

## Part A: Generic

DCUSA Change Proposal (DCP)		At what stage is this document in the process?
<h1>DCP 313:</h1> <h2>Eligibility Criteria for EDCM Generation Credits</h2> <p>Insert date raised: 10 October 2017</p> <p>Proposer Name: Andrew Enzor</p> <p>Company Name: Northern Powergrid</p> <p>Company Category: DNO</p>		<p><b>01 – Change Proposal</b></p> <p>02 – Consultation</p> <p>03 – Change Report</p> <p>04 – Change Declaration</p>
<p>The intent of this Change Proposal is to improve transparency of the eligibility criteria for EDCM generators to receive super red credits, and to improve consistency in the application thereof.</p>		
	<p>Governance:</p> <p>The Proposer recommends that this Change Proposal should be:</p> <ul style="list-style-type: none"> <li>• Treated as a Part 1 Matter</li> <li>• Treated as a Standard Change</li> <li>• Proceed to a Working Group</li> </ul> <p>The Panel will consider the proposer’s recommendation and determine the appropriate route.</p>	
	<p>Impacted Parties: DNOs</p>	
	<p>Impacted Clauses: Schedule 17 and 18</p>	

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Indicative Timeline	
<b>The Secretariat recommends the following timetable:</b>	
Initial Assessment Report	11 October 2017
Consultation Issued to Industry Participants	TBC
Change Report Approved by Panel	17 January 2018
Change Report issued for Voting	19 January 2018
Party Voting Closes	09 February 2018
Change Declaration Issued to Parties	13 February 2018
[Change Declaration Issued to Authority]	13 February 2018
[Authority Decision]	20 March 2018

 Any questions?

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## 1 Summary

### What?

The legal text in schedules 17 and 18 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 down in Engineering Recommendation P2/6 – ‘Security of Supply’ (ER P2/6) and Engineering Technical Report 130 – ‘Application Guide for Assessing the Capacity of Networks Containing Distribution Generation’ (ETR130). The F factor is determined based on a site-specific assessment of the contribution to network security of each EDCM embedded generator, taking into account availability and the operating regime, alongside intermittency.

EDCM embedded generators are deemed to be eligible to receive charge one credits (unit rate credits applicable in the DNO’s peak ‘super-red’ period, calculated based on a power flow analysis of the DNO’s

network) if they have a non-zero F factor, and are deemed not eligible to receive charge one credits if they have a zero F factor.

This change seeks to improve the transparency around the determination of the eligibility of EDCM embedded generators to receive charge one credits.

### Why?

This change proposal seeks to address a Distribution Charging Methodologies Forum (DCMF) Methodologies Issues Group (MIG) issue raised in November 2016 which identified potential differences in the application of generation credits to EDCM embedded generators across different DNOs. The concern raised by embedded generators is that there is a lack of transparency and potential lack of commonality in the method by which DNOs determine the F factor, and consequently whether prospective sites will be eligible for charge one credits. DCP 291 – ‘Application of Generation Credits to EDCM Customers’ was raised to resolve this issue, by making all EDCM embedded generators eligible for charge one credits regardless of the F factor. The DCP 291 Working Group subsequently agreed that this was not the best available solution to the issue raised, which has led to the withdrawal of DCP 291 and the creation of this CP.

### How?

Two potential solutions are proposed.

1. Amend legal text in schedules 17 and 18 to require DNOs to populate the ‘proportion eligible for charge one credits’ field within the EDCM model based on technology type rather than on F factor, i.e. set to one for all non-intermittent EDCM embedded generation and set to zero for all intermittent EDCM embedded generation.
2. Amend legal text in schedules 17 and 18 to no longer reference P2/6 when assigning the F factor, but rather to include table 2-1 from P2/6 in the EDCM, and so set the F factor based only on technology type with no site specific assessment.

## 2 Governance

### Justification for Part 1 and Part 2 Matter

The change is believed to be a Part 1 matter as the assignment of F factors and the eligibility for charge one credits impacts the level of credits for EDCM embedded generators.

