











Modification	At what stage is this document in the process?
<p>DCRP/MP/19/02 - Final Modification Report</p> <p>Revision of Engineering Report (EREP) 130 - Guidance on the application of P2, Security of Supply</p>	
<p>The purpose of this document is to assist the Authority in its decision to implement the proposed modifications to EREP 130 and the minor consequential changes to the Distribution Code. The proposed modifications were subject to industry consultation between February 8 and March 7 2019.</p> <p>Date of publication: 29th March 2019</p>	
<p>Recommendation</p> <p>The Distribution Code Review Panel (DCRP) and distribution network licensees recommend that the proposed modifications are made to Engineering Report (EREP) 130 and the minor consequential changes to the Distribution Code.</p>	
	<p>The DCRP and distribution network licensees recommends that this modification should be: Submitted to the Authority for approval.</p>
	<p>High Impact:</p>
	<p>Medium Impact: The proposed new EREP 130 is expected to have a medium impact on the way in which Distribution Network Operators (DNOs) assess the network demand that needs to be secured and established the optimum means of securing that demand via a combination of network and non-network solutions.</p>
	<p>Low Impact:</p>

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Timetable		
Workgroup Report presented to Panel	7 th February 2019	
Draft Modification Report issued for consultation	8 th February 2019	
Consultation Closed	7 th March 2019	
Final Modification Report available for Panel	24 th March 2019	
Final Modification Report submitted to Authority	29 th March 2019	

1. Purpose of the Modification

ENA EREP 130 is a guidance document for the EREC P2 planning standard and an Annex 2 document to the Distribution Code. The proposed modification of this document has been written to recognise the changes to the load and generation connected to distribution networks since ETR 130 Issue 1 was initially published in 2006. In particular it recognises that:

- some demand customers are modifying their electricity consumption in response to market signals; this means that further consideration has to be given to establishing the true demand on the network;
- in addition to providing security of supply from network assets and distributed generation, demand side services can also contribute to security of supplies;
- the nature and type of distributed generation connected to the network mean that their contribution to security of supplies is different to that in EREC P2/6 and EREP 130 Issue 2; and
- ER P2/6 has been revised and a new version EREC P2/7 has been proposed in Modification DCRP/MP/18/03.

2. Details of the Proposal

In order to address the issues identified above, the emphasis of the new document is focused on how to assess the demand that needs to be secured and the security contribution offered by Distributed Generation (DG), Demand Side Response (DSR), and Electricity Storage (ES) when making a conformance assessment against the EREC P2/7 security of supply standard. The main changes in this revision are to:

- Align EREP 130 with EREC P2/7;
- Provide new guidance on assessing the contribution to security from, and the latent demand associated with, Distributed Generation, Demand Side Response schemes and Electricity Storage;
- Update the F factors for assessing the contribution to security from Distributed Generation, using recent data from DG, based on work carried out for ENA by Imperial College London as detailed in Appendix 4;
- Differentiate between the contribution to security from DG, DSR and ES which is contracted with a Distribution Network Operator (DNO) and that which is not; and
- Restructure the document to improve the flow of the guidance, based on a revised step-by-step flow diagram (see Figure 1 EREP 130 Issue 3, Appendix 2).

The DCRP P2 working group agreed that EREC P2 should be a standard defining the security of supply that is to be achieved, whilst EREP 130 should be a document describing how that security of supply should be achieved. EREP 2/7 has been submitted to Ofgem to reflect this guidance; EREP 130 Issue 3 has now been drafted to reflect this guidance.

The changes included in EREP 130 Issue 3 are summarised below:

- a) The scope now includes an assessment of the security contribution from DSR, ES, as well as network assets and DG;
- b) The definitions have been amended to align with EREC P2/7 and some new definitions have been added:

- i. Cold Load Pickup;
 - ii. Contracted & Non-contracted;
 - iii. Demand Facility; and
 - iv. Electricity Storage.
- c) A new process overview diagram has been included;
- d) Clarification is provided on the assessment of latent demand, group demand, including cold load pickup;
 - i. Clause 5 includes an explanation of group demand;
 - ii. Annex A provides additional guidance on latent demand; and
 - iii. Criteria added for assessing cold load pickup.
- b) Guidance on the calculation of capacity of network assets has been broadened to include;
 - i. Use of the term 'intrinsic network capacity'; and
 - ii. Clarification and considerations for transfer capacity.
- c) New guidance is provided on assessing the security contribution from DG, DSR and ES that is contracted to the network operator; the security contribution from being based on the terms of that contract;
- d) The previous guidance on assessing fortuitous contribution from DG has been updated and clarification is provided that it now applies only to DG that is not contracted with the DNO;
- e) New guidance is provided on assessing the security contribution from DSR and ES that is not contracted with the DNO;
- f) New guidance is provided on conducting a high-level review of the options when the system capacity is insufficient to meet system security requirements;
- g) New guidance is provided on planning remedial work to address a deficiency in system capacity;
- h) New guidance is provided on undertaking a supplementary CBA when the options identified for remedial works are not considered viable;
- i) Annex A, Identification of Group Demand, has been revised. As well as determining latent demand for DG, new guidance has been added to assist in determination of latent demand associated with DSR Schemes and ES.
- j) Annex B, Capping DG/DSR Schemes/ES, has been updated. Previous guidance on capping has been removed as the concept of establishing the 'number of DG units equivalent to a first circuit outage' is no longer relevant i.e. DG, DSR and ES are now considered on a 'per facility' basis. Hence, new guidance has been added for capping, covering the capacities that are relevant.
- k) Annex D, Approaches for assessing the contribution from DG to System Security, has been revised:
 - i. Approach 1: The F factors for DG have been subject to a major amendment following analysis by Imperial College London of DG data collated from DNOs. The latest data is representative of output (at the point of connection) from typical

DG installations and it has been analysed to derive a mean and standard deviation value for the F-Factor.

- ii. Approach 1: The F Factor values for both non-intermittent and intermittent DG types apply to the facility i.e. the consideration of the number of DG units for non-intermittent types is no longer applicable. Hence, the F factor values in Approach 1 have been replaced with new values.
 - iii. Approach 1: The non-intermittent DG types presented with F factors are – Biomass, Landfill gas and Waste.
 - iv. Approach 1: The intermittent DG types presented with F factors are – Onshore wind, offshore wind, hydro run-of-river, hydro reservoir, and solar.
 - v. Approach 2: The previous methodology, which required knowledge of the availability of DG and the number of units on a facility, has been deleted as it is now longer relevant. A new methodology for Approach 2 has been added for non-intermittent DG, which uses the concept of capacity factors.
- l) Annex E, Influencing factors for DG/DSR Schemes/ES Security Contribution, has been revised:
- i. The previous guidance on generation availabilities has been subject to major amendment. The explanation on establishing the availability of DG units has been deleted as it is no longer relevant. New guidance has been added for DSR scheme considerations and ES considerations.
- m) Annex F, Examples, has been revised:
- i. New examples have been added to illustrate the application of EREP 130.
 - ii. Previous example on DG has been revised.
- n) Annex G, Interpretation of Imperial College London Report findings, has been added
- i. New annex has been added to provide commentary on how the latest analysis, completed by Imperial College London, has been used in the document.

3. Impacts and Other Considerations

Impacts on Users of The Distribution Code

The purpose of this revision is to provide clarity on the means of providing the security of supply at the level required by EREC P2/7. It is not expected to have material impact on Users, other than providing clarity on how the security contribution from Users equipment should be assessed.

Impacts on Total System and the DNOs System

The purpose of this revision is to provide clarity on the means of providing the security of supply at the level currently required by EREC P2/7. It is not expected to have material impact on the Total System or the DNOs Systems.

Environmental Impact Assessment

There are no environmental impacts associated with this proposed modification.

4. Impact on other Industry documents

The Distribution Connection and Use of System Agreement (DCUSA) Review Panel are aware of the changes to EREC P2/7 and are currently considering whether there are any impacts on the DCUSA. Any consequential changes arising from the implementation of EREP P2/7 and potentially ETR130 will be progressed in accordance with the DCUSA governance arrangements.

5. Assessment against Distribution Code Objectives

The proposed amendments better facilitate the Distribution Code objective (i):

(i) to permit the development, maintenance and operation of an efficient, coordinated and economical system for the distribution of electricity;

Positive - This proposed document better facilitates the assessment of the demand that needs to be secured and the assessment of the security contribution from DG, DSR and ES as well as from network assets which will enable the network operator to assess the best solution to address any identified security deficit.

(ii) to facilitate competition in the generation and supply of electricity

The proposal has a neutral impact on this objective.

