

---

## **Distribution Use of System Charging – Managing the effects of surplus residual charges**

---

Publication date: 25<sup>th</sup> July 2024

---

Response deadline: 5<sup>th</sup> September 2024

---

Contact: Distribution and Residual Charging Team

---

Team: Distribution and Residual Charging

---

Email: [DUOS@ofgem.gov.uk](mailto:DUOS@ofgem.gov.uk)

---

The text of this document may be reproduced (excluding logos) under and in accordance with the terms of the [Open Government Licence](#).

Without prejudice to the generality of the terms of the Open Government Licence the material that is reproduced must be acknowledged as Crown copyright and the document title of this document must be specified in that acknowledgement.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

This publication is available at [www.ofgem.gov.uk](http://www.ofgem.gov.uk). Any enquiries regarding the use and re-use of this information resource should be sent to: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk)

# Contents

<b>Distribution Use of System Charging – Managing the effects of surplus residual charges</b> .....	<b>1</b>
<b>Summary</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>7</b>
<b>Background</b> .....	<b>8</b>
Prioritisation of work .....	10
Questions.....	10
<b>Implementation</b> .....	<b>11</b>
Question .....	11
<b>The Options</b> .....	<b>12</b>
Our approach to assessment .....	12
Quantitative and directional analysis.....	12
DCUSA objective alignment with our PO .....	13
Question .....	13
EDCM .....	14
Question .....	17
CDCM .....	17
Questions.....	21
<b>Summary of Call for Input question</b> .....	<b>22</b>
Background .....	22
Implementation.....	22
Options – approach to assessment .....	22
EDCM Options .....	22
CDCM Options.....	22
<b>Annexes</b> .....	<b>24</b>
Annex 1 – EDCM Assessment.....	24
Proposals .....	24
Quantitative ‘stress testing’ of the options .....	26
Qualitative assessment of proposals against criteria .....	28
DNO obligations .....	28
Competition.....	28
Cost reflectivity .....	30
DNO business development.....	31
Efficiency .....	32
Ofgem Principal Objective and wider statutory duties .....	33
Annex 2 – CDCM Assessment .....	36
Proposals .....	36
Quantitative ‘stress testing’ of the options .....	38
Qualitative assessment of proposals against criteria .....	39
DNO obligations .....	39
Competition.....	40

Cost reflectivity .....	41
DNO business development.....	42
Efficiency .....	43
Ofgem Principal Objective and wider statutory duties .....	43

## Summary

Distribution Use of System (DUoS) charges are used to ensure that the costs of the distribution networks can be recovered by the Distribution Network Operators (DNOs). Each year, charging statements are produced to provide advanced notice<sup>1</sup> of the following year's charges. Publishing charges in advance allows end users and their suppliers to understand their future costs. Some users will use this information to plan other activities accordingly, such as shift patterns or process scheduling for manufacturing sites.

To produce charging statements in advance, the DNOs must use approved cost models to generate tariffs that recover the relevant expected allowed revenues. In recent years, some DNOs have found the models have produced tariffs that are not in line with good charging practice. In other cases, the models have failed to produce tariffs using the desired inputs, and intervention has been required. Some of these issues can be traced to developments in the industry, such as higher-than-normal levels of expected future investment, or a falling allowed revenue, and broadly are also attributable to choices made during the implementation of Ofgem's Targeted Charging Review (TCR).

Charging statements must be produced, and so it is important that there is clarity about how issues such as those seen in recent years should be dealt with. The standard approach to issues such as these is to progress code changes, but this may not be the best option during a period of significant change in industry where resources are spread thinly. Instead, we are interested to understand industry views on a non-standard process that aims to reduce burdensome and potentially nugatory work with a more flexible approach that aims to add predictability.

This document sets out how we propose to treat requests by industry to deal with issues DNOs have producing sensible tariffs. DNOs have collaborated and supported us in the development of this document, and we would like to hear from the rest of industry on our approach. Under the process we propose, and subject to industry views, we will confirm guidelines for dealing with these issues, and invite any DNOs needing to make requests relating to these issues to submit them with their rationale and supporting information. Requests will be considered individually in a consistent and transparent way.

We see this as a specific and technical issue, but one that needs industry engagement and consultation. It is not a process we intend to be used more widely, but may be an

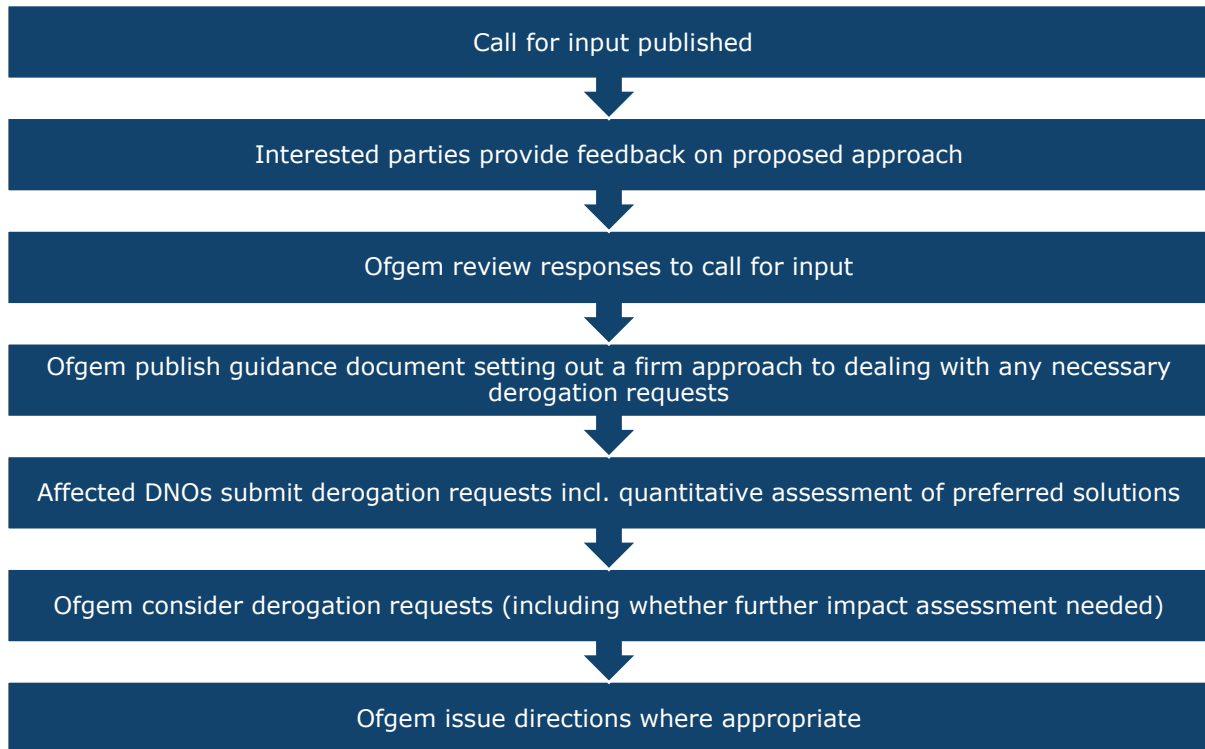
---

<sup>1</sup> At time of publication, there is a 15 month notice period of DUoS charges.

efficient way to manage issues like this associated with the energy transition where changes are necessary but could be impacted by strategic developments in the sector.

Our proposed process

*Chart 1: Our proposed process*



We invite feedback on these proposals by 5<sup>th</sup> September 2024. Interested parties can submit their responses to [DUoS@ofgem.gov.uk](mailto:DUoS@ofgem.gov.uk).

## Introduction

Distribution Use of System (DUoS) charges are levied by Distribution Network Operators (DNOs) to recover their allowed revenues. DUoS charges are calculated according to the Charging Methodologies as approved by the Authority<sup>2</sup>, namely the Extra-High Voltage (EHV)<sup>3</sup> Distribution Charging Methodology (EDCM) and the Common Distribution Charging Methodology (CDCM) as set out in the Distribution Connection and Use of System Agreement (DCUSA)<sup>4</sup>.

We are aware of issues within the existing Charging Methodologies. For the CDCM, this creates a risk that the methodology will fail to produce a full set of tariffs. In the case of the EDCM, there is a risk that the existing methodology will produce potentially distortive fixed credits for certain users. This call for input seeks views on how best to address these apparent issues with the Charging Methodologies should they arise in future charge-setting periods.

This document serves to briefly explain the conditions under which the Charging Methodologies may result in these issues. We then describe our assessment framework used in this work, set out some proposed solutions raised by industry stakeholders in response to our identification of this issue, and provide an initial assessment of these options. Further detail of these initial assessments is provided in Annexes 1 (for the issue relating to the EDCM) and 2 (for the issue relating to the CDCM). We then set out next steps for how DNOs may address these issues should they arise in future tariff setting.

We request feedback on our evaluation of proposals received from industry stakeholders on how these issues may be mitigated against in future charge-setting periods. We intend to publish a guidance document setting out a firm approach to dealing with any necessary derogation requests, following on from the proposals and assessment outlined in this document. This process takes into consideration the need to confirm a robust approach or approaches to addressing the issues in due time for DNOs to publish 2026/27 tariffs by the deadline of 31 December 2024. We recognise the context of significant change within the industry and that this process should be efficiently implemented by industry in the short-term. To this end, we invite responses, over the next six weeks, to the questions raised in this call for input to inform policy development in this area.

---

<sup>2</sup> The terms “we”, “us”, “our”, “Ofgem” and “the Authority” are used interchangeably in this document and refer to the Gas and Electricity Markets Authority.

<sup>3</sup> Extra-High Voltage refers to users connected at (or above) 22kV, or to users connected into a substation where the primary infeed is at (or above) 22kV.

<sup>4</sup> The most recent version of the DCUSA document can be read [here](#).

## Background

Forward-looking charges are the element of network charges that signal to users how their actions can either increase or decrease future network costs. They typically provide signals about the incremental cost of locating at different points on the network, or of using the network at different times. Forward-looking charges are priced within the Charging Methodologies, in the cost allocation process: the EDCM is a site-specific methodology, whereas the CDCM considers costs for all users across the network area. Forward-looking charges can be recovered through unit rates, capacity charges and daily fixed charges.

The revenue recovered from forward-looking charging elements is typically less than the forecast of DNO allowed revenue that is due to be recovered.<sup>5</sup> To bring the revenue recovered from DUoS charges into alignment with the network's allowed revenue, a residual charge is added to the daily fixed charge. In some cases, the cost allocation process would mean that forward-looking charges recover **more** than the allowed revenue, resulting in a negative-value "surplus residual"<sup>6</sup>.

Recent regulatory reforms and economic changes have affected the extent of forward-looking charge recovery and the value of revenue due to be recovered through the Charging Methodologies. Charge recovery for users billed under the EDCM has further been impacted by changes to local network utilisation, both in the present day and under the assumed load growth expected of the next ten years (a consideration in the Forward Cost Pricing calculation approach, used by some networks). Charge recovery for users billed under the CDCM may also have changed as a result of user behaviour. These conditions each have the effect of increased forward-looking charge recovery relative to a network's allowed revenue, and if combined have a compounding effect.

In the 2023 charge-setting period (i.e., in producing tariffs for the charging year beginning in April 2025), we were made aware of circumstances where following the EDCM would result in a surplus residual. In reconciling this surplus, the Charging Methodology adds a negative adjustment value to the fixed charge of Final Demand sites.<sup>7</sup> In some cases, the size of this negative residual adjustment exceeded the fixed charge determined by the initial cost allocation process, which would have resulted in a

---

<sup>5</sup> Allowed revenues are determined by the RIIO process. You can read more information on Network price controls 2021-2028 (RIIO-2) [here](#).

<sup>6</sup> The residual is the difference between the expected value of forward-looking charges and the target revenue. Surplus residual is also understood as a 'negative residual'. This document uses the term "surplus residual" for consistency with the DCUSA.

<sup>7</sup> Final Demand Site means: (a) Domestic Premises; or (b) a Single Site (as defined in Schedule 32) at which there is Final Demand, as determined in accordance with Paragraphs 1.10 and 5 of Schedule 32 of the DCUSA.



fixed daily credit being paid to those sites. We do not consider that a fixed daily credit for Final Demand Sites is cost-reflective nor conducive to competition in the generation and supply of electricity. A credit or discount to one user group, must be paid for by another: at a time when both domestic and non-domestic users are facing higher costs of energy, it does not seem reasonable to see consumer money paid out to users in standing charges or for excessively volatile or high unit rates affecting business decisions without clear justification. On this basis, we granted directions to derogate to the two affected DNOs to charge outside of the Charging Methodology and directed them to change how they applied particular elements of the EDCM, to the effect that fixed daily credits were not paid to network users.<sup>8</sup>

Similarly, we are aware of limitations within the CDCM in how it seeks to reconcile a surplus residual. While there is a discounting process described in the Charging Methodology, a large surplus residual may result in the Methodology failing to produce a final schedule of charges for some network users. This happens when the surplus residual exceeds the ability of the current approach to discount against fixed and unit charges, as charges are subject to a floor of 0 to prevent a credit from being paid to demand users. We do not consider that compliance with the Charging Methodology should result in the failure to produce a set of final tariffs.

In both methodologies, the surplus residual serves to discount forward-looking charges for Final Demand users to ensure that an appropriate amount of revenue is recovered. In extreme cases, this results in a set of final tariffs that we consider to be inappropriate. These issues were described in greater detail in two explanatory notes published alongside our presentation to the March Charging Futures Forum.<sup>9</sup> These notes invited interested stakeholders to share initial feedback on our identification of these issues. They also provide more context regarding how the existing CDCM discounting process works.

In addition, earlier this year we held workshops with DNO representatives to explore the issues in greater detail. A number of potential solutions were raised, which are detailed in the following section. There was not a clear consensus on whether intervention was justified in cases where the surplus residual was created but did not result in either a daily fixed credit or a failure of the CDCM to produce a set of final tariffs.

Our initial position is that intervention is more justifiable when the EDCM produces a fixed credit or the CDCM results in failure. A surplus residual that does not lead to these

---

<sup>8</sup> You can read our directions pursuant to SLC 13B Part E of the Electricity Distribution Licence relating to National Grid Electricity Distribution [here](#), and to Scottish and Southern Electricity Networks [here](#).

<sup>9</sup> Our note on the EDCM issue can be read [here](#). Our note on the CDCM issue can be read [here](#).

outcomes can be handled by the models and is not of itself potentially distortive. We invite views on this position.

The question that we seek to address in this short-term work is how best to resolve the issues caused by an excessive surplus residual. This is considered separate to the question of what causes forward-looking revenue recovery to be higher in some years than in others, or of what causes a network's allowed revenue to be lower in some years than in others.

We do not believe that the solutions developed through this process should seek to make fundamental changes to the Charging Methodologies or alter the overall signals and intentions of DUoS charging beyond what is necessary. The solutions progressed should enable the EDCM and CDCM to produce charges for all network users over the coming years. Our position on achieving this is described in the "Implementation" section of this document.

## **Prioritisation of work**

We are mindful that there is currently significant change underway in the industry, and it may not be optimal to devote significant industry resource to work that may only be useful for a short period of time, or only by a small number of DNOs. It is our view that wider-reaching changes to the DUoS Charging Methodologies should align with developments in the Review of Electricity Market Arrangements (REMA)<sup>10</sup> and changes to the Transmission Network Use of System (TNUoS) charging regime.<sup>11</sup> As such, longer term reforms to DUoS charging arrangements will be explored when these developments are further advanced. We are therefore exploring options for dealing with these issues that can be efficiently implemented by industry, in recognition of the potential for these issues to be resolved on a more enduring basis by later DUoS work.

## **Questions**

Q1: Do you agree that managing the effects of surplus residual charges should be prioritised and requires consideration in advance of the 2026/27 charge setting period? Please provide your rationale.

Q2: Do you agree that interventions should be applied only when the Charging Methodology produces a fixed credit (in the EDCM) or results in failure (in the CDCM)? Please provide your rationale.

---

<sup>10</sup> Review of electricity market arrangements (REMA) purpose is to identify reforms needed to transition to a decarbonised, cost effective and secure electricity system. You can read more [here](#).

<sup>11</sup> Our Open letter on strategic transmission charging reform: a summary of responses can be read [here](#).

## Implementation

We are aware that the issues described above may arise for 2026/27, for which DNOs publish final tariffs by the end of 2024. To address these issues in a way that preserves the 15-month notice period for 2026/27, we consider that bespoke derogations to affected DNOs from the requirements of the Charging Methodologies is the only feasible option. A longer-term solution may involve a DCUSA code modification as an enduring option, but that would not be possible in the time available for 2026/27 tariff setting. We state the intended steps for applying the preferred approaches below, along with further explanation of our implementation process.

- **Guidance document published**, stating our preferred approach or approaches following consideration of the responses to this call for input.
- **Derogation requests submitted by any DNOs that anticipate facing one or both of these issues for 2026/27**. Requests should be made in line with the approaches outlined in our guidance document. DNOs should include an impact assessment on 2026/27 tariffs to demonstrate the impact of the proposed approach or approaches in their specific circumstances.
- **Ofgem consider direction(s) in response to DNO requests**. We will review the derogation requests and impact assessments against our Principal Objective, wider statutory duties and DCUSA Charging Objectives<sup>12</sup>.
- **DNOs to follow Ofgem direction(s) to enable publication of 2026/27 tariffs**, by 31 December 2024.

**We do not seek to preclude addressing these issues through any DCUSA code modification proposals that industry may wish to bring forward**, but aim to provide an alternative approach that recognises wider regulatory context and limited industry resources. Code change proposals put forward by industry would not necessarily need to stem from the proposals that we have considered in this document and would be considered using the standard industry approaches.

## Question

Q3: Do you agree with our view that addressing the issue via derogations rather than a code modification is appropriate for 2026/27 tariffs in order to preserve the 15-month notice period? Please provide your rationale.

---

<sup>12</sup> DCUSA Charging Objectives are found in clause 3.2 of DCUSA and are re set out in Condition 22A of the Distribution Licences; this can be read [here](#).

