

Modification proposal:	<b>Distribution Connection and Use of System Agreement (DCUSA) Change Proposal (CP) 313 – Eligibility Criteria for EDCM Generation Credits (DCP313)</b>		
Decision:	The Authority <sup>1</sup> has decided to reject <sup>2</sup> this modification <sup>3</sup>		
Target audience:	DCUSA Panel, Parties to the DCUSA and other interested parties		
Date of publication:	30 September 2022	Implementation date:	<i>Not applicable</i>

## Background

The DCUSA currently requires Distribution Network Operators (DNOs) to determine an 'F Factor' for each Extra High Voltage (EHV) Distribution Charging Methodology (EDCM) embedded generator based on the criteria set out in Engineering Recommendation P2/6 ('EREC P2/6') and the related application guidance in Engineering Report 130 ('EREP 130').

The F factor is a measure of the reliability of each embedded generator to contribute to system security and is calculated by DNOs for two main (related) purposes: i) to assess if their networks meet the system security standard set in EREC P2/6 and plan investments accordingly<sup>4</sup>; ii) to establish if a specific generator should receive "charge one credits"<sup>5</sup>.

For each EDCM embedded generator ('EG')<sup>6</sup> connected to their networks, a DNO determines the F factor based on a site-specific assessment of the contribution of that generator to network security (considering availability, the operating regime and

<sup>1</sup> References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

<sup>2</sup> This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

<sup>3</sup> 'Change' and 'modification' are used interchangeably in this document.

<sup>4</sup> DNOs have a licence obligation to plan and develop their systems in accordance with EREC P2/6 requirements on security of supply levels.

<sup>5</sup> Charge one credits (or "super red credits") are unit rate credits applicable in the DNO's peak "super red period". They are calculated as negative charges, based on a power flow analysis of the DNO's network.

<sup>6</sup> Embedded generation (also called 'distributed generation' (DG) or 'distribution-connected generation') refers to generators that are connected to the distribution system rather than the transmission system.

intermittency). The F factor is then used to determine the output of each EG in the maximum demand scenario ('MDS')<sup>7</sup>. In general, generation that is not controllable cannot be relied upon to output at peak times, so it is assigned an F factor of zero. The converse applies when an EG is controllable and can, therefore, be relied upon at peak times. EGs are deemed eligible to receive charge one credits if they have a non-zero F Factor, and not eligible otherwise. Credits are given on the basis that the EG is supporting network capacity and deferring or avoiding network reinforcements<sup>8</sup>.

DCP313 seeks to address EGs' concerns about a lack of transparency and potential lack of commonality in the method used by DNOs to determine the F factors and charge one credit eligibility. EGs considered that, under the requirements of EREC P2/6 and EREP 130/2, DNOs would assign F factors based on data not accessible to prospective connectees and could interpret those requirements differently. As a result, EGs may be unable to predict the credits and charges they are likely to face when choosing to locate in any given DNO's area, which creates uncertainty around investment decisions.

In order to address the issue of inconsistent application of generation credits across DNO areas, DCUSA change proposal DCP291 ('Application of Generation Credits to EDCM Customers')<sup>9</sup> was originally raised in February 2017. This was subsequently withdrawn, as the working group agreed that the proposed solution to make all EGs eligible for credits regardless of F factors would not match the proposal intent. We understand that there were concerns about paying charge one credits to intermittent EGs that may not be proved to support the network in absence of a DNO's F-factor assessment. This could result in double-charging of demand customers, who would pay both for network reinforcements and for charge one credits awarded to those intermittent EGs. This led to DCP313 being raised with a revisited intent and scope.

### **The modification proposal**

DCP313 was raised by Northern Powergrid (the 'Proposer') on 10 October 2017. The intent of this proposal is to improve transparency of the eligibility criteria for EDCM generators to receive charge one (or "super red") credits, as well as consistency in their application. The proposal originally put forward two main options for consideration by the Panel and Working Group.

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<sup>7</sup> By multiplying the EG's export capability by the F factor: eg, with a capacity of 5MW and F factor of 50%, the contribution to security is assumed to be 2.5MW.

<sup>8</sup> If there is a high level of generation in the MDS, then it's likely that some demand on higher voltage assets is offset, so it's less likely that thermal reinforcement is needed.

<sup>9</sup> <https://www.dcusa.co.uk/change/application-of-generation-credits-to-edcm-customers/>

**Option 1** would base the super red credit eligibility for EGs on technology type rather than on the F factor assigned, that is: all non-intermittent<sup>10</sup> EG are deemed eligible for credits (regardless of F factor assigned by the DNO); intermittent<sup>11</sup> EGs, instead, remain eligible according to the status quo (ie, based on F factor values assigned by the DNO).

**Option 2** would not remove the link between super red credit eligibility and F factors, but would set the F factor based only on technology type with no site-specific assessment carried out by the DNO. This would be achieved by including Table 2-1 in EREC P2/6, reporting F factors for non-intermittent generation, in the EDCM (DCUSA Schedules 17 and 18). Intermittent EGs would all be made ineligible for credits, regardless of the assigned F factor.

The Proposer of DCP313 believes that the change would better facilitate DCUSA Charging Objective two<sup>12</sup> by providing greater transparency to EGs of the likely charges/credits<sup>13</sup> they will face, and thus enabling them to make more informed choices on where to locate plants. Option 2 would have the additional advantage of improving transparency in the determination of F factors. The Proposer also believes that DCP313 would have a negative impact on DCUSA Charging Objective three<sup>14</sup>. Under both options, there is a possibility that an EG is awarded charge one credits despite being deemed not to support the network and to offset any reinforcement cost.<sup>15</sup>

The DCUSA Panel established a Working Group ('WG') to assess DCP313. As part of the WG's process, two consultations to industry were conducted (in February and December 2018), to aid further development of the solution and seek views on the two variants of the original modification proposal described below.

Under labelled **Option 1A**, credit eligibility would be based on the installed capacity of the non-intermittent generation as a percentage of the site's Maximum Export Capacity. This was to address the identified issue of "mixed sites"<sup>16</sup>. **Option 2B**, instead, would require DNOs to assign F factors in line with the process laid out in EREC P2/6 and EREP

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<sup>10</sup> In EREC P2/6 and EREP 130, non-intermittent generation is defined as "generation plant where the energy source of the prime mover can be made available on demand".

<sup>11</sup> In EREC P2/6 and EREP 130, intermittent generation is defined as "generation plant where the energy source of the prime mover can not be made available on demand".

<sup>12</sup> Compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences);

<sup>13</sup> We remind that the charge one credit is expressed as a negative charge rate.

<sup>14</sup> Compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred or reasonably expected to be incurred by the DNO Party in its Distribution Business.

<sup>15</sup> In Option 1, this is because F factors are no longer relevant for credit eligibility. In Option 2, this is because F factors are assigned based on pre-classified technology types rather than site-specific assessments.

<sup>16</sup>These are sites on which a single generation connectee combines intermittent and non-intermittent generation technology

130 without considering the location of the generator. In this way, the DNO should determine whether a generator is sufficiently reliable to provide a contribution to security of supply should the need arise, not whether the generator is currently making an actual contribution. By removing the locational element, DNOs would have a common approach in determining the F factor for a given EG.

Following a review of the consultation responses, the WG agreed to progress **Option 1A** alone.

### **DCUSA Parties' recommendation on 22 March 2019**

In each party category where votes were cast (no votes were cast in the CVA Registrant party category or Gas supplier categories)<sup>17</sup>, there was majority (>50%) support for the proposal and for its proposed implementation date. In accordance with the weighted vote procedure, the recommendation to the Authority is that DCP313 is accepted. The outcome of the weighted vote is set out in the table below:

<b>DCP313</b>	WEIGHTED VOTING (%)							
	DNO <sup>18</sup>		IDNO/OTSO <sup>19</sup>		SUPPLIER		CVA <sup>20</sup> REGISTRANT	
	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
CHANGE SOLUTION	92%	8%	n/a	n/a	100%	0%	n/a	n/a
IMPLEMENTATION DATE	100%	0%	n/a	n/a	100%	0%	n/a	n/a

### **Our decision**

We have considered the issues raised by the proposal and the Change Report (22 March 2019) and the Change Declaration (16 April 2019), including the results of the impact assessment and the responses to the workgroup consultations. We have also considered and taken into account the recommendation vote of the DCUSA Parties on the proposal, which is attached to the Change Declaration. We have concluded that:

<sup>17</sup> There are currently no gas supplier parties.

<sup>18</sup> Distribution Network Operator

<sup>19</sup> Independent Distribution Network Operator/Offshore Transmission System Operator

<sup>20</sup> Central Volume Allocation

- the implementation of the change proposal will not better facilitate the achievement of the Applicable DCUSA Charging Objectives ('Relevant Objectives' or 'Objectives')
- directing that the modification be made would not be consistent with our principal objective (see end of next section).

