

Energy Networks Association

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3rd August 2017

Distribution Code & Negative Phase Sequence Limits

Dear David

The introduction of the Intercity Express Train on the East Coast Main Line (ECML) will result in increased electric services starting in December 2018 and leading up to the adoption of a new timetable in May 2021. Work over the past few months has identified the need for considerable investment of the traction power between Bawtry (Doncaster) and Edinburgh. Engineering options are currently being evaluated, but the initial estimate of costs is significant (circa£200m-£700m) with a large part of this expenditure focused on complying with the current NPS limits in ENA ER P24*.

We are aware of the recent OFGEM decision regarding voltage unbalance (GC0088)**, and the corresponding change to the Grid Code***. The corresponding Distribution Code (D-Code) plus ENA Engineering Recommendations P29 and P24 have yet to be updated, but we understand there are plans to align these documents in the near future, and possibly before prior to the introduction of the new timetable in May 2021. Being able to make use of the revised limits before publication (for planning purposes) would refocus the traction power design and allow a wider range of enhancement opportunities to be explored, with the potential of significant savings of the estimated enhancement costs.

I would therefore be grateful if you could advise if Network Rail and the DNOs should be working to the new or existing limits when assessing the impact of the May 2021 timetable? If you could respond with a opinion before the end of August it would allow Network Rail to complete an option selection process and present the conclusion to the Department for Transport before the end of September.

Yours Sincerely,

A handwritten signature in blue ink that reads "R Stainton".

Richard Stainton, Engineer Expert

* ENA ER P24 - Traction Supplies to British Rail

** https://www.ofgem.gov.uk/sites/default/files/docs/gc0088_decision_letter_final_7_january_2016.pdf

*** <http://www2.nationalgrid.com/uk/industry-information/electricity-codes/grid-code/the-grid-code/>

CC, Dave Hewings, Paul Ramsey

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