

Electrification Asset Usage Charge

– Presentation to TESG

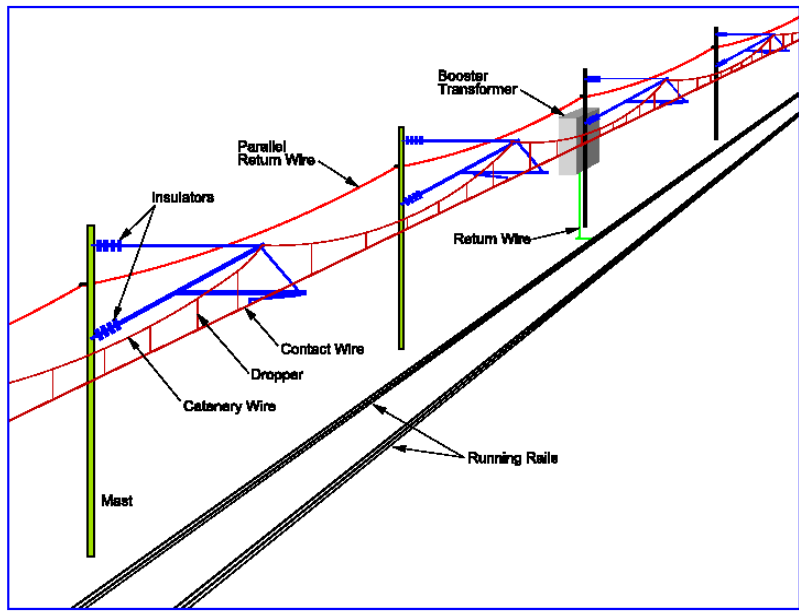
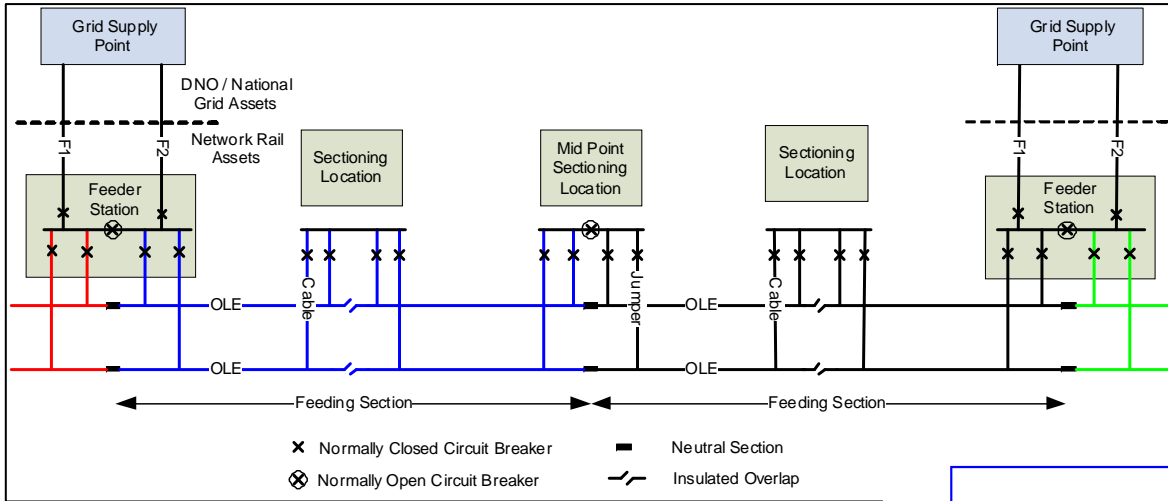
Matt Skinner, Development Manager