# **The Options**

## **Our approach to assessment**

We consider that any solution to the identified issues in the Charging Methodologies must be in accordance with our Principal Objective and wider statutory duties. To determine whether a proposed solution is suitable, we conducted a set of initial quantitative and principles-based analyses.

Following our stakeholder engagement on these issues, we received a variety of proposals that we believe may be readily implemented for the 2024 charge-setting period if needed. These proposals are set out below, along with a summary of our initial assessment. As the EDCM and CDCM forward-looking charge calculations function differently, we have considered the defects in isolation. Fuller assessments are included in Annexes 1 and 2.

## **Quantitative and directional analysis**

We firstly sought to understand how proposals may affect the allocation of cost between different network charges. This quantitative assessment was informed by a stress-test, carried out by DNO's, wherein each proposal was applied using inputs that would ordinarily cause an excessive surplus residual. We then examined whether the proposal was successful at mitigating against the creation of final tariffs with the issues described above.

As the Charging Methodologies are complex calculations, we also examined the effect of different solutions on each component of the final tariffs, as charge components might not be affected in a uniform way. Consequently, individual users will be impacted to greater or lesser extents dependent on their network utilisation. This directional analysis is presented in Annexes 1 and 2 in order to inform responses to this call for input. As we describe in the Implementation section of this document, we expect that the actual implementation of any solution should be subject to a more complete examination of the impact on final tariffs. This is because the extent of surplus residual is contingent on inputs which are subject to change year-on-year, so we consider that a case-by-case assessment is most appropriate.

## **DCUSA objective alignment with our PO**

Recognising these issues as defects within the Charging Methodologies, we believe that the DCUSA Charging Objectives<sup>13</sup> are an appropriate framework for evaluating proposals against our Principal Objective to protect the interests of current and future consumers, and our wider statutory duties. For instance, we consider that the First DCUSA Charging Objective<sup>14</sup>, relating to the promotion of competition in the generation and supply of electricity, reflects a similar requirement in our Principal Objective<sup>15</sup>. The Fifth DCUSA Charging Objective<sup>16</sup>, relating to compliance with European regulation, has been omitted from this assessment as we do not consider it possible to conduct a comprehensive assessment without further quantitative analysis against specific derogation requests. It is also important to note that there is considerable overlap between the requirements of the Fifth Objective and others, such as that of cost-reflectivity being further stipulated in Article 18 of Regulation 2019/943<sup>17</sup>. We have structured part of our analysis according to these Charging Objectives, as we believe that they will likely be familiar to respondents to this call for input. This is also consistent with our approach to the assessment of DCUSA Change Proposals.

We have also taken into consideration the network charging principles in Government's Strategy and Policy Statement (SPS) for Energy Policy in Great Britain. We have regard to the strategic priorities in the SPS when carrying out our functions to which the Principal Objective applies.

Finally, we have considered any additional factors relevant to our Principal Objective and wider statutory duties. Our assessment is presented as a RAG analysis below, and in greater detail in Annexes 1 and 2.

## **Question**

Q4: Do you agree that we have considered the relevant factors in our approach to assessment of the proposed approaches to managing the surplus residual charges?

---

<sup>13</sup> DCUSA Charging Objectives are found in clause 3.2 of DCUSA and are re set out in Condition 22A of the Distribution Licences; this can be read [here](#).

<sup>14</sup> This covers DCUSA objective 3.2.2 - 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); found [here](#).

<sup>15</sup> Ofgem's Principle Objective, see section 3A(1B) of Electricity Act; found [here](#).

<sup>16</sup> This covers DCUSA objective 3.2.5 - that compliance by each DNO Party with the Charging Methodologies facilitates compliance with the EU Internal Market Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators; found [here](#).

<sup>17</sup> Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity; found [here](#)

## **EDCM**

Under the existing Charging Methodology, a surplus residual results in a negative adjustment to the fixed charge. An excessive surplus residual may result in a fixed daily credit being paid to some Final Demand sites.

To address this issue, following consultation with DNOs, we received the following proposals:

- **Proposal 1:** Reapportion negative fixed charges for final demand consumers within a residual band to the capacity charge for the same group of consumers.
- **Proposal 2:** Reduce forward-looking components of charges by a set percentage such that the residual is equal to zero. Proposal 2 contains four variants for its implementation depending on which tariff components are reduced:
  - **2A** – all sites, all tariff components
  - **2B** – all sites, import tariffs and export fixed charge
  - **2C** – Final Demand sites, all tariff components
  - **2D** – Final Demand sites, import tariffs and export fixed charge
- **Proposal 3:** Carry over locational components and network use factors from previous years.
- **Proposal 4:** Reapportion 'excess' surplus residual to the CDCM.

Our high-level RAG assessment of the EDCM proposals against the relevant DCUSA Charging Objectives is in Table 1, below. The relative merits of the Proposal 2 variants are explored in the accompanying text. We include a fuller assessment at Annex 1.

Table 1: EDCM Options Assessment RAG

Assessment criteria		Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
DCUSA Charging Objectives	1. Facilitates discharge of obligations <sup>18</sup>	Red	Green	Green	Green	Green
	2. Facilitates competition <sup>19</sup>	Red	Amber	Amber	Amber	Red
	3. Charges that reflect costs incurred <sup>20</sup>	Amber	Amber	Amber	Red	Red
	4. Takes account of business developments <sup>21</sup>	Red	Amber	Amber	Red	Red
	6. Promotes efficiency in its own implementation <sup>22</sup>	Amber	Amber	Amber	Amber	Amber

Note: Red means worst performing compared with the alternative options, while green represents best performing. Amber indicates there is a balance of pros and cons for that option against the criterion.

<sup>18</sup> This covers DCUSA objective 3.2.1 - 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; Found [here](#).

<sup>19</sup> This covers DCUSA objective 3.2.2 - 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); found [here](#). This is also present in Ofgem's Principle Objective, see section 3A(1B) of Electricity Act; found [here](#).

<sup>20</sup> This covers both DCUSA objective 3.2.3 - 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; found [here](#).

<sup>21</sup> This covers DCUSA objective 3.2.4 - 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; Found [here](#).

<sup>22</sup> This covers DCUSA objective 3.2.6 - that compliance with the Charging Methodologies promotes efficiency in its own implementation and administration; Found [here](#).

Following our initial assessment, we consider that all proposals are preferable to the status quo. Furthermore, proposals 1 and 2 (all variants) perform better against the criteria than proposals 3 and 4.

Relative to the status quo, all proposals would avoid negative fixed charges and allow DNOs to publish charges. However, they would involve some dilution of cost-reflectivity by spreading the surplus residual across some forward-looking charges. This could mean that users are billed on unit, capacity, and fixed charges differently to what their originally-calculated impact on the network would suggest.

Compared with the other options, proposals 1 and 2 both have particular benefits with respect to competition, cost-reflectivity and fairness.

In particular, Proposal 1 is designed to retain the 'benefits' of the surplus residual within the same group of customers and only dilutes one element of the forward-looking charge. It therefore retains the cost reflective signals sent by the other tariff elements. However, because it only reapporions the surplus residual to one tariff component, it would not be a sufficient solution in all circumstances, as a negative capacity charge could result. In such a case, customers would receive credits in proportion to the size of their connection.

Proposal 2 has variants that can be adopted according to the driver of the issue and its scale. However, the surplus residual is not retained within the same customer group to the same extent as Proposal 1, and its application results in the dilution of more forward-looking tariff components, though to a lesser degree.

Proposals 3 and 4 have particular disadvantages with respect to cost-reflectivity and fairness. By fixing some inputs based on network conditions at an earlier point in time, Proposal 3, dilutes cost-reflectivity compared with the status quo of charges based on more up-to-date network conditions. It also maintains relative winners/losers from previous year's inputs despite changing use of the network, making it less fair<sup>23</sup> than proposals 1 and 2. However, we know that it does work in extreme circumstances.

Proposal 4 breaks the link between EDCM target revenue and charges applied to EHV customers, diluting cost-reflectivity. It also creates an effective cross-subsidy from EHV to lower voltage customers, reducing fairness for EHV customers.

---

<sup>23</sup> This covers SPS charging principle 58.b - Fairness: including that there should be no undue discrimination between network users; earlier adopters of key low carbon technologies should not be unduly penalised through network charging arrangements; network users should not be able to unduly avoid network charges; and consumers in vulnerable situations should receive an adequate level of protection; Found [here](#).



Ultimately, the merits of each proposal partly depend on the driver of the issue and the extent to which the proposal addresses that driver. If, for example, the surplus residual is driven by increases in charges to only EHV Final Demand customers, then any solution that focuses on charges for EHV Final Demand customers is likely to be more appropriate than one that addresses other tariff elements (including those in the CDCM). Our final assessment of the appropriate proposal will be a combination of:

- The driver of the issue (what tariffs have been affected)
- Whether the proposal is sufficient to correct for the issue in those circumstances
- Wider assessment against the criteria.

Proposals 1 and 2 perform best against the criteria and we consider the most appropriate option will depend on the circumstances. We would seek to use the proposal that addresses the driver of the issue (i.e. which tariffs have been affected):

- If the issue only affects Final Demand tariffs, then proposals 1, 2C and 2D could be appropriate.
- If the issue affects all tariffs for all users, then proposals 2A and 2B could be appropriate.

