



**Economic and Social  
Council**

Distr.  
GENERAL

TRANS/SC.2/2005/6  
19 August 2005

Original: ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

**Working Party on Rail Transport**

(Fifty-ninth session, Paris (France), 24-25 November 2005,  
agenda item 6)

**STUDY OF THE SITUATION OF RAILWAYS IN MEMBER COUNTRIES**

Transmitted by the Governments of Belgium and Bulgaria

**BELGIUM****1. Data on past developments of rail passengers and good traffic**

## 1.1. Rail Passengers and Rail Kilometres

	Rail passengers (NMBS)		Number of rail km (NMBS)	
	* 1 million		*1 million	
	Total	Evolution	Total	Evolution
1980	163,7		6.963	
1981	168,8	3,13%	7.078	1,65%
1982	162,6	-3,70%	6.879	-2,81%
1983	155,5	-4,34%	6.631	-3,61%
1984	149,9	-3,61%	6.444	-2,82%
1985	150,3	0,27%	6.572	1,99%
1986	139,1	-7,45%	6.069	-7,65%
1987	142,2	2,25%	6.270	3,31%
1988	143,1	0,62%	6.348	1,24%
1989	142,0	-0,78%	6.400	0,82%
1990	142,4	0,26%	6.539	2,17%
1991	145,5	2,18%	6.771	3,55%
1992	145,0	-0,32%	6.798	0,40%
1993	145,3	0,24%	6.694	-1,53%
1994	142,6	-1,89%	6.638	-0,84%
1995	144,0	0,99%	6.757	1,79%
1996	141,7	-1,61%	6.788	0,46%
1997	143,5	1,25%	6.980	2,83%
1998	145,9	1,67%	7.097	1,68%
1999	147,3	0,98%	7.354	3,62%
2000	153,3	4,08%	7.755	5,45%
2001	160,3	4,57%	8.117	3,65%
2002	164,9	2,87%	8.359	2,76%
2003	168,3	2,06%	8.341	0,06%
2004	178,4	2,06%	8.676	4,97%

