

Consultation

CMP361 and CMP362 – Minded-to decision and draft impact assessment

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We are consulting on our minded-to decision on a proposed change to the way that the Balancing Services Use of System (BSUoS) charges are collected from electricity network users. In 2020, the second BSUoS Task Force recommended that BSUoS charges, which are currently variable, should be recovered as a flat volumetric charge set on an ex-ante basis.¹ The CUSC (Connection and Use of Systems Code) modifications CMP361 and CMP362,² if approved, would implement this recommendation. We would like views from people with an interest in electricity network charging. We particularly welcome responses from electricity generators, suppliers and other users of the GB electricity networks. We also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at [Ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations). If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

¹ [second-balancing-services-charges-task-force-final-report.pdf \(chargingfutures.com\)](https://www.chargingfutures.com/second-balancing-services-charges-task-force-final-report.pdf)

² [CMP361 & CMP362 'BSUoS Reform: Introduction of an ex ante fixed BSUoS tariff & Consequential Definition Updates' | National Grid ESO](#)

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Executive summary

In November 2019, we published our Decision on the Targeted Charging Review (TCR) Significant Code Review.³ The TCR aimed to ensure the costs of operating, maintaining and upgrading the electricity grid would be spread more fairly across users, with fewer distortions. The TCR included a review of how residual network charges are set and recovered, and also sought to remove some remaining distortions in network charging, known as Embedded Benefits.⁴

Balancing Services Use of System (BSUoS) charges are the means by which the Electricity System Operator ('ESO') recovers costs associated with balancing the electricity transmission system. Currently, balancing services costs are recovered using a BSUoS charge that varies for each half hour. The TCR removed an Embedded Benefit associated with BSUoS⁵ charges and noted that the differences in arrangements between Small Distributed Generators⁶ and Large Generators⁷ amounted to a distortion but did not make changes to BSUoS itself. Instead, the TCR launched two industry Task Forces to look at the costs recovered by BSUoS, who should be liable for the charges, and how these charges should be recovered.

The Task Forces made various recommendations as to how BSUoS charges should be set and recovered, including a recommendation that BSUoS charges take the form of a flat volumetric charge for this service, set in advance. These CUSC modifications, CMP361 and CMP362, cover that change. In addition, the Task Forces also recommended that BSUoS costs be recovered solely from Final Demand, rather than equally from demand and generation, as is currently the case. The CUSC modification CMP308, which we approved on 25 April 2022, implements that recommendation.⁸

This consultation focuses on the move of BSUoS to an ex-ante volumetric charge and the specific arrangements that will allow the ESO to manage the setting and forecasting of these charges and managing risks and cash flows. It also deals with associated code changes to allow these things to happen. In particular, it looks at various options for:

- notice periods that would be provided ahead of charges coming into force;

³ <https://www.ofgem.gov.uk/publications-and-updates/targeted-charging-review-decision-and-impact-assessment>

⁴ Embedded Benefits is the name given to the differences in charging arrangements between Small Distributed Generators and large generators (with capacity >100MW) connected to either the distribution or transmission networks.

⁵ This was implemented via CMP333 'Connection and Use of System Code (CUSC) CMP333: BSUoS – charging Supplier Users on gross demand (TCR)' which Ofgem approved on 3 December 2020: [cmp333 final version 031220 \(1\).pdf](#)

⁶ Small distribution connected generators with capacity less than 100MW are currently treated differently from Large Generators, whether connected to the transmission or distribution networks.

⁷ Large Generators are those generators connected to the transmission network, or with capacity greater equalling or greater than 100MW connected to the distribution network

⁸ [CMP308 Wider System and Distributional Impacts of Recovering Balancing Services Costs from Demand FINAL STC 30h0621 \(ofgem.gov.uk\)](#)

- the length of time these tariffs would be set for;
- the degree of risk taken that tariffs may need to be reset, and the corresponding certainty that tariffs would change within a period; and
- the possibility of the presence of a BSUoS “fund” to assist ESO cashflow and the arrangements for building up such a fund.