The final decision would depend on the scale of the surplus residual and the extent of the impact of the proposal on different tariff components. As noted in the Implementation section, as part of any derogation request, we would expect the DNOs to present their assessment to allow us to make a decision on the most appropriate option in the circumstances.

## **Question**

Q5: Do you agree with our assessment that proposals 1 and 2 perform best against the criteria and should be assessed on a case-by-case basis as potential options for future derogations? Please provide your rationale.

## **CDCM**

Under the existing Charging Methodology, there is a provision for surplus residual: it firstly applies a banded negative adjustment to the fixed charge, which is floored at 0p/day. If this floor is exceeded, all unit rates (p/kWh) for users in the affected band are then adjusted downwards by the same amount, until a unit rate charge value reaches 0p/kWh, at which point the remaining surplus is then used to adjust the other eligible unit rates within that band. The methodology fails when all unit rates reach the floor of 0p/kWh, and a surplus residual still remains.

To address this issue, following consultation with DNOs, we received the following proposals:

- **Proposal 1:** Reducing the value of the Distribution Reinforcement Model (DRM)<sup>24</sup>, an input to the cost allocation methodology used for determining the incremental value of forward-looking signals
  - **1A** – Reduce value of DRM such that the forward-looking charges of the CDCM recovers the CDCM target revenue exactly
  - **1B** – Reduce value of DRM such that the forward-looking charges of the CDCM recovers 90% of the CDCM’s target revenue, with the remaining 10% to be recovered through the residual shortfall process
- **Proposal 2:** Reducing the value of all charges produced through the normal cost allocation process, such that forward-looking charges recover the CDCM’s target revenue
  - **2A** – Application of a scaler to Final Demand site tariffs
  - **2B** – Application of a scaler to all tariffs

Proposal 1 would affect an input to the Charging Methodology, with its effects filtering through to final tariffs, whereas Proposal 2 would affect the final tariffs directly. Our high-level RAG assessment of CDCM Options against the relevant DCUSA Charging Objectives in Table 2, below. Proposals 1A, 2A, and 2B may each be applied either to the extent that the surplus residual no longer exists, or to where it can be accommodated for within the existing surplus residual methodology. We include a fuller assessment at Annex 2.

---

<sup>24</sup> The DRM is also known as the “500MW model”, as it describes the cost and characteristics of a hypothetical 500MW addition to the network.

Table 2: CDCM Options Assessment RAG

Assessment criteria		Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
DCUSA Charging Objectives	1. Facilitates discharge of obligations <sup>25</sup>	Red	Green	Green	Green	Green
	2. Facilitates competition <sup>26</sup>	Yellow	Yellow	Yellow	Yellow	Yellow
	3. Charges that reflect costs incurred <sup>27</sup>	Red	Yellow	Red	Red	Yellow
	4. Takes account of business developments <sup>28</sup>	Red	Green	Green	Green	Green
	6. Promotes efficiency in its own implementation <sup>29</sup>	Red	Green	Green	Yellow	Yellow

<sup>25</sup> This covers DCUSA objective 3.2.1 - 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; Found [here](#).

<sup>26</sup> This covers DCUSA objective 3.2.2 - 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); found [here](#). This is also present in Ofgem's Principle Objective, see section 3A(1B) of Electricity Act; found [here](#).

<sup>27</sup> This covers both DCUSA objective 3.2.3 - 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; found [here](#)

<sup>28</sup> This covers DCUSA objective 3.2.4 - 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; Found [here](#).

<sup>29</sup> This covers DCUSA objective 3.2.6 - that compliance with the Charging Methodologies promotes efficiency in its own implementation and administration; Found [here](#).

*Note: Red means worst performing compared with the alternative options, while green represents best performing. Amber indicates there is a balance of pros and cons for that option against the criterion.*

Following our initial assessment, we consider that all proposals are preferable to the status quo, where the Methodology may fail to resolve any remaining surplus residual after the discounting process is exhausted. Under each proposal, the value of forward-looking charges is reduced from what they otherwise would be, with the consequence that the surplus residual is less significant: this may be considered detrimental to the cost-reflectivity of affected tariffs.

As a result of this reduction in the value of forward-looking charge components, the difference between peak and off-peak rates is reduced. Similarly, capacity charges may be reduced compared to what the methodology would ordinarily produce. Interventions to reduce the value of these charge components may consequently increase network costs in the long run, as the marginal cost of inefficient network use would not be priced according to the usual methodology. However, we consider that this risk is only applicable if the cost signal is passed onto the consumer.

We do not initially consider there to be one strong front-runner between the four proposals raised. The responses to this call for input will enable us to better understand the potential risks and benefits associated with adjusting tariffs for both final demand and non-final demand users in this context. In particular, users engaged in storage, generation, or demand-response activities would be uniquely affected by changes to the calculation of their forward-looking charges as a result of excessive residual surplus.

Overall, we do not consider Proposal 1B to be a suitable intervention, as although it retains the distinction between users of different sizes within a given tariff as would be expected in cases of residual shortfall, it introduces an unjustifiable liability to final demand users. The residual shortfall apportionment methodology was designed with the intention of mitigating against charge avoidance, by moving the necessary cost of revenue-matching to a fixed charge. A reduction in forward-looking charges beyond what is necessary to recover revenue, and in particular to an arbitrary value of 10% below the target revenue figure, is not appropriate in terms of cost-reflectivity and would introduce an additional standing charge cost to users without strong reasoning of why this is suitable. We would expect that larger users would pay more towards network costs even without this additional fixed charge adjustment, through higher unit consumption and capacity requirements.

## **Questions**

Q6: Should interventions that scale forward-looking revenue recovery be applied until the point where the existing residual surplus scaling methodology is able to produce eligible final tariffs, or to the point where no surplus residual is created? Please provide your rationale.

Q7: Should surplus residual scaling impact charges for Non-final Demand users as well as Final Demand users? Can you identify any further distortionary impacts that this may have on market participation? Please provide your rationale.

Q8: Do you agree with our assessment of the performance of each proposal against the criteria? Please provide your rationale.

## **Summary of Call for Input question**

We invite interested parties to provide comment and opinion in response to the below questions, which we will duly consider in future policy development:

### **Background**

Q1: Do you agree that managing the effects of surplus residual charges should be prioritised and requires consideration in advance of the 2026/27 charge setting period? Please provide your rationale.

Q2: Do you agree that interventions should be applied only when the Charging Methodology produces a fixed credit (in the EDCM) or results in failure (in the CDCM)? Please provide your rationale.

### **Implementation**

Q3: Do you agree with our view that addressing the issue via derogations rather than a code modification is appropriate for 2026/27 tariffs in order to preserve the 15-month notice period? Please provide your rationale.

### **Options – approach to assessment**

Q4: Do you agree that we have considered the relevant factors in our approach to assessment of the proposed approaches to managing the surplus residual charges?

### **EDCM Options**

Q5: Do you agree with our assessment that proposals 1 and 2 perform best against the criteria and should be assessed on a case-by-case basis as potential options for future derogations? Please provide your rationale.

### **CDCM Options**

Q6: Should interventions that scale forward-looking revenue recovery be applied until the point where the existing residual surplus scaling methodology is able to produce eligible final tariffs, or to the point where no surplus residual is created? Please provide your rationale.

Q7: Should surplus residual scaling impact charges for Non-final Demand users as well as Final Demand users? Can you identify any further distortionary impacts that this may have on market participation? Please provide your rationale.

Q8: Do you agree with our assessment of the performance of each proposal against the criteria? Please provide your rationale.

We are requesting that responses are provided no later than **5<sup>th</sup> September 2024**. Interested parties can submit their responses to [DUoS@ofgem.gov.uk](mailto:DUoS@ofgem.gov.uk). We welcome your interest and engagement in this important process.

# Annexes

## Annex 1 – EDCM Assessment

### Proposals

In response to our identification of the issue with the EDCM described above, we received a variety of policy options.

One option that we did not consider to be appropriate to carry forward at this stage was taking no action, as we received consensus feedback from stakeholders that the methodology producing negative fixed charges was likely to occur again in the future, with distortive consequences. We also excluded a proposal to update the Distribution Reinforcement Model to the extent it resolves EDCM issues as it was identified as a potential cause of EDCM charging volatility rather than a solution to this specific issue. We will revisit this proposal, if appropriate, as part of our longer-term DUoS work.

We are assessing four options, proposed in consultation with industry, for addressing the EDCM issue. One of the proposals has four variants for its application, resulting in seven options overall. The proposals are shown in Table 3, below.

*Table 3: Approaches to negative fixed charges in the EDCM*

<b>Proposal name</b>	<b>Description</b>
Proposal 1: Reapportion negative fixed charges for Final Demand consumers within a residual band to the capacity charge for the same group of consumers	Allocates the surplus residual charges in a given residual band across all customers in that band. It does this by reducing the capacity charge for each band by the total residual credit for that band divided by the total capacity for that band. In this way all customers in a given band see a uniform capacity charge reduction. This was the process NGED was directed to follow following derogation from the existing methodology for its East Midlands area for 2025/26 charges.
Proposal 2 – Reduce forward-looking components of charges by a set percentage such that the residual is equal to zero	The residual charge is set to zero, and instead other charge components (including the forward-looking fixed charge component) would be scaled down by a uniform percentage amount applied to all or a subset EDCM customers. There are four variants to this option, depending on the customers and tariff elements it is applied to (see table 4, below).
Proposal 3 - Carry over locational components and network use factors from previous years	Uses locational components and network use factors from an earlier year as model inputs, such that the model does not produce negative fixed charges. We approved a derogation for SSEN for 2025/26 charges and directed it to use this approach, based on carrying over relevant inputs from 2024/25.



Proposal 4 - Reapportion 'excess' negative residual to CDCM	If there is over recovery of EDCM target revenue after EDCM fixed charges for Final Demand sites are floored at 0, that excess revenue is apportioned to the CDCM. The existing process is followed for dealing with CDCM surplus residual.
---	---

Table 4: The four variants of Proposal 2 depending on which customers and tariff components are affected

		Applicable to tariff elements:	
		All tariff components	Import tariffs and export fixed charge
Applicable to customer sites:	All sites	Option 2A	Option 2B
	Only final demand sites	Option 2C	Option 2D

Table 5, below, summarises the tariff components each option would affect and helps compare the different approaches. It illustrates differences in the approaches, though all would seek to ensure the residual charge is greater than or equal to 0. All proposals would have some impact on the CDCM (not captured in this table) because outputs of the EDCM are used in the calculation of CDCM charges and vice versa.<sup>30</sup> In summary:

- Proposal 1 would limit impacts to the capacity charge for Final Demand sites.
- The different variants of Proposal 2 would impact different numbers of tariffs, with a smaller number of tariffs meaning larger changes to those tariffs, all else being equal.
- Proposal 3 is the only one that would seek to change the inputs of the model to ensure a non-negative residual rather than adjust the tariff outputs after the model has been run.
- Proposal 4 would only affect the fixed elements of the EDCM tariff for Final Demand customers. It would also reduce the revenue to be recovered from CDCM customers.

The scale of intervention required would become more significant as the excessive residual surplus becomes greater. Consequently, the directional impacts on network charge elements for different users (as identified below) become more intensive as the forward-looking recovery exceeds target revenue.

---

<sup>30</sup> In the case of Proposal 1 being applied to the NGED derogation for EMID for 2025/26, we considered the impact on the CDCM to be *de minimis*, so the CDCM tariffs were unaffected by Proposal 1 in that instance.

Table 5: Directional impact on different EDCM tariff components of the proposals

Directional impact of proposal on revenue recovered from tariff component		Proposal							
		1	2A	2B	2C	2D	3	4	
Final Demand	Fixed Residual	Floored at zero	Floored at zero	Floored at zero	Floored at zero	Floored at zero	Increase to positive	Floored at zero	
		Import	Unit rate charges	Fixed % decrease	Fixed % decrease	Fixed % decrease	Fixed % decrease	Decrease (for majority)	
			Fixed (excl. residual)	Fixed % decrease	Fixed % decrease	Fixed % decrease	Fixed % decrease	Increase	Floored at zero
	Capacity	Decrease (uniform within band)	Fixed % decrease	Fixed % decrease	Fixed % decrease	Fixed % decrease	Decrease (for majority)		
	Export	Unit rates credits		Fixed % increase (lower credits)		Fixed % increase (lower credits)		Increase to 0	
		Fixed		Fixed % decrease	Fixed % decrease	Fixed % decrease	Fixed % decrease	Increase	
		Capacity		Fixed % decrease		Fixed % decrease			
	Non-Final Demand	Import	Unit rate charges	Fixed % decrease	Fixed % decrease			Decrease (for majority)	
			Fixed	Fixed % decrease	Fixed % decrease			Increase (for some, minimal)	
Capacity			Fixed % decrease	Fixed % decrease			Decrease (for majority)		
Export		Unit rates credits		Fixed % increase (lower credits)				Increase to 0	
		Fixed		Fixed % decrease	Fixed % decrease			Increase (for majority)	
		Capacity		Fixed % decrease					

### Quantitative 'stress testing' of the options

To inform our assessment, the proposals were 'stress tested' to check whether they would work in relatively 'extreme' circumstances of a surplus residual. In such circumstances, left unchanged, the methodology would result in significant fixed credits to some Final Demand sites. To do this stress testing, we asked SSEN to apply each of the proposals to the EDCM charges for Southern Electric Power Distribution (SEPD) for

2025/26 as they were originally calculated under the EDCM, before a direction to derogate was issued for the benefit of consumers in this licence area.

It is assumed that Proposal 3 would work under a similar set of future circumstances, as it was utilised in the direction to derogate against the Methodology for 2025/26 charge-setting. However, early stakeholder engagement on this matter indicated that this approach could have a compounding effect on the cost-reflectivity of tariffs if adopted for consecutive years, and may not be adaptable to different drivers of residual surplus.

We therefore wanted to check if any of the proposals would only be appropriate in certain circumstances. For example, the derogation for 2025/26 provided to NGED was prompted by a smaller surplus residual for the East Midlands region. In that instance, Proposal 1 was able to address the issue by only amending one tariff element. However, with a more significant surplus residual, Proposal 1 may not be appropriate.

The summary results of the stress testing on the EDCM tariffs, undertaken by SSEN, are:

- Proposal 1 resulted in some negative capacity charges for demand, which provide distortive incentives, similar to negative fixed charges.
- Proposal 2 variants reduced affected tariff components by a common percentage and did not result in any negative demand charges. However, these variants did result in the CDCM failing to run as they increased 'revenue raised outside CDCM', which decreases the CDCM target revenue. This put the CDCM model into the error state described in the CDCM sections of this Call for Input.
- Proposal 3 affected all tariffs apart from the export capacity charge tariffs. It did not result in any negative demand charges.
- Proposal 4 resulted in the CDCM failing to run because of size of the EDCM surplus residual that is transferred to CDCM customers.

Therefore, in certain circumstances, it may not be possible to use Proposal 1 if it results in negative capacity charges notwithstanding its other pros/cons, assessed below. In addition, the Proposal 2 variants and Proposal 4 resulted in the CDCM failing to run, such that a CDCM solution would need to be applied to these options in tandem in some circumstances. These results have informed our assessment against the criteria, particularly Efficiency, below.

## Qualitative assessment of proposals against criteria

### DNO obligations<sup>31</sup>

Criterion	Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
DNO obligations					

The DCUSA includes a requirement for DNOs to publish network tariffs 15 months in advance of them coming into effect<sup>32</sup>. We consider this predictability and certainty in charges is aligned with our Principal Objective to protect consumers. The status quo option may leave the DNOs in a position where they are unable to publish charges, if the model results in negative fixed charges, resulting in a red rating. All of the proposals seek to address this issue by clarifying a procedure to follow to avoid this outcome and still meet the deadline for publishing charges. We therefore assess all proposals as green for this criterion.

### Competition<sup>33</sup>

Criterion	Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
Competition					

We have previously stated that negative fixed charges do not better facilitate this objective. For example, in our SSEN and derogation letter<sup>34</sup> we stated that:

*Negative residuals could lead to distortive incentives for customers to hold or increase agreed capacity where it is not needed, which will not lead to efficient system use and could be harmful for competition if it prevents the efficient allocation of capacity to other users.*

All of the solutions address this issue so are positive relative to the status quo and would help reduce charging volatility. However, the proposals may have other impacts on

<sup>31</sup> This covers DCUSA objective 3.2.1 - 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; Found [here](#).

<sup>32</sup> Under clause 19.1A of the DCUSA, a licensee is required to give 15 months' notice of a change to its Use of System Charges; Found [here](#).

<sup>33</sup> This covers DCUSA objective 3.2.2 - 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); found [here](#). This is also present in Ofgem's Principle Objective, see section 3A(1B) of Electricity Act; found [here](#).

<sup>34</sup> Derogation to Scottish and Southern Electricity Networks Distribution pursuant to SLC 13B Part E of the Electricity Distribution Licence | Ofgem; found [here](#).

competition. Overall, we think proposals 1 and 2 (all variants) perform marginally better against this criterion than Proposal 3, with Proposal 4 the weakest of the proposals. We explain our reasoning below.

Proposals that focus on Final Demand (1 and 2C/D) limit those 'benefiting' from reapportioning the surplus residual to Final Demand customers, i.e., effectively retaining the surplus residual benefit of the status quo within that same group of customers. This helps preserve a level playing field relative to the status quo reducing the potential for distortions to competition.

More specifically, Proposal 1 reapportions the surplus residual within the same group of customers, albeit, within a given group, those with a lower capacity would see a smaller reduction than those with a higher capacity. Whereas, under Proposals 2C/D a blanket percentage reduction is applied regardless of the original allocation of the surplus residual. As a consequence, even those proposals (1 and 2C/D) focusing on Final Demand have the potential to be distortive to competition, by reallocating costs differently across Final Demand consumers compared with the status quo.

Proposals that include non-Final Demand tariff components (2A/B) have the potential to benefit storage/generation compared with other DNO areas not affected by a surplus residual, because non-Final Demand tariffs would go down. This has the potential to distort competition among storage/generation between DNO areas compared with the status quo. Under Proposal 2A, the value of export credits would also reduce for these customers.

All the Proposal 2 variants apply the same percentage change to all included tariff components, potentially preserving competition within the area affected. By moving some revenue collection from fixed to other charges, inappropriate (dis)incentives for network use may be introduced, changing behaviour and potentially introducing an unjustified advantage to some network users outside of the cost model's determination of their network impact. Therefore, while proposals 1 and 2 perform best at limiting competition impacts, we assess them as amber.

Proposal 3 maintains the relative winners/losers from previous year's inputs despite changing use of the network. This means that any changing behaviour of users in response to charging signals and/or competitive pressures is not reflected in their updated tariffs. As a result, Proposal 3 performs marginally less well against this criterion than proposals 1 and 2.

Proposal 4 has the potential to be distortive to competition as EDCM customers effectively cross-subsidise CDCM customers. It may also increase volatility for CDCM

customers. This proposal has the potential to affect both within DNO region, and between DNO region competition, resulting in a red rating.

**Cost reflectivity<sup>35</sup>**

Criterion	Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
Cost-reflectivity					

The status quo option helps maintain notional cost-reflectivity by using the EDCM model outputs unaltered. However, in doing so it can produce negative fixed charges which we have stated are not cost reflective, resulting in an amber rating. On the other hand, while intervention removes the negative fixed charge, it does dilute the cost-reflectivity of the existing EDCM model.

In terms of the dilution of the cost reflectivity of the model, proposals 3 and 4 have notable weaknesses for cost reflectivity, whereas the picture is more mixed for proposals 1 and 2 (and its variants). We expand on this summary in the following paragraphs.

Proposal 3 introduces a separation of charges from known network conditions by fixing some inputs at an earlier point in time. That is, compared with the other options, which use more up-to-date network conditions as an input, Proposal 3 relies on some historical data. This use of historical data is likely to dilute cost-reflectivity compared with the other options, resulting in a red rating for Proposal 3.

Proposal 4 breaks the link between EDCM target revenue and revenue recovered from EHV customers (and likewise for CDCM target revenue and recovery). That is, under Proposal 4, the charges for EHV customers would no longer be based on the prescribed methodology for allocating costs to this customer group. This has an equivalent impact on CDCM customers. It is for the extent of dilution of cost-reflectivity that we rate Proposal 4 as red for this criterion.

Proposals 1 and 2 both involve some dilution of forward-looking tariff elements by applying the surplus residual to those elements. The more tariff components adjusted results in dilution across more tariff elements, but all else being equal, reduces the scale of the reduction of those tariff elements.

---

<sup>35</sup> This covers both DCUSA objective 3.2.3 - 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; found [here](#) and the SPS principle of cost reflectivity (section 58 found [here](#)).

In terms of positives for cost-reflectivity, Proposal 1 targets the same customer groups proportionately according to their collective share of the surplus residual. Proposal 2 variants apply a reduction to both the import and export fixed charge as the forward-looking fixed charge is recovered from export on same basis as import.

Proposals 1 and 2 dilute cost-reflectivity but to a lesser degree than the other proposals so we assess them as amber. Ultimately, the relative merits of the options for cost reflectivity will be informed by the extent to which they adjust the tariff elements affected by the original issue.

**DNO business development<sup>36</sup>**

Criterion	Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
DNO business development					

Recent developments in DNO business, such as the increase in future investment to enable net zero, have contributed to the scale of the issue in some areas.

The status quo would result in published charges on the basis of models that were not designed for inputs that result in negative fixed charges, resulting in a red rating. All proposals address this, in different ways, by updating the charging calculation to address the issues with the changing nature of model inputs.

There are weaknesses specific to Proposals 3 and 4. For Proposal 3, fixing inputs in time does not reflect the latest changes to the network so is not reflective of DNO business development. For Proposal 4, the revenue recovered from EHV and lower voltage customers is no longer linked to the target revenue for those customer groups. We therefore assess proposals 3 and 4 as red.

Proposals 1 and 2 do not have these specific weaknesses. However, as short-term fixes rather than a holistic examination of the methodologies to address these business developments, we assess proposals 1 and 2 as amber. As noted above, we consider that the DUoS SCR is the appropriate forum for a more holistic review of these issues.

---

<sup>36</sup> This covers DCUSA objective 3.2.4 - 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; Found [here](#).

## Efficiency<sup>37</sup>

Criterion	Take no action	Proposal 1	Proposal 2	Proposal 3	Proposal 4
Efficiency					

The status quo represents no intervention, though may require working up potential solutions at short notice if the models produce negative fixed charges, resulting in inefficiencies compared with considering solutions ahead of time. All of the proposals seek to address the issue of negative fixed charges in a transparent way meaning the issue of the negative residual can be dealt with more efficiently should it arise in the future, which we consider is in the best interests of consumers. We recognise, however, that each of the proposals would require additional steps to the tariff calculation. As a consequence, all options are rated as amber.

Proposal 1 adopts an equivalent approach to the existing method in the CDCM for addressing a surplus residual. Applying an equivalent approach has the potential to create efficiencies. However, it might not be an appropriate solution in all circumstances as SSEN's testing showed that it can result in negative capacity charges if the surplus residual is sufficiently large.

Proposal 2 has a further efficiency benefit of the potential to apply the equivalent solution to the issues within the CDCM model described in the CDCM sections of this Call for Input.

Proposal 3 has not been designed to address a significant reduction in allowed revenues, but rather for increases in forward-looking charges driven by future planned investment. It therefore may not be appropriate in all circumstances.

All of the solutions would have some impact on the CDCM owing to the EDCM being a key input to the CDCM and vice versa, though the Proposal 1 impact on the CDCM should be the most limited of the options. In testing, Proposals 2 and 4 more materially affected the CDCM than the other options. In some circumstances, this may be to the extent that the CDCM is unable to produce tariffs. Such circumstances would lead to the need to apply a separate solution to the CDCM as well, reducing the efficiency of proposals 2 and 4.

---

<sup>37</sup> This covers DCUSA objective 3.2.6 - that compliance with the Charging Methodologies promotes efficiency in its own implementation and administration; Found [here](#).



## **Ofgem Principal Objective and wider statutory duties**

As noted above, we consider the DCUSA Charging Objectives and SPS charging principles are well aligned with our Principal Objective and relevant wider statutory duties. In particular, our assessment has demonstrated that the status quo is not in the interests of current and future consumers as it could allow a potential windfall gain for some customers at the expense of others. All of the proposals seek to address this issue.

The SPS charging principles recognise further considerations in the design of cost-reflective network charges in enabling net zero, fairness, predictability, and transparency. These are characteristics of Charging Methodologies understood as being in the interest of the consumer, and have been used to develop a holistic assessment of the proposals beyond that which is required of the Charging Objectives.

It was regarded that all proposals have weakness against the Enabling Net Zero<sup>38</sup> principle. Proposals 1 and 2 would involve some dilution of forward-looking signals, which are designed to drive efficient investment, including that which may be required for net zero. However, we do not expect this to be significant enough or over a sufficiently prolonged period to inhibit the transition to net zero. Proposal 3 maintains some historical inputs that do not reflect contemporary changes to network use associated with net zero, while Proposal 4 reapportions some of the costs of net zero from lower voltage to higher voltage customers, diluting forward-looking signals.

Regarding Fairness<sup>39</sup>, the status quo has the advantage of avoiding manipulating the models in a way that could potentially result in cross-subsidies between users or groups of users. But crucially, the status quo would allow fixed credits for demand users which raises distributional concerns, particularly in the context of increasing standing charges for other customers. All of the proposals are designed to avoid these fixed credits.

We consider that proposals 1 and 2 (all variants) better facilitate fairness than proposals 3 and 4, for the reasons outlined below.

Proposal 1 follows a similar methodology to the existing one in the CDCM, to help ensure fairness across the two groups of users (EDCM and CDCM), though we note that the existing CDCM fix is not sufficient in all circumstances. Compared with the status quo,

---

<sup>38</sup> This covers SPS charging principle 58.a - Enabling net zero: network charges may have a significant effect on how net zero is delivered, including through any locational price signals that are sent. Alongside this, charging design should take due account of other relevant system factors that influence location. Supporting arrangements should also continue to recognise the relative value, benefits and disbenefits of all technologies connecting – or already connected – to the electricity network; Found [here](#).

<sup>39</sup> This covers SPS charging principle 58.b - Fairness: including that there should be no undue discrimination between network users; earlier adopters of key low carbon technologies should not be unduly penalised through network charging arrangements; network users should not be able to unduly avoid network charges; and consumers in vulnerable situations should receive an adequate level of protection; Found [here](#).

Proposal 1 retains the surplus residual 'benefits' to customers within that same band. However, with this proposal there are relative winners and losers compared to the status quo, (i.e., within a given band, those with a lower capacity would see a smaller reduction in charges than those with a higher capacity).