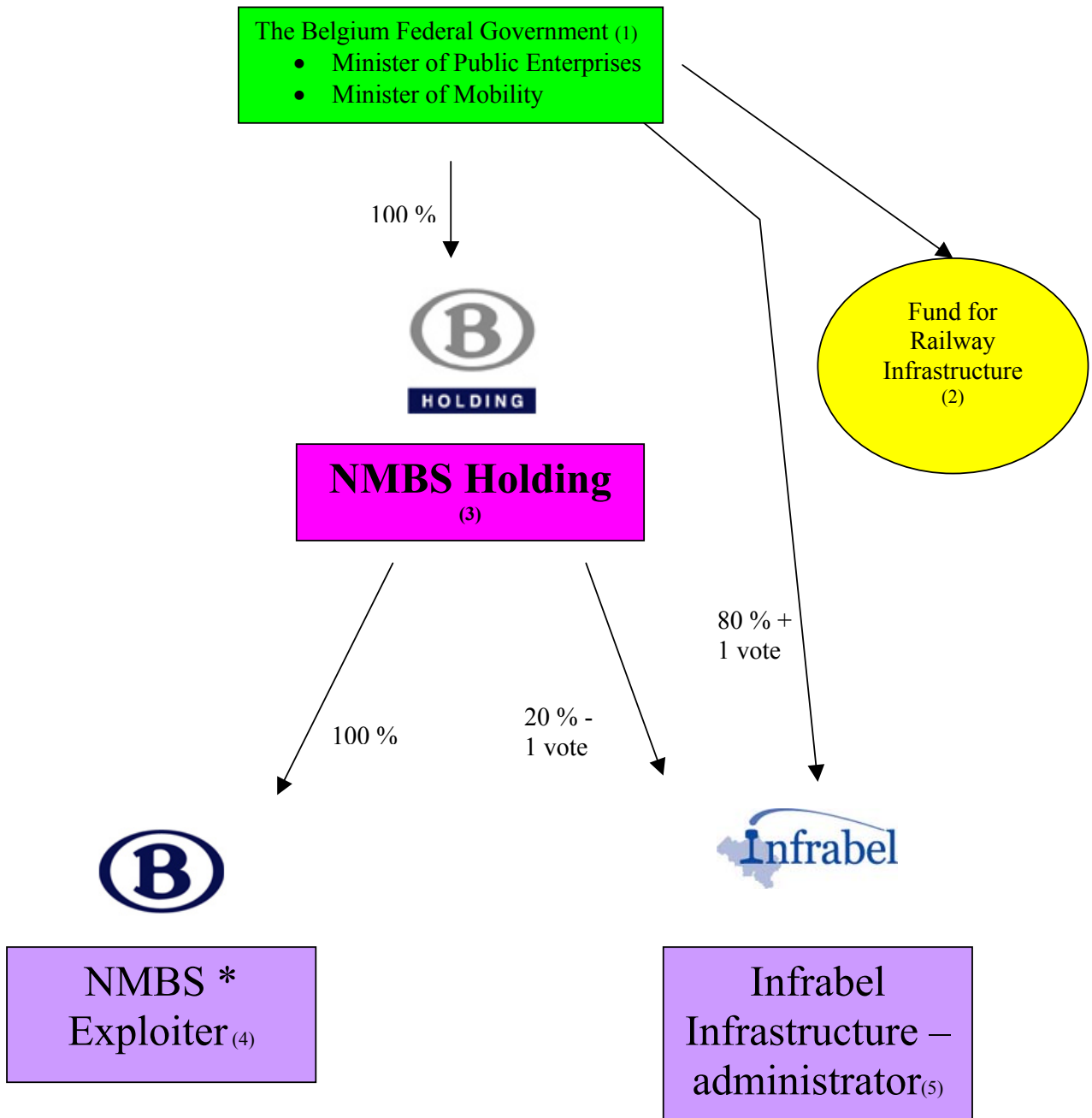
1.2. Freight traffic

	Ton goods transported (NMBS)		Number of ton km (NMBS)	
	* 1 million		*1million	
	Total	Evolution	Total	Evolution
1980	71,1		7.999	
1981	69,6	-2,01%	7.528	-5,89%
1982	62,4	-10,39%	6.788	-9,83%
1983	63,3	1,45%	6.870	1,21%
1984	70,8	11,89%	7.905	15,07%
1985	72,4	2,27%	8.254	4,41%
1986	63,1	-12,87%	7.423	-10,07%
1987	64,0	1,38%	7.266	-2,12%
1988	65,8	2,81%	7.694	5,89%
1989	65,9	0,14%	8.049	4,61%
1990	67,1	1,89%	8.354	3,79%
1991	64,7	-3,60%	8.187	-2,00%
1992	63,8	-1,40%	8.346	1,94%
1993	57,8	-9,34%	7.581	-9,17%
1994	63,1	9,12%	8.081	6,60%
1995	59,7	-5,36%	7.287	-9,83%
1996	57,1	-4,42%	7.244	-0,59%
1997	58,8	3,07%	7.465	3,05%
1998	60,7	3,14%	7.600	1,81%
1999	59,1	-2,55%	7.392	-2,74%
2000	61,3	3,60%	7.674	3,81%
2001	57,1	-6,90%	7.080	-7,74%
2002	57,2	0,26%	7.297	3,06%
2003	55,7	-2,56%	7.293	-0,05%
2004	58,4	4,79%	7.691	5,46%

1.3. Developments

1.3.1. Structural developments.

Starting from 1 January 2005 the federal railway undertaking (NMBS) was *reformed* into a Holding structure consisting of different units.



**1. The Belgium Federal Government:** From the Federal Government, the Minister of Public Enterprises, Mr. Johan Vande Lanotte and the Minister of Mobility, Mr. Renaat Landuyt are responsible, respectively, for the federal railway undertaking and for the rail system in general. The objective of the Government is to increase the number of passengers in domestic service of 25% over the period 2000-2006, and of making attempts to an increase of 25% over the period 2006-2012.

**2. The fund for railway infrastructure** The Government has taken over a considerable part of the debts of the NMBS by means of a financial vehicle. This for an amount of €7.4 billion.

**3. NMBS-Holding** is the parent company of the complete Belgian railway group. It has the statute of a corporation of public law. It is the legal heir of the former NMBS. It effectively employs 4,200 staff members, whereas the largest part of manpower of the former NMBS is split up into Infrabel and NMBS\*. NMBS-Holding depends for almost 100% on the State, its only shareholder. It will play a coordinating role between the NMBS\* - the carrier of passengers and goods - on the one hand, and the infrastructure manager Infrabel on the other hand, taking into its independency in the field of allocating and pricing train paths.

**4. The NMBS\*,** a 100% subsidiary company of NMBS-Holding. Within the group the railway carrier will transport, both goods and passengers. The railway operator kept its former name "NMBS" and its existing logo in order to give clarity to the customers, who are very familiar with this brand name. The NMBS has become the juridical form of a corporation of public law.

**5. Infrabel:** The infrastructure manager is the company that will run and develop the Belgian public railway network.

### **1.3.2. Developments concerning customer service**

In order to promote a sustainable mobility and the environment, the Government stimulates the modal shift from road to rail. Systems are set up to decrease the tariffs for passengers mainly for commuters, school people and seniors. Increasing subsidies and employers contributions are reducing the prices for passengers.

The Government stimulates the customer-orientation of the NMBS. The Government aims at affordable rail transport for passengers; thanks to donations of the Government, the contributions of third payers<sup>1</sup> and the increase of the number of travellers; a negative influence on the financial situation of the NMBS. For the period 2000-2006, the objective of the Government is to increase the number of travellers in internal service with 25%. For the period 2007-2012, the Government targets another increase of this number with 25%.

Today, the priorities of the investment programme concentrate mainly on maintaining and extending the existing infrastructure for the improvement of the station infrastructure and the (internal) offer.

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<sup>1</sup> Contribution of third payers: In Belgium, employees who are travelling by train, can enjoy free work-leisure traffic. A part of the costs of this traffic is paid by their employers (third payers).

The Government believes that the NMBS can play an important role within the freight transport. For that purpose, the NMBS has to be supported actively and has to stand open to commit alliances with other - foreign - companies.

The Government finds that each car driver is a potential customer, who can be commissioned by means of a renewed parking policy. The financing and the exploitation of the station parking must be developed as such that the daily traveller can park for free and that the tariffs are also attractive for occasional travellers. For that purpose, the Government will make available an annual amount of €7 million between 2006 and 2010.

### **New Developments**

The royal decree of 12 March 2003 has transposed into Belgian law the first EU-railway package concerning the directives 2001/12, 2001/13, 2001/14.

From 1 January, the NMBS has been split up into a Holding-structure.

In this way, the rail freight market has been further opened for competition namely on the trans-European rail freight network.

\* **RER/GEN**: Every day, 350,000 people converge on Brussels to work or study. For the time being, the majority of those trips are made using an individual car. This generates major traffic jams on the roads towards Brussels, and also heavily increases traffic congestion inside the town. In order to offer a credible alternative to people commuting by car, a consensus exists on the necessity of a dense network of public transport covering the area within 30 kilometres from Brussels and offering good frequencies (minimum headway of 15 minutes during peak hours on every line) - in other words, a Regional Express Railway network (Réseau Express Régional or RER in French, Gewestelijk Express Net or GEN in Dutch). It is thought that this goal can be achieved by using mainly the existing railway network in and around Brussels, and by adding new bus services in segregated lanes. Furthermore, it is essential to offer a better integration of all transportation means, including an integrated fare structure between the various public transportation companies serving Brussels and its hinterland.

## Investments in rail infrastructure and railway rolling stock

The NMBS is implementing the investment plans on long (2001-2012) and on middle long (2004-2007) term. In the schedule below it can be seen how much money is assigned each year to the different categories. The NMBS had the intention to invest €224 million into rolling stock (2004-2007). On the one hand, the NMBS invests in new trains with air-conditioning, electronic displays and, on the other hand, it modernizes its old material with modern sign systems and telecommunication.

