ANNEX 6A
COMPENSATION FOR TRAIN SERVICE DISRUPTIONS
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1 INTRODUCTION

This annex sets out the method of calculating compensation for train service disruption resulting from the execution of investment works (engineering works and upgrades) on the public rail infrastructure (PRI).

PRI is the property of the Republic of Slovenia, and is used by RUs based on allocation of train path capacity. The Infrastructure Manager (IM), who manages the PRI for and on behalf of the country and makes it available to RUs for normal use, allocates train paths. The IM makes the PRI available for use in line with the conditions of the train path concerned and the conditions laid down in the Network Statement, which are applicable to a particular request for train path capacity.

As part of managing the PRI, the IM in cooperation with the RUs needs to maintain rail safety when infrastructure works (i.e. engineering works and upgrades) are in progress. To this aim, the IM plans track closures and sets line speed limits, which can cause disruptions to train services and affect the use of train paths allocated to RUs. This in turn triggers delays, train rerouting to diversionary routes or cancellation of train paths with alternative paths allocated or not. As such instances prevent the intended use of train paths; the investor (with the intervention of the IM if needed) is obliged to pay compensation to the RUs for the damage incurred.

1.1 ELIGIBLE EVENTS

Compensation paid to RUs due to infrastructure works is applicable to closures due to civil engineering works and upgrades in progress on the PRI as of 1 January 2018 and classified as major works. Below is a list of eligible events for compensation.

Table 1: Description of eligible events

<table>
<thead>
<tr>
<th>Damage event attributable to infrastructure works</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Train delay</td>
<td>Train delay means an event causing damage to the RU («damage event») if a train exceeds the scheduled journey time for the train path concerned and this delay was caused by service disruptions (closures or speed restrictions) due to infrastructure works (engineering works and upgrades).</td>
</tr>
</tbody>
</table>
| 2. Amendment of conditions of carriage | Amendment of conditions of carriage on the train path means any event where:
- the IM cancels, due to infrastructure-related disruptions, track access to service facilities for a particular train path, or when
- the conditions of carriage are restricted in a way which requires changing the manner of transport originally planned or, alternatively, calls for additional measures to run the train service affected. |
| 3. Additional train path | Additional train path is a damage event which occurs when a restriction of carriage conditions necessitates allocating an additional train path to complete the carriage of goods which would otherwise be carried by a single train on the train path originally allocated. |
| 4. Cancelled train path with alternative path or rail replacement bus service | Alternative train path is a damage event associated with service disruptions (closures or speed restrictions) due to infrastructure works (engineering works and upgrades) where an alternative or other train path is allocated to replace the train path originally allocated or when the affected train path is replaced, completely or in part, by a rail replacement bus service. |
5. **Cancelled train path without alternative path or rail replacement bus service**

Cancelled train path without alternative path is a damage event where a train path was cancelled due to service disruptions (closures or speed restrictions) attributable to infrastructure works (engineering works and upgrades) and cannot be replaced by an alternative train path / bus service or when the alternative path / bus service is refused by the RU for good reason.

### 1.2 COMPENSATION CALCULATION ITEMS

Compensation recognised by the IM for infrastructure works is calculated using the basic items of compensation listed below.

**Table 2: List of basic items of compensation**

<table>
<thead>
<tr>
<th>Type of transport</th>
<th>Basic items of compensation</th>
<th>Compensation item per km for cancelling a train path (TP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minute of delay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail passenger (PP)</td>
<td>$PP_{\text{min}} = €3.37$</td>
<td>$PP_{K\text{min}} = €6.85$, $PP_{K\text{m}} = €11.03$</td>
</tr>
<tr>
<td>Rail freight (PT)</td>
<td>$PT_{\text{min}} = €3.07$</td>
<td>$PT_{K\text{min}} = €10.45$, $PT_{K\text{m}} = €8.56$</td>
</tr>
</tbody>
</table>

The list of basic items of compensation is comprised according to:

- Public data published in RUs' reports; compensation items factor in the cost of material, cost of services, labour costs, write-offs and other expenses relating to the supply of train services, with the compensation item for train path cancellation also taking into account a portion of the revenue,
- RUs' timetable data (train service volume in minutes and kilometres) on scheduled services actually operated (train movement), and
- A coefficient for differentiation of compensation items, which factors in the business interest of RUs affected by a particular damage event and is recognised by the IM.