11th March 2013

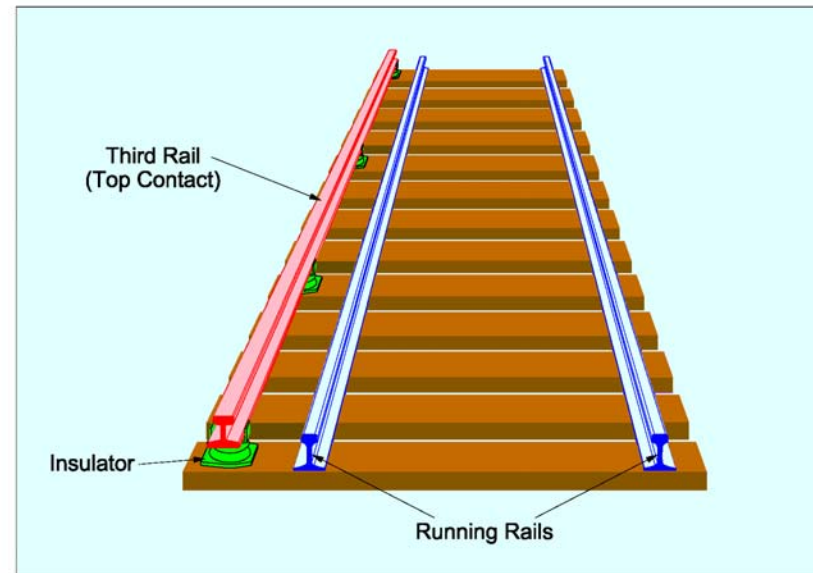
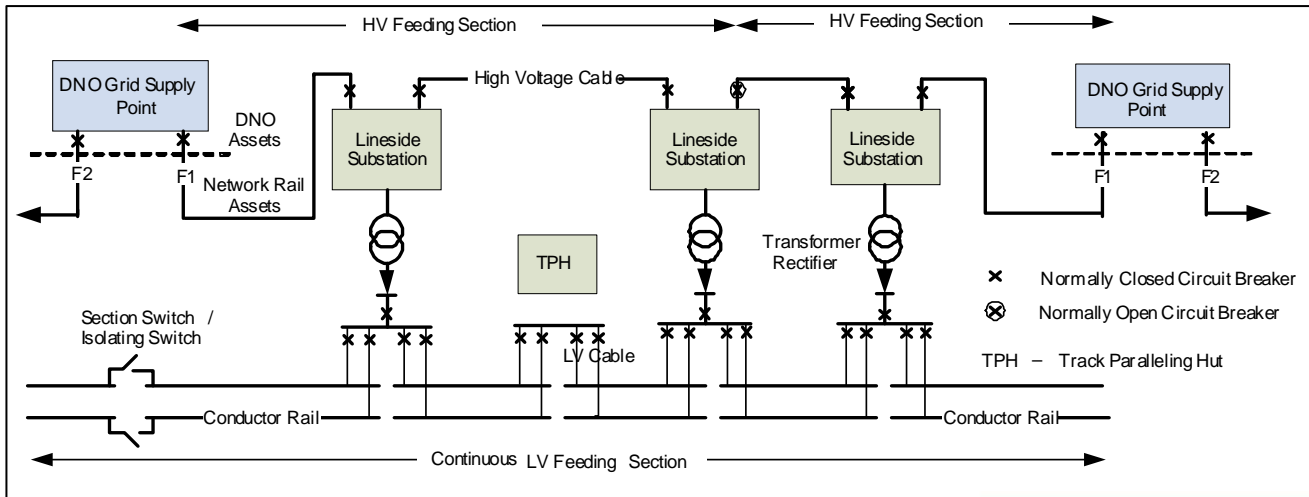
Background – Purpose of the charge

- The Electrification Asset Usage Charge (EAUC) is designed to recover the costs of electrification assets (e.g. overhead lines and conductor-rail) that vary with traffic
- It ensures that Network Rail is compensated for the wear and tear on electrification assets that results from traffic on the network
- Separate rates exist for vehicles operating on the A.C. and D.C. networks reflecting the differences in variable costs and traffic
- In 2011/12 Network Rail received £8m in EAUC income (0.1% of its c.£6bn revenue requirement)
- Like other access charges the EAUC is reviewed and recalibrated as part of a periodic review