Based on our assessment, we are minded to approve, with effect from 1 April 2023, CMP361 Workgroup Alternative CUSC Modification (WACM) 5 and consider CMP361 WACM5 to better facilitate the achievement of the Applicable CUSC Objectives (ACOs).⁹ CMP361 WACM5 provides a fixed tariff period of 1 year, with 3 months’ notice provided to users ahead of the fixed tariff period. WACM5 provides the ESO with a ringfenced reserve “fund” of money to allow them to better manage the cash flow impacts of setting a fixed charge for unpredictable balancing services costs. This fund will be built up over a period of 5 years via an additional charge on users. We consider that building this fund up over 5 years rather than 2 years, will reduce the cost impacts to users in this challenging time. We think given the pressures on suppliers and end users, it is appropriate for the ESO to use a risk-based approach to tariff setting that strikes the right balance between certainty of charges and minimising the amount of industry cash held.

Our consultants’ report, which builds on earlier modelling carried out for the working group, suggests the proposed changes could provide a benefit, predominantly from reducing the risk premiums that suppliers and end consumers face due the existing variable charges. We also expect significant competitive benefits from the simplification of charges for end users in such a way that complements our earlier CMP308 decision.

We are minded to approve the CMP362 Original proposal, which provides the relevant consequential changes to definitions for CMP361 WACM5. We consider this proposal to better facilitate the achievement of CUSC non-charging objectives.

We consider the decision to approve CMP361 WACM5 and CMP362 Original proposal to be consistent with our principal objective and statutory duties.

⁹ Applicable CUSC Objectives vary depending upon whether the modification is to a Charging Methodology. CMP361 falls to be assessed in accordance with the Applicable CUSC Charging Objectives as defined in paragraph 5 of SLC C5 of ESO’s Transmission Licence. CMP362 is assessed against the ‘non-charging’ Objectives as defined in paragraph 15 of SLC C10 of ESO’s Transmission Licence.

Together, we think this combined package of BSUoS reforms (combined with suitable price cap arrangements¹⁰) will ensure cost recovery for this important group of system costs is fair and will reduce distortions and aid competition and transparency. As we move towards Net Zero, it is vital that markets work efficiently and that the costs of our shared infrastructure are covered in a fair and non-distortive way.

We are seeking views on our assessments of both these proposals against the relevant code objectives, and our duties, as well as views on the reasoning, modelling and impacts we have produced to support this work. The closing date for responses is 19 October 2022.

¹⁰Suppliers have raised concerns on their ability to recover incremental costs resulting from the proposed changes from both CMP308 and CMP361 through the default tariff cap. We have considered those concerns and have published a Call for Input on potential default tariff cap changes alongside this minded-to decision. The Call for Input will close on 3 October 2022.

Background

Section summary

We describe the background to this proposal, including the existing BSUoS charges and their impact on the market, the TCR, the BSUoS Task Forces and previous modifications in this area.

BSUoS Charging

1.1. BSUoS charges are the means by which the ESO recovers costs associated with balancing the electricity transmission system. They recover several categories of costs¹¹ relating to balancing services, including:

- the costs of constraints;
- the costs of frequency response services;
- the costs of reserve provision;
- the costs associated with Balancing Mechanism actions; and
- the ESO's internal costs.

1.2. BSUoS charges are currently recovered using a volumetric charge (£/MWh) from both demand customers and liable generators based on the amount of energy imported from or exported onto the network within each half-hour period. BSUoS charges are currently charged ex-post; the exact level of charge is not known until after the period for which the balancing services have been provided.¹²

1.3. The magnitude of the current volumetric charge can vary significantly from period to period. For the period of May 2021 to May 2022, where BSUoS was chargeable to generation and demand, the average cost of BSUoS was c£6.80/MWh and was chargeable on c.570TWh of

¹¹ [Balancing Services Use of System \(BSUoS\) charges | National Grid ESO](#)

¹² The balancing service provided is made up of a number of components, with cost elements that relate to different timescales, and some are currently forecastable. Some elements relate to costs generated in half-hourly periods, while others relate to longer term costs. Overall, the total level of BSUoS charge is not known ex-ante.

electricity. At times, the cost of BSUoS fell below £-6/MWh for some periods and reached c.£100/MWh at other times. Due to the range, and the fact that BSUoS costs are not known at the time of electricity delivery, risk premiums are also present in contracts where BSUoS costs are included.

1.4. Charges are currently levied on Large Generators and storage users on their exports, though following our decision on CMP308 in April 2022, BSUoS will be payable only by Final Demand users from April 2023.