The IM, in cooperation with investor, reserves the right to adjust the amount of compensation according to the impact of infrastructure works (scale and duration) on the timetable by using the coefficient for differentiation of impact of track closure duration ($k_{\text{td}}$).

The coefficient for differentiation of closure duration impact ($k_{\text{td}}$) that is used in the calculation of the compensation is listed in the sheet of the compensation recognised.

### 1.3 CALCULATION OF COMPENSATION

Compensation is calculated for train service disruptions which occur due to infrastructure works (engineering works and upgrades). The scale of a damage event is identified from the period when track closures were set in place for works associated with a particular engineering project.

The calculation is done for damage events which are identified as eligible according to the public data and records of the IM. Damage events are processed separately for rail passenger and rail freight, with compensation calculated according to the methodology below.

Data on damage events is processed after engineering projects and aggregated in a compensation sheet (list) of infrastructure works by RU and by event type. The sheet includes the scale of damage events and the amount of compensation recognised for a particular RU.
2 CALCULATION METHODOLOGY

The models used to calculate compensation differ between rail passenger and rail freight. While both models use the same concept, different variation factors are applied in the calculation to factor in the characteristics of and differences between the two modes, as well as the mode-specific business impacts of damage events.

Compensation for train delay is capped at a certain amount for both transport modes. In rail freight, compensation for train path cancellation is limited by the length of train path recognised in the calculation.

In the model factors the impact of track closure duration on RUs’ business because of the proportional effect of closure duration on passengers’ decision to use rail services and the associated reductions in ridership along with a long-term shift to other transport modes, which cause damage to RUs’ business. The IM define the impact of track closure duration separately for freight and passenger traffic.

Below is a list of models by damage event – separately for rail passenger and rail freight – used to calculate the compensation. Both models are used for single train path or part thereof that makes up a train path or, in case of cancellation, a planned train path of specific train.

2.1 RAIL PASSENGER

2.1.1 COMPENSATION FOR DELAY

Compensation for delay in rail passenger is calculated using the following formula:

\[ ODP_{Zam} = F_{tp} \times PP_{min} \times (ZK_{inv}:300)_{min} \times (k_{tzp})_{DTR>60} \times (F_{vl})=DZ \]

in which:
- \( F_{tp} \) – time progression factor for passenger trains:

<table>
<thead>
<tr>
<th>Train delay (ZK_inv)</th>
<th>Time progression factor (F_tp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 min ≤ ZK_inv ≤ 5 min</td>
<td>( F_{tp} = 1,1 )</td>
</tr>
<tr>
<td>5 min ≤ ZK_inv ≤ 10 min</td>
<td>( F_{tp} = 1,2 )</td>
</tr>
<tr>
<td>10 min &lt; ZK_inv ≤ 20 min</td>
<td>( F_{tp} = 1,3 )</td>
</tr>
<tr>
<td>20 min &lt; ZK_inv ≤ 30 min</td>
<td>( F_{tp} = 1,4 )</td>
</tr>
<tr>
<td>30 min &lt; ZK_inv ≤ 60 min</td>
<td>( F_{tp} = 1,5 )</td>
</tr>
<tr>
<td>60 min &lt; ZK_inv ≤ 120 min</td>
<td>( F_{tp} = 1,6 )</td>
</tr>
<tr>
<td>120 min &lt; ZK_inv ≤ 300 min</td>
<td>( F_{tp} = 1,7 )</td>
</tr>
</tbody>
</table>
- \( PP_{min} \) – base compensation item per minute of delay in rail passenger,
- \( ZK_{inv} \) – final delay, which is a sum of delay increments due to engineering works and upgrades recorded at check points (stops and stations): \( ZK_{inv} = \sum Z_{inv} \),
- \( k_{tzp} \) – coefficient for differentiation of closure duration impact \((k_{tzp} \geq 1)\); determined by the IM,
- \( DTR \) – total days of track closure anywhere on the network; \( k_{tzp} \) is factored in if a track closure exceeds a period of 60 days,
- \( F_{vl} \) – traction factor; \( F_{vl} = 1,4 \), when diesel traction is used, the traction factor is applied for the entire train path.
2.1.2 COMPENSATION FOR AMENDMENT OF THE CARRIAGE CONDITIONS FOR THE TRAIN PATH

When an amendment of the technical conditions of carriage is issued for a train path allocated, RUs are eligible to compensation for changes which include a restriction on train mass or axle-load, restriction on train length, restriction on clearance gauge, and restriction due to failure of the overhead lines.

