforms are still not on the government's agenda in Belarus. Restructuring and privatization of enterprises, and the establishment of a regulatory framework independent of political interference, are no priorities for the government. The general impression that emerges from analyzing the five infrastructure industries in this report (roads, railways, telecommunications, gas and electricity) is a lack of significant changes in the regulatory framework. Only the reforms in the gas sector have shown slight progress (Figure 1).

Reforms in the **transport sector** were fragmented. No attempts were undertaken to reform Belarusian Railways, a large state holding that is the monopolist railway operator and provider of transportation services. By contrast, the auto transportation market was quite open to competition until 2005 when its scope narrowed for passenger transportation companies. State-owned providers of road transportation services have not been privatized and generally received more favorable treatment than their private competitors. As a result of several negative changes, national carrier companies continued to lose their positions to the markets of neighboring countries. The negative environment for transit via Belarus and for the operations of national road carriers did however not lead to decreased export of transportation services – both by railway and road – due to increased tariffs and improved performance of the firms.

Government interference in the activities of the **telecommunications sector** has increased. In particular, the government increased its holdings in the mobile company BelCel; also the state-owned mobile operator BNT began operations in 2005. Also, a law “On Telecommunications” was enacted in 2005, giving evidence that the legislative framework for telecommunications is improving. However, this law does not define any mechanisms for privatizing and corporatizing the national operator, nor does it create an independent regulator.

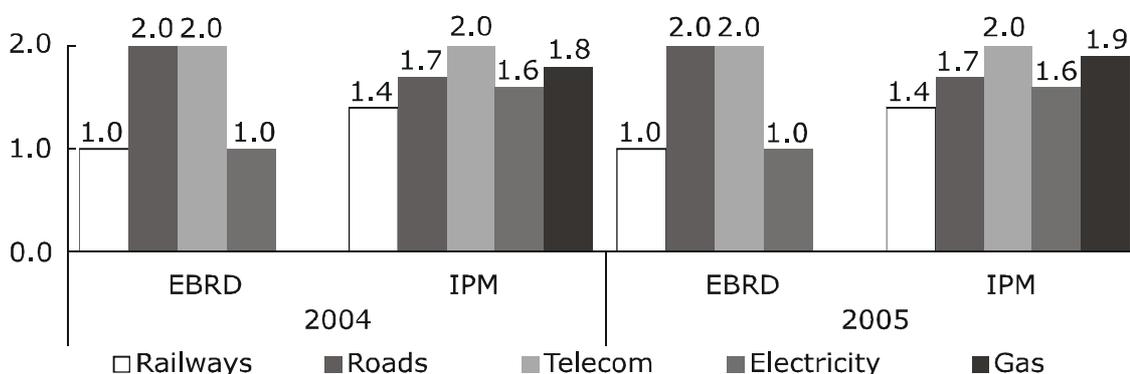
The energy sector (both gas and electricity) does not show noticeable progress in implementing market reforms either. Slight improvements in payment discipline have occurred. By the use of administrative measures, all current consumption of imported gas and electricity is paid on time and mainly in cash. External overdue debts were paid off and current debts for energy consumption were significantly reduced. For domestic payments, non-monetary payment schemes constituted less than 5% of total payments. However, the government did not manage to completely eliminate the practice of soft budget constraints and non-payments.

The practice of tariff setting was a bit contradictory. The tariffs for gas for households exceeded costs while for electricity the cross-subsidization increased. In both sectors the preferential tariffs for some industrial enterprises and incomplete compensation to the service providers by the state for servicing certain household groups at preferential tariffs negatively affect the financial results of the energy enterprises, thus restraining investment in new equipment and technologies.

There are only minor differences between the EBRD and RC IPM indices (Figure 2). Due to the more precise scale used by RC IPM the indices of reforms in the railway and electricity sectors are higher than those of EBRD, while the reforms in the road sector received a lower grade. Neither the EBRD nor the RC IPM experts found much progress in implementing reforms in any sector of the Belarusian infrastructure, and hence neither up- nor downgraded the indices relative to 2004. The exception was the gas sector, the reform index of which was increased from 1.8 in 2004 to 1.9 in 2005 due to improved payment discipline and cross subsidy reductions.

Despite some small divergences of opinion, the EBRD and RC IPM indices do not conflict with each other.

Figure 2
Infrastructure reform indices for Belarus



Sources: EBRD (2004) Infrastructure, Transition report 2004; EBRD (2005) Business in transition, Transition report 2005; RC IPM estimates.

3.1. Railways

3.1.1. Progress in 2004

The regulatory environment in the national railway transportation sector did not change in 2005. Belarusian railways, the large state holding that serves the entire national railway sector hasn't seen any significant reforms in 2005. BR is still engaged in many non-core activities (like agricultural production at 10 farms). Non-core businesses employ 26% of all employees. The total staff of the holding grew by approximately 10% in the last 2 years.

BR reduced the tariffs for international passenger transportation by 8.5% in 2005. The trend towards reducing cross-subsidization between domestic freight and especially passenger transportation and transit freight transportation continued. The tariffs on suburban and intercity transportation grew by 20% and 10% respectively (Figure 3) while tariffs for freight transportation grew by 7.3% only³. Still, BR's losses on domestic transport services, both freight and passenger, amounted to BYR 377 bn. Revenues covered only 38% of cost of suburban and 48% of intercity transportation, which is slightly higher than in 2004: 39% in both cases. Concerning domestic freight transportation, the revenues covered 80% of cost. This figure shows that there are not only transfers from BR (a profitable company) to personal consumers but also to industrial and agricultural enterprises. BR's losses from providing under-priced services were not covered by the state.

3.1.2. Reform agenda

It is vital for the development of the national railway network that all categories of consumers pay the full cost for railway services. The complete elimination of cross-subsidization between freight and passenger transportation and between domestic and international passenger/transit transportation must be realized. This would be possible if the volume of privileges was reduced and income compensations would replace price compensations for privileged passengers.

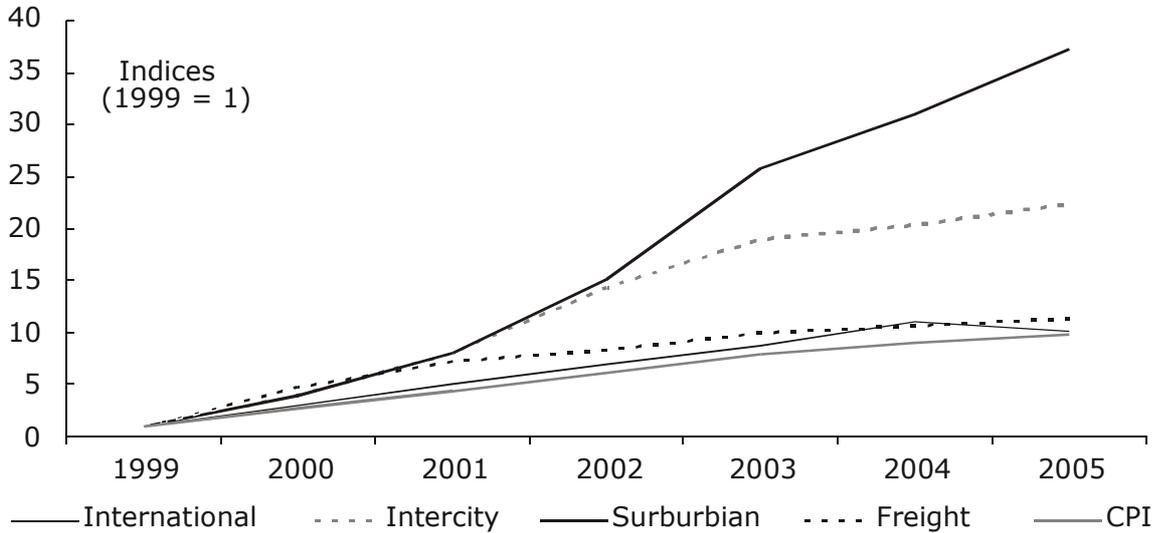
For a better functioning railway transportation system it is necessary to split the railway network operations from the provision of transportation services. However, the separation and privatization of non-core businesses should be the first priority for BR to address. The enterprise should be freed from the burden of social

³ The share of transit freight transportation in the total turnover of BR increased to 35% in 2005 from 30% in 2003–2004.

support and have efficiency of operations and hence profit-making as its primary goal. If the state needs BR to perform some social tasks, then the enterprise should be properly compensated for them.

Figure 3

Index of tariffs for railway freight transportation, international, intercity, and suburban passenger transportation, and CPI



Note: December 1999 = 1, December to December

Source: Ministry of Statistics and Analysis.

Initially, BR should pass its social infrastructure holdings such as housing facilities, hospitals and kindergartens to the state or local governments. Production plants, farms and service companies should be separated from the company as well.

The state should create a clear regulatory framework by separating regulation from the economic activities of the railways. This can be achieved by creating an independent regulator for the sector. An independent regulator would ensure that investment and other decisions are not influenced by the concerted interests of the consumers of transportation services or by railway construction companies. Later on it could also regulate the access to the market of private carriers and forwarding companies. A transparent tariff setting policy, which would not be influenced by BR should be the responsibility of the regulator.

Finally, the economic activities in this sector should be divided into separate companies. Initially these companies should form a holding. Then, after a suitable regulatory framework is in place and corporatization is occurring, it will be possible to consider privatization in the sector.

3.2. Roads

3.2.1. Progress in 2005

The structure of Belavtodor, the operator of the road network and a department of the Ministry of Transport was slightly reorganized in 2005. "Magistralavtodor" merged with "Minskavtodor" (units of Belavtodor) into a company "Minskavtodor-Center" which now deals with the only toll road M1/E30 and the roads of Minsk oblast. Other highways that had previously been administered by "Magistralavtodor" were turned over to oblast road management companies. Three R&D and IT companies within Belavtodor were combined into a new company, "Belarusian Center for Road Engineering and Technology".