If the equivalent of Proposal 2 is applied to the CDCM issue (i.e., CDCM Proposal 2A or 2B), then there is the potential for equivalent treatment of EHV and lower voltage customers. Similar to Proposal 1, under Proposals 2C and D, the "benefits" of the surplus residual are retained within Final Demand customers, though the reallocation of the surplus residual is spread evenly across all Final Demand customers rather than reallocated according to the customers' residual band as for Proposal 1.

Under Proposals 2A and B, the surplus residual is used to lower tariffs for non-Final Demand as well as Final Demand customers. All of the Proposal 2 variants involve reductions to the export charges to at least some sites, though for options 2A and C, export credits are also reduced. All of the Proposal 2 variants apply the same percentage reduction to all included tariff components.

Proposal 3 would maintain some of the relative differences in tariff levels from previous years despite changing use of the network. Compared to the status quo, Proposal 4 would introduce an effective cross-subsidy from EHV to lower voltage customers that is beyond the control of either set of customers.

The status quo has the potential to reduce Predictability<sup>40</sup>, by not mitigating against the volatility introduced by the surplus residual. In addition, an absence of proposals for addressing negative fixed charges may result in late changes to models and potentially shortened notice periods for charges.

All of the proposals should help ensure the charge setting notice period is maintained if any derogations are required. Proposals 1 and 2 should also all limit volatility in charges by reapportioning swings in fixed charges to other charge components. Though the variants that reapportion the surplus residual to the fewest tariff components (proposals 1 and 2D) may result in larger movements for those components, all else being equal, potentially reducing predictability.

Proposal 3 should limit volatility by maintaining some inputs from earlier years, while Proposal 4 would floor fixed charges for EDCM customers and maintain other charge components as calculated. Proposal 4 may reduce predictability of CDCM charges as an

---

<sup>40</sup> This covers SPS charging principle 58.c - Predictability: the evolution of the energy system means that network charges will inevitably need to evolve over time, but charges should be clear to stakeholders and as predictable as possible; Found [here](#).

EDCM surplus residual is reapportioned across CDCM customers, which may compound volatility if there is already a CDCM surplus residual. As a consequence, Proposal 4 is the worst performing for predictability.

Transparency<sup>41</sup> will be reduced by changes to the methodologies relative to the process documented in the DCUSA, so we assess taking no action as being better against this principle. By consulting on the approach to any necessary derogations ahead of time, through this call for input, we hope to increase transparency, though the transparency of EDCM is necessarily constrained by the commercial confidentiality of some of the model inputs that produce the site-specific charges. All proposals perform equally for transparency.

---

<sup>41</sup> This covers SPS charging principle 58.d - Transparency: the level of network charges and the possible impact of any proposed reforms should be transparent, and accessible to all relevant parties; Found [here](#).

## **Annex 2 – CDCM Assessment**

### **Proposals**

In response to our identification of the defect in the CDCM as described above, we received a variety of proposed policy solutions.

Options that we did not consider to be appropriate to carry forward at this stage included taking no action, as we received consensus feedback from stakeholders that the methodology failing to produce charges was likely to occur again in the future.

We are assessing two primary options for addressing the CDCM defect, each with two variations.

Proposal 1 would alter the Distribution Reinforcement Model (the DRM). It is a costed model for an increment to the relevant DNO's network, reflecting the local user base and topography. The value of total purchase and installation cost of this increment, the Gross Asset Values, are a significant input to the CDCM and EDCM as it determines the £/kW/year figure corresponding to amortisation and return on capital for assets at different voltage levels. This is reflected in the value of all forward-looking charging elements. It is described in detail in Step 1 of the CDCM. Changes to the DRM would affect user tariffs indirectly.

Proposal 2 would directly alter the final tariffs produced through the regular operation of the cost model.

Table 6: Approaches to surplus residual in the CDCM

Proposal name	Description
Proposal 1A: Reducing the value of the DRM such that the forward-looking charges of the CDCM recovers the CDCM target revenue exactly	The Gross Asset Values of the DRM are reduced uniformly by applying a scaling factor to the cost of each network level. This scaling factor is set so that there is no surplus residual or shortfall.
Proposal 1B: Reducing the value of the DRM such that the forward-looking charges of the CDCM recover 90% of the CDCM target revenue	The Gross Asset Values of the DRM are reduced uniformly by applying a scaling factor to the cost of each network level. This scaling factor is set so that there is a residual shortfall of 10% of the CDCM's target revenue. This residual shortfall is recovered based on the usual approach.
Proposal 2A: Reducing the value of charges produced through the normal cost allocation process for Final Demand sites	The methodology is applied without intervention, resulting in a surplus residual. A uniform scaling factor is applied to all tariff components for Final Demand CDCM users only, such that the target revenue is recovered exactly; Non-Final Demand users' charges are unaffected.
Proposal 2B: Reducing the value of charges produced through the normal cost allocation process for all sites	The methodology is applied without intervention, resulting in a surplus residual. A uniform scaling factor is applied to all tariff components for all CDCM users such that the target revenue is recovered exactly.

The proposals raised each consist of an intervention to reduce the amount of forward-looking revenue recovery. In each case, forward-looking charge elements would be modified against what would have otherwise been produced by the methodology before the revenue matching process. Proposals 1A and 1B would reduce one of the inputs to the Charging Methodology, whereas Proposals 2A and 2B would reduce the value of charges produced by the Charging Methodology before the revenue-matching process. All proposals would affect the charges levied on Final Demand users. Proposals 1A, 1B, and 2B would each affect the forward-looking charges levied on Non-Final Demand (NFD) sites, including the value of generation credits.

In addition to the qualitative assessment of the proposals against the criteria outlined above, analysis was conducted to understand the directional impact of each proposal on different tariff components. In general, forward-looking charge elements were reduced such that the revenue to be recovered from the methodology did not exceed target

revenue. Conversely, the value of revenue surplus in each was reduced to near-zero, meaning that the residual was not negative.

### **Quantitative 'stress testing' of the options**

The options were assessed against their implementation into the charging model under three different conditions of surplus residual, representing slight, moderate, and extreme scenarios. This implementation was conducted by its respective proposer in accordance with a template we had provided, and was subject to review to ensure accuracy.

The scale of intervention required would become more significant as the excessive residual surplus becomes greater. Consequently, the directional impacts on network charge elements for different users (as identified below) become more intensive as the forward-looking recovery exceeds target revenue. This analysis assumed that the intervention would be applied to the point of no residual surplus: it did not consider further modification to final demand users' fixed and unit rates that would take effect as a result of the existing residual surplus allocation methodology. If the existing methodology was incorporated, the effect may be more intensive on fixed charge elements and green and amber time-band unit rates.

Table 7: Directional impact on different CDCM tariff components of the proposals

Directional impact of proposal on revenue recovered from tariff component		Proposals			
		1A	1B	2A	2B
Final Demand	Residual	Increased to near-zero	Proportionally fixed minimum residual; increase dependent on band	Reduced	Reduced
	Unit Charge	Increase in red time-band, decrease in others	Increase in red time-band, decrease in others	Reduced	Reduced
	Capacity Charge	Reduced	Reduced	Reduced	Reduced
	Fixed Charge	Reduced	Reduced	Reduced	Reduced
Non-Final Demand	Unit Credits	Smaller credit	Smaller credit	Unaffected	Smaller credit
	Capacity Charge	Reduced	Reduced	Unaffected	Reduced
	Fixed Charge	Reduced	Reduced	Unaffected	Reduced

## Qualitative assessment of proposals against criteria

### DNO obligations<sup>42</sup>

Criterion	Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
DNO obligations					

Under the status quo, there is a risk that the network may fail to produce a complete set of tariffs in accordance with the Charging Methodology. If the unviable charges produced

<sup>42</sup> This covers DCUSA objective 3.2.1 - 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; Found [here](#).

by the methodology were treated as recovering no revenue (as no fixed charge is levied and no consumption unit rates apply), then the network would not recover sufficient revenue to discharge its obligations.

Each proposal better facilitates the discharge of obligations on DNOs. In particular, regards to the publication of tariffs (with due notice) in order to recover revenue that is necessary for the safe and efficient development and operation of the network. If the issue of severe over-recovery is anticipated by the network in due time before the publication of network charges, derogations against the methodology may be evaluated well in advance of the expected publication date. In circumstances where the Authority considers the application of one of these proposals to be appropriate, the notice period of 15 months may be maintained.

### Competition<sup>43</sup>

Criterion	Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
Competition					

Under the status quo and Proposal 2A, the final tariffs produced for non-final demand users are equivalent to what such users would face in situations without a surplus residual. Under Proposal 2A, non-final demand customers would not be subject to a scaling of their charges, so may pay more in demand-related charges relative to final demand users, but would also benefit from the value of generation use-of-system credits to the same extent as if over-recovery had not occurred. This distinction may have a distortive effect on the relative merits of demand response and generation in electricity markets.

Proposals 1A, 1B, and 2B may each have a distortive effect on the participation of non-final demand users in electricity markets. The size and impact of this distortion on the ability of embedded generation and storage to compete in the generation of electricity is variable, depending on the extent of surplus residual, the voltage level of connection, and the ability of assets to operate at peak times. By changing the value of forward-looking charges for all users in response to an excessive surplus residual, the proposals would effectively result in non-final demand users receiving a discount against their

---

<sup>43</sup> This covers DCUSA objective 3.2.2 - *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)*; found [here](#). This is also present in Ofgem's Principle Objective, see section 3A(1B) of Electricity Act; found [here](#).



usual network charges. In practice, this would mean that the value of generation credits and positive charges would also be reduced, reducing network costs for embedded generation and storage assets.