Compensation for restriction on carriage conditions \( OD_{omej} \) is a fixed sum:

\[
OD_{omej} = \text{EUR 120}
\]

RUs are eligible to this kind of compensation because of the costs associated with arranging and operating replacement tractive units, additional shunting and other unplanned train movement. Compensation for a carriage condition restriction is set according to the average cost of shunting, which includes an hour of shunting work done by a shunting locomotive and a shunter.

2.1.3 COMPENSATION FOR CANCELLED TRAIN PATH WITH ALTERNATIVE PATH OR RAIL REPLACEMENT BUS SERVICE

Compensation for a train path that was cancelled and replaced by an alternative train path or by rail replacement bus service is calculated using the following formula:

\[
ODP_{odpN} = (PP_{KMn} \times NR \times F_{NAP} + SP_D) \times (k_{tzp})_{DTR>60}
\]

\[
SP_D = (KM_N - KM_0)_{>0} \times PP_{KMn}
\]

in which:

- \( PP_{KMn} \) – base compensation item per km for cancellation involving an alternative train path or a rail replacement bus service in rail passenger,
- \( NR \) – normalised distance; \( NR=50 \text{ km} \),
- \( SP_D \) – cost of increase in the length of alternative train path for passenger train,
- \( KM_N \) – length of alternative train path,
- \( KM_0 \) – length of train path originally allocated,
- \( k_{tzp} \) – coefficient for differentiation of closure duration impact \( (k_{tzp} \geq 1) \); determined by the IM,
- \( F_{NAP} \) – cost factor of rail replacement bus service \((F_{NAP} = 1,33)\),
- \( DTR \) – total days of track closure anywhere on the network; \( k_{tzp} \) is factored in if a track closure exceeds a period of 60 days.

When a train path is replaced by a bus service, the cost of alternative train path has a value of zero in the calculation \( (SP_D=0) \). The cost factor of rail replacement bus service represents the compensation of the cost of the RU which are incurred as a result of the difference between the total cost of the rail replacement bus service incurred by the RU and the reimbursement of the cost of the rail replacement bus service according to the relevant contract on the discharge of public service obligations received by the RU under the contract on the provision of a compulsory commercial public passenger transport service. The cost factor of the rail replacement bus service is determined by the IM for each report period on the basis of the received evidence on the actual and reimbursed costs of the rail replacement bus service during the report year to add up to \( F_{NAP} = 1,33 \).

2.1.4 COMPENSATION FOR CANCELLED TRAIN PATH WITHOUT ALTERNATIVE PATH

Compensation for a train path that was cancelled and was not replaced by an alternative path or by rail replacement bus service is calculated using the following formula:

\[
ODP_{odp} = PP_{KM} \times D \times (k_{tzp})_{DTR>60}
\]

in which:

- \( ODP_{odp} \) – base compensation for cancellation in rail passenger without alternative train path or rail replacement bus service,
- \( PP_{KM} \) – base compensation item per km for cancellation without alternative train path or rail replacement bus service in rail passenger,
- \( D \) – length of the cancelled train path,
- \( k_{taz} \) – coefficient for differentiation of closure duration impact \((k_{taz} \geq 1)\); determined by the IM,
- \( DTR \) – total days of track closure anywhere on the network; \( k_{taz} \) is factored in if a track closure exceeds a period of 60 days.

2.2 RAIL FREIGHT

2.2.1 COMPENSATION FOR DELAY

Compensation for delay in rail freight \((OD_{zamT})\) is calculated using the following formula:

\[
OD_{zamT} = F_{tt} \cdot PT_{min} \cdot \left( ZK_{inv} \left\{ \begin{array}{ll}
ZK_{inv} \leq 300 \text{ min} & \Rightarrow 1 \\
300 \text{ min} < ZK_{inv} \leq 60 \text{ min} & \Rightarrow \left( k_{tzt} \right)_{DTR>60} \\
60 \text{ min} < ZK_{inv} \leq 300 \text{ min} & \Rightarrow \left( F_{vl} \right)_{DZ}
\end{array} \right. \right)
\]

in which:
- \( F_{tt} \) – time progression factor for freight trains
- \( PT_{min} \) – base compensation item for a minute of delay in rail freight
- \( ZK_{inv} \) – final delay owing to engineering works and upgrades is calculated by dividing the sum of delays due to engineering works and upgrades \((Z_{inv})\) by the sum of all delays on the train path \((Z_{sum})\) and multiplying the ratio by the delay at final destination \((ZK)\), as follows:
  \[
  ZK_{inv} = \frac{Z_{inv}}{Z_{sum}} \cdot ZK
  \]
- \( k_{tzt} \) – coefficient for differentiation of closure duration impact \((k_{tzt} \geq 1)\); determined by the IM,
- \( DTR \) – total days of track closure anywhere on the network; \( k_{tzt} \) is factored in if a track closure exceeds a period of 60 days,
- \( F_{vl} \) – traction factor; \( F_{vl} = 1,4 \), when diesel traction is used, the traction factor is applied to the entire train path.

2.2.2 COMPENSATION FOR AMENDMENT OF THE CARRIAGE CONDITIONS FOR THE TRAIN PATH

When an amendment of the technical conditions of carriage is issued for a train path allocated, RUs are eligible to a compensation for changes which include a restriction on train mass or axle-load, restriction on train length, restriction on clearance gauge, and restriction due to failure of the overhead lines.

Compensation for restriction on carriage conditions \((OD_{omej})\) is a fixed sum:

\[
OD_{omej} = 120 \text{ EUR}
\]

RUs are eligible to this kind of compensation because of the costs associated with arranging and operating replacement tractive units, additional shunting, goods handling and other unplanned train movement. Compensation for a carriage condition restriction is set according to the average cost of shunting, which includes an hour of shunting work done by a shunting locomotive and a shunter.

2.2.3 COMPENSATION FOR CANCELLED TRAIN PATH WITH ALTERNATIVE PATH

Compensation for a train path in rail freight that was cancelled and replaced by an alternative train path \((ODT_{odpN})\) is calculated using the following formula:
\[ ODT_{odpN} = (PT_{KMn} \cdot NR + ST_D) \cdot (k_{tzt})_{DTR>60} \]

\[ ST_D = (KM_N - KM_0)_{>0} \cdot PT_{KMn} \]

in which:
- \( PT_{KMn} \) – base compensation item per km for cancellation involving an alternative train path in rail freight,
- \( NR \) – normalised distance; \( NR=30\text{km} \),
- \( ST_D \) – cost of increase in the length of alternative train path for freight train,
- \( KM_N \) – length of alternative train path,
- \( KM_0 \) – length of train path originally allocated,
- \( k_{tzt} \) – coefficient for differentiation of closure duration impact (\( k_{tzt} \geq 1 \); determined by the IM),
- \( DTR \) – total days of track closure anywhere on the network; \( k_{tzt} \) is factored in if a track closure exceeds a period of 60 days.

RU\( s \) are eligible to a compensation of costs associated with the length of alternative train path (\( ST_D \)) that is greater than the length of the train path originally allocated. RU\( s \) are not eligible to compensation for an alternative train path shorter than the path originally allocated (\( ST_D=0 \)). The cost increase relating to diesel traction or to banking / double heading required on the alternative train path is included in the base compensation item per km (\( PT_{KM} \)).

When the alternative train path has the same point of departure and destination as the train path originally allocated or when the alternative path does not enter a foreign rail network, only the difference in train path lengths on the Slovenian rail network (\( KM_N = (KM_{NS})_{>0} + (KM_{NT})_{>0} \)) is factored in.

When the alternative train path enters a foreign network, the calculation includes the additional distance the train covers there owing to a change of the train path on the Slovenian rail network. For each change of train path on the Slovenian network (i.e. change of border crossing), the calculation factors in the relevant alternative train paths (via alternative border crossings) on the foreign network which lead up to stations of destination or transport hubs most frequently travelled to via these border crossings. The combinations of alternative train paths and differences in path length are shown in Table 3 below. When greater than the original, the length of alternative train path, , is calculated through the sum of length of alternative train path on Slovenian rail network and the normalised difference in path length on foreign rail network when this difference is greater than 0 (according to Table 3):

\[ KM_N = (KM_{NS})_{>0} + (KM_{NT})_{>0} \]

in which:
- \( KM_N \) – length of alternative train path
- \( KM_{NS} \) – length of alternative train path on Slovenian rail network
- \( KM_{NT} \) – length of alternative train path on foreign rail network