Survey of the categories <i>[Mio €'04]</i>	2004		2005		2006		2007		Total	
	2001 - 2012	2004 - 2007	2001 - 2012	2004 - 2007	2001 - 2012	2004 - 2007	2001 - 2012	2004 - 2007	2001 - 2012	2004 - 2007
<b>Capacity maintainance</b>	356	307,4	327	307,4	334	287,3	349	304,3	1.367	1.206
<b>Station Equipment</b>	58	86,3	49,5	99,9	49,3	106,5	49,1	86,1	206	379
<b>Classic extensions</b>	171	106,3	228	124,2	363	212,6	564	260,2	1.326	703
<b>RER/GEN*</b>	109,8	72,6	137,4	120,5	197,1	198,3	262,7	221,1	707,0	612
<b>Rolling stock</b>	349	224,2	385	253,8	533	269,4	427	196,5	1.694	944
Train	308	210,0	349	238,2	492	247,0	386	173,0	1.536	868
Wagons	41	14,2	36	15,3	41	22,4	41	23,5	159	75
<b>Production outils and service buildings</b>	26	34,5	20	43,2	17	35,7	17	52,1	81	166
Service buildings	11	18,0	7	26,7	5	19,2	5	35,6	28	99
Restructuration, equipment	15	16,5	13	16,5	12	16,5	12	16,5	52	66
<b>Workshops material</b>	48	27,1	26	38,9	16	38,8	15	81,2	104	186
<b>Divers</b>	50	58,6	38	54,3	23	54,4	23	54,5	134	222
Informatics	27	48,0	22	43,9	16	43,9	13	43,9	77	180
Facility Management	2	3,9	2	3,1	2	3,1	2	3,1	9	13
Divers	21	6,6	14	7,3	5	7,4	8	7,5	48	29
<b>HST</b>	559	557,4	332	447,1	108	255,9	10	63,6	1.009	1.324
Federal Public Service	153	133,5	83	103,4	16	52,4	2	18,2	254	308
HST Financing	398	416,4	250	336,9	91	199,5	7	44,5	747	997
Own Funds	8	7,4	5	6,7	2	4,0	0	0,9	15	19
<b>Optional envelope</b>		50,2								50
Reserve		34,7								35
Physical projects		15,5								15
<b>Total</b>	<b>1.726</b>	<b>1.525</b>	<b>1.544</b>	<b>1.489</b>	<b>1.640</b>	<b>1.459</b>	<b>1.717</b>	<b>1.320</b>	<b>6.627</b>	<b>5.792</b>

### **Information on research activities carried out by the Government of Belgium in the field of Railway Transport**

Cooperation with the Federal Service for science politics. Study of the implications of railway in the politics of passenger travelling.

- AGORA – RER: Study implying the choice of transport modus around the Brussels capital into software and databases. This project is linked to the RER.
- Future study concerning the RER-stations.
  - The park capacity around the stations
  - The degree in which the stations are attractive
- The Dynamic Model: are studies concerning the railway infrastructure capacity related to the latest offer of trains (RER included). Those studies are being brought together into a simulation model.

### **Practical experiences with the application of Global Positioning Systems**

For the moment, there is no experience and there are no projects running in the field of GPS.

### **Railway Safety: Risk assessment techniques**

After the railway accident at Pécrot in 2001, two safety audits were carried out, one for the train drivers and one for all the other safety functions. Therefore, the NMBS group has made an action plan to fill up the identified gaps. Then the group NMBS decided to make a monitoring system for the exploitation safety. A component of it is to make an inventory and to master the risks. This mastering system will be operational at the end of 2006.

Principles and policies used as a preventive measure are aimed at increasing the overall safety of railway transport. Like other countries, Belgium has made investments in modern equipment for communication and indication such as ETCS (European Train Control System) and GSM-R. There is also a concentration of the signal boxes.

The NMBS has taken its first steps towards a risk assessment system, by making an inventory and an evaluation of the risks. Concerning risk assessment techniques, at the moment there are no legal obligations, except for those concerning civil rights, for the NMBS in Belgium.

## **BULGARIA**

### **Restructuring of the Bulgarian railways: operator and network manager**

The restructuring of the railway transport system is in its last stage. The restructuring process has already been accomplished for the Railway Infrastructure State Company; it meets European standards and affords opportunities for the creation of effective relations and cooperation with the countries of the European Union. For BDZ EAD, the operator, the separation of the accounting system management into passengers' and freight transport services has already been accomplished. The institutional separation within the structure of the commercial organization of



a holding structure is foreseen to be executed. In the long term planning, the privatization of BDZ EAD is envisaged to start as from 2005.