### Requested Next Steps

This Change Proposal should:

- Be treated as a Part 1 Matter
- Be treated as a Standard Change
- Proceed to Working Group

## 3 Why Change?

This change proposal seeks to address a DCMF MIG issue raised in November 2016 which identified potential differences in the application of generation credits to EDCM embedded generators across

different DNOs. The concern raised by embedded generators is that there is a lack of transparency and potential lack of commonality in the method by which DNOs determine the F factor, and consequently whether prospective sites will be eligible for charge one credits. DCP 291 – ‘Application of Generation Credits to EDCM Customers’ was raised to resolve this issue, by making all EDCM embedded generators eligible for charge one credits regardless of the F factor. The Working Group subsequently agreed that this was not the best available solution to the issue raised, which has led to the withdrawal of DCP 291 and the creation of this CP.

Both of the proposed solutions would improve the transparency around the eligibility for charge one credits, with the second solution also achieving a common approach in regards to the assignment of F factors to EDCM embedded generators.

## Part B: Code Specific Details

### 4 Solution and Legal Text

There are two proposed solutions:

#### Option 1

Amend legal text in schedules 17 and 18 to require DNOs to populate the ‘proportion eligible for charge one credits’ field based on technology type rather than on F factor, i.e. set to one for all non-intermittent EDCM embedded generators and set to zero for all intermittent EDCM embedded generators. This would lead to:

- all intermittent EDCM embedded generators (which have zero F factor) remaining unchanged;
- non-intermittent EDCM embedded generators which the DNO has determined do not support the network in line with ETR130 (which also have zero F factor) being eligible for charge one credits where they currently are not; and
- non-intermittent EDCM embedded generators which the DNO has determined do support the network in line with ETR130 (which have non-zero F factor) remaining eligible for charge one credits.

This will provide greater transparency to EDCM embedded generators of the likely charges/credits they will face, enabling them to more easily predict their charges before deciding where to site plant. This option will only improve transparency in the eligibility for credits by divorcing eligibility from the site specific assessment carried out to determine the F factor. The assignment of the F factor will remain unchanged by this option, and so a non-intermittent EDCM generator may still be assigned a zero F factor if they are deemed by the DNO to not support the network.

As a result, there is a possibility that an EDCM embedded generator which is deemed not to support the network will be awarded credits. This is unlikely, as generators which do not support the network are likely to be in areas of low demand, and hence charge one is likely to be zero. Nonetheless, it is possible that charge one will be non-zero, and so a generator which does not offset reinforcement costs could be awarded credits under this solution.

There is also a risk under this solution that a scenario where a non-intermittent EDCM embedded generator would be awarded higher credits if it were deemed not to support the network by the DNO than if it were deemed to support the network by the DNO. This is because in the case where the generator is deemed to support the network, it will have a non-zero F factor, and so will be assumed to be generating at the time of peak demand (in line with the load flow methodology), and so the time to reinforcement on the local network will be longer and charge one lower. If the same generator were deemed not to support

the network, it would be assigned a zero F factor, and so assumed to not be generating at the time of peak demand (in line with the load flow methodology), and so the time to reinforcement on the network will be shorter and charge one higher. Under this option, the generator in both scenarios would be eligible for charge one credits (because both are non-intermittent), but charge one would be higher in the case where the generator is deemed not to support the network, and so the credits the embedded generator receives would be higher in this scenario.

## Option 2

Amend legal text in schedules 17 and 18 to no longer reference P2/6 when assigning the F factor, but rather to include table 2-1 from P2/6 in the EDCM, and so set the F factor based only on technology type with no site specific assessment. This would lead to:

- all intermittent EDCM embedded generators (which have zero F factor) remaining unchanged;
- non-intermittent EDCM embedded generators which the DNO has determined do not support the network in line with ETR130 (which also have zero F factor) being reassigned a non-zero F factor and so becoming eligible for charge one credits; and
- non-intermittent EDCM embedded generators which the DNO has determined do support the network in line with ETR130 (which have non-zero F factor) being assigned the same F factor and so remaining eligible for charge one credits.

As with option one, this will provide greater transparency to EDCM embedded generators of the likely charges/credits they will face, enabling them to more easily predict their charges before deciding where to site plant. This option will also improve transparency in the determination of the F factor.

The possibility identified in option one that a generator which is deemed not to support the network will be awarded credits remains a risk under option two. As with option one, this is unlikely, as generators which do not support the network are likely to be in areas of low demand, and hence charge one is likely to be zero. Nonetheless, it is possible that charge one will be non-zero, and so a generator which does not offset reinforcement costs could be awarded credits under this option.

The risk identified under option one of a scenario where a non-intermittent EDCM embedded generator would be awarded higher credits if it were deemed not to support the network by the DNO than if it were deemed to support the network by the DNO does not exist under this option. This is because both generators would be assigned the same F factor based on table 2-1 from P2/6, and so both would have the same charge one calculated.

For both options, the Working Group should determine whether the increased transparency and commonality outweigh the potential loss in cost-reflectivity.

## Legal Text

The legal text solution will be different for the two options:

### Option 1

Amend paragraph 6.5 of schedule 18 as follows:

*Charge 1 is applied to export charges as a credit. The credit is expressed as a negative charge rate in p/kWh and is applied in respect of active power units exported during the DNO Party's super-red time band. The credit rate is set to zero for Connectees are assigned an F Factor of zero. The credit rate is calculated as follows:*

$$[p/kWh \text{ super-red export rate}] = -100 * [Proportion \text{ eligible for charge 1 credits}] * ([local \text{ charge 1 } \pounds/kVA/year] + [remote \text{ charge 1 } \pounds/kVA/year]) * ([Chargeable \text{ export capacity}] / [Maximum \text{ export capacity}]) / [number \text{ of hours in the super-red time band}]$$

Where:

The proportion eligible for charge 1 credits is zero ~~if the F factor that is assigned to the Connectee as described in the LRIC methodology is equal to zero, and 1 otherwise~~ for intermittent generators and 1 for non-intermittent generators

Intermittent generation is defined as generation plant where the energy source of the prime mover cannot be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. These include wind, tidal, wave, photovoltaic and mall hydro.

Non-intermittent generation is defined as a generation plant where the energy source of the prime mover can be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. The generator can choose when to operate. These include combined cycle gas turbine (CCGT), gas generators, landfill, sewage, biomass, biogas, energy cop, waste incineration and combined heat and power (CHP).

## Option 2

Amend paragraph 5.31 and 5.32 of schedule 18 as follows:

~~The Network Demand Data (Generation) element of the Maximum Demand Data will be constructed with generation output set at zero unless the generation can be considered to have a contribution to security of supply under ER P2/6, in which case the ER P2/6 level of export will be modelled.~~ is assigned a non-zero F factor.

~~The contribution of distributed generation to security of supply is dealt with in ER P2/6 through the application of F factors. Each Generation Installation is assigned an F factor and this represents the percentage of the generator's declared net capacity that can be considered when assessing network security. ER P2/6 also uses the term 'Persistence' to reduce the F factor for intermittent generation, as the time period (in hours) for which its contribution to security is being assessed increases. Table 2-4 of ER P2/6 recommends values of 'Persistence'; these values are dependent on the demand class being assessed. The value of 'Persistence' to be used for intermittent generation will be as stated in Table 2-4 of ER P2/6 for 'Other outage', using the maximum GSP (or GSP groups) demand instead of the demand class of the demand group. Non-intermittent distributed generation is assigned an F factor in accordance with table x:~~

<u>Type of Generation</u>	<u>Number of Units</u>									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
<u>Landfill Gas</u>	<u>63</u>	<u>69</u>	<u>73</u>	<u>75</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>79</u>	<u>80</u>	<u>80</u>
<u>Combined Head and Power sewage treatment using a spark ignition engine</u>	<u>40</u>	<u>48</u>	<u>51</u>	<u>52</u>	<u>53</u>	<u>54</u>	<u>55</u>	<u>55</u>	<u>56</u>	<u>56</u>
<u>Waste to Energy</u>	<u>58</u>	<u>64</u>	<u>69</u>	<u>71</u>	<u>73</u>	<u>74</u>	<u>75</u>	<u>75</u>	<u>76</u>	<u>77</u>
<u>Combined Cycle Gas Turbine</u>	<u>63</u>	<u>69</u>	<u>73</u>	<u>75</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>79</u>	<u>80</u>	<u>80</u>

<a href="#">Combined Heat and Power sewage treatment using a Gas Turbine</a>	<a href="#">53</a>	<a href="#">61</a>	<a href="#">65</a>	<a href="#">67</a>	<a href="#">69</a>	<a href="#">70</a>	<a href="#">71</a>	<a href="#">71</a>	<a href="#">72</a>	<a href="#">73</a>
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*Table x – F factors for non-intermittent distributed generation*

*Non-intermittent generation is defined as a generation plant where the energy source of the prime mover can be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. The generator can choose when to operate. These include combined cycle gas turbine (CCGT), gas generators, landfill, sewage, biomass, biogas, energy cop, waste incineration and combined heat and power (CHP).*

## Text Commentary

Option one involves a simple change to the legal text, to make all non-intermittent EDCM embedded generators eligible for charge one credits regardless of their F factor.

Option two involves a more significant change to the legal text, with the reference to P2/6 removed from the relevant paragraphs which define the F factor to be used, and table 2-1 from P2/6 inserted.

## 5 Code Specific Matters

### Reference Documents

n/a

## 6 Relevant Objectives

DCUSA Charging Objectives	Identified impact
<input type="checkbox"/> 1 that compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence	None
<input checked="" type="checkbox"/> 2 that 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)	Positive
<input checked="" type="checkbox"/> 3 that 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	Negative

<input type="checkbox"/> 4 that, so far as is consistent with Clauses 3.2.1 to 3.2.3, the Charging Methodologies, so far as is reasonably practicable, properly take account of developments in each DNO Party's Distribution Business	None
<input type="checkbox"/> 5 that compliance by each DNO Party with the Charging Methodologies facilitates compliance with the Regulation on Cross-Border Exchange in Electricity and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None
<input type="checkbox"/> 6 that compliance with the Charging Methodologies promotes efficiency in its own implementation and administration.	None
<p>Both proposed solutions will better facilitate charging objective two by providing greater transparency to EDCM embedded generators of the likely charges/credits they will face, enabling them to more easily predict their charges before deciding where to site plant. Option two will facilitate this objective more strongly by improving transparency in the assignment of the F factor alongside the eligibility for credits; whilst option one will only improve transparency in the eligibility for credits by divorcing eligibility from the site specific assessment carried out to determine the F factor.</p> <p>Both proposed solutions will have a small detrimental impact against charging objective three, as there is the possibility that EDCM embedded generators which are deemed not to support the network by the DNO could be awarded credits. Option one would have a slightly worse detrimental impact than option two, due to the issue described in the 'Solution and Legal Text' section where an EDCM embedded generator which is deemed to support the network could receive lower credits than an equivalent EDCM embedded generator which is deemed to not support the network.</p>	

## 7 Impacts & Other Considerations

This change will have an impact on EDCM embedded generators, and a knock-on impact on other customers through tariff scaling. The biggest impact will be on non-intermittent EDCM embedded generators which are currently deemed to be ineligible for charge one credits.

### Does this Change Proposal impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No

### Does this Change Proposal Impact Other Codes?

- BSC
- CUSC
- Grid Code

- MRA
- SEC
- Other
- None

### Consideration of Wider Industry Impacts

No wider impacts are anticipated

### Confidentiality

Non-confidential

## 8 Implementation

The change should be implemented as soon as possible.

### Proposed Implementation Date

01 April 2020

## 9 Recommendations

### Part C: Guidance Notes for Completing the Form

Ref	Section	Guidance
1	<b>Attachments</b>	Append any proposed legal text or supporting documentation in order to better support / explain the CP.
2	<b>Governance</b>	<p>A CP must be categorised as a Part 1 or Part 2 matter in accordance with Clause 10.4.7 of the DCUSA. All Part 1 matters require Authority Consent.</p> <p>Part 1 Matter</p> <p>A change Proposal is considered a Part 1 Matter if it satisfies one or more of the following criteria:</p> <p>a) it is likely to have a significant impact on the interests of electricity consumers;</p> <p>b) it is likely to have a significant impact on competition in one or more of:</p> <ul style="list-style-type: none"> <li>i. the generation of electricity;</li> <li>ii. the distribution of electricity;</li> <li>iii. the supply of electricity; and</li> <li>iv. any commercial activities connected with the generation, distribution or supply of electricity;</li> </ul>

		<p>c) it is likely to discriminate in its effects between one Party (or class of Parties) and another Party (or class of Parties);</p> <ol style="list-style-type: none"> <li>i. it is directly related to the safety or security of the Distribution Network; and</li> <li>ii. it concerns the governance or the change control arrangements applying to the DCUSA; and</li> <li>iii. it has been raised by the Authority or a DNO/IDNO Party pursuant to Clause 10.2.5, and/or the Authority has made one or more directions in relation to it in accordance with Clause 11.9A.</li> </ol> <p>Part 2 Matter</p> <p>A CP is considered a Part 2 Matter if it is proposing to change any actual or potential provisions of the DCUSA which does not satisfy one or more of the criteria set out above.</p>
<b>3</b>	<b>Related Change Proposals</b>	Indicate if the CP is related to or impacts any CP already in the DCUSA or other industry change process.
<b>4</b>	<b>Proposed Solution and Draft Legal Text</b>	<p>Outline the proposed solution for addressing the stated intent of the CP. The Change Proposal Intent will take precedence in the event of any inconsistency. A DCUSA Working Group may develop alternative solutions.</p> <p>The plain English description of the proposed solution should include the changes or additions to existing DCUSA Clauses (including Clause numbers).</p> <p>Insert proposed legal drafting (change marked against any existing DCUSA drafting) which enacts the intent of the solution. The legal text will be reviewed by the Working Group (if convened) and is likely to be subject to legal review as part of its progress through the DCUSA change process.</p>
<b>5</b>	<b>Proposed Implementation Date</b>	<p>The Change can be implemented in February, June, and November of each year or as an extraordinary release. For Charging Methodology CPs, select an implementation date which takes into consideration the minimum notice periods for publishing tariffs. These are:</p> <ul style="list-style-type: none"> <li>• 15 months, for DNOs acting within their Distribution Services Areas; or</li> <li>• 14 months, for IDNOs and DNOs acting outside their Distribution Services Area.</li> </ul> <p>Please select an implementation date that provides sufficient time for the Change to be incorporated into the appropriate charging model and the DCUSA in order to be reflected in future tariffs.</p> <p>Contact the DCUSA helpdesk for any further information on the releases <a href="mailto:dcusa@electralink.co.uk">dcusa@electralink.co.uk</a>.</p>

6	<b>Impacts &amp; Other Considerations</b>	Indicate whether this Change Proposal will be impacted by or have an impact upon wider industry developments. If an impact is identified, explain why the benefit of the Change Proposal may outweigh the potential impact and indicate the likely duration of the Change.
7	<b>Environmental Impact</b>	Indicate whether it is likely that there would be a material impact on greenhouse gas emissions as a result of the proposed variation being made. Please see <a href="#">Ofgem Guidance</a> .
8	<b>Confidentiality</b>	Clearly indicate if any parts of this Change Proposal Form are to remain confidential to DCUSA Panel (and any subsequent DCUSA Working Group) and Ofgem
9	<b>DCUSA General Objectives</b>	Indicate which of the DCUSA Objectives will be better facilitated by the Change Proposal.
10	<b>Detailed Rationale for DCUSA Objectives</b>	Provide detailed supporting reasons and information (including any initial analysis that supports your views) to demonstrate why the CP will better facilitate each of the DCUSA Objectives identified.
11	<b>DCUSA Charging Objectives</b>	Indicate which of the DCUSA Charging Objectives will be better facilitated by the Change Proposal.
12	<b>Defining 'Material' for Charging Methodology Changes</b>	In respect of proposals to vary one or more of the Charging Methodologies, such proposals shall be deemed to be "material" if they might reasonably be expected to have a significant impact on the tariffs calculated under one or more of the methodologies.