Assets & activities under consideration – a.c. electrification



Assets & activities under consideration – d.c. electrification



Identifying intervention activities affected by traffic and their variability

- Initial review of key intervention types to identify variability – more detailed than CP4
- Internal Network Rail review and challenge session. Challenge team included:
 - EP Professional Head, E&P Route Asset Manager, maintenance organisation representative, E&P CP5 Technical Lead, P & R regulatory economists
- Activity cost variability is assessed by considering two components
 - The amount that an intervention activity is affected by traffic
 - How much of the cost of that activity varies with traffic i.e. for a figure of 80% then if traffic increases by 10% then costs would increase by 8%

Maintenance intervention activities for EAUC consideration

System	Asset / system	Included at initial EAUC review	Included post NR EAUC challenge
A.C. electrification	Distribution	Yes	No
	OLE	Yes	Yes
	Other	No	No
D.C. electrification	Distribution	Yes	No
	Electrical traction equipment (con rail, etc)	Yes	Yes
	Other	No	No

Renewal intervention activities for EAUC consideration

System	Asset / system	Sub asset / activity	Included at initial EAUC review?	Included post NR EAUC challenge
A.C. electrification	Distribution	HV Switchgear renewal	Yes	No
		Substation auxiliary equipment, HV cable renewal	No	No
		Transformer renewal	Yes	No
	OLE	GE Project - Renewal	No	No
		Campaign Changes	No	No
		Contact / catenary wire renewal	Yes	Yes
		Mid – life refurbishment	Yes	Yes
		Full renewal	No	Yes
		Structures renewal	No	No
		Component change	Yes	Yes

Renewal intervention activities for EAUC consideration

System	Asset / system	Sub asset / activity	Included at initial EAUC review?	Included post NR EAUC challenge
D.C. electrification	Distribution	HV Switchgear renewal	Yes	No
		Substation ancillary equipment renewal	No	No
		HV cable renewal	Yes	No
		Transformer Rectifier Units renewal	Yes	Yes
		LV d.c. switchgear renewal	Yes	No
	Electrical Traction Equipment	Conductor rail renewal	Yes	Yes
		LV d.c. cables renewal	Yes	No
		Track isolating device renewal	No	No

SBP proposals for EAUC activities

System	Activity	CP4 variability	Proposed CP5 variability	Comments
A.C. electrification	OLE Maintenance	5% (50%/10%)	12% (80%/15%)	Risk based maintenance regime – planned and reactive activities influenced by category (pan passages & lines speed)
	OLE contact / catenary wire renewal	40% (50%/80%)	72% (80%/90%)	Very strong link between asset degradation and traffic. Significant scope of this work activity is linked to traffic.
	OLE mid – life refurb.	N/A	42% (60%/70%)	New intervention for OLE as per asset policy. Scope includes elements that will vary with traffic (contact wire, catenary, insulators, registration equipment, etc)
	Full renewal	N/A	10.5% (15%/70%)	No impact on charge due to timescales for intervention activities
	Component change	N/A	10% (25%/40%)	Includes renewal of some components degraded by pan passages e.g. neutral sections

SBP proposals for EAUC activities

System	Activity	CP4 variability	Proposed CP5 variability	Comments
D.C. electrification	ETE Maintenance	N/A	21% (40%/52%)	Maintenance regime more reactive than OLE – identified reactive activities
	Conductor rail renewal	40% (50%/80%)	54% (60%/90%)	Re-assessed based on better understanding of degradation rates and assessment of scope of renewal activities
	Transformer Rectifier Unit renewal	N/A	4% (40%/10%)	Considers increase in traffic accelerating end of life

EAUC calculation methodology

- CP5 methodology broadly the same as in CP4
 - more detailed approach to assessing intervention activities
 - cost estimates based on long run (35 years) average costs – in line with other charges
- Impact is that this has contributed to an increase in the charge. This is due to a number of factors: changes in unit rates, changes to type of interventions and mix of work (asset policy)
- Increase in rates is also due to the updated variability assumptions

Independent Reporter review

- AMCL (Independent Reporter) remitted to review EAUC
- Scope of review includes:
 - Scope of assets / activities included in EAUC assessment
 - Assumptions relating to variability
 - Computational accuracy of model used to calculate charges
- Review to commence shortly
- May result in an updated set of numbers which will be made available after the review has concluded (April 2013)

Thank you

- Any further questions?

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