

**RAILWAYS ACT 1993**

**2023 PERIODIC REVIEW**

**REVIEW NOTICE: TRACTION ELECTRICITY RULES**

TO:

- (1) the persons whose names are set out in Part 1 of Annex 1 to this Review Notice (the “**Train Operators**”);
- (2) the persons whose names are set out in Part 2 of Annex 1 to this Review Notice;
- (3) Network Rail Infrastructure Limited (“**Network Rail**”); and
- (4) the Secretary of State for Transport, the Scottish Ministers and the Treasury,

together the “**Addressees**”.

**1 General**

1.1 This review notice (the “**Review Notice**”) is given in accordance with paragraph 4 of Schedule 4A to the Railways Act 1993 (the “**Act**”).

1.2 The Office of Rail and Road (“**ORR**”) has undertaken a review of:

- (a) the amounts payable by Network Rail and each of the Train Operators to each other under each of the track access agreements listed in Part 1 of Annex 1 to this Review Notice (the “**Track Access Agreements**”); and
  - (b) the times at which, and the manner in which, those amounts are payable,
- (the “**Review**”).

- 1.3 ORR's conclusions on the Review, and its reasons for those conclusions, are:
- (a) set out in a series of documents referenced in the document entitled "**PR23 final determination: Consolidated list of decisions – England & Wales and Scotland**" and published by ORR on 31 October 2023; and
  - (b) hereby incorporated into this Review Notice.
- 1.4 By publishing this Review Notice and serving it on each of the Addressees, ORR is initiating the implementation of the Review.

## **2 Proposed Relevant Changes**

- 2.1 For or in connection with giving effect to ORR's conclusions on the Review, ORR proposes to direct the parties to each of the Track Access Agreements to amend that document known as the Traction Electricity Rules published by Network Rail<sup>1</sup> (the "**Traction Electricity Rules**") on the terms specified in Annex 2 to this Review Notice (the "**proposed relevant changes**").
- 2.2 ORR proposes that, subject to paragraph 3, the proposed relevant changes will come into operation on and from 1 April 2024.

## **3 Approved Amendments**

- 3.1 If, before the proposed relevant changes come into operation in relation to the Traction Electricity Rules, the Traction Electricity Rules are amended in a manner which is in accordance with the amendment procedure set out in paragraph 17 of the Traction Electricity Rules, including being consented to by ORR under paragraph 17.15 of the Traction Electricity Rules (each an "**approved amendment**"), then:
- (a) the proposed relevant changes shall come into operation in relation to that Track Access Agreement subject to the approved amendments; and

---

<sup>1</sup> Which document is either already incorporated into the Train Operators' Track Access Agreements or will become so by operation of other review notices published by ORR on 20 December 2023.

- (b) if there is any conflict between the proposed relevant changes and the approved amendments, the approved amendments shall take precedence.

## 4 Objections

4.1 Subject to paragraph 4.2, any person specified in paragraph 4(4)(a) or (b) of Schedule 4A to the Act may make objections with respect to:

- (a) any of the proposed relevant changes; or
- (b) the date on which it is proposed that any such proposed relevant changes shall come into operation.

4.2 Any objection made under paragraph 4.1 must be:

- (a) made in writing;
- (b) received by ORR on or before 9 February 2024; and
- (c) addressed to ORR as follows:

Will Godfrey  
Office of Rail and Road  
25 Cabot Square  
London  
E14 4QZ

## 5 Definitions and Interpretation

5.1 In this Review Notice, unless the context otherwise requires:

- (a) references to “**this Review Notice**” include the Annexes to this Review Notice;
- (b) references to the singular include the plural and *vice versa*;
- (c) words and phrases defined in:
  - (i) the Act;

(ii) the Traction Electricity Rules; or

(i) each Track Access Agreement,

shall have the same meanings in this Review Notice; and

(d) any general rules of interpretation contained in:

(i) the Traction Electricity Rules; or

(ii) each Track Access Agreement,

shall also apply to this Review Notice.



**Will Godfrey**

**Director of economics, finance and markets**

**FOR AND ON BEHALF OF**

**THE OFFICE OF RAIL AND ROAD**

Dated 20 December 2023

## ANNEX 1

### TRAIN OPERATORS AND TRACK ACCESS AGREEMENTS

#### PART 1 (TRAIN OPERATORS)

Train Operator (collectively, the “Train Operators” and each a “Train Operator”)	Train Operator Company Number	Original Date of Track Access Agreement
Abellio East Anglia Limited	07861414	10 December 2004
Abellio East Midlands Limited	09860485	1 September 2020
Arriva Rail London Limited	04165861	9 November 2007
Caledonian Sleeper Limited	SC328825	2 March 2018
The Chiltern Railway Company Limited	03007939	7 October 2022
Colas Rail Limited	02995525	11 December 2016
DB Cargo (UK) Limited	02938988	11 December 2016
Devon and Cornwall Railways Limited	04973992	6 August 2021
Direct Rail Services Limited	03020822	14 December 2019
East Coast Trains Limited	08765536	3 October 2016
First Greater Western Limited	05113733	4 March 2016
First MTR South Western Trains Limited	07900320	9 April 2019
First Trenitalia West Coast Rail Limited	10349442	1 December 2022
Freightliner Limited	03118392	11 December 2016
Freightliner Heavy Haul Limited	03831229	11 December 2016
GB Railfreight Limited	03707899	11 December 2016
Govia Thameslink Railway Limited	07934306	2 March 2016
Grand Central Railway Company Limited	03979826	1 August 2014
Grand Union Trains No. 2 Limited	14653926	13 June 2023
Hanson & Hall, Rail Services Solutions Limited	11376408	30 June 2021
Harsco Rail Limited	00977100	1 November 2020