Belavtodor officials claim that maintenance funding still falls short of requirements. For instance, they assess the damage done to roads as USD 94 m annually, while the fees collected for heavy-truck transit⁴ amount to only USD 3 m. The ratio between the amount of actual spending by the public Road Funds (central and local) and the required spending did not exceed 50%.

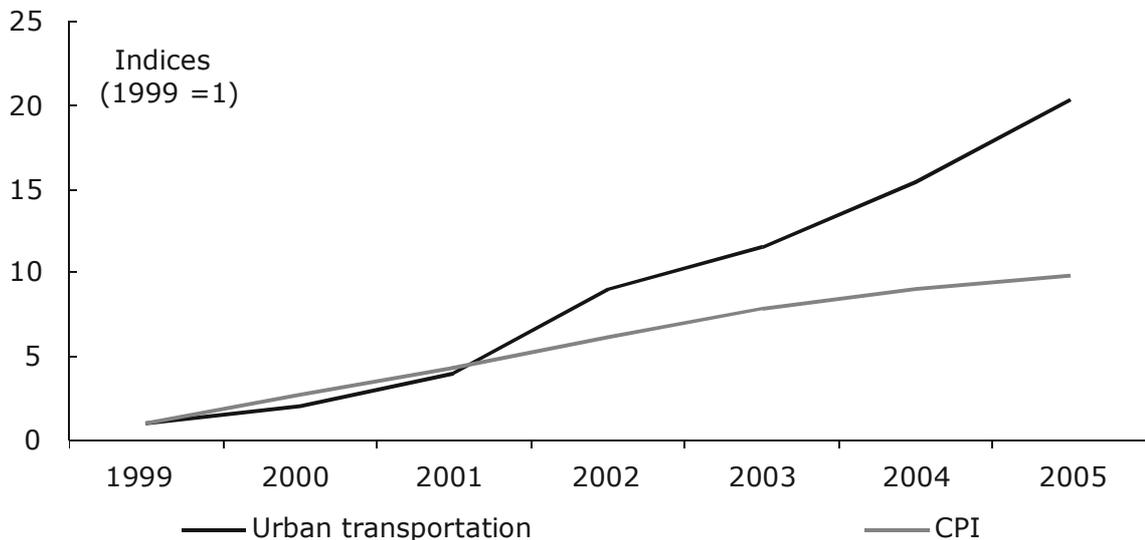
Discussions continue within Belavtodor about introducing additional toll roads⁵. Yet even the one Belarusian toll road (M1/E30) continued to lose money in 2005. According to Belavtodor, the toll road revenues increased to USD 28.4 m in 2005, from USD 24 m in 2004. At the same time maintenance costs went up from USD 44 m in 2004 to USD 49.3 m in 2005, mostly due to increased prices for fuel, the cost of labor, etc.

The freight transportation market continued to be depressed by unfavorable regulations regarding the import of heavy trucks: the import duty for trucks older than 3 years is prohibitively high (EUR 2.2 per cm³ of the engine). Increased import duties, the elimination of the so called “temporary import regime” and other regulations led to 4,500 trucks leaving Belarus since May 2003. Some measures had been introduced by the government to lower the cost to road carriers when importing trucks, but these changes haven't had any significant impact on the market.

Local state-owned transportation companies preserved their statuses: no attempts were made to corporatize these companies, to change the system of management or the way tariffs are set. At the same time there is a clear trend since 2002 towards decreasing the losses of these companies through increasing tariffs. Thus tariffs have risen by 32.4% while the CPI rose by 8% (December to December, Figure 4) in 2005. This policy though hasn't yet produced significant success: the companies' own revenues cover only 55.5% of costs in the case of urban transportation and 60.2% of suburban (2005).

Figure 4

Index of the tariffs on urban passenger transportation and the CPI



Note: Indices, December 1999 = 1; December to December.

Source: Ministry of Statistics and Analysis.

⁴ There are special fees to be paid for the transit of so-called “heavy weight and oversized” trucks on all roads of the country.

⁵ Several highways were suggested, such as Grodno-Shchuchin, Minsk-Hatyn, Minsk-Grodno, Minsk-Vitebsk-Polock. According to Belavtodor, transport flows on these roads are still significantly lower than the 15000–20000 cars a day, necessary to make a profit.

One deficiency in the system of regulating local passenger transportation was filled at the beginning of 2005 by the new “Provision on Operator of Passenger Auto Transportation Services”⁶. This 'provision' finally gave legal definitions for the principal (contractor), and for operators and providers of transportation services and described their functions. But in practice, local councils continue to grant operating rights to regional state transportation companies, making fair competition on local transportation markets impossible. This practice contradicts the national anti-monopoly legislation and the law “On Auto Transport and Transportation”⁷.

Presidential Edict No. 285 of 18.06.05 made the use of cash registers on buses compulsory, putting an end to the long struggle between the Ministry of Transport and private sector providers of passenger transportation services⁸. Cash registers are not used for fiscal purposes and state-owned companies operate without them (cash registers are obligatory only for mini-buses – both private and public – operating so called “express routes”).

The Council of Ministers mandated a check-in system for the drivers of private sector providers as of September 1, 2005. The system is used by state-owned providers to control their employee drivers who have to check in at major (usually 1 or 2) points of the route. It is unclear why private sector providers should be forced into this system, especially at their own costs.

3.2.2. Reform agenda

To ensure sustainable development for the national road network it is necessary to improve the financing of the Road Funds. Partially this could be achieved by increasing the volume of transit freight traffic through Belarus, which would be possible only if the conditions of transit were more favorable for carrier and expediting companies. All categories of users, including residents, should pay tolls on the M1/E30 road, and more toll roads should be introduced in the future. The natural monopoly operator Belavtodor should be given more independence from the Ministry of Transport to ensure that decisions on financing road construction and maintenance are less influenced by the transport lobby.

The competitiveness of the national transportation market depends on the ability of the government to create a favorable regulatory framework. High truck import duties give an advantage to the main competitor of automotive carriers – the railway transportation company and to companies residing in countries where duties are lower (Russia). To make the competition fairer, it is necessary to lower the duties on imported trucks. An ideal way would be to rescind the “temporary import regime” for leased imported vehicles used in international transportation. At the same time it is equally important to start with the restructuring and privatization of state-owned trucking companies.

To better develop the urban passenger transportation markets the government has to clearly define the roles of contractors and operators of transportation services. The right to operate the market shouldn't be granted to companies that provide transportation services. Instead, regulatory bodies should be established independent both from state administration and service providers. National legislation should ensure equal treatment of private providers and public companies (including the same requirements for the technical characteristics of vehicles, the use of cash registers, equal access to routes etc). Regional councils should not be involved in regulating the tariffs of private firms. It must also be ensured that transportation companies pay their 'fair share' to the local Road Funds in a transparent manner.

⁶ Came into power by a Resolution of the Ministry of communication and transport of February 8, 2005.

⁷ Articles 36, 50.

⁸ See the previous issue of Belarus Infrastructure Monitoring, <http://research.by/pdf/BIM2004e.pdf>.

Since all public transportation companies now operate at a loss, the government needs a strategy for their restructuring. If the losses are incurred because of government intervention (rather than organizational inefficiencies) these losses should be reimbursed from the public purse. A first step would be to sell off all freight transport vehicles and other redundant assets, since private sector firms provide the major part of the overall volume of service. A considerable part of the redundant assets could be sold to private transportation companies. Also, the subsidization policy must be shifted towards compensating the income of privileged consumers instead of providing price compensation.

3.3. Telecommunications

3.3.1. Progress in 2005

The main events that characterized the telecommunications market in 2005 were the following: adoption of the law “On Telecommunications”, increase in the state ownership share in the mobile market, start up of the state GSM operator, tariff reductions on mobile and Internet services, and beginning of competition between fixed and mobile operators.

Adoption of the law “On Telecommunications” is a positive development and is evidence that the legislative framework for telecommunications is improving. This law reflects attempts of the telecommunication sector to adjust to WTO standards. But in spite of this the state still has strong influence on the development of the telecommunications sector. This new law does not define mechanisms of privatization and corporatization for the national operator, nor does it create an independent regulator.

The new law revises the framework of the radio-frequency spectrum usage and introduces universal service. At present about 90% of the frequency range is reserved for the security agencies and only 2% is available for civilian purposes. Introduction of fees for all network operators (without any exception) is expected to result in optimal distribution and effective usage of the radio-frequency spectrum (before this law was adopted security agencies used the radio-frequency spectrum without charge).

The new law introduces universal service. The main purpose of universal service is to make telecommunications services (for example, local telephony services) available and affordable for all people within a country. The creation of a universality fund will help to implement the universal service goals. This fund will be collected through charges on all network operators (without exceptions) and will be used for investments concerning universal service delivery.

The conditions for the licensing activities in the telecommunications sector were changed in 2005. The Ministry of Communication and Informatization was empowered to issue licenses for ten-year periods. The previous term of any license was 5 years with the possibility of extension. The lengthening of the license terms should help to attract more investment and promote large-scale projects in the telecommunication sector.

The profitability of the telecommunications sector increased in 2005: the net profit of network companies reached BYR 468.7 bn, which is 1.7 times higher than in 2004⁹. Despite significant government interference in Beltelecom's operations and despite the state's insistence that Beltelecom engage substantially in socially significant investment projects, the company as a whole has proved to be profitable, although the profitability level for services is somewhat below the industry average (Table 1). In 2005 tariffs for local city calls increased by 12.1% yoy, while long-distance call rates rose by 13.6% yoy. In reality, the tariff increases reflect inflation; they do not decrease cross-subsidization through higher charges to privileged customers (Figure 5).

⁹ In 2005 the inflation rate was 8,0%, this proves that the profitability of the telecommunication sector saw real growth in 2005.

Table 1

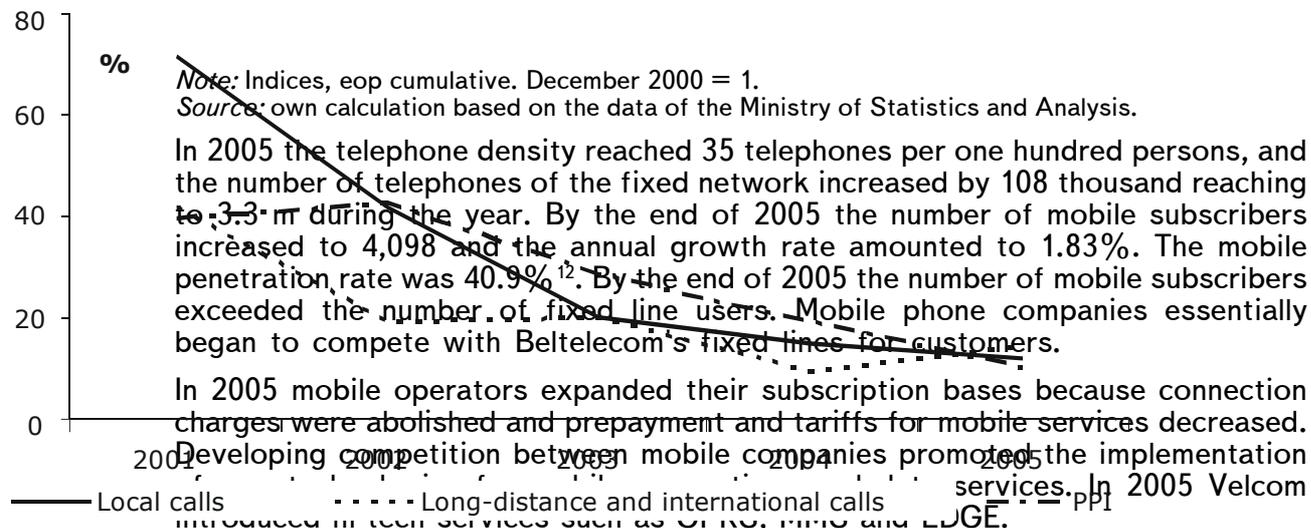
 Profitability of telecommunication services¹⁰, %, 2000–2005

	2000	2001	2002	2003	2004	2005
Beltelecom	18.4	5.6	12.9	13.5	20.9	16.24 ¹¹
Telecommunications – total	23.6	12.3	17.0	13.5	26.9	37.7

Source: Beltelecom Annual Reports and Ministry of Statistics and Analysis

Figure 5

Annual growth of telecommunication tariffs for legal entities and PPI



¹⁰ The profitability of telecommunication services is calculated as the ratio of the profit from sales of telecommunication products, works and services to the prime cost of products, works and services sold.

¹¹ Statistics on profitability of telecommunication services of Beltelecom is only available for the first 9 months of 2005.

¹² In 2004 the mobile penetration rate was 24.4%. Data source: "Review of the Belarusian mobile market", www.onliner.by.

¹³ So-called "agro-towns" were established under the state program for village recovery.

plan called “AgroCorporation” for enterprises, which are registered in “agro-towns”.

The government increased its ownership in the mobile telecommunication market in 2005. It already held a majority stake in the mobile operators Velcom¹⁴ and MTS¹⁵; BNT¹⁶ is a fully state-owned operator. After the redistribution of shares in the mobile company BelCel in 2005 the government increased its ownership from 33% to 50%. As a result Trastbank (before Infobank), one of the founders of BelCel who owned a 17% stake, lost its shares. Currently, the shareholders of BelCel are Beltelecom (50% of the shares) and the Dutch company CIB B.V. (50% of the shares). Increasing government interference, which reduces the regulatory transparency (tendering policies) significantly hampers the telecommunications market development and sends the wrong messages to potential investors.

Beltelecom is the primary Internet provider in Belarus. The Ministry of Communication and Informatization had issued about 50 licenses authorizing Internet activity in the telecommunications sector. There are 35 Internet providers in Belarus; most of them are working in the capital of the country. The tariff policy of Beltelecom is constantly changing due to expansion of the Internet network. The latest tariff reduction was in April 2005. Tariffs were cut for Internet-providers (by 20%) and for consumers (dial-up access by on average by 10%, ADSL by on average by 10%, and leased line access by 20%). There are some privileges for the public sector. At the beginning of 2005 the Ministry of Communication and Informatization issued the first license to provide web-hosting services. There are good opportunities for developing national web-hosting. In 2005 the number of Internet subscribers increased to 3 m with the growth during the year amounting to 538.9 thousand.

3.3.2. Reform agenda

Active government interference in the economic activities of the Belarusian telecommunications sector is a real impediment for the development of this sector, which is one of the most dynamic and fastest growing. The strategy for telecommunications market development should be directed towards the creation of a competitive and attractive investment environment. In this regard the following steps could be taken:

- Elimination of the cross-subsidization between local and international calls. Tariffs must become cost reflecting for consumers. Tariff rebalancing will promote the creation of an investment fund, development of competition and the introduction of new operators into the fixed telephony market. Also this step will help to start the liberalization of the long-distance and international markets.

¹⁴ The joint venture Mobile Digital Communications Ltd. (the trade mark of Velcom) was set up in 1999. After the redistribution of shares in 2004 Samauwi Brothers Telecom (SB Telecom), one of the founders of Velcom lost its controlling interest and received 49% of the stock. 51% of the shares of Velcom belong to state-owned companies.

¹⁵ The Russian company Mobile TeleSystems (MTS) entered the Belarusian telecommunication market in 2002. Shareholders of MTS are Beltelecom with 51% of the shares, and Mobile TeleSystems (Russia) with 49% of the shares.

¹⁶ The third GSM mobile operator, Belarusian Network of Telecommunications (BNT), was created by the government on November 9, 2004. 25% of the BNT stock belongs to Beltelecom. The rest is owned by the state enterprise Agat. On March 24, 2005 BNT received a license authorizing it to operate in the telecommunications sector using GSM technology. According to this license BNT was to start the commercial activity on September 19, 2005. But BNT started to operate on December 21, 2005. The main reason for the delay was caused by equipment installation. BNT is a socially oriented mobile operator and it plans to cover the costs connected with its social activities by providing hi-tech services. It will be difficult for the third GSM operator attain all its goals, because of the strong existing competition between Velcom and MTS. The tariff schedules of BNT are neither very attractive nor competitive with those of the other mobile operators. By the end of 2005 the number of BNT subscribers was about 2 thousand.

- Abolishing all privileges for certain consumer groups. Social privileges to selected households should be provided via direct income subsidization.
- Pursuing profitability and operational efficiency goals by telecommunications enterprises. They should provide social benefits only if these are directly compensated from state coffers.
- Cancellation of the monopoly on the delivery of long-distance service, international calls and IP-telephony services. Access of private companies to these segments will foster price competition and ensure a dynamic development of the fixed telephony sector.
- Corporatization of Beltelecom to reduce the state's monopoly in the sector. This step will provide transparency of activities, and will increase management motivation and efficiency within the sector.
- Creation of an independent regulator for the telecommunications sector. The independent regulator should shield market participants from political interference in order to ensure long-term market stability and a level playing field. The regulator should also ensure market discipline while protecting consumer interests and facilitating open access to the core infrastructure of the network. The independence of such a body from direct political interference has often been cited as a means of building trust among investors in a newly liberalized sector.

3.4. Gas

3.4.1. Reforms in 2004

No significant changes were noted in the operational principles or in the results of the Belarusian gas sector in 2005. The government continued its policy of gradual tightening of the payment discipline while continuing to apply soft budget constraints and preferential tariffs for selected consumers. The availability of cheap Russian gas is the cause for the absence of structural reforms within the sector.

The negotiations between Russia and Belarus concerning gas supplies were lengthy and difficult. Despite the hope of the Belarusian government to sign a contract for regular and for transit gas during the first half of the year, the contract was only signed on December 30, 2004.

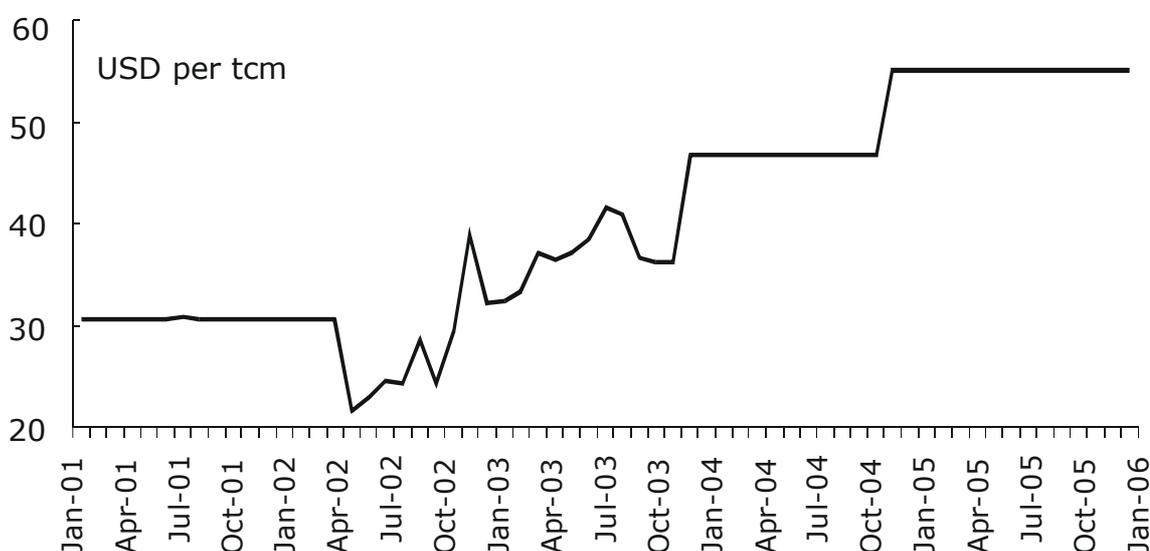
The delay is explained by the desire of the government to subtract VAT from the price of the imported gas (i.e. a reduction of the price by the amount of VAT down to USD 39.56 per tcm)¹⁷. However, Belarus failed to achieve this end, and, according to the contract, will continue to be able to buy gas for USD 46.68 per tcm (Figure 6). The transit prices did not change either. The transit price through the Beltransgaz pipeline remained at USD 0.75 per tcm of gas per 100 km and at USD 0.46 per tcm through the Russian Yamal-Europe pipeline.

In general, Belarus consumed 20.12 bcm of gas during 2005, which is 2.4% more than in 2004. Gas transit through the country amounted to 40.8 bcm (15.5% higher). Indeed, the main increase of transit gas was achieved via the Russian Yamal-Europe pipeline, which transported 66% of the total amount of transit gas (27 bcm).

¹⁷ On January 1, 2005, the economies of Belarus and Russia switched to a regime of indirect tax payments based on the country of destination. Thus VAT on imported gas is now paid to the Belarusian government. Formally, Belarus had bought gas at the 2004 price (USD 46.68 per tcm). But in fact, the price was increased by the VAT rate (18%). Therefore, in 2005 all prices for imports from Russia were increased by 18%. As a result of the large amount of Russian gas imports the Ministry of Finance received significant additional financial sources but the competitiveness of the Belarusian production declined due to the higher costs.

Figure 6

The development of prices for imported gas from Russia, 2001–2006



Note: Including VAT in 2005.

Source: The Ministry of Statistics and Analysis.

During 2005 the negotiations on setting up a joint venture and privatizing JSC Beltransgaz didn't succeed, however they were reactivated at the end of the year, when both sides signed the gas contract for 2006. Although Belarus was able to maintain its very favorable price for gas in 2006¹⁸, details of the preliminary agreements concerning the privatization of Beltransgaz were not made public¹⁹.

In 2005 the government continued stiffening the payment discipline (Table 2).

Table 2

Structure of Beltransgaz payments for gas imported into Belarus

	2001	2002	2003	2004	2005
Total value of gas supplied, USD m	505.3	426.7	619.7	903.0	949.52
Payment rate, % of the total value of gas supplied (including previous debts)	86.7	119.4	102.2	101.3	100.4
Payments in cash, %	19.9	47.0	74.1	87.5	100.0
Non-cash component, %	80.1	53.0	25.9	12.5	–

Source: The Ministry of Energy.

As a result, Beltransgaz is fully paid up for current consumption in 2005, with a 100.4% level of payment. The current external gas debt to Russian suppliers is zero (Table 3). In 2005 Belarus reduced its external gas debt by USD 69.6 m, i.e. it paid USD 88.3 m on January 1, 2006 (including USD 18.7 m for the gas supplied in December, 2005). Belarus has met all obligations set by the Russian-Belarusian agreement of December 5, 2003 and paid USD 26.5 m for the debts incurred in previous years.

¹⁸ In 2006 "Gazprom" increased gas prices for all CIS countries except Belarus.

¹⁹ In November 2005, president A. Lukashenko signed a decree according to which he 'permitted' the sale of shares bought by the employees of "Beltransgaz" during the corporatization of the company. A few days later at a "Beltransgaz" shareholders' meeting it was decided to purchase all shares owned by physical entities at a nominal price and transfer them to the state free of charge. Physical entities possessed 0.103% of the shares (i.e. 236709), which they had bought as employees at a preferential price (20% lower than nominal). As a result, the state now owns 100% of the company. The ownership of shares by the employees impeded the negotiation for a joint venture on a parity basis.

Table 3
Arrears for gas, USD m

	As of January 1, 2002	As of January 1, 2003	As of January 1, 2004	As of January 1, 2005	As of January 1, 2006
Total, including	925.50	874.11	708.16	248.66	186.05
Arrears by domestic consumers	742.66	774.63	594.48	247.51	186.05
External consumers	182.84	99.48	113.68	-	-

Source: The Ministry of Statistics and Analysis.

However, the situation with final (domestic) consumer payments was not as favorable. The debts of all domestic consumers to the concern Beltopgaz amounted to 35.3% of the arrears for all fuel and energy resources consumed in the country. Despite the fact that the current payments of Beltopgaz to Beltransgaz were at the level of 100.5% and the payments of the clients of Beltopgaz were 100.8%, overdue arrears for gas consumed in the country still remain. On January 28, 2005 the government issued Resolution No.99 showing the quarterly amount of supposedly repaid arrears of previous years for different enterprises and sectors, of which, however, only about half had been paid.

The main debtors of the gas sector are the electricity sector and some industrial and agricultural enterprises. 70% of all arrears for gas fell on the concern Belenergo. Belenergo increased its accounts payable to banks for on time payments for current consumption but the concern was not able to pay the arrears of previous years due to its difficult financial state and the fact that it has its own debtors for consumed electricity.

Resolution No.20 of the Ministry of Economy on February 20, 2005 increased the price for gas for the majority of enterprises by 8% (Table 4), however preferential prices were maintained for some enterprises, which amounted to 50 to 80% of the full price.

Table 4
Price dynamics for gas and its structure for industrial enterprises, USD per tcm

Resolution of the Ministry of Economy	29.03.01 №67	13.06.02 №124	25.11.02 №251	24.01.03 №25	25.09.03 №6194	28.01.04 №21	02.02.05 №20	24.02.06 №32
Purchase price for imported gas	30.00	24.52	33.59	34.37	37.59	46.68	55.08	55.08
Markup by Beltransgaz	11.38	10.03	9.14	6.99	6.92	8.14	8.07*	7.9*
The price of Beltransgaz	41.38	34.55	42.73	41.36	44.51	54.82	63.15	62.98
Markup by Beltopgaz	15.38	13.38	9.17	9.53	9.43	12.18	12.76	16.28
The price of Beltopgaz	56.67	47.93	51.90	50.89	53.94	67.00	72.3	75.16

Note: including VAT (20%).

* The markup was reduced by USD 3.61 in 2005 and by USD 4.1 in 2006 as a state subsidy to Beltransgaz (i.e. without that subsidy the final prices would have been higher and have amounted to USD 75.91 and USD 79.26 per tcm respectively).

Source: The Ministry of Energy.

The gas tariffs for households were increased by 18% (the VAT rate) to BYR 160900 per tcm (USD 75.)²⁰. The cost recovery for natural gas consumed by households by the end of the year amounted to 104% (109% in 2004).

²⁰ Resolution of the Council of Ministries No. 264 dated March 12, 2005.

3.4.2. Reform agenda

On the one hand, the crucial importance of gas for the Belarusian economy requires having stable and affordable gas prices and a secure gas supply. On the other hand, the need for investments in infrastructure and equipment should – at least partially – be financed by private investors, since public funds are limited and are also needed for investments in the social sphere such as health care, education, etc. Besides, the inevitability of future price increases for imported gas makes it extremely important to search for cost reduction opportunities within the sector and to increase its efficiency. Hence, the gas industry policy should be directed towards sustainable, profit-oriented development²¹. The regulatory policy should provide incentives for increasing efficiencies in the gas sector and creating attractive investment opportunities for the private sector. In this context the following changes would seem to be relevant:

- The tariffs for final consumers must become cost-reflective for households and for industries without allowing for cross-subsidization. The prices for all industrial consumers should be equal and costs should account for investment needs;
- If providing social privileges to some groups of households remains a priority of the government, it should be dealt with in a transparent manner with the help of targeted aid or, better yet, via direct income subsidization;
- Efforts to improve the payment discipline of all groups of consumers must be continued without exceptions, using economic as well as administrative measures;
- Significant and deep restructuring of Beltopgaz and Beltransgaz is needed. Both enterprises are overburdened with non-productive assets, and (although in part already officially corporatized) they are not free to make financial and investment decisions. Restructuring and corporatizing also includes the necessity and the possibility to divest all ancillary enterprises that are not related to the core business. The current policy of implementing investments for achieving different social and political goals should be stopped;
- In order to avoid cross-subsidization between different activities within a single firm (a particularly severe impediment for the development of competition between different activities), full corporatization must include a strict separation (unbundling) of network operations and gas supply (retail) activities within each company, and for the case of Beltransgaz also a separation into international transit and domestic transmission. Furthermore, in order to ensure creditworthiness, all companies should provide a sufficient degree of transparency, e.g. through regular independent audits according to international standards;
- In order to avoid excessive interference, the sector needs a regulator that is independent of both the gas business and the government. This body should define the rules of the game, and consider the interests of all groups involved. Among its first actions, the regulator should make changes to the tariff policy that will bring more competition into the sector.

3.5. Electricity

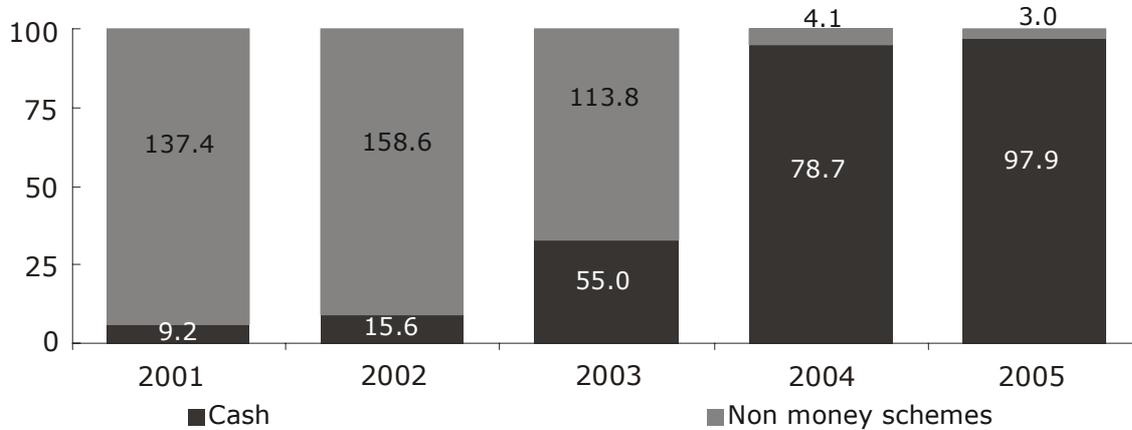
3.5.1. Reforms in 2005

The state concern Belenergo generated 30.1 bn kWh (101.5% of 2004) and imported 4.9 bn kWh. The structure of payments for imported electricity continued to improve. The payment discipline has increased; non-monetary schemes have mostly been eliminated (Figure 7). The existing debt of Belenergo for electricity imported from Russia was reduced by USD 20.2 m, and now amounts to USD 2.8 m, while all overdue debts were repaid.

²¹ For more detailed suggestions for reforming the gas sector see RC IPM-GET Policy Paper 15/04 Gas Sector Restructuring in Belarus: Necessity and Directions, <http://research.by/pdf/pp2004e15.pdf>

Figure 7

Amounts (USD m) and structure (%) of payments for electricity imported into Belarus



Source: The Ministry of Energy.

The government continued to work on reducing arrears and increasing transparency within Belarus. In order to stiffen payment discipline a resolution of the Council of Ministries was issued specifying for every ministry and company the amount of outstanding debt to be paid off²². However some companies and ministries (Bellesbumprom, Bellegprom, the Ministry of Architecture and others) have not met these requirements. The use of barter schemes for domestic payments was disallowed by presidential decree²³. As a result, non-monetary schemes have dropped to less than 3%.

The collection rate for electricity paid by final consumers amounted to 100.3% on average. Nevertheless, the situation with payments within the country remained difficult as the existing arrears of final consumers to the concern Belenergo were reduced by only USD 34.7 m (Table 5). The overdue debts for electricity amounted to 56% of all overdue debts for fuel resources. The main debtors of Belenergo are enterprises belonging to the Ministry of Agriculture (representing 65% of all debts to Belenergo).

In 2005 the tariff for electricity for industrial consumers was increased by 12% and fixed at the level of US cents 6.7 per kWh (Table 6). At the same time, some preferential pricing persisted. The lists of the enterprises eligible for reduced tariffs included such major tax payers as the Belarusian metallurgical plants, Svetlogorsk PO Khimvolokno, Grodno PO Khimvolokno, Grodno-Azot Inc., Minsk Bearing plant Inc., JSC Beltransgaz and its affiliates, enterprises of the Beltopgaz concern and some other energy intensive enterprises. In 2005 the list of consumers receiving preferential treatment was extended by another 15 enterprises. At the same time many other enterprises do not receive such price benefits and have to buy electricity at the nominal (higher) tariff.

Table 5

Debts for electricity consumption

	As of January 1, 2002	As of January 1, 2003	As of January 1, 2004	As of January 1, 2005	As of January 1, 2006
Total, including	838.29	812.6	721.38	331.48	293.92
Domestic consumers	750.70	758.59	692.25	328.62	293.92
Foreign consumers	87.59	54.01	29.13	2.86	–

Source: The Ministry of Statistics and Analysis.

²² Resolution of the Council of Ministries of Belarus No. 99 of January 28, 2005.

²³ Presidential decree No. 373 of July 16, 2005.

Table 6

Electricity production costs and prices for different groups of consumers, US cents per kWh

	As of January 2002	As of January 2003	As of January 2004	As of January 2005	As of January 2006
Cost	2.02	2.32	3.21	3.50	4.40
Prices for:					
State financed organizations	3.39	3.00	4.02	4.02	4.90
Industry	4.15	4.41	6.02	6.02	6.70
Households	1.19	2.39	3.32	3.45	4.09
Agriculture	3.39	2.44	2.66	2.66	2.90
Other enterprises	4.15	4.41	6.02	6.02	6.70

Source: The Ministry of Energy.

Agricultural consumers – the most problematic payers – continued to receive deferments for paying their accumulated debts, provided they pay for their current consumption fully and on time. Of course, such privileges usually do not help agricultural enterprises enough to improve their financial situations to allow them to pay back their accumulated overdue debts.

Electricity tariffs for households during 2005 were not revised but simply indexed, which led to an increase of 18% yoy. As a result, cost coverage dropped to 82% by the end of the year, which is worse than in 2004²⁴.

Aside from pricing, state interference in the affairs of energy enterprises continued in other ways, in particularly by way of investment policy. Presidential decree No. 373²⁵ instituted a program of assets modernization. According to this program capital investment became a target indicator for the government. However, due to their difficult financial states and their statuses of state enterprises, the enterprises of the concern Belenergo face difficulties with finding the financial sources to meet the government's ambitious investment program. Currently, the main sources for investments are the energy enterprises' own internally generated funds, which, however, are not sufficient to fully meet the program's targets. Banking credits are very expensive; attracting FDI is unrealistic without corporatization and privatization.

3.5.2. Reform agenda

The inevitable future price increases for imported Russian gas require urgent measures to prevent sharply escalating electricity costs and tariffs. Industrial tariffs are already set at levels close to those in Poland or the Baltic states, although the Belarusian price for gas is 4 to 5 times cheaper. Modernizing some of the power plants so that they can use domestic and/or renewable energy sources would be useful, but can only provide a partial solution. Nuclear power stations (if new ones were decided upon)²⁶ would only be ready in 8 to 10 years, although their economic viability is arguable²⁷.

As a first step, the tariff policy should be changed. Industrial tariffs are too high (significantly above cost) due to cross-subsidization, privileged pricing for some

²⁴ At the end of 2004 the cost coverage had amounted to 94%, however, over most of the year the tariffs were maintained at levels that covered only average costs.

²⁵ Presidential decree No.399 of July 25, 2005 "On Enactment of the State Complex Program for Modernizing the Capital Assets of Energy Enterprises, Energy Saving and Increasing domestic Fuel Resource Use in 2006–2010 in Belarus".

industrial consumers, debts, etc., while tariffs for households are below cost. The policy of eliminating cross-subsidies has been inconsistent and incomplete, and a complete elimination of household cross-subsidization was not achieved.

Subsidized energy prices for certain customers, mostly industrial and agricultural enterprises remains an issue. Moreover, the tariff policy vis-a-vis privileged industrial enterprises remains unpredictable and subject to political influence. Tariff eligibility criteria are often vague, leading to misallocation of resources, rent seeking and inconsistent information for future planning. All this creates numerous distortions.

The electricity sector operates inefficiently with large deferred investments. There is no reason to further reduce the profits of energy enterprises. Besides, the existing cost plus practice of tariff formation does not provide adequate cost-cutting incentives to the energy sector.

The following measures are needed to enable the electricity sector to provide the desired outcomes:

- Tariffs should be set at cost-reflecting levels without permitting cross-subsidization, and at equal levels for all consumers without any price privileges;
- If providing social privileges to some groups of households remains a priority of the government, it should be dealt with in a transparent manner with the help of targeted aid or, better yet, via direct income subsidization;
- An independent regulator that creates incentives for cost cutting should be established. The system should be transformed from a centrally planned one into a self-developing market, where the state only guarantees that no single market actor or the state itself abuses market power;
- The policy of further and stricter hard budget constraints for consumers should be continued. It is therefore reasonable to permit non-paying consumers, including public utilities etc., to be disconnected;
- Guaranteed third party access to the transport and distribution networks should be gradually opened up on a clearly non-discriminatory basis;
- Corporatization and restructuring of all regional branches of the concern Belenergo (oblenergos) and of all ancillary businesses should gradually start. This would make it possible to reduce the current 'politically fixed costs' and increase management's motivation to cut costs²⁸.

Once these steps have been taken, the government will be in a position to address the next important issue, i.e. to increase efficiency within the sector (lowering costs). International experience shows several ways of improving efficiency within the sector through increasing competition and changes in motivating management (e.g. systems of pool or bilateral contracts).

²⁶ A moratorium on governmental and parliamentary discussions about the practicability and necessity of nuclear power station construction is in place until 2008. However in 2005 the government provided the Academy of Science (the Institute for Nuclear Power) with significant funding for planning and research purposes concerning nuclear power station construction in Belarus.

²⁷ See RC IPM-GET Policy Paper 03/06 "Economics of Nuclear Power Development in Belarus", <http://research.by/pdf/pp2006e03.pdf>

²⁸ We call some costs 'politically fixed', because they could be reduced if it was politically possible. For example, enterprises cannot reduce the number of employees, as there exists an informal ban; many social objects or ancillary businesses cannot be separated, corporatized or privatized, etc.

Appendix 1

General description of the infrastructure indicators

This appendix presents a brief description of the criteria for scoring each indicator on a scale of 1 to 4.

1.0 Commercialization and privatization

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 corporatized, privatized and newly constructed private fixed networks in the total length of networks. The maximum score 4.0 is reached with private ownership of all networks.

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

1.1.3 Ancillary business. Ancillary businesses are concerned with network construction, its maintenance, inputs supplies, and social infrastructure. A score of one means that these businesses are state owned. The score increases with the degree of separation, corporatization and privatization, or with increases 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 reorganization into an independent state agency or a company and establishment of an independent regulator. The maximum score is assigned if a private company manages the natural monopoly, subject only to an independent regulator, established by law.