**Results have been achieved due to the following:**

1. Adoption of the Railway Transport Act in 2000 (State Gazette issue 97 of 28.11.2000, amended SG issue 47 of 10.05.2002, amended SG issue 96 of 11.10.2002, enforced as of 01.01.2002, amended SG issue 70 and 115 of 2004).
2. With the provisions of Decree No 167/29.06.2001, SG, issue 61/2001 the Railway Administration Executive Agency, a regulatory body, has been established as a legal budget funded entity. It shall perform regulatory and control functions with regard to licensing, certification and traffic safety. Thus the necessary balance and establishment of equal conditions for loyal competition between the railway operators and the road hauliers is to be achieved.
3. The institutional separation of the National Company BDZ was accomplished with the establishment of two new entities:
  - BDZ EAD, successor to National Company Bulgarian State Railways – railway operator. It is an independent railway operator in provision of railway services in the field of freight and passengers' transportation.
  - State Railway Infrastructure Company, successor to BDZ for maintenance, repair and management of infrastructure.
4. The adoption of secondary legislation - 26 normative acts, out of which 19 ordinances, created a new political, legal and administrative basis.
5. Five licenses have been issued as follows:
  - A permanent BDZ EAD being a successor to NK BDZ has been issued a temporary license for performance of freight and passengers transport services within the territory of the country, as of 1.06.2002.
  - A permanent licence No 401 of 01.12.2002 has been issued to the National Research Institute of Transport for checks on technical suitability of all type of vehicles and the conformity of the competence and qualification of the staff involved directly in their management.
  - A permanent licence No 2 for performance of freight and passenger transportation services within the territory of the country has been issued to BDZ as of 01.04.2004.
  - A permanent licence No 301 has been issued to Bulmarket – DM OOD for performance of freight transportation services on the rail route Ruse–North, Ruse–Marshalling Yard – Kaspichan as of 10.05.2004.
  - A permanent licence No 201 has been issued to the Bulgarian Railway Company AD for performance of freight transport services within the territory of the country, as of 15.04.2005.

6. A Contract between the Railway Infrastructure National Company and BDZ EAD regulating the interrelations between the two entities with regard to the right of access and use of infrastructure has been concluded.
7. Temporary Rules on functional interaction between the safety and control bodies in railway transport have been applied prior to the adoption of the Ordinance on Safety transposing Directive 2004/49/EC.
8. Decree No 194 of the Council of Ministers of 2 August 2004 (published SG, issue 71 of 2004) amending the Tariff on the Infrastructure Charges collected by the Railway Infrastructure National Company, adopted by Decree No 302 of the Council of Ministers of 21 December 2001 (promulgated, SG, issue 1 of 2002; amended, issue 49 of 2002) has been adopted.
9. A Contract on assignment of public services obligations between the railway operator BDZ EAD and the State has been signed.
10. Optimization of the administrative capacity has been carried out. New management technologies have been introduced both into the Railway Infrastructure National Company and BDZ EAD.
11. The harmonization of the legislative framework has been accomplished comprising the interoperability issues as well. All future amendments to the European legislation shall be timely taken into consideration.
12. The introduced control on the professional competence of the staff involved in the railway sector is initiated.
13. The managers and workers from the railway sector, responsible for the execution of supervision on traffic safety, are regularly examined.

As a result of the policy, which is being carried out at present, a radically restructured railway system is available.

1. The railway transport market has been liberalized. It is open to railway operators upon provision of equal rights for access to the infrastructure.
2. The responsibility for development, maintenance of the infrastructure is a priority of the State.
3. A sound licensing and certification system has been established in the sector.
4. The capacity allocation and the right of access to the railway infrastructure have been regulated through normative acts, the collection of infrastructure charges inclusive.
5. The introduced control on the professional competence of the operational staff involved in the railway sector made possible the examination of the staff of the two entities – Railway

Infrastructure National Company and BDZ EAD with regard to knowledge and application of the new legislation.

6. The completely new legislative framework satisfies the requirements of the European directives and regulations.

7. The financial state of the railways is considerably improved.

8. An increase of 22% of the railway speeds is expected under implementation of the programmes. Speeds of 130-160 km/h are envisaged to be reached along the trans-European corridors by 2015.

9. Investments in the sector amounting to €3,534 million for the period by 2012, which is approximately €393 million per year, shall allow improvement of the infrastructure parameters as well as higher quality of the transportation services.

### **Next steps towards restructuring of the railway sector**

In the period 2006–2008 substantial measures shall be undertaken in order to contribute to the integration of the national railway system into the European railway system under equal standards of functioning as follows:

1. Transformation of BDZ EAD into a company of holding type and follow-up privatization;
2. Concessioning of railway infrastructure elements;
3. Regulation of the transport market in order to open it for foreign railway operators;
4. Establishment of a system for railway transportation safety management with unified indicators and methodology for the entire European Community;
5. Retraining of the staff which shall work for the unified European railway system;
6. Uniform management of transportation services along the trans-European corridors;
7. Design of projects on adoption of financial funds from European structures.

### **RAILWAY INFRASTRUCTURE**

The major task of the **Railway Infrastructure National Company** is the alignment of the parameters of the railway infrastructure with the parameters of the UIC standards in order that interoperability with the trans-European railway system be achieved.