<b>Train Operator</b> (collectively, the “Train Operators” and each a “Train Operator”)	<b>Train Operator Company Number</b>	<b>Original Date of Track Access Agreement</b>
Hull Trains Company Limited	03715410	17 March 2016
Locomotive Services (TOC) Limited	10375954	1 August 2019
London North Eastern Railway Limited	04659712	3 March 2017
Loram UK Limited	06031483	1 February 2022
Merseyrail Electrics 2002 Limited	04356933	1 April 2019
MTR Corporation (Crossrail) Limited	08754715	21 November 2018
Northern Trains Limited	03076444	3 March 2016
RailAdventure UK Limited	12448249	1 December 2020
Rail Operations (UK) Limited	08556176	21 March 2020
Scotrail Trains Limited	SC328826	3 March 2016
SE Trains Limited	03266762	6 December 2007
South Yorkshire Supertram Limited	02634683	4 May 2018
TransPennine Trains Limited	12544930	1 March 2016
Transport for Wales Rail Ltd	12619906	6 August 2020
Trenitalia c2c Limited	07897267	3 March 2017
Varamis Limited	12038291	5 August 2022
Victa Railfreight Limited	03017321	28 May 2020
West Coast Railway Company Ltd	03066109	28 May 2020
West Coast Railway Company Ltd	03066109	1 December 2020
West Midlands Trains Limited	09860466	15 May 2019
XC Trains Limited	04402048	8 August 2017

## **ANNEX 1**

### **PART 2 (OTHER ADDRESSEES)**

Merseyside Passenger Transport Executive (Merseytravel)

Rail for London

South Yorkshire Mayoral Combined Authority

Transport for Wales

Welsh Government

**ANNEX 2**  
**STANDARD AMENDMENTS**

***Explanatory Note:***

*In order to give effect to ORR's conclusions on the Review, this Annex 2 sets out the standard form proposed relevant changes to be made to the Traction Electricity Rules (the "**standard amendments**").*



The following amendments shall be made to the Traction Electricity Rules:

## **1 Amendments to the Traction Electricity Rules**

- 1.1 In the Explanatory Note of the Traction Electricity Rules delete paragraph A(ii), and accordingly renumber paragraph A(iii) as A(ii).
- 1.2 In sub-paragraph 1.2 (Definitions and Interpretation) of the Traction Electricity Rules:
  - (a) delete the definition of “Derived Rate”;
  - (b) delete the definition of “Initial Opt-in Notice”;
  - (c) delete the definition of “Initial PFM Notice”;
  - (d) in the definition of “Metered Train Operator” delete both references to “(either wholly or partly)”;
  - (e) delete the definition of “Opt-in Notice”;
  - (f) delete the definition of “Partial Fleet Metering”;
  - (g) delete the definition of “PFM Data Threshold”;
  - (h) delete the definition of “PFM Data Threshold Failure”;
  - (i) delete the definition of “PFM Effective Date”;
  - (j) delete the definition of “PFM Financial Spreadsheet”;
  - (k) delete the definition of “PFM Fleet”;
  - (l) delete the definition of “PFM Qualification Threshold”;
  - (m) delete the definition of “PFM Rate”;
  - (n) delete the definition of “PFM Rates List”;
  - (o) delete the definition of “PFM Year”;
  - (p) delete the definition of “PFM Year 1”;

- (q) delete the definition of “PFM Year 2”;
- (r) delete the definition of “PFM Year 0”;
- (s) delete the definition of “Previous PFM Year”;
- (t) delete the definition of “Train category” and replace it with the following definition:

**“Train category”** means train category i as identified in the relevant section of the Traction Electricity Modelled Consumption Rates List, being either:

- (a) where there is a modelled consumption rate for a particular passenger vehicle type operating on a particular Train Service Code, the relevant category set out in the table entitled “Passenger Traction Electricity Modelled Consumption Rates for CP7”; or
  - (b) in respect of all electrified freight services, the relevant category set out in the table entitled “Freight Traction Electricity Modelled Consumption Rates for CP7”;
- (u) delete the definition of “Unmetered Vehicles”.

- 1.3 In paragraph 2 (On-Train Metering – General) of the Traction Electricity Rules delete the following wording from the end of sub-paragraph 2.4:

“(except any part of such charge calculated using PFM Rates, in respect of which the provisions set out in paragraph 14 apply)”.

- 1.4 Delete paragraph 14 (Partial Fleet Metering) of the Traction Electricity Rules and replace it with the following:

**“14.** (Not used)”.

- 1.5 In sub-paragraph 18.2 of the Traction Electricity Rules:

- (a) delete the formula “ $S1_{tgw}$ ” and replace it with the following formula:

$$“S1_{tgw} = E_{tmogw} \bullet (A_{gt} - L_{tmog} - L_{tmeg} - L_{tmug} - L_{tmng}) / (L_{tmog} + L_{tmng})”;$$

(b) in the definition of  $C_i$  delete paragraph (a) and replace it with the following:

“(a) the consumption rate:

- (i) in kWh per electrified Train Mile in relation to passenger electric multiple units (using the rate for the relevant number of units); or
- (ii) in kWh per electrified kgm in relation to locomotive-hauled units and all freight traffic,

for train category  $i$  shown in the Traction Electricity Modelled Consumption Rates List taking into account any Regenerative Braking Discount applied in accordance with these Traction Electricity Rules; or”;

(c) in the definition of  $L_{tmng}$  delete “; and” from the end of the definition and replace it with “.”;

(d) delete the definition of  $A_g$ .

1.6 In paragraph 18.3 of the Traction Electricity Rules:

(a) delete the definition of  $CWE_t$  and replace it with the following:

“ $CWE_t$  shall be derived from the following formula:

$$CWE_t = TEC_t + EN_{tmn}$$

where:

$TEC_t$  means the summation of the Energy Costs of traction electricity consumption across all train operators in Relevant Year  $t$ ; and

$EN_{tmn}$  means the summation across all Geographic Areas  $g$ , of the Energy Costs of the traction electricity consumption in Relevant Year  $t$  by (a) Network Rail, and (b) all entities whose consumption is not modelled or metered in a track access contract subject to regulation by ORR, which Energy Costs Network Rail shall assess as accurately as possible after allocation of each  $S1_{tw}$ .”;

(b) delete the definition of  $CWD_{tg}$  and replace it with the following:

“ $CWD_{tg}$  shall be derived from the following formula:

$$CWD_{tg} = TED_{tg} + DEN_{tmng}$$

where:

$TED_{tg}$  means the summation of all Train Operator Delivery Costs across all train operators in Geographic Area  $g$  and Relevant Year  $t$ ; and

$DEN_{tmng}$  means the summation across all Geographic Areas  $g$ , of the Delivery Costs of the traction electricity consumption in Relevant Year  $t$  by: (a) Network Rail, and (b) all entities whose consumption is not modelled or metered in a track access contract subject to regulation by ORR, which Delivery Costs Network Rail shall assess as accurately as possible after allocation of each  $S1_{tw}$ .”.

1.7 Delete Appendix 3 (Network Rail Distribution System Loss Factors) of the Traction Electricity Rules and replace it with the new Appendix 3 set out in Appendix 1 to this Annex 2.

## APPENDIX 1 TO ANNEX 2

### APPENDIX 3: NETWORK RAIL DISTRIBUTION SYSTEM LOSS FACTORS

The table below sets out the Network Rail Distribution System Loss Factor for each traction electricity Geographic Area (g) for the AC System ( $\lambda_{AC}$ ) and the DC System ( $\lambda_{DC}$ ) for the purposes of calculating the Traction Electricity Charge.

<b>ESTA</b>	<b>Traction electricity Geographic Area (g)</b>	<b>Network Rail Distribution System Loss Factor for the AC System (<math>\lambda_{AC}</math>)</b>	<b>Network Rail Distribution System Loss Factor for the DC System (<math>\lambda_{DC}</math>)</b>
M	Merseyside	N/A	0.1125
N	Midland Main Line	0.0306	N/A
O	London Tilbury and Southend	0.0264	N/A
P	Great Eastern	0.0205	0.1125
Q	West Anglia	0.0370	N/A
R	East Coast Main Line South	0.0194	0.1125
A	East Coast Main Line Central	0.0286	N/A
B	East Coast Main Line North	0.0339	N/A
C	East Coast Main Line Leeds	0.0369	N/A
S	Scotland Glasgow	0.0439	N/A
D	Scotland East	0.0420	N/A
E	Scotland North and West	0.0418	N/A
F	Scotland WCML	0.0371	N/A
T	West Coast Main Line South	0.0289	0.1125
G	West Coast Main Line Central	0.0404	N/A
H	West Coast Main Line Midlands	0.0278	N/A

<b>ESTA</b>	<b>Traction electricity Geographic Area (g)</b>	<b>Network Rail Distribution System Loss Factor for the AC System (<math>\lambda_{AC}</math>)</b>	<b>Network Rail Distribution System Loss Factor for the DC System (<math>\lambda_{DC}</math>)</b>
J	West Coast Main Line North	0.0421	N/A
U	Southern	0.0315	0.1125
V	Great Western (soon to be renamed 'Western East')	0.0293	N/A