1.2.2 Natural monopoly planning and investment decisions. A score of one implies political interference in 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 realized 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 Organizational structure

1.3.1 Separation of natural monopoly and potentially competitive businesses. A score of one means separation neither between the infrastructure and the service providers' managements, nor 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 Decentralization. A score of one implies no or minimal decentralization and increases with increasing decentralization. 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-subsidization. The score increases as the tariff approaches the long-run marginal cost reflecting cost covering levels, with cross-subsidization 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 approach zero.

2.2.2 Final consumer collection rates. A score of one means low revenue collection from final consumers (households, companies, state organizations) and constantly accumulating arrears. The score increases as progress with revenue collection is made and services are fully paid for.

2.2.3 State indebtedness. A score of one corresponds to growing arrears for state compensations to privileged consumers. The score increases, 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 subsidized by the state in an explicit or implicit form. Both the depth of the subsidization 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.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

3.1.1 Management selection of competitive businesses. A score of one means

that the management is appointed by state officials. The score increases when the management is elected by shareholders and reaches its maximum when the shareholders are private companies or individuals.

- 3.1.2 Independence of regulator, insulation from political influence.** A score of one is assigned when a government department provides the service. The score increases as a state commission is introduced and an independent regulator is established. The highest score applies when an independent regulator acts according to law.
- 3.1.3 Transparency of regulation.** A score of one implies an absence of legislation defining clear rules of the game for businesses, and the obligations of government bodies. The score increases with the development of legislation and its enforcement, including when the decision-making becomes public. The maximum score is reached when the performance of natural monopolies in an industry is regulated only by an independent regulator in accordance with law, and all decisions are disclosed.
- 3.2 Access 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, and finally determined by market mechanisms.

Appendix 2

Explanation for the 2005 infrastructure indicators evaluation

RAILWAYS

1.0 Commercialization and privatization

1.1 Ownership

- 1.1.1 The basic rail network is 100% state owned. Rails linking enterprises to the basic network are owned by the enterprises. 2005: 1.3.
- 1.1.2 Passenger and freight transportation is 100% state owned. However, companies belonging to Belarusian Railways are separated and are independent legal entities. There are a number of private forwarding companies operating at the market. 2005: 1.3.
- 1.1.3 All ancillary businesses are state owned and constitute a part of Belarusian Railways, though they are divided into separated legal entities. 2005: 1.3.

1.2 Operation

- 1.2.1 According to law, Belarusian Railways is a state holding not directly regulated by the government. The law prohibits government interference in the decision-making processes of the corporation. However, this is often not the case. 2005: 1.7.
- 1.2.2 According to the statute of Belarusian Railways the primary objective is satisfying the needs of producers and of the population concerning transportation services. Achieving profitability is secondary to the primary objective. There is also a certain amount of state interference in the business and its investment decisions. 2005: 2.0.
- 1.2.3 There is private sector participation in service contracts. The tendering procedure is quite transparent including postings of announcements on the Internet. Nevertheless the scale of outsourcing has not yet reached satisfactory levels. 2005: 1.7.

1.3 Organizational structure

- 1.3.1 No separation of potentially competitive businesses from the natural monopoly operators has taken place so far. 2005: 1.0.
- 1.3.2 Ancillary businesses are independent legal entities within the structure of Belarusian Railways. The share of non-core businesses in the structure of Belarusian Railways is very high (26% if measured on the basis of employment). 2005: 1.3.
- 1.3.3 Belarusian Railways consist of 6 regional companies. Altogether the company unites 93 legal entities. 2005: 2.0.

2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 Tariffs for domestic transportation services are set independently from the railways by the Ministry of Economy. Transit transportation tariffs are determined by international agreements. However, there is strong political influence on the tariff setting process, as they are believed to affect the standard of living in the country. 2005: 1.7.
- 2.1.2 According to law, tariffs should cover cost of the service provided and allow development of the railway network. As BR is both a natural monopoly operator and a transportation services provider it is impossible to assess the

percentage of revenues channeled into railway network maintenance. Though, there is a considerable amount of cross-subsidization especially towards suburban transportation (diesel and electric trains): it's the most loss-making (in 2005 revenues, excluding subsidies, covered only 38% of costs). Between 2001 and 2005 tariffs for suburban transportation grew faster than for other kinds of passenger and freight transportation. 2005: 1.7.

- 2.1.3 Belarusian Railways consistently makes profits (the 2005 rate of return was 16.5%). Due to the distorted structure of tariffs, however, the amount of cross-subsidization is still very high. 2005: 1.7.

2.2 Payments

- 2.2.1 A certain amount of indebtedness exists between the different enterprises within Belarusian Railways. 2005: 2.0.

- 2.2.2 Revenue collection for passenger transportation is 100%. A large percentage of consumers have privileges, especially on suburban transport. Free rider practices on suburban transport are common. As of January 1, 2005 privileged consumers had to acquire free tickets to be able to get on board a train. Some firms that use freight transportation services are regularly indebted to Belarusian Railways. 2005: 2.0.

- 2.2.3 In practice the government does not cover any losses of Belarusian Railways caused by providing privileged consumers with service. 2005: 1.0.

2.3 State funding

- 2.3.1 Some consumer groups, especially users of suburban and intercity trains, are subsidized at the expense of enterprises that ship their goods by railway. Coverage by the state of losses resulting from the provision of services to privileged consumers is low. 2005: 1.0.

- 2.3.2 According to law the government is obliged to cover all railway expenses, which are incurred as a result of providing privileges to certain categories of consumers. In practice the procedure of price compensation is not disclosed. 2005: 1.0.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1 The CEO of Belarusian Railways is appointed directly by the President. His deputies are appointed by the Council of Ministers. 2005: 1.3.

- 3.1.2 Belarusian Railways is operated as an independent state owned holding. The state administration has no right to intervene in particular activities of the company. This often turns out not to be the case in practice. 2005: 1.3.

- 3.1.3 The rules for operating Belarusian Railways are clearly defined in a number of legislative documents. Yet the decision-making procedures have not been made open to the public. 2005: 1.7.

- 3.2 **Access regulation:** Access by outside firms to the market is not possible. 2005: 1.0.

ROADS

1.0 Commercialization and privatization

1.1 Ownership

- 1.1.1 Roads are 100% in state and communal ownership. 2005: 1.0.

1.1.2 State transportation enterprises are separated into independent legal entities, each of which operates in a certain region. Private urban transportation is highly developed in some towns, reaching 50% market share. There is some evidence that market share of private passenger transportation firms decreased by several percentage points in 2005 as it did in 2004. Private freight transportation enterprises and individual entrepreneurs provide about 80% of the total amount of services. 2005: 1.7.

1.1.3 Ancillary businesses are state owned. All of them are independent legal entities separated from road management and approximately 19% are corporatized. 2005: 1.7.

1.2 Operation

1.2.1 The natural monopoly operator Belavtodor operates as a government agency, i.e. as part of the Ministry of Transport and Communications. 2005: 1.3.

1.2.2 There is political interference in the business and investment decisions of state owned firms by state administrations including local offices. 2005: 1.3.

1.2.3 Road construction and maintenance is provided by state owned firms, 19% of which are corporatized. There is private sector participation in service contracts through tenders. Yet the scale of outsourcing has not reached satisfactory levels. 2005: 1.7.

1.3 Organizational structure

1.3.1 Road management is completely separated from freight and passenger transportation services. 2005: 3.0.

1.3.2 Road construction and maintenance are separated from the natural monopoly operators. Cooperation between them is based on tendering procedures. 2005: 2.0.

1.3.3 The natural monopoly operators are divided into regional monopolies, although these monopolies are heavily regulated by the central and local administrations. The state road operator Belavtodor was reorganized, but the changes were not significant enough to upgrade the indicator. 2005: 1.7.

2.0 Tariff reform

2.1 Structure of tariffs

2.1.1 Although tariffs are politically determined, state owned firms have some freedom in setting their own tariffs. This happens in towns where competition with private contractors is stronger and the tariffs charged by state owned firms are lower. Investment decisions are highly influenced by the state administrations. 2005: 2.0.

2.1.2 According to state legislation, road funding should derive from contributions, which are applied to the price of all products and paid by producers, and from other payments such as the tax on fuel. Also, user fees are levied on truck companies depending on the distance traveled and the truck's parameters. There is one state owned toll road (M1/E30 Brest – Minsk – Russian Federation border), but revenues do not cover operational costs on this road. According to Belavtodor state financing didn't exceed 50% of the needed amount. 2005: 2.0.

2.1.3 The trucking and bus transportation markets are competitive, though competition in the urban transportation market is limited by excessively strict permit requirements. Tariffs on passenger transportation services of state-owned enterprises are set by the Ministry of Economy, although the enterprises have some freedom to change them. The maximum tariffs for

private passenger transportation are set by oblast councils. Private freight transportation companies are free to set their own tariffs. 2005: 1.7.

2.2 Payments

2.2.1 A certain, but not a significantly large amount of indebtedness between ancillary services providers persists. 2005: 2.3.

2.2.2 Revenue collection for passenger transportation is close to 100%, though price compensation for serving privileged passengers remains an issue. Free rider practices in urban transport are also common. The revenues of public transport enterprises relative to their costs continue to be low: 55.5% for urban transportation and 60.2% for suburban. 2005: 2.0.

2.2.3 State financing of road construction and repair in 2005 improved as compared to 2004 when it fluctuated so much throughout the year that construction firms were forced to obtain commercial credits. In 2005 this practice did not reoccur. 2005: 2.0.

2.3 State funding

2.3.1 The government uses the cost-plus approach to cover losses of public transport firms instead of compensating them for the cost of providing services to privileged consumers, which would be in accordance with the law. Losses of public transportation companies on urban and suburban routes not covered by state subsidies amounted to BYR 28.4 bn (2004: 11.4 bn). Private firms generally are not obliged to provide privileges. In many cases the prices charged by private firms resemble those of their public competitors (price discrimination). 2005: 1.3.