Proposals that alter the balance of peak and non-peak network usage valuations may change the economics and consequently the operational profile of generation designed for baseload and peak demand. For instance, Proposal 2B would dampen the operational signal of higher-value credits in the red time-band. However, under all proposals, the Red time-band would remain the most valuable period to generate, compared to Green and Amber periods.

### Cost reflectivity<sup>44</sup>

Criterion	Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
Cost-reflectivity					

Across all proposals and the status quo, the surplus residual adjustment reduces the value of forward-looking charges such that the revenue recovered does not exceed target revenue. In cases where the methodology fails to produce a complete set of tariffs, the “valid” charges (i.e., those unaffected by the adjustment) produced may fail to recover the costs reasonably incurred by the licensee in its Distribution Business, as determined by the price control process. Consequently, the revenue that is recovered through viable charges would not be reflective of actual costs incurred insofar as they correspond to those of an efficient and structurally comparable network operator.

Previous consideration of the adjustment to unit rate values, such as DCP-228<sup>45</sup>, have understood the additional marginal cost of usage to be variable throughout the day, and are therefore more reflective of costs incurred. As a user’s time-band unit rates are discounted, the signal intended to increase load diversity and reduce the expected long-run cost of network development is weakened as it diverges from these expected additional marginal costs.

The extent of discounting applied is dependent on a user’s surplus residual liability (i.e., their band), meaning that two users may be charged forward-looking unit rates differently even if the Charging Methodology determined that their behaviour would have

---

<sup>44</sup> This covers both DCUSA objective 3.2.3 - *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;* found [here](#) and the SPS principle of cost reflectivity (section 58 found [here](#)).

<sup>45</sup> Our approval of DCP-228 can be found [here](#).

the same effect on long-run costs. Assuming that these signals are passed on to the end user, discounted unit rates may result in adverse behaviour increasing long-run costs as the marginal cost of usage is distorted.

Proposals 1A and 2B apply to users regardless of their respective residual liability. Proposal 1B would retain some distinction between users with regards to their residual liability, as the 10% net target revenue not recovered as a result of the reduced DRM would be recovered through the standard residual shortfall Charging Methodology. The adjustment process in Proposal 2B would not apply to non-final demand users, who are not liable for residual shortfall or surplus adjustments.

Proposal 1A and 1B may reduce the relative value of charges in the red time-band, but increase the unit rates levied in the green and amber time-bands. Similarly, by applying a scaler to forward-looking charges, Proposals 2A and 2B would dampen the relative signal that using the network at peak times incurs long-run costs.

#### **DNO business development<sup>46</sup>**

Criterion	Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
DNO business development					

The Charging Methodology should be robust to different network revenue expectations. We consider that the Charging Methodology being unable to produce tariffs under a probable set of conditions, namely particular changes to the allowed revenue and forward-looking charge recovery profile, does not satisfy the Objective that the Charging Methodologies take account of developments in each DNO Party's Distribution Business. Intervention in each case would allow for the Charging Methodology to function even in these conditions.

Proposals 2A and 2B would perform better against this objective than Proposals 1A and 1B. As the DRM is designed with the intention of reflecting contemporary procurement and installation costs of a hypothetical tranche of network build, deviation from the gross asset value of the DRM would not reflect the supply chain costs of that particular year. However, scaling under proposals 1A and 1B would have regard to the network topography and distribution of users across different network voltage levels. Ultimately,

---

<sup>46</sup> This covers DCUSA objective 3.2.4 - 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; Found [here](#).

the proposals would allow for the correct recovery of revenue from the CDCM, contributing to that year’s actual spend on network development. We therefore assess all proposals as green against this criterion.

**Efficiency<sup>47</sup>**

Criterion	Take no action	Proposal 1A	Proposal 1B	Proposal 2A	Proposal 2B
Efficiency					

We do not consider that the existing Charging Methodology failing to produce a complete set of tariffs is efficient. Each proposal may be readily applied to the existing Charging Methodology and calculation models with ease. However, implementation would still constitute an additional step to the tariff calculation.

Proposals 1A and 1B may have additional efficiency benefits in mitigating against the risk of residual surplus in the EDCM, as the DRM is a significant input to both methodologies. However, the changes to final tariffs that this would introduce may be complex, and the overall efficiency of such a solution should be evaluated in a complete context.

**Ofgem Principal Objective and wider statutory duties**

As noted above, we consider that the DCUSA charging objectives and SPS charging principles are well aligned with our Principal Objective and relevant wider statutory duties. In particular, our assessment has demonstrated that the status quo is not in the interests of current and future consumers as it may result in the Charging Methodology failing to produce tariffs for some users. All the proposals seek to address this issue.

The SPS charging principles recognise further considerations in the design of cost-reflective network charges in enabling net zero, fairness, predictability, and transparency. These are characteristics of Charging Methodologies understood as being in the interest of the consumer, and have been used to develop a holistic assessment of the proposals beyond that which is required of the Charging Objectives.

We have undertaken further consideration of the SPS charging principles. Regarding the enabling net zero<sup>48</sup> principle, under the status quo, charges for embedded generation

---

<sup>47</sup> This covers DCUSA objective 3.2.6 - that compliance with the Charging Methodologies promotes efficiency in its own implementation and administration; Found [here](#).

<sup>48</sup> This covers SPS charging principle 58.a - Enabling net zero: network charges may have a significant effect on how net zero is delivered, including through any locational price signals that are sent. Alongside this, charging design should take due account of other relevant system factors that influence location. Supporting arrangements should also continue to recognise the relative value, benefits and disbenefits of all technologies connecting – or already connected – to the electricity network; Found [here](#).

users (including both renewable and non-renewable sources) are unaffected by the revenue-matching process. However, in the case of a failure to produce charges, no time-of-use signals regarding network usage are passed onto final demand users: this may discourage load diversity, resulting in additional avoidable spend on reinforcement.

We consider that our assessment of competition in the generation of electricity applies to both renewable and non-renewable sources of generation, so we anticipate a neutral impact on the development of a net-zero energy system. Proposals that alter the balance of peak and non-peak network usage valuations may change the economics and consequently the operational profile of generation designed for baseload and peak demand.

Considering fairness <sup>49</sup> under the status quo, the variation in residual liability under each tariff can result in some users receiving a discount against their network bills to the extent that very little or no DUoS charges are recovered from them. In contrast some consumers in residual groups with a larger number of users may see only a slight benefit in terms of a reduction in their individual network charges. For example, domestic consumers' individual charges are discounted to a lesser extent than those of a high-voltage non-domestic user in a site-specific tariff. Each proposal would mitigate against this, passing a greater responsibility for contributing to network costs in cases of surplus residual from domestic consumers to other users.

The distribution of charges within and between tariff types is explained in the directional assessment in this Annex. Some arrangements may recover a greater proportion of revenue from standing charge elements or from unit rates. If the implementation framework set out in this document were to be accepted, we would expect DNOs to consider the changes in charge structure as part of their impact assessments submitted alongside their requests to derogate.

Proposal 1B introduces a residual shortfall liability for all eligible users. While this maintains a degree of differentiation between users on the basis of their residual bands, this may not serve a functional purpose if the residual charge is understood as not intending to send signals about a user's individual contribution to network costs. Users may not perceive an additional fixed charge element as being fair if it is not clearly justifiable from either the forward-looking charges derived from the DRM or in the context of revenue-matching that the Targeted Charging Review sought to reform.

---

<sup>49</sup> This covers SPS charging principle 58.b - Fairness: including that there should be no undue discrimination between network users; earlier adopters of key low carbon technologies should not be unduly penalised through network charging arrangements; network users should not be able to unduly avoid network charges; and consumers in vulnerable situations should receive an adequate level of protection; Found [here](#).

We consider that the predictability<sup>50</sup> of charges can be facilitated by the suggested implementation route, which would aim to ensure that charges are published with due notice and justification. Each solution may be assessed in light of year-on-year variation in network charges, such that consumers are not subject to tariff volatility that may inefficiently impact how they use the network compared to how they would in a year with typical levels of forward-looking charge recovery.

Transparency will be reduced by changes to the methodologies relative to the process documented in the DCUSA, so we assess taking no action as being better against this principle. Proposals 2A and 2B may perform better with regards to Transparency<sup>51</sup> than Proposals 1A and 1B, owing to the complexity of interactions between the value of the Distribution Reinforcement Model and the production of final tariffs: the application of a percentage scalar may be simpler to explain and implement.

---

<sup>50</sup> This covers SPS charging principle 58.c - Predictability: the evolution of the energy system means that network charges will inevitably need to evolve over time, but charges should be clear to stakeholders and as predictable as possible; Found [here](#).

<sup>51</sup> This covers SPS charging principle 58.d - Transparency: the level of network charges and the possible impact of any proposed reforms should be transparent, and accessible to all relevant parties; Found [here](#).