The BSUoS Task Force

1.5. In November 2019, we published our Decision (and associated Directions) on the Targeted Charging Review (TCR) Significant Code Review.¹³ The TCR included a review of how residual and cost-recovery network charges are set and recovered, in particular establishing that non-cost reflective charges should be recovered from Final Demand in a non-distortive manner.¹⁴ Our work on TCR removed some distortions, including the removal of an Embedded Benefit¹⁵ associated with BSUoS, but stopped short of making changes to BSUoS itself. Our November 2018 TCR minded-to decision¹⁶ launched the first BSUoS Task Force,¹⁷ which was asked to examine whether and how the cost reflectivity of BSUoS could be improved to provide better forward-looking signals.

1.6. The first Task Force concluded BSUoS “does not currently provide any useful forward-looking signal” and that it should be treated as a cost-recovery charge.¹⁸ When we published our TCR Decision, we acknowledged the conclusion of the first Task Force, and asked the ESO to launch a further industry working group¹⁹ (the second BSUoS Task Force) to assess who should be liable for BSUoS charges and how these charges should be recovered.

¹³ <https://www.ofgem.gov.uk/publications-and-updates/targeted-charging-review-decision-and-impact-assessment>

¹⁴ The TCR aimed to ensure that residual charges are recovered from network users in a way that balanced the need to reduce harmful distortions, maintain fairness, and charge in a way that is practical and proportionate.

¹⁵ Our TCR Decision directed that the ability for suppliers to reduce their liability for BSUoS charges by contracting with distributed generators with capacity less than 100 MW should be removed. This was achieved by recovering BSUoS charges for demand on a gross consumption basis, rather than a net consumption basis at the point the transmission network meets the distribution network. The modification that enacted this change, CMP333, was approved by Ofgem in December 2020 and implemented in April 2021.

¹⁶ https://www.ofgem.gov.uk/sites/default/files/docs/2018/11/targeted_charging_review_minded_to_decision_and_draft_impact_assessment.pdf

¹⁷ [Review of balancing services charges \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/publications-and-updates/balancing-services-charges-review)

¹⁸ [ESO Word Template – Full Width \(chargingfutures.com\)](https://www.eso.co.uk/word-template-full-width)

¹⁹ [Launch of a second Balancing Services Charges Taskforce \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/publications-and-updates/balancing-services-charges-taskforce)

1.7. This second Task Force recommended²⁰ that BSUoS be paid solely by Final Demand, and also that it should be levied in the form of a flat volumetric £/MWh charge that was known to users in advance and was of a fixed level for a set period.²¹ The key reasons for their conclusions that BSUoS should be paid solely by Final Demand were that doing so would reduce distortions between Large Generators and other forms of generation, would avoid significant new distortions between network-connected and on-site generation, and would improve efficiency by removing risk premiums and transaction costs.

1.8. The key reasons for their conclusions that BSUoS should be levied in the form of a flat volumetric £/MWh charge were that:

- BSUoS costs reflect that this service has significant energy cost drivers, unlike asset related costs such as Transmission Network Use of System or Distribution Use of System charges, and as such are more suited to fixed or capacity charges;
- Volumetric charges, being broadly similar to the existing method, avoid significant distributional impacts or charge redistribution;
- Charging BSUoS on volumes is simple and relatively transparent, aiding understanding and implementation; and
- While fixed charges are less avoidable than volumetric charges, volumetric charges do not include the “cliff edges” that come with banded charges which can lead to strong incentives at the margins.

1.9. In December 2020, we published an open letter that supported the second Task Force’s recommendations in principle, whilst recognising that quantitative analysis as to the overall impacts of the reforms would be required to inform a final decision.²² Ofgem committed to carry out this quantitative work. In February 2021, we issued an invitation to tender and, following a competitive process, commissioned Frontier Economics and Lane Clark & Peacock (LCP) to carry out this work.

²⁰ [second-balancing-services-charges-task-force-final-report.pdf \(chargingfutures.com\)](https://www.chargingfutures.com/second-balancing-services-charges-task-force-final-report.pdf)

²¹ Currently BSUoS charges are recovered using a £/MWh volumetric charge that varies in cost in each 30 minute settlement period to reflect the specific costs that arose in that period.

²² [Ofgem response to publication of the final report of the second Balancing Services Use of System \(BSUoS\) Task Force](#)

CMP308

1.10. Following the second BSUoS Task Force's recommendations, we set out our expectations that industