

## LEGAL FRAMEWORK FOR LOW-DENSITY TRAFFIC RAILWAYS OPERATION

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### ABSTRACT

For a number of significant reasons and considerations, low-density (low-density traffic, low-intensity) railway lines retain their intended functions. There are problems of efficient operation of low-density railway lines (LDRL) both in Europe and in Russia. The effectiveness of the use of LDRL is one of the priorities facing the transport industry. And their features in a changing social and market environment require regular updating of legal framework, regulatory amendments,

interpretation of legal responsibility of operating companies and authorities at various levels. The authors of the article assess the current context of the possibilities of preserving or refusal to maintain low-density railway lines in the structure of JSC Russian Railways. At the same time, optimization of operation of these lines through the transfer of LDRL to private ownership, leasing, and closure of LDRL is considered. An algorithm for decision-making on operation change of LDRL is given.

**Keywords:** low-density railway lines, operation legal framework, freight and passenger transportation, legal responsibility.

**Background.** JSC Russian Railways implements an approved plan of activities to reduce the cost of maintaining and operating low-density (low-density traffic, low-intensity railways) railway lines (LDRL). LDRL are considered as sections of railways on which less than eight train pairs per day with a reduced cargo density of less than 5,0 million ton·km gross/km per year pass. In 2017, specialists of Russian University of Transport (RUT), at the request of JSC Russian Railways, developed the «Rules for operation and maintenance of infrastructure at low-intensity railway sections» [1, p. 11], which defines the components of an optimization approach to functioning of LDRL, namely:

- technical re-equipment of lines and changes in operation technology, contributing to an increase in their efficiency (cost reduction, etc.);
- stimulation of demand for transportation through organization of new types of services (including tourist services);
- renting of a LDRL or its transfer to the balance of an interested party (transfer to the category of non-public railway tracks), as well as the use of other forms of private-public partnership, including creation of an outsourcing association that is not part of the structure of JSC Russian Railways (in accordance with the approved Procedure [2, p. 3]);
- subsidizing the functioning from the federal and regional budgets, etc.;
- closing of LDRL or its individual sections (in accordance with [2, p. 2]).

**Objective.** The objective of the authors is to consider legal aspects of operation of low-density railway lines in Russia.

**Methods.** The authors use general economic and legal methods, comparative analysis, evaluation approach, scientific description.

### Results.

#### Justification of changes of a legal form

To make a decision on changing the form of operation of LDRL, it is necessary to:

- to determine the type of LDRL (in accordance with [1, p. 9]);
- to analyze current operations;
- to identify opportunities for effective work while maintaining the current legal status;
- to compare options for preserving and avoiding preserving LDRL as part of JSC Russian Railways;
- to formulate proposals for improving the functioning of LDRL.

The analysis of current operating activities includes calculation of operating costs, expenses for maintenance and operation of the infrastructure and calculation of variable costs, including those associated with the subsequent movement of cars outside LDRL.

In order to maintain LDRL as part of JSC Russian Railways, it is necessary to consider the possibility of attracting additional traffic volumes and reducing operating costs, proceeding with technical re-equipment and changes in work technology. These measures include:

- change in organization of work (combination of professions (several job functions to be performed by a single employee), introduction of mobile teams, change in the mode of labor of workers);
- change of traffic organization, technology of freight and passenger work;
- optimization of infrastructure facilities maintenance;
- introduction of technical means to ensure maximum efficiency of LDRL by minimizing the need for maintenance personnel.

When comparing financial results, it is necessary to take into account the strategic value of LDRL for JSC Russian Railways.

LDRL, realizing commercial function, are transferred (sold) to the new owners which are business companies. Losses from operation and maintenance of LDRL implementing social functions are compensated by the relevant executive authorities in accordance with the Concept of the Structural Reform of the Federal Railway Transport [8, p. 5].

Losses from operation and maintenance of LDRL used to implement the main activities of the railways are borne directly by JSC Russian Railways.

In respect of LDRL, which are not threatened with transfer to another owner, or regarding which it is not planned to compensate for losses incurred by the owner of the infrastructure, a decision is made on its further status.

The construction of railway infrastructure facilities can be financed by the local authorities of the region through which LDRL passes.