2.3.2 Subsidies are directed straight to the service providers in a non-transparent way. 2005: 1.3.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

3.1.1 Management of all state owned companies is appointed by the state administrations, either central or local. 2005: 2.0.

3.1.2 Belavtodor, the monopoly road operator is a department of the Ministry of Transport. Road maintenance companies and transportation companies are separate legal entities. 2005: 1.7.

3.1.3 There are clear rules of operation for the natural monopoly described in legislative acts. However, the decision making process is not disclosed to the public. Decisions are highly politically influenced. 2005: 1.3.

3.2 Access regulation: Access is regulated by licensing. At the local level route tendering procedures are not transparent. The rules of sharing out routes among various contractors are not clearly defined and public control is lacking. The regulatory framework continued to be unfavorable to private truck companies (regarding import of vehicles) as well as for urban transportation firms and entrepreneurs during 2005, which resulted in the exit of some of them from the market. Private trucking companies lost about 4500 trucks and the market share of private providers of passenger transportation services dropped from 9.5% in 2004 to 8.4% in 2005²⁹. Compared with public firms they receive unequal treatment. 2005: 1.7.

²⁹ Official Ministry of Statistics data. The category “private providers” in this case includes only private entrepreneurs, while firms are not counted. Hence, the figure is underestimated. Nevertheless it definitely indicates that private participation shrank in 2005.

TELECOMMUNICATIONS

1.0 Commercialization and privatization

1.1 Ownership

- 1.1.1 The cable infrastructure is primarily owned by Beltelecom. There was no change in the Beltelecom ownership structure. 2005: 1.3.
- 1.1.2 Regional telecommunication enterprises, the Minsk city telephone network, and long-distance communications are branches of Beltelecom. Mobile phone operators are corporatized; however, the state has majority ownership in most of them. In 2005 after the redistribution of shares in the mobile company BelCel the government increased its share fraction from 33% to 50%. Internet providers are privately owned, some of which have a state share, and compete with each other. The indicator was decreased from 2.0 in 2004 to 1.7 in 2005.
- 1.1.3 Some construction, infrastructure maintenance and other ancillary enterprises are state owned, others are private. Beltelecom is solely responsible for the maintenance of its networks. 2005: 2.0.

1.2 Operation

- 1.2.1 Beltelecom is an independent financial unit. The Ministry of Communication and Informatization regulates the activities of Beltelecom. 2005: 1.3.
- 1.2.2 Officially, Beltelecom's long-term goal is to increase its earnings and the profitability of its business. In reality, investment decisions cannot be made without approval of the Ministry of Communication and Informatization. Network extensions are a priority for Beltelecom to meet the government's goal of enhancing telephone access for low-income households and for remote areas. 2005: 1.7.
- 1.2.3 The mobile phone network was developed by private operators. The private sector participates in service contracts and equipment supply through tenders. The state owned company Giprosvyas performs design work. As a rule, private enterprises supply equipment for telecommunications; however, they are rarely assigned service contracts. 2005: 2.0.

1.3 Organizational structure

- 1.3.1 Only Beltelecom's hardware facilities can be employed for international traffic transfer. The network operation and phone user services are integrated. Beltelecom provides local, long-distance and international calls. Private companies provide mobile phone services, while long distance and international roaming to mobile operators belongs to Beltelecom. Beltelecom is the only primary Internet provider, while secondary Internet providers are mainly private companies that compete with Beltelecom for services. There were no changes in the organizational structures in 2005. The indicator maintained its 2004 level: 2.0.
- 1.3.2 Ancillary businesses are independent legal entities. Cooperation between them and Beltelecom is based on tendering procedures, some of which are announced via the Beltelecom website. 2005: 2.3.
- 1.3.3 Regional companies were integrated into Beltelecom. Local, long-distance and international phone services are centralized. There are no competing regional operators in telecommunications. 2005: 1.3.

2.0 Tariff reform

2.1 Structure of tariffs

- 2.1.1 Beltelecom's tariff policy is under strong political influence. It is determined by state priorities. Tariffs on domestic phone calls are set by the Ministry of Economy. Rates on international phone calls and charges for fixed

network customer connections to the mobile networks are defined by Beltelecom. Internet tariffs and prices for mobile phone services are set by providers. 2005: 2.7.

2.1.2 Local calls are subsidized by international calls. 2005: 2.3.

2.1.3 Mobile and Internet provider charges are compatible and cover costs. Charges for mobile and Internet services are decreasing. 2005: 3.3.

2.2 Payments

2.2.1 Telephone calls are normally paid for. A certain level of indebtedness still persists in telecommunications, however it is gradually decreasing. 2005: 3.3.

2.2.2 Households cover the costs of phone usage in full. In the case of non-payment they are disconnected. The arrears of legal entities are not significant and falling. 2005: 3.3.

2.2.3 The indebtedness level is low but is still not eliminated. 2005: 3.3.

2.3 State funding

2.3.1 The below-cost tariffs for local phone calls and the provision of other services to privileged customers are covered by profits generated by other Beltelecom activities. Some debt restructuring has taken place in the sector. Telephones used by state enterprises are not disconnected for nonpayment. 2005: 2.7.

2.3.2 State subsidies are not significant and primarily aid the building of new telecommunications networks and improving the access to telecommunication services in rural areas. 2005: 1.3.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

3.1.1 The top management of Beltelecom is appointed by the Ministry of Communication and Informatization. The managements of the mobile phone operators and the Internet providers are selected by their shareholders. 2005: 2.0.

3.1.2 Beltelecom is a state enterprise. The telecommunications sector activities are regulated and controlled by the Ministry of Communication and Informatization. Mobile phone operators are not subordinated to the Ministry of Communication and Informatization. 2005: 1.3.

3.1.3 The rules of the sector's operation are defined in legal acts, which are far from perfect. Administrative regulation is strong. The decision-making process is not open to public scrutiny and is greatly influenced by political factors. An increasing number of decisions is being made in the state's interests and to the detriment of private market participants. 2005: 1.3.

3.2 Access regulation: Access is provided through tender allocations and operations licensing. 2005: 1.7.

GAS

1.0 Commercialization and privatization

1.1 Ownership

1.1.1 The main trunk and distribution gas pipelines are 100% state property despite the corporatization of Beltransgaz (the state owns 99.99% of the shares). 2005: 1.7.

1.1.2 Transportation and distribution of gas are unbundled. Enterprises that form the concern Beltopgaz are mostly state enterprises. 2005: 1.3.

1.1.3 Construction, infrastructure maintenance and other ancillary enterprises are mostly state owned and/or are controlled by state concerns. 2005: 1.3.

1.2. Operation

1.2.1 The Ministry of Energy regulates the activities of the Beltransgaz and Beltopgaz regional organizations (Oblgaz), but the enterprises function as independent financial units. 2005: 1.3.

1.2.2 Commercial goals are weak. Political influence on management and investment decisions prevail. 2005: 1.7.

1.2.3 The private sector takes a minor part in providing service for the gas sector. 2005: 1.7.

1.3. Organizational structure

1.3.1 Gas transportation is separated from distribution and sales. The concern Beltopgaz deals with transportation and sales of gas to consumers. 2005: 1.7.

1.3.2. The enterprises that provide support services (delivery, installation) are separated economically and organizationally but they are parts of the concern. 2005: 1.7.

2.0 Tariff reform

2.1 Structure of tariffs

2.1.1 Price and tariff setting is still subject to strong political influence, and determined by state priorities for economic development. Economic activities are separated from regulatory functions. All important prices and tariffs are set by the Ministry of Economy. This ministry performs certain functions of a regulatory body. 2005: 2.0.

2.1.2 Beltransgaz prices cover average costs. In 2005 the policy of cross-subsidization was continued (prices for Beltopgaz were subsidized by increased transit revenues and state subsidies). 2005: 2.0.

2.1.3 Overall revenues of the enterprises that make up Beltopgaz cover costs. In general the system of price formation is based on the cost plus method. Gas prices for domestic consumers do not depend on the distance of gas delivery. Prices for some industrial consumers are below costs. There is no cross-subsidization of households by industry. The indicator was increased from 2.0 to 2.7 in 2005.

2.2 Payments

2.2.1 In 2005, debts were reduced and the share of cash payments increased. 2005: 3.0.

2.2.2 Enterprises, especially in the industrial sector, improved their gas payments. Nevertheless some consumers continue to have overdue debts. 2005: 3.3.

2.2.3 State debts are low and do not exceed the level of payments for monthly gas consumption. 2005: 3.3.

2.3 State funding

2.3.1 Some categories of consumers buy gas at preferential prices. Their debts are restructured and they were given payment deferrals. However, in 2005 debt write-offs were not practiced. 2005: 2.0.

2.3.2 The procedure of granting subsidies lacks transparency and does not target individual consumers. One-time subsidies are given; there are cases of implicit

state aid (for example, state loans). However, in 2005 the amount of subsidies was considerably reduced. The indicator was increased from 1.7 to 2.3.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

3.1.1 The top management of Beltransgaz and of the enterprises of the concern Beltopgaz is appointed by the Ministry of Energy subject to approval by the President. 2005: 1.0.

3.1.2 The Ministry of Economy performs some regulatory functions in the sector. 2005: 1.0.

3.1.3 Administrative regulation is strong not only in management and decision making, but also in contract performance both of suppliers and consumers. There is no specific legislation that regulates the sector. 2005: 1.0.

3.2 Access regulation: In 2004 in order to increase openness and transparency in the sector, a tariff for gas transportation via the Beltransgaz pipeline was established. As well, network access to the low-pressure network of Beltopgaz by third parties was established. However, despite considerable improvements in access regulation there are still numerous administrative barriers for third parties access. 2005: 2.0.