### **Reasons for our decision**

We consider this modification proposal will not better facilitate Relevant Objectives two and three and has a neutral impact on Objectives one and five. We do not consider that a positive impact on Relevant Objectives four and six has been adequately demonstrated to outweigh the negative impacts on Objectives two and three.

***Second Applicable Charging Methodology Objective: compliance with the Relevant Charging Methodology facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in the participation in the operation of an Interconnector.***

The Workgroup unanimously considered that this Relevant Objective is positively facilitated by DCP 313 because the proposed solution provides more transparency to EGs to better predict the likely charges and credits that they will face when deciding where to locate. This is in line with the Proposer's initial assessment.

We note that one of the voting Parties expressed the view that the proposal would in fact have an adverse impact on this Objective<sup>21</sup>, given that under the proposed solution two essentially identical generators (ie, with equal F factors and equally calculated charge one credits) could receive different levels of credits merely because one of them is located on a mixed site.

Whilst we recognise that increasing the transparency of charges for network users is generally beneficial for competition, we do not think that, on balance, Objective two is better facilitated by the proposal. This is for the following reasons:

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<sup>21</sup> <https://dcusa-cdn-1.s3.eu-west-2.amazonaws.com/wp-content/uploads/2019/08/20105644/DCP-313-Change-Declaration-v1-0.zip>

- In June 2019, we approved the proposed revisions of relevant engineering standards EREC P2/7<sup>22</sup> and EREP 130/3<sup>23</sup>. These supersede the EREC P2/6 and EREP 130/2 referenced in the DCP313 Change Report and Declaration, which pre-date the revisions. Our assessment is that the revised standards have significantly simplified the calculation of the network security contribution of EG, by effectively removing all site-specific considerations and replacing these with 'typical' F factors for various types of intermittent and non-intermittent DG based on a comprehensive study by Imperial College London<sup>24</sup>. Crucially, unlike EREP 130/2, EREP 130/3 is now referenced in Annex 1 standards of Distribution Code<sup>25</sup>, that is, it now forms part of the code technical requirements. This means that there is now a more transparent and objective set of common rules, that all DNOs have to follow in assessing contributions to security of supply from EGs and any related credit eligibility. It is, therefore, far simpler for a prospective EG to estimate their security contribution in line with the DNO's initial assessment based on the F factors. This should address the primary concerns raised in DCP313 and largely achieve the positive impact on Objective two attributed to the proposal. We also observe that EREP 130/3 disciplines and encourages the use of bilateral agreements between EGs and DNOs for the provision of security services ("Contracted DG"). Entering a contract with a DNO would give absolute clarity to EGs on their F factors and charge one credits.
- As we explain in our assessment of Relevant Objective three, we believe that the modification would have a negative impact on the cost-reflectivity of super red charges/credits. We are concerned that any departure from cost-reflectivity may potentially introduce distortions into the charging methodology, which would ultimately hamper competition in generation (eg, by awarding charge one credits based on technology type rather than on actual contribution to security of supply at any given location).
- We share the concerns expressed by the dissenting voting Party that the proposed treatment of mixed sites may have a potentially adverse impact on competition in generation, in that the amount of credit received by two equivalent (non-

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<sup>22</sup> <https://www.ofgem.gov.uk/publications/dcrp1803-revision-engineering-recommendation-erec-p2-security-supply>

<sup>23</sup> <https://www.ofgem.gov.uk/publications/dcrpmp1902-revision-engineering-report-erep-130-guidance-application-p2-security-supply>

<sup>24</sup> [http://www.dcode.org.uk/assets/files/RTA/DCRP\\_MP\\_19\\_02\\_Appendices.zip](http://www.dcode.org.uk/assets/files/RTA/DCRP_MP_19_02_Appendices.zip) (Appendix 4)

<sup>25</sup> <http://www.dcode.org.uk/annexes/annex-1/>

intermittent) EGs connected to the same network may depend on being co-located or not with intermittent generation<sup>26</sup>.

***Third Applicable Charging Methodology Objective: compliance with the Relevant Charging Methodology results in charges that, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by a Distribution Services Provider in its Distribution Business.***

The majority of the DCP313 Workgroup agreed that the proposal would have a negative impact on this Relevant Objective, because it would establish that for non-intermittent EGs, charge one credit eligibility is not based anymore on the F factor assignment and the related network security assessment carried out by the DNO. This would effectively create a separation between the principles used for charge setting and the engineering standards that DNOs are required to follow.