#### Transfer to private ownership or renting

The basic requirements for railway tracks of public use are stipulated in the federal law «On Railway Transport in the Russian Federation» [9]. When transferring LDRL into the category of non-public railway tracks, the balance holder is set depending on who will be the owner of the infrastructure.

The procedure for leasing railway tracks is regulated by the order of JSC Russian Railways [10].

The list of objects of property of JSC Russian Railways, consolidated in its share capital and which are not subject to lease, free use, trust management or pledge, is determined by government decree [11].

When setting up an outsourcing association for operation and maintenance of LDRL, which is not part of JSC Russian Railways structure, its activities include establishment of a self-regulatory organization registered in the state register and part of «Promzheldortrans» [Industrial railway transport] association.



Table 1

### Matrix of responsibility of participants in operation of LDRL while keeping it within JSC Russian Railways

Sub-processes			Participants in operation of LDRL								
			CD	CFTO	CT	CDMV	CDI	Transenergo	CSS	Passenger carriers	Suburban passenger carriers
Traffic organization	Freight transportation		R	P	P	—	P	—	—	—	—
	Passenger transportation		P*	—	P	—	P	—	—	R	—
	Suburban transportation	Motor rolling stock	P*	—	—	P	—	—	—	—	R
		Locomotive traction	P*	—	P	—	—	—	—	—	R
		Light rail buses, incl. RRV	P*	—	P**	P**	—	—	—	—	R
Freight and commercial operations	Initial-final operations		P	R	—	—	—	—	—	—	—
	Service en route		R	P	—	—	—	—	—	—	—
Current maintenance and repair of infrastructure facilities	Current maintenance and repair of infrastructure facilities when creating an infrastructure section		P	P***	I	—	R	—	—	P***	P***
	Current maintenance and repair of railway tracks		P	P***	I	—	R	—	—	P***	P***
	Maintenance and repair of signaling systems		P	P***	I	—	R	—	P	P***	P***
	Current maintenance and repair of communication devices		P	P***	I	—	P	—	R	P***	P***
	Current maintenance and repair of power supply systems		P	P***	I	—	P	R	—	P***	P***

\* Organization and management of transportation process in passenger traffic. \*\* In accordance with ownership regarding rolling stock. \*\*\* Coordination for cases of restrictions on train passage. Notes: R — is responsible; P — participates; I — receives information. JSC Russian Railways departments: CD — traffic control, CFTO — branded transport services, CT — traction, CDMV — motorised wagons, CDI — infrastructure, CSS — communication.

Once an LDRL is managed by the outsourcing association for operation and maintenance of LDRL, it is possible to regulate issues related to the initial and final operations of the transportation process (carriage and cleaning of cars, shunting work, loading and unloading).

The effectiveness of the use of an outsourcing association for operation and maintenance of LDRL is determined by the method of calculating the economic efficiency of outsourcing at JSC Russian Railways [12].

#### The procedure for closing LDRL

The procedure for closing LDRL is aimed at optimizing the costs of railway infrastructure or increasing the efficiency of land use.

The closure of public railway track, including LDRL, should be carried out on the basis of a decision of the authorized federal executive body in the prescribed manner [2].

From the date of the proposal to close the stations of LDRL to perform all or some operations related to reception and departure of trains, reception, delivery, loading, unloading, sorting, storage of goods (including in containers), baggage and cargo, the decision should be made in three months.

The authorized representative for implementation of administrative procedures related to provision of public services for closure of railway lines and stations, is a structural unit of the Ministry of Transport of Russia — the department of state policy in the field of railway transport [5].

Currently, the Ministry of Transport of the Russian Federation has prepared amendments to the administrative regulations of the Ministry of Transport [5, p. 4], according to which the whole procedure for closing LDRL should be simplified, since the decision to close can be made directly by the divisions of JSC Russian Railways.

In accordance with the requirements of the document [5], the Federal Agency for Railway Transport (Roszheldor) decides on closure of LDRL and requires coordination with the Federal Antimonopoly Service (FAS), and after introduction of amendments, the conclusion of the

authorized bodies will be sent to the FAS within a simple notification procedure.

The liquidation of LDRL must take place in coordination with the executive authorities of the constituent entities of the Russian Federation through which the lines pass [8, p. 7].

Decisions on opening or closing of LDRL, on the opening or closing of stations to perform all or some of the operations associated with reception and departure of trains, reception, delivery, loading, unloading, sorting, storage of cargo (including in containers), baggage and cargo luggage, are published in the relevant tariff guide and a collection of rules on transportation by railways.

The procedures of decommissioning of the LDRL track facilities (preservation), as well as re-activation, if necessary, followed by their re-involvement in the production process, are stipulated in the Instruction on transfer to conservation and re-activation of track facilities [13].

In case of preservation of devices and structures involved in integrated traffic, it should be possible to quickly reopen the infrastructure for a possible increase in the size of traffic when planning breaks in traffic on main lines.

When transferring LDRLs into non-public railways, their owner should follow approved procedures to obtain an agreement on schedules of traffic, that involves adjacent railway sections.

#### Responsibility matrix

Responsibilities, rights and obligations of participants in the process of operation of LDRL are provided for in accordance with the requirements of the Charter of Railway Transport [14] and other applicable regulatory and legal acts.

The matrix of responsibility of participants in operation of LDRL, while maintaining it as part of JSC Russian Railways, is presented in Table 1.

Technical re-equipment and/or changes in the technology of operation of low-intensity lines while retaining it as part of JSC Russian Railways and preserving LDRL as part of JSC Russian Railways for own or public needs do not imply a change in the status of the line relative to the existing

situation. JSC Russian Railways and carriers remain participants in operation of LDRL.

The transfer of LDRL to the balance of federal, regional or municipal authorities envisages the government of the Russian Federation (including public authorities) as the balance holder and operator of the line.

The purpose of transferring an object to that status is to maintain the operation of the LDRL because of its significance for JSC Russian Railways, for public facilities or for providing vital services for remote communities, despite loss-making.

**Conclusion.** The transfer of LDRL to private property provides for sale (or royalty-free transfer) of LDRL infrastructure objects to the balance sheet of a commercial organization that becomes the owner of the infrastructure.

The relationship between the new owner of the infrastructure and the carrier in the freight and passenger traffic is regulated by a decree of the Russian government [15].

The preservation of an LDRL provides for maintenance of the preserved LDRL on the balance sheet of JSC Russian Railways and termination of cargo and passenger work.

The liquidation of LDRL involves dismantling and sale of its infrastructure facilities by JSC Russian Railways.

## REFERENCES

1. Order of JSC Russian Railways of 17.05.2017 No. 944r «On approval of the Regulations for operation and maintenance of infrastructure at low-intensity railway sections» [*Rasporyazhenie OAO «RZD» ot 17.05.2017 № 944r «Ob utverzhenii Reglamenta ekspluatatsii i obsluzhivaniya infrastruktury na malointensivnykh zheleznodorozhnykh uchastkakh»*].
2. Order of the Ministry of Transport of the Russian Federation of 22.12.2011 No. 327 «On approval of the Procedure for closing public railway tracks, including low-intensity lines and sections». Registered in the Ministry of Justice of the Russian Federation on 21.03.2012, No. 23558 [*Prikaz Mintransa Rossiiskoi Federatsii ot 22.12.2011 № 327 «Ob utverzhenii Poryadka zakrytiya zheleznodorozhnykh putei obshchego polzovaniya, v tom chisel malointensivnykh linii i uchastkov»*. Zaregistrirvano v Minyuste RF 21.03.2012 № 32558].
3. Vakulenko, S. P., Kolin, A. V., Evreenova, N. Yu. Low-density lines: state and optimization options. *World of Transport and Transportation*, Vol. 15, 2017, Iss. 3, pp. 174–180.
4. Vakulenko, S. P., Kolin, A. V., Evreenova, N. Yu. Directions for optimizing the operation of low-intensity railway lines [*Napravleniya optimizatsii raboty malointensivnykh zheleznodorozhnykh linii*]. *Vestnik Rostovskogo gosudarstvennogo universiteta putei soobshcheniya*, 2017, Iss. 4, pp. 89–95.
5. Order of the Ministry of Transport of the Russian Federation of 05.05.2012 No. 130 «On approval of the administrative regulations of the Ministry of Transport of the Russian Federation for provision of state services for making decisions on closing public railways, including low-intensity lines and sections». Registered in the Ministry of Justice of the Russian Federation on 19.07.2012 No. 24947 [*Prikaz Mintransa Rossiiskoi Federatsii ot 05.05.2012 № 130 «Ob utverzhenii administrativnogo reglamenta Ministerstva transporta Rossiiskoi Federatsii predostavleniya gosudarstvennoi uslugi po prinyatiyu resheniya o zakrytii zheleznodorozhnykh putei obshchego polzovaniya, v tom chisel malointensivnykh linii i uchastkov»*. Zaregistrirvano v Minyuste RF ot 19.07.2012 № 24947].
6. Vakulenko, S. P., Kolin, A. V., Evreenova, N. Yu., Romensky, D. Yu. Problems and prospects of low-intensity lines [*Problemy i perspektivy malointensivnykh linii*]. *Avtomatika, svyaz, informatika*, 2017, Iss. 6, pp. 7–10.
7. Vakulenko, S. P., Kolin, A. V., Evreenova, N. Yu., Romensky, D. Yu., Golikov, K. V. Efficiency of operation and maintenance of low-intensity railway lines: Monograph [*Effektivnost ekspluatatsii i obsluzhivaniya malointensivnykh zheleznodorozhnykh linii: Monograph*]. Moscow, VINITI RAS, 2018, 218 p.
8. Government Decree of May 15, 1998 No. 448 «On the Concept of the Structural Reform of Federal Railway Transport» [*Postanovlenie pravitelstva RF ot 15 maya 1998 g. № 448 «O kontseptsii strukturnoi reform federalnogo zheleznodorozhnogo transporta»*]. *Rossiyskaya gazeta*, May 21, 1998.
9. Federal Law of 10.01.2003 No. 17-FZ «On Railway Transport in the Russian Federation» [*Federalnyi zakon ot 10.01.2003 № 17-FZ «O zheleznodorozhnom transporte v Rossiiskoi Federatsii»*].
10. Order of JSC Russian Railways of 04.09.2013 No. 80 «On the procedure for sale and renting of railway tracks of JSC Russian Railways» [*Prikaz OAO «RZD» ot 04 sentyabrya 2013 № 80 «O poryadke prodazhi i predostavleniya v arendu zheleznodorozhnykh putei OAO «RZD»*].
11. Decree of the Government of the Russian Federation of 06.02.2004 No. 57 «On property of JSC Russian Railways, limited for circulation» [*Postanovlenie pravitelstva RF ot 06.02.2004 № 57 «Ob ogranichennykh v oborote ob'ektakh imushchestva otkrytogo aktsionernogo obshchestva «Rossiiskie zheleznie dorogi»*].
12. Order of JSC Russian Railways of 04.09.2013 No. 1899r «On making a decision to terminate performance of certain types of work (operations) using labor resources and labor tools of JSC Russian Railways» [*Rasporyazhenie OAO «RZD» ot 04.09.2013 № 1899r «O prinyatii resheniya o prekrashchenii vypolneniya otdelnykh vidov rabot (operatsii) s ispolzovaniem trudovykh resursov i sredstv truda OAO «RZD»*].
13. Order of JSC Russian Railways of 16.08.2006 No. 1707r «On approval of the Instruction on transfer to preservation and re-activation of track facilities» (as amended by the Order of JSC Russian Railways of 11.03.2013 No. 601r) [*Rasporyazhenie OAO «RZD» ot 16.08.2006 № 1707r «Ob utverzhenii Instruksii o perevode na konservatsiyu i provedenii raskonservatsii ob'ektov putevogo khozyaistva» (v red. rasporyazheniya OAO «RZD» ot 11.03.2013 g. № 601r)*].
14. Federal Law of 10.01.2003 No. 18-FZ «Charter of Railway Transport of the Russian Federation» [*Federalnyi zakon ot 10.01.2003 № 18-FZ «Ustav zheleznodorozhnogo transporta Rossiiskoi Federatsii»*].
15. Decree of the Government of the Russian Federation of 20.11.2003 No. 703 «On Approval of the Rules for Provision of Services for the Use of the Infrastructure of Railway Transport of Common Use» (as amended by the Decree of the Government of the Russian Federation of 14.12.2006 No. 767) [*Postanovlenie pravitelstva RF ot 20 noyabrya 2003 g. № 703 «Ob utverzhenii Pravil okazaniya uslug po ispolzovaniyu infrastruktury zheleznodorozhnogo transporta obshchego polzovaniya» (v red. postanovleniya pravitelstva RF ot 14.12.2006 № 767)*].

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