**The needed capital transfers for the maintenance and development of the railway infrastructure for 2006 amount to 141,000 thousand BGN.** The funds shall be allocated to the following major projects:

**Track repair for keeping the achieved speeds** – disbursement 42,000 thousand BGN. The Project aims at limitation of the permanent and temporary speed restrictions of the trains due to the poor condition of the permanent way.

**Rail track renewal on 8 main railway lines** – disbursement 24,000 thousand BGN. The Project aims at reaching design speeds which shall guarantee safe train traffic.

**Introduction of new systems and technologies into the energy system of the Railway Infrastructure National Company** – disbursement 7,000 thousand BGN. The Project aims at the introduction of a new type of energy consuming equipment of the traction sub-stations so that telematic management of the installations to be provided as well as introduction of a new system of catenaries permitting speeds of 200 km/h to be achieved.

**Introduction of new systems and technologies into safety and telecommunication equipment** – envisaged 8,000 thousand BGN. The modernization of the telecommunications lines and automation shall contribute to: higher informational capacity; higher degree of reliability as well as safety of the train traffic management systems; establishment of a sound environment for implementation of new technologies to secure the interoperability of the railway transportation in the region.

**Reconstruction of railway stations** – 16,500 thousand BGN.

**Mechanized renewal of rail tracks** – 21,000 thousand BGN. Upon accomplishment of the project the commitments towards the World Bank shall be fulfilled with a result of 427 km of renewed rail tracks.

**Modernization of railway sections** – 19,000 thousand BGN.

**Optical connection Sofia-Kalotina West, Radomir-Blagoevgrad** – 1,500 thousand BGN. The new optical connections shall create possibilities for information transfers needed for implementation of new high-tech systems for train traffic management and control along with modern information technologies.

## **RAILWAY OPERATOR**

### **Bulgarian State Railways (BDZ) EAD**

In 2004 bids for the nomination of a supplier for purchasing of new rolling stock were conducted. At the end of 2004, a Contract was concluded with “Siemens” for the delivery of 25 Diesel Multiple Units which is to be executed by the end of 2005. These trains shall be operated and serve the population in the regions where the only available transport mode is the railway mode. In the near future, a new plant for repair, completion and maintenance of Diesel Multiple Units on the territory of Bulgaria will be opened.

The BDZ EAD Business Plan 2005–2006 comprises:

**Modernization of the rolling stock** in compliance with the requirements for provision of safety and comfort:

**Delivery of 25 Electric Multiple Units.** The company is considering to sign a contract for the delivery of 25 of the above-mentioned trains, which will operate on long-distance lines;

**Delivery of 40 new passengers coaches,** 20 new sleeping cars and 26 recycled cars;

**Delivery of second hand passenger coaches** in good technical state will continue:

- in **2005** 30 second class coaches, 20 sleeping cars and 10 coaches for disabled persons will be delivered;
- in **2006 the delivery of another 40** is envisaged.

### **Practical application of GPS**

So far 50 locomotives of BDZ fleet have been equipped with GPSs for tracking the trains. It is envisaged for the rest of the locomotives, EMUs and 600 wagons to be equipped. The system software is being developed and perfected. The system allows visualization of the train position (freight, passenger and express trains). Movement of a single locomotive can be also traced. It shows data of position, speed, additional data of each locomotive equipped with GPS. In the cab of the locomotive a SIM card which sends SMS upon crossing every control point is installed. Moreover, there is a mobile phone for direct connection between the loco driver and the system operator.

### **Railway safety**

The adopted **RULES** on functional interaction between the safety and control bodies in railway transport introduce the safety requirements on the national level. They are to specify the category of accidents and incidents that occur on the railway network, the procedure referred to notification of the interested authorities and officials at the time of occurrence, restoration of train traffic and elimination of consequences after occurrence, investigation and accomplishment, as well as relations and interaction between the safety control bodies for rail traffic.

After having been published, the **Directive 2004/49/EO** of 29 April 2004 amending **Council Directive 95/18/EC** on safety on the Community's railways and on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Directive on railway safety) the experts of Bulgaria are elaborating an ordinance which will satisfy the requirements of the above Directive.

The Project **BG2004/016-711.04.01 Railway Safety and Interoperability** has been approved under **the PHARE Programme**. At present, a contract for the project implementation has been prepared. It will be initiated as of 01.09.2005 and will be implemented jointly with French consultants. It will result in a safe transportation management system along with well-trained operational staff in compliance with the Third railway package.

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