We believe that the proposal would not better facilitate Objective three, for the following reasons:

- The rationale for awarding charge one credits is that, by helping to meet peak demand in its local area, an EG is supporting network capacity and thus deferring or avoiding network reinforcements. The credits reflect the resulting estimated future savings, so it is appropriate to award them to generators for producing at times of peak demand<sup>27</sup>. Credit eligibility is linked to the F factors, as DNOs will assess each EGs' actual contributions to network security taking into account the specific circumstances of the local network, and the F factors are an indication of such contributions.
- As identified in the Change Report, under the proposal there would be cases in which a non-intermittent EG, that was originally assigned a zero F factor by the DNO because it was deemed not to support the network, would be awarded

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<sup>26</sup> Let's consider two equivalent (ie, with the same calculated F factor and hence equal calculated charge one credit) non-intermittent generators with a capacity of 51MW each, one of which is co-located with 50MW of intermittent generation. We understand the the latter will, effectively, only be eligible for (51/101)% of the super red credit. Instead, the former generator will be awarded the full calculated credit.

<sup>27</sup> See our direction to approve the charging methodology for higher voltage distributed generation: <https://www.ofgem.gov.uk/publications/electricity-distribution-charging-direction-authority-approve-charging-methodology-higher-voltage-distributed-generation-notice-intention-impose-condition-approval-pursuant-part-d-electricity-distribution-licence?docid=855&refer=Networks/ElecDist/Policy/DistChrgs>

charge one credits, based only on its technology type. This defeats the very logic of credit eligibility.

- In such cases, the divorce between the charging methodology principles and the network security requirements (set in EREC P2 and EREP 130) created by the proposed change would result in a departure from cost-reflectivity: awarding credits (ultimately, paid through the charges levied on demand customers) would have no justification in any DNO's cost savings achieved through the network support received by the EG.
- Therefore, we are not convinced that for non-intermittent generation, as under the proposal, considerations about technology type alone (ie, non-intermittent vs intermittent generation) should take precedence over the network security assessment (ie, calculation of F factors) that all DNOs are expected to carry out under relevant engineering standards.

***Fourth Applicable Charging Methodology Objective: so far as is consistent with the first three Applicable Charging Methodology Objectives, the Relevant Charging Methodology, so far as is reasonably practicable, properly takes account of developments in a Distribution Services Provider's Distribution Business.***

The majority of the DCP313 Workgroup considered that this Relevant Objective would be positively facilitated by the proposal because the change would support network operators to meet the developments in their businesses. In their role as proactive parties on using and dispatching flexibility services, Distribution System Operators would benefit from a clear and standard approach when determining the eligible technologies.

We note that no evidence or persuasive argument of such benefits have been provided, beyond a mere statement of principle. We therefore consider it has not been adequately demonstrated that Objective four is better facilitated by the proposal.

***Sixth Applicable Charging Methodology Objective: compliance with the Relevant Charging Methodology promotes efficiency in its own implementation and administration.***

The DCP313 Workgroup unanimously considered that this Objective would be positively facilitated by this change because a harmonised approach in defining the eligibility criteria across the DNO areas will guarantee a more efficient implementation of the generation credits.



We note that no evidence or persuasive argument of such benefits have been provided, beyond a mere statement of principle. We therefore consider it has not been adequately demonstrated that objective six is better facilitated by the proposal.

We also note that, as detailed under Objective two, the revised EREC P2/7 and EREP 130/3 now provide a set of common and transparent rules for all DNOs, which already ensures a more harmonised approach to F factor calculation across DNOs, thus rendering the proposal redundant in this respect.

### ***Our principal objective***

We are particularly concerned that the proposal would reduce the cost-reflectivity of charge one credits, in that, for those non-intermittent EGs to which DNOs have assigned zero F factors, credit eligibility would be effectively disjoint from any actual contributions to network security. As we explain above, this may result in demand customers funding credits to those EGs without receiving the benefit of any delayed or avoided reinforcements.

As to the potential benefit of improved transparency, we believe this is largely achieved by the revised standards in EREC P2/7 and EREP 130/3.

Therefore, we consider that on balance this proposal would not be consistent with our principal objective to protect the interests of current and future energy consumers.

### **Decision notice**

In accordance with standard licence condition 22.14 of the Electricity Distribution Licence, the Authority has decided that modification proposal DCP313: '*Eligibility Criteria for EDCM Generation Credits*' should not be made.

**Charlotte Friel**

**Deputy Director**

**Market Operations and Signals**

Signed on behalf of the Authority and authorised for that purpose