<table>
<thead>
<tr>
<th>Foreign hub of destination</th>
<th>FROM*</th>
<th>TO*</th>
<th>Šentilj border (Spielfeld)</th>
<th>Jesenice border (Rosenbach)</th>
<th>Hodoš border (Oriszentpeter)</th>
<th>Dobova border (Savski Marof)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vienna</td>
<td>Šentilj border (Spielfeld)</td>
<td></td>
<td>107</td>
<td>-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salzburg</td>
<td>Jesenice border (Rosenbach)</td>
<td></td>
<td>133</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budapest</td>
<td>Hodoš border (Oriszentpeter)</td>
<td></td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tovarnik</td>
<td>Dobova border (Savski Marof)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Difference in length of train paths on foreign networks owing to a change in the point of handover (FROM/TO)
### 2.2.4 Compensation for Cancelled Train Path Without Alternative Path

Compensation for a train path that was cancelled and was not replaced by an alternative path \((\text{ODT}_{\text{odp}})\) is calculated using the following formula:

\[
\text{ODT}_{\text{odp}} = \text{PT}_{KM} \times (D; 120)_{\min} \times (k_{\text{tzt}})_{\text{DTR} > 60}
\]

in which:
- \(\text{PT}_{KM}\) – base compensation item per km for cancellation without alternative train path in rail freight
- \(D\) – length of cancelled train path; the length of cancelled train path is capped at 120km,
- \(k_{\text{tzt}}\) – coefficient for differentiation of closure duration impact \((k_{\text{tzt}} \geq 1)\); determined by the IM,
- \(\text{DTR}\) – total days of track closure anywhere on the network; \(k_{\text{tzt}}\) is factored in if a track closure exceeds a period of 60 days.

### 2.2.5 Compensation for Additional Train Path

RUs are eligible to compensation for additional train path \((\text{ODT}_{\text{dod}})\) when a restriction on carriage conditions necessitates allocating an additional train path to complete the carriage of goods planned.
on the train path originally allocated, which would otherwise be carried out without an additional train path. This compensation covers the length of additional train path travelled by the RU – excluding any surcharges – and is calculated using the following formula:

$$ODT_{dod} = PT_{KMn} \cdot KM_D \cdot (k_{tzt})_{DTR>60}$$

in which:
- $PT_{KM}$ – compensation item per km for cancellation without alternative train path in rail freight,
- $KM_D$ – length of additional train path travelled,
- $k_{tzt}$ – coefficient for differentiation of closure duration impact ($k_{tzt} \geq 1$); determined by the IM,
- $DTR$ – total days of track closure anywhere on the network; $k_{tzt}$ is factored in if a track closure exceeds a period of 60 days.

The length of additional train path ($KM_D$) is calculated as a sum of the train path length on Slovenian rail network and the normalised distance for the foreign network.

In case an additional train path on Slovenian network also necessitates an additional path abroad, the compensation for the latter will be calculated using the distance from the border crossing where the train service exited Slovenian network to the closest marshalling yard on the foreign network, as shown in Table 4.

**Table 4: Distances between the border crossing on Slovenian network and the closest marshalling yard on the foreign network**

<table>
<thead>
<tr>
<th>Border crossing on Slovenian rail network</th>
<th>Marshalling yard of destination</th>
<th>KM&lt;sub&gt;DT&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Šentilj border (Spielfeld)</td>
<td>Graz (ÖBB)</td>
<td>49</td>
</tr>
<tr>
<td>Jesenice border (Rosenbach)</td>
<td>Villach (ÖBB)</td>
<td>31</td>
</tr>
<tr>
<td>Hodoš border (Oriszentpeter)</td>
<td>Zalaegerszeg (MÁV)</td>
<td>44</td>
</tr>
<tr>
<td>Dobova border (Savski Marof)</td>
<td>Zagreb (HŽ)</td>
<td>35</td>
</tr>
<tr>
<td>Ilirska Bistrica border (Šapjane)</td>
<td>Rijeka (HŽ)</td>
<td>31</td>
</tr>
<tr>
<td>Središče border (Čakovec)</td>
<td>Zagreb (HŽ)</td>
<td>151</td>
</tr>
<tr>
<td>Sežana border (Vila Opicina)</td>
<td>Cervignano (RFI)</td>
<td>44</td>
</tr>
<tr>
<td>Nova Gorica border (Gorizia)</td>
<td>Cervignano (RFI)</td>
<td>46</td>
</tr>
</tbody>
</table>

The length of additional train path ($KM_D$) is calculated using the following formula:

$$KM_D = KM_{DS} + KM_{DT}$$

in which:
- $KM_{DS}$ – length of additional train path on Slovenian rail network
- $KM_{DT}$ – length of additional train path on foreign rail network