



CFR NETWORK STATEMENT - 2023

ANNEX 25.c **PRINCIPLES OF ALLOCATING DIRECT COSTS FOR IAC**

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COMPANIA NATIONALA DE CAI FERATE CFR SA

Principles regarding the allocation modality of direct costs taken into account when calculating the Infrastructure Access Charge (IAC)

1. GENERAL PRINCIPLES REGARDING IAC CALCULATION MODALITY

For the circulation of a train on the railway infrastructure managed by the CFR between two points (stations) of the network, without shunting or (re)fueling services, CFR calculates and levies an Infrastructure Access Charge (IAC). IAC applies indiscriminately to all RUs for similar conditions of transport.

IAC is calculated by CFR for the services provided within the minimum access package defined in paragraph 1 of Annex II to Law 202/2016 on the integration of the Romanian railway system into the single European railway area, hereinafter referred to as MAP, with further amendments and supplements, hereinafter referred to as Law 202/2016.

In accordance with Art. 31(3) of Law no. 202/2016 on Romania's integration into the single European railway area including subsequent amendments and additions (hereinafter referred to as Law 202/2016), which constitutes the transposition of EU Directive no. 2014/34,

"... the charges for the minimum set of services and for the access to the infrastructure connecting the service facilities are stated at the direct cost attributable to the operation of rail transport services, in accordance with the measures adopted by the European Commission, through implementing acts, on the methods of calculating costs incurred directly as a result of the operation of a train."

The implementing act is the Implementing Regulation (EU) 2015/909 on the methods of calculating the costs generated directly from the operation of the rail transport service (hereinafter referred to as EU Regulation 2015/909).

In order to explain the principles regarding the method of allocation of direct costs (the direct cost attributable to the operation of railway transport services) related to IAC, we shall demonstrate in the following, some general aspects regarding the method of calculating IAC.

As shown in art. 5.3.2 of NRD, IAC is calculated on the basis of the "Methodology for charging the use of railway infrastructure", approved, according to the legal provisions, by the Activity and Performance Contract of Compania Națională de Căi Ferate "C.F.R." - SA, methodology which is presented in [Annex 25.a](#) of the NRD.

Within this methodology, it is provided that IAC is calculated for each train that runs on the railway infrastructure operated by CFR SA, based on a formula that includes values of the basic charging elements according to the line category on which the train runs.

In order to determine the value of the basic charging elements, the traffic lines of the railway infrastructure are classified according to the maximum speed allowed by the line, on line categories from A (lines with a maximum speed of over 121 km/h) to D (lines with a speed of maximum up to 50 km/h).

The line categories and the distribution modality of the line categories in sections for IAC calculation are presented in Art. 6 and Art. 7 of the methodology, and the list of line categories for IAC sections is approved, according to the legal provisions, by the Activity and Performance Contract of Compania Națională de Căi Ferate

"C.F.R." - SA. The list of sections for the calculation of IAC classified by line categories can be found in [Annex 25.b](#) of the NRD.

The value of the basic charging elements is determined at the level of the direct cost related to the activity of the charging element, for each category of line. Thus, the basic charging elements represent the direct cost related to the registered charging element for traveling one kilometer on the respective line category.

Direct costs mainly include the costs of line maintenance and repair, those for traffic activities (traffic management, signaling equipment, etc.) as well as those for ensuring the supply of traction electricity (for electrification).

The basic charging elements applicable for determining IAC are structured according to Table no. 1, for each type of freight or passenger traffic:

Tabel No. 1

Name of the charging element	Basic charging elements			
Charging elements depending on train tonnage	Charge per train-km depending on tonnage (lei/ train-km)			
	A	B	C	D
Category of line	A	B	C	D
Traffic lines	T_{tsn}	T_{tsn}	T_{tsn}	T_{tsn}
Minimum tonnage	T_{min}	T_{min}	T_{min}	T_{min}
Tonnage factor	F_t	F_t	F_t	F_t
Charging elements depending on distance	Charge per train-km depending on distance (lei / train-km)			
	A	B	C	D
Category of traffic line	A	B	C	D
Traffic	T_c	T_c	T_c	T_c
Electrification	T_{tse}	T_{tse}	T_{tse}	T_{tse}

The basic charging elements have the following meaning:

T_{tsn} – the charge depending on the tonnage for each km of line category;

T_{min} – represents the gross tonnage of the train starting from which the tonnage factor is applied; for trains with a tonnage lower than T_{min} , T_{tsn} related to T_{min} is applied.

