

ENA Consultation – ENA/17/01

Title: Technical Report ETR 140

Statutory Voltage Limits at customers' terminals in the UK and options for future application of wider limits at low voltage

Target Audience: Technical Report 140

(ETR 140) will be of interest to designers of customer low voltage (LV) installations. It will also be of interest to LV equipment and appliance manufacturers, designers and operators of LV distributed generation, electricity suppliers and electricity consumer groups.

Summary

1. Introduction

In January 2015, an ENA Task Group was established to consider the findings of various Low Carbon Network Fund projects in relation to voltage control on the low voltage (LV) network.

The Task Group reviewed the current lower bound of the statutory voltage limits on the LV network and specifically at LV customers' terminals. The Task Group also reviewed the option for changing the current lower bound from 6 per cent below nominal voltage to 10 per cent below nominal so as to align with the current BS EN 50160 and BS EN 60038 standards.

The report of the Task Group, ETR 140, sets out the positive and negative aspects of these proposed changes in policy and practice on network operators, customers, generators and other stakeholders in terms of planning and operations.

2. Analysis and Proposal

ETR 140 details the potential benefits to stakeholders gained through Distribution Network Operators (DNOs) revising their operations within the current statutory voltage limit bands. In part, this change is driven by the changing requirements placed on their networks by customers but also by opportunities identified by a number of LCNF projects.

The report also summarises the potential benefits and impacts on stakeholders, including the effect on LV networks, of changing the lower bound of the current LV statutory voltage limit from 6 per cent to 10 per cent as referenced in BS EN 50160 and BS EN 60038. The report also compares the UK position with a number of other European countries who already utilise a wider band and investigates the voltage flexibility available within the current Regulations.

Because of the potential impacts, both positive and negative, on stakeholders, ETR 140 recommends that a consultation is undertaken to understand the wider views within the UK regarding voltage limits and a wider voltage range.

3. Consultation Questions

- Q1. How could the proposals for reducing the target voltage within the existing limits of 230V+10%-6% affect you as a stakeholder or stakeholders you represent?
- Q2. How could the proposals for widening the existing statutory limits to 230V +/-10% affect you as a stakeholder or stakeholders you represent?
- Q3. Do you support a move to widen the existing statutory limits?

4. Next Steps

Responses to this consultation should be sent to ENA at david.spillett@energynetworks.org by **17:00 Wednesday 6 September 2017** on the proforma provided expressly for the purpose. Responses after this date may not be considered.

5. Consultation Pack

- Consultation Paper
- Draft ETR 140
- Proforma comment form

For more information, please contact:

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