ELECTRICITY

1.0 Commercialization and privatization

1.1 Ownership

1.1.1 Most enterprises of Belenergo are 100% state property. 2005: 1.3.

1.1.2 Generation, transportation and distribution of electric power are not unbundled and are mainly carried out by state enterprises. 2005: 1.0.

1.1.3 Construction, infrastructure maintenance and ancillary enterprises are mostly state owned and/or are controlled by a state concern. 2005: 1.3.

1.2 Operation

1.2.1 The Ministry of Energy regulates the activities of the Belenergo enterprises, but the enterprises function as independent financial units. 2005:1.3.

1.2.2 Commercial goals are weak. Political influence on management and investment decisions is prevalent. 2005: 1.7.

1.2.3 Most construction and infrastructure maintenance are provided by enterprises belonging to Belenergo. Some privatized enterprises also participate. 2005: 2.0.

1.3 Organizational Structure

1.3.1 There is no separation between production, distribution and sales. 2005: 1.0.

1.3.2 The enterprises that provide supporting services (delivery, installation) are separated economically and organizationally, but they are parts of the concern. 2005: 1.7.

2.0 Tariff reform

2.1 Structure of Tariffs

2.1.1 The setting of prices and tariffs remains strongly politically influenced. The Ministry of Economy sets all important prices and tariffs. Economic activities

are separated from regulatory functions, for some of which the Ministry of Economy is responsible. 2005: 2.0.

- 2.1.2 Prices cover the average costs of Belenergo. However, cross-subsidization of heating by electricity still takes place. 2005: 2.3.
- 2.1.3. Overall revenues cover Belenergo's costs. In general, the system of price setting is based on the cost plus method. Electricity prices for domestic consumers do not depend on the distance of electricity transmission. In 2005, prices for some consumers were below costs. Tariffs for households were maintained at a below cost level throughout the year. By the end of 2005 cross-subsidization of households by industry even increased slightly. 2005: 2.0.

2.2. Payments

- 2.2.1 In 2005, the debts within the sector were reduced and non-cash payments by enterprises of the sector were practically eliminated. 2005: 3.0.
- 2.2.2 The level of payments, especially by industrial enterprises, increased. In 2005 they paid fully for current electricity consumption. Nevertheless debts by various consumers remain. 2005: 3.3.
- 2.2.3. State debts are low and they do not exceed the average level of payments for monthly electricity consumption. 2005: 3.3.

2.3. State funding

- 2.3.1. Some categories of consumers buy electricity at preferential prices. Their debts were restructured and they were given payment deferments. However, in 2005 debt write-off was not practiced. 2005: 2.0.
- 2.3.2. The procedure for granting subsidies lacks transparency and does not target individual consumers. One-time subsidies are sometimes given (for example, state loans). The amount of subsidies granted was considerably reduced; therefore the indicator was increased from 1.7 in 2004 to 2.3 in 2005.

3.0 Regulatory and institutional development

3.1 Effective regulatory institutions

- 3.1.1. The top management of the enterprises of Belenergo is appointed by the Ministry of Energy subject to approval by the President. 2005: 1.0.
- 3.1.2. The household tariffs are not set by Belenergo (by the Council of Ministries). Belenergo proposes its tariffs to the Ministry of Economy. Belenergo is managed by the Ministry of Energy. 2005: 1.0.
- 3.1.3. Administrative regulation is strong not just in management and decision making, but also in the contract performance both of suppliers and consumers. There is no specific legislation that regulates the sector. 2005: 1.0.

- 3.2. **Access regulation** to the power lines network is provided by Belenergo; nevertheless it is not closed. 2005: 1.0.

Appendix 3 Infrastructure Indicators Assess for Belarus

Indicator	Railways		Roads		Telecom- munications		Gas		Electricity	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
1. Commercialization and privatization	1.5	1.5	1.7	1.7	1.8	1.7	1.6	1.6	1.4	1.4
1.1 Ownership	1.3	1.3	1.5	1.5	1.8	1.7	1.4	1.4	1.2	1.2
1.1.1 Natural monopoly	1.3	1.3	1.0	1.0	1.3	1.3	1.7	1.7	1.3	1.3
1.1.2 Potentially competitive businesses	1.3	1.3	1.7	1.7	2.0	1.7	1.3	1.3	1.0	1.0
1.1.3 Ancillary businesses	1.3	1.3	1.7	1.7	2.0	2.0	1.3	1.3	1.3	1.3
1.2 Operation	1.8	1.8	1.4	1.4	1.7	1.7	1.6	1.6	1.7	1.7
1.2.1 Natural monopoly	1.7	1.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1.2.2 Natural monopoly planning and investment decisions	2.0	2.0	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
1.2.3 Private sector participation in service contracts	1.7	1.7	1.7	1.7	2.0	2.0	1.7	1.7	2.0	2.0
1.3 Organizational structure	1.4	1.4	2.2	2.2	1.9	1.9	1.7	1.7	1.4	1.4
1.3.1 Separation of natural monopoly and potentially competitive businesses	1.0	1.0	3.0	3.0	2.0	2.0	1.7	1.7	1.0	1.0
1.3.2 Separation of ancillary businesses	1.3	1.3	2.0	2.0	2.3	2.3	1.7	1.7	1.7	1.7
1.3.3 Decentralization	2.0	2.0	1.7	1.7	1.3	1.3	-	-	-	-
2. Tariff reform	1.5	1.5	1.8	1.8	2.7	2.7	2.4	2.5	2.4	2.5
2.1 Structure of tariffs	1.7	1.7	1.9	1.9	2.8	2.8	2.0	2.1	2.1	2.0
2.1.1 Political vs. regulated operators	1.7	1.7	2.0	2.0	2.7	2.7	2.0	2.0	2.0	2.0
2.1.2 Natural monopoly pricing	1.7	1.7	2.0	2.0	2.3	2.3	2.0	2.0	2.3	2.3
2.1.3 Potentially competitive businesses pricing	1.7	1.7	1.7	1.7	3.3	3.3	2.0	2.7	2.0	2.0
2.2 Payments	1.7	1.7	2.1	2.1	3.3	3.3	3.2	3.2	3.1	3.2
2.2.1 Intra-industry payments ratios	2.0	2.0	2.3	2.3	3.3	3.3	3.0	3.0	3.0	3.0
2.2.2 Final consumers collection ratios	2.0	2.0	2.0	2.0	3.3	3.3	3.3	3.3	3.3	3.3
2.2.3 State indebtedness	1.0	1.0	2.0	2.0	3.3	3.3	3.3	3.3	3.3	3.3
2.3 State funding	1.0	1.0	1.3	1.3	2.0	2.0	1.9	2.2	1.9	2.2
2.3.1 Subsidies level	1.0	1.0	1.3	1.3	2.7	2.7	2.0	2.0	2.0	2.0
2.3.2 Subsidies procedure	1.0	1.0	1.3	1.3	1.3	1.3	1.7	2.3	1.7	2.3
3. Regulatory and institutional development	1.2	1.2	1.7	1.7	1.6	1.6	1.5	1.5	1.0	1.0
3.1 Effective regulatory institution	1.4	1.4	1.7	1.7	1.5	1.5	1.0	1.0	1.0	1.0
3.1.1 Management selection of competitive businesses	1.3	1.3	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
3.1.2 Independence of regulator, insulation from political influence	1.3	1.3	1.7	1.7	1.3	1.3	1.0	1.0	1.0	1.0
3.1.3 Transparency of regulation	1.7	1.7	1.3	1.3	1.3	1.3	1.0	1.0	1.0	1.0
3.2 Access regulation	1.0	1.0	1.7	1.7	1.7	1.7	1.0	2.0	1.0	1.0
RC IPM indicator	1.4	1.4	1.7	1.7	2.0	2.0	1.8	1.9	1.6	1.6
EBRD indicator	1.0	1.0	2.0	2.0	2.0	2.0	-	-	1.0	1.0

Sources: EBRD (2004) Infrastructure. Transition report 2004; EBRD (2005) Business in transition. Transition report 2005; IPM Research Center estimates.

About the project

The joint project of the German Economic Team in Belarus and the IPM Research Center was launched in May 2003 with support of the Ministry of Economy (Germany) under the TRANSFORM program. The main objective of the project is to support the Belarusian government in the field of economic policy. To achieve this, a team of experts regularly prepares analytical papers on different topical issues and presents recommendations to officials of the National Bank, the Ministry of Finance, the Ministry of Economy, the Ministry of Foreign Affairs and other institutions involved in the process of defining and implementing economic policy.

Activities

- Regular analyses of the economy of Belarus;
- Monitoring of major sectors of the economy;
- Promotion of professional dialogue between Belarusian and German experts on important issues for the economic development of Belarus.

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Analytical materials

Current research products and publications of the project group are available via the Internet (<http://research.by/engl/get>).

Belarusian Monthly Economic Review (BMER)

A monthly bulletin has been published since October 2002. It provides readers with recent news on politics and economics, covering such sectors of the economy as the real sector, structural trends, the external sector, public finance, monetary policy and the banking sector.

Policy Papers

Analytical materials on specific economic issues providing policy recommendations for the government and organizations involved in the process of creating and implementing economic policy.

- PP/01/05 Guarantee Funds for SME Loans
- PP/02/05 Presumptive Taxation of Agriculture: International Experiences and Implications for Belarus
- PP/03/05 Reforms in the Belarusian Electricity Sector: How to Reduce Costs and Dependence on Imported Resources
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- PP/03/06 Economics of Nuclear Power Development in Belarus

Belarus Infrastructure Monitoring

Monitoring of the current situation and the perspectives for the development of the energy, telecommunications and transport sectors in Belarus. The following sectors are monitored: electricity, gas, communication and communication services, railways and roads.

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