(iii) to efficiently discharge the obligations imposed upon distribution licensees by the distribution licences and comply with the Regulation and any relevant legally binding decision of the European Commission and/or the Agency for the Co-operation of Energy Regulators; and

The proposal has a neutral impact on this objective.

(iv) to promote efficiency in the implementation and administration of the Distribution Code.

The proposal has a neutral impact on this objective.

6. Workgroup Recommendations

On 15th March 2019 the DCRP P2 Working Group formally approved the proposed draft of EREP 130 Issue 3 to be recommended to the DCRP to proceed to a RTA. The working group agreed to allow drafters to make any other editorial corrections identified as the document is finalised for publication.

The DCRP P2 workgroup recommends that the changes proposed in the new EREP Issue 3 and the changes to the Distribution Code as outlined in section 9 of this report should be implemented.

7. Implementation

The proposed modification would be implemented when EREC P2/7 is implemented, this is currently under review by Ofgem.

Appendix 5, the draft of the new version of the DCode, is based on the current, version 37, of the DCode and is track changed to show the material changes to the DCode text and content.

If other modification proposals are approved before the implementation of this modification proposal which result in change to the current version of the DCode, the tracked changes will be applied to the version of the DCode that is current on the proposed implementation date.

There are no costs attributed to Users as a result of this proposed modification.

8. Consultation

On 8th February 2019 the DCRP formally opened up a public consultation DCRP/PC/19/03 on the proposed draft of EREP 130 Issue 3. The deadline for responses was 7^h March 2019.

Four responses from the public consultation were received. These responses were supportive of the proposed changes with mainly editorial recommendations to be made to the draft EREP 130 Issue 3 to add clarity to users. One comment was deemed to be not relevant to the scope of changes being proposed in EREP 130. Appendix 1 details the consultations responses. Further detail of this public consultation can be found [here](#).

9. Legal Text

The Distribution Code version 37 refers to Engineering Technical Report 130-1 in one instance, on page 171, Qualifying Standards Annex 2, item 3.

The required change to the Distribution Code is to update this section to refer to Engineering Report (EREP) 130 Issue 3 - Guidance on the application of Engineering Recommendation P2, Security of Supply.

Proposed changes to the classifications of Annex 1 or Annex 2 DCode documents is expected to go to public consultation after the April 11th DCRP meeting. This public consultation will include consulting on whether stakeholders believe it is appropriate for EREP 130 to be an Annex 1 document as requested by Ofgem.

Legal text for the changes proposed to the Distribution Code (Appendix 5) and the final draft of EREP 130 Issue 3 have been provided as appendices (Appendix 2 – clean, Appendix 3 – tracked) to this Modification Proposal. The version of the Distribution Code provided incorporates the DCRP/MP/18/03 legal text changes to demonstrate the total changes for the implementation of EREP 130 Issue 3 and EREC P2/7.

10. Distribution Code Review Panel Discussion

The Final Modification Report was circulated to DCRP for approval via email on 24th March 2019. At an extraordinary meeting of the Distribution Code Review Panel (the Panel) held on 27th March 2019, the Panel agreed that the Final Modification Report would be amended with minor amendments before final submission of the Report to Authority for approval. The amendments were to reflect the withdrawal of Guidance Note 1, and to clarify the applicable version of the Distribution planning standards of voltage and of security of supply (Parts of Scottish Hydro Electric Power Distribution Ltd Area) as referenced in Annex 1 item 4 (b). The Panel unanimously agreed to the submission of the Report to Authority as the Panel agreed that the modification proposal better facilitated the objectives of the Distribution Code.

11. Recommendation

The Distribution Code Review Panel and Licenced Distribution Network Operators recommend that this modification report should:

- be submitted to the Authority for approval; and
- subject to the agreement of the Authority the modification should be implemented from the date the revised Distribution Code is published. This recommended date is to align with the implementation date of EREC P2/7 which is currently awaiting approval from the Authority.

12. Appendices

Appendix 1 – Consultation Responses

Appendix 2 – ENA Engineering Report EREP 130 Issue 3 – Clean

Appendix 3 - ENA Engineering Report EREP 130 Issue 3 – Tracked

Appendix 4 – Imperial College London F Factor Analysis Report

Appendix 5 – Proposed Distribution Code based on current published version v37 incorporating DCRP/MP/18/03 changes