

Improvement in Transportation Process Performance

Car fleet management in the context of multiple rolling stock owners

Transition from the model of state monopoly of the freight transportation market to a market model was not backed up by relevant changes in the regulatory framework that sets out the rules of private car fleet management.

Major regulatory legal acts in rail transport services were published before 2003, i.e. before the incorporation of JSC "RZD" and in conditions when the entire freight car fleet was mainly inventoried. The applicable legislation offers no clear definition of a rolling stock operator and does not regulate its roles related to transportation, rights and liabilities.

The actions of multiple rolling stock owners are not coordinated and the empty car flow planning techniques used by them are often ineffective.

The absence of required regulations has had other negative impacts on the transportation market, which eventually resulted in a slower turnover of freight cars, an increased share of running empty cars, a considerable decline in the number of double freight operations and a reduced speed of car freight movement. This brought about an increase in an unnecessary load on the public infrastructure, unmet demand for freight transportation and considerable price inflation with regard to car provision to consignors.

Poor performance of the current system of empty car use became particularly evident following the market demand from the Asia Pacific market: an increase in freight traffic to the East occurred against a backdrop of restricted railway infrastructure capacity in this direction.

Car fleet growth rate exceeds the transportation growth rate by 3.5 times. The optimal level of required cars has already been exceeded by 28%, which amounts to an oversupply of 258.6 th. cars.

According to JSC "RZD" estimates, the oversupply of fleet freight cars in the network resulted in considerable process losses:

- ▶ car turnaround time increased by 2.7 days or 21%;
- ▶ service speed decreased by 5.2 kilometer per hour or 12%;
- ▶ delivery speed decreased by 65 km per day or 23%;
- ▶ the share of late deliveries increased by 17 p.p.;
- ▶ demand for train locomotives increased by 600 units and for shunting locomotives by 300 units per day.

Common network process of railway freight transportation

The aim of CNP is to ensure a systemic interaction of all market players: JSC "RZD", consignors, operators, rolling stock owners, consignees, private track owners and engineering support for transportation organization and management by JSC "RZD". The document was developed by JSC "RZD" and adopted in December 2012.

Basic principles of car fleet use optimization set out in the CNP provide for counterwork by JSC "RZD": (bringing transportation techniques in balance with the objective needs of the transport market) and by the rolling stock operators (regulation of empty car traffic logistics in line with public infrastructure capabilities).

The Company is updating a number of internal processes and automated systems to enable their adaptation to new conditions for the freight transportation market:

- ▶ train makeup plan is regularly adjusted with regard to monthly transportation forecasts, changes in car flow directions, and arrangement of empty car technical routes;
- ▶ programs for aggregate loading scheduling based on consignors' requisitions and empty car traffic plans of rolling stock operators for a next month have been prepared;
- ▶ simulation of a resource-based model of infrastructure used in the eastern part of the network ensures the prompt assessment of technological and economic capabilities of car flow handling;
- ▶ a number of special-purpose schedules for through-running train handling in heavy-traffic directions is gradually increasing.

Based on accurate details of routes, scopes, frequency of freight car traffic for a scheduling period provided for in the CNP and given by operators and consignors, JSC "RZD" will be able to effectively plan transportation, distribute hauling resources, repair operations, and regulate the use of infrastructure capacities.

One of the key elements of the new system will be a transition to monthly transportation planning not only with regard to freight, but also empty cars (requisitions used to be received in a steady flow). The stable presentation of freight for transportation under a schedule which guarantees the operators an appropriate provision of empty cars will enable the synchronization of processes between enterprises and railways, determine optimal train paths, enhance the rolling stock performance along the route in general and, consequently, reduce the demand in the number of cars to handle available freight volumes.

It needs to be understood that the progressive principles of the Common Network Process will not be able to be fully implemented without changes in transport laws. In 2012, JSC "RZD" submitted relevant proposals to federal authorities with regard to:

- ▶ determination of a rational number of car fleets in the public infrastructure;
- ▶ state-level development of the requirements for rolling stock owners and operators: they must have sufficient capacity to deploy car fleets on private tracks;
- ▶ revision of the car allocation procedure established by the Russian Ministry of Transport, prohibiting the allocation of newly received rolling stock to public tracks only;
- ▶ vesting JSC "RZD" with a right to move cars not used in transportation to paid standby lots or their allocation to private tracks at the expense of the car owner or operator;
- ▶ allocation of responsibility to rolling stock owners and operators if they fail to accept unclaimed empty cars on private tracks, delay these cars on public tracks waiting for provision and if cars are delayed en route through no fault of the carrier. Responsibility shall be equal to a charge for a car on standby on public tracks.

Borrowed car fleet (PBC fleet)

In order to overcome any negative market effects and ensure social transportation to the fullest extent, JSC "RZD" has proposed to the government to generate a fleet of leased and borrowed cars and the government accepted this proposal.

In late December 2011, the resolution of the government was accepted; it regulates a procedure for rolling stock borrowing by "Russian Railways" and special pricing procedure with regard to borrowed car fleet transportation (No. 1051). In pursuance of this document, JSC "RZD" and JSC "FFC" entered into a contract for the lease of 105 th. open cars (private borrowed car fleet, PBC) on 26 January 2012. The legal status of the PBC fleet is similar to that of a carrier's fleet (common park), but subject to tariff regulation peculiarities established by decree No. 444-т/4 of the Russian FTS dated 27 December 2011. Therefore, the cost of services related to the use of borrowed cars is determined based on standard indicators for all-purpose open cars, with a borrowing cost and adjusting factor (from 0.7 to 1.1).

In 2012, the PBC fleet accounted for 22% of the total open car fleet across various forms of ownership. Its share of freight loading onto open cars in the railway network was a little larger: 24.2%. In 2012, open cars of the PBC fleet transported more than 140 mln tons of freight (2,139.2 th. car deliveries).

The PBC fleet filled a problematic niche of the transport market as it undertook service of consigners with small transportation volumes (car freight) and well as low-profit and socially significant transportation to housing and communal enterprises, utilities, Ministry of Defense — transportation segments unattractive to other freight car owners. The share of specified transportation in the PBC fleet freight turnover is around 60%.

In the commodity mix of PBC's fleet transportation, coal (51.4% of the volume of transportation) and construction freight have a large share (32.4%).

Work scheduling using borrowed open cars from a pool of locomotives controlled by JSC "RZD" eliminated a local shortage of rolling stock. The Company also managed to dramatically improve transportation procurement for small and medium-size consigners of single cars and small car groups (i.e. in the segment of deliveries that have no steady logistics schemes). The creation of the PBC fleet that operates at rates approved by the Russian Government has helped keep down prices in the transport service market.

However, car borrowing is considered to be a temporary stabilizing measure. In pursuance of the governmental decree, PBC fleet operation is extended until the end of 2013 and open cars may only be borrowed from JSC "FFC" up to a maximum of 88 th. units (No. 1467). To ensure steady rail transport operations, a set of measures is required as a part of the Common Network Process (CNP).