F_t – the tonnage factor represents a correction coefficient to be applied to the gross train tonnage;

T_c – represents the traffic charge depending on the distance for every km of line category.

T_{tse} – represents the charge for the use of electrification equipment for each km of category of electrified line and does not include the value of traction power;

Direct costs mainly include:

- for T_{tsn} - line maintenance and repair costs depending on train tonnage;
- for T_c - the costs of traffic activities (traffic management, signaling equipment, etc.);
- for T_{tse} - the costs for ensuring the supply of traction power (for electrification).

(2) The IAC value for a train circulating on a traffic route shall be calculated as the sum of the charges for each distance run on a traffic section (section IAC), depending on its category, by using the following formula:

$$\text{IAC} = \Sigma \text{ section IAC}$$

where:

$$\text{section IAC} = \text{tonnage IAC} + \text{traffic IAC} + \text{electrification IAC}$$

and:

tonnage IAC - represents the railway infrastructure access charge for a traffic IAC section category depending on the distance run and the train tonnage and shall be calculated with the formula:

$$\text{tonnage IAC} = Km \times Ttsn [1 + (\text{Gross tonnage} - Tmin) \times Ft]$$

where:

Km = the number of km covered on the IAC section;

Ft = 0 for the trains with a gross tonnage below *Tmin*;

Gross tonnage = the gross tonnage of the train according to the form „Wagon Display”, inclusively of the locomotives in action or the tonnage of the locomotives or self-propelled units for the traffic without hauled rolling stock.

- traffic IAC - represents the charge for the traffic management depending on the distance covered and shall be calculated with the help of the formula:

$$\text{traffic IAC} = Km \times Tc$$

where:

Km = the number of km covered on the IAC section.

electrification IAC - represents the charge for the use of electrification equipment for each category of electrified line, only for trains with electric traction, depending on the distance traveled and is calculated with the formula:

$$\text{electrification IAC} = Km \times Ttse$$

where:

Km = the number of km traveled on the IAC section with electric traction;

From the assembly within the methodology formula of the values of these charging elements specific to the line categories related to the traffic route of a train, results the IAC value for that train.

The values of the basic charging elements for the calculation of IAC for each class of IAC and by type of freight or passenger traffic mentioned in the methodology are established by CFR SA, in accordance with the provisions of the Activity and Performance Contract of CFR SA for the period 2021-2025.

As a result, there are the basic charging elements that actually determine the IAC value for a run train.

The values of the basic charging elements for the calculation of IAC valid for the period of the train timetable in force are presented in paragraph 1.2 of [Annex 26.a](#)

2. METHODS OF APPROACHING THE DETERMINATION OF DIRECT COSTS FOR IAC

As we have shown before, the value of IAC is represented by the value of the basic charging elements established at the level of direct costs, depending on the category of the line used.

In the first stage, starting from the total operating expenses, the total value of the net direct costs related to the IAC (or MAP) is determined, which is allocated to the specific basic activities.

In the second stage, by modulating them according to the line categories provided in the IAC calculation methodology, the values of the basic elements used in the IAC calculation formula are obtained.

Considering the provisions of art. 3(5) of Regulation 2015/909, in principle there can be two ways of approaching the determination of the direct costs related to the provision of MAP:

a) depending on the forecast costs

This method considers the determination of the forecast direct costs related to the provision of the MAP estimated for the calendar year following the train timetable in force (forecast cost - as shown in art. 5, last paragraph of EU Regulation 2015/909) which is calculated according to the forecast direct costs eligible for the MAP for the next reference period. In this case, the forecast traffic data provided by the RUs for traffic sections will be used, or if they cannot be provided by the railway undertakings, the traffic data related to the previous period can be used, or updated data can be used with an index forecast by CFR in its capacity as railway infrastructure manager according to the previous evolution of the train km indicator.

Considering that during the evaluation period of the forecast costs for the next year (usually in the middle of the current year), the amounts related to the transfers from the state budget are not yet determined (the CFR budget is approved later, usually only in the first part of the following year) these transfers are forecast according to the mechanism for establishing budgetary transfers related to the last available period (e.g. the current year).

b) according to actual (previous) costs

When the forecast data on direct costs for the next year or those on budget transfers are not available or cannot be forecast with sufficient accuracy for the next reference period (next year) an option is to use the actual direct costs available for the immediate previous period (effective cost - as shown in art. 5, last paragraph of EU Regulation 2015/909), calculated according to the actual direct costs eligible for the MAP for the previous reference period (budget year already completed). In this case, traffic data from the previous period will be used.

b.1) according to current and forecasted costs

This is a variant of mode b) combined with mode a), which considers the actual costs for the period already elapsed from the current year up to the cost assessment period for the next year (usually in the middle of the current year) plus the forecast costs up to the end of the current year.

3. THE MODE TO ALLOCATE THE DIRECT COSTS CONSIDERED IN IAC CALCULATION

The present mode of allocating the direct costs taken into account when calculating IAC mainly takes into account the provisions of Law 202/2016 and EU Regulation 2015/909.

In this sense, the mode of highlighting CFR costs was also updated in order to adapt to the normative provisions. For this CFR developed two data models, as follows:

- a model **highlighting the costs related to CFR staff** broken down by main activities (Lines, Installations, Traffic, Electrification, other activities), grouped by: basic units of Regional Railway Branches, the headquarters of the Regional Railway Branches and the headquarters of CFR, hereafter called **Annex 1** (cost with the personnel). This model is fed with specific data by Regional Railway Branches 1-8 and is centralized at the CFR level and includes all CFR personnel expenses divided into (i) personnel costs for IAC, (ii) administrative personnel expenses, (iii) personnel fixed costs and (iv) other personnel costs not eligible for IAC.

- a complex model **highlighting the related cost chapters** that includes both the detailing of some cost chapters and their breakdown by main activities (Lines, Installations, Traffic, Electrification, Common Activities, Operating Buildings and Other Activities), hereafter called **Annex 2** (operating expenses) which also includes the mode of determining the direct costs related to MAP (IAC).

Annex 1 and Annex 2 are completed with the data required by the form both at the level of each of the 8 CFR regional branches and at the level of the CFR headquarters, the data provided being then summed up in a matrix to obtain the costs at the overall level of CFR.

Throughout this article, cost will be understood as actual cost or forecast cost, depending on the approach adopted a) or b).

In any of the two approaches from paragraph 2, the direct cost related to IAC is determined starting from Annex 1 and Annex 2 drawn up for the forecast costs or for those recorded in the completed budget year as follows:

3.1. Determination of total operating expenses

The total operating expenses represent the gross operating costs of CFR with putting at the disposal of the railway infrastructure and are calculated as the sum of the expenditure chapters from A to D in Annex 2.

This cost mainly includes:

- the operational cost for the operation of the network (maintenance costs, traffic management, other operational costs and other general costs);
- cost of capital (including financial and interest cost and cost of capital);
- total subsidies in relation to PAM provision;
- subsidies for the capital cost and for the operational cost.

3.2. Determination of Total Gross Cost for MAP

This cost is obtained by subtracting the following cost elements from the Total Operating Expenses:

- the cost for services related to adjacent services (which are not part of the MAP) provided by CFR at the request of the RUs (costs related to social security) and administrative costs related to social security,
- the costs for other services (charges) that are not part of the MAP, such as e.g. the charge for driving the traffic on non-interoperable sections;

3.3. Determination of the Gross Eligible Cost for MAP (IAC)

This cost can be obtained by two methods:

- a) the method indicated in Art. 3(1) of EU Regulation 2015/909

For this, from the Gross Total Cost for MAP (Art. 3.2) there is deducted, in principle, in a first stage, a part of the non-eligible costs for the direct cost, referred to in art. 4 of the same Regulation:

- the fixed cost related to the administrative cost for all personnel (from Annex 1);
- the fixed cost with the personnel used regardless of the traffic volume (from Annex 1);
- other ineligible costs with the personnel (from Annex 1);
- other ineligible costs highlighted in Annex 2;
- fixed cost with the personnel on the sections without traffic (from Annex 1);
- subsidies (budgetary allocations) for costs with CFR personnel not involved in MAP-related activities (IAC);
- subsidies (budgetary allocations) for investment activities;

b) the method of using the data from Annex 2 from which there are highlighted and taken into account only the gross eligible costs related to the MAP highlighted in Annex 2.

In principle, the amount of these costs collected from the data provided by Regional Railway Branches 1-8 should be equal with the amount of costs determined by method a).

3.4. Determination of the Direct Cost related to MAP (IAC)

This cost is obtained by deducting from the Gross Eligible Cost for the MAP (IAC) of the second stage of ineligible costs for the direct cost, mentioned in Art. 4 of EU Regulation 2015/909:

- TOTAL budget amounts for maintenance, repairs and operation of the railway infrastructure;
- Budget amounts for social security for the Traffic personnel;
- Social security salary cost + other tariffs;
- other ineligible costs.

This cost represents the direct cost related to MAP (i.e. actually the total cost of IAC) for the reference period depending on the volume of services in the case of using method 2a) - forecasted traffic elements (using statistical indices of traffic variation) or in the case of using the method 2b) – historical data (traffic already performed).

4. MODULATION OF DIRECT COSTS TO DETERMINE THE VALUES OF THE BASIC CHARGING ELEMENTS FOR IAC CALCULATION

In accordance with Art. 5(2) of Regulation 2015/909, within the charging methodology for the use of the railway infrastructure, the modulation of the average direct unit costs (the basic charging elements) is provided, depending on elements such as:

- line category (established according to the maximum speed allowed by the line);
- the train mass;
- the use of traction power equipment;

according to Table no. 1 from Article 1 of these principles.

In this sense, the values of the basic charging elements were modulated within the consultancy project "Calculation of Infrastructure Access Charges", carried out by the consultancy firm First Class Partnerships (FCP) Ltd. from England.

These values are matrix adjusted with a correction coefficient so that the amount resulting from their application within the calculation formula according to the methodology at the level of the reference period according to the distance traveled by each train on the line categories according to the route as well as the use of equipment to be equivalent with the total direct cost for IAC determined in paragraph 3.4. above.

For this, CFR, with the logistical support of SC "Informatica Feroviara" SA, performs a simulation with the new values obtained for the basic charging elements modulated according to those shown above and elaborates reports by line categories and reports by RUs in which it highlights the amounts obtained related to IAC. Normally, as we have shown previously, the total amounts related to IAC must be comparable to the total direct cost for IAC determined in paragraph 3.4. above.

5. ESTABLISHING BASIC CHARGING ELEMENTS FOR IAC CALCULATION

As I have shown before, the modulation of direct costs actually means the establishment of the basic charging elements used in the IAC calculation formula and actually determines the IAC value for a train that runs on various categories of lines on the CFR network.

The establishment of these values (which in fact represents the establishment of IAC, as we have shown above) is one of the two essential functions of CFR, in addition to that of assigning infrastructure capacities and for which CFR in its capacity as the administrator of the railway infrastructure benefits of functional independence in accordance with the provisions of Law 202/2016.

Anyway, the method of establishing IAC is subject to checks by the National Supervisory Council in the Railway Sector.

The values of the basic charging elements are published by CFR in accordance with the normative provisions in force in the Network Reference Document (NRD).

These values can be modified by CFR under the conditions of the regulatory documents in force depending on the evolution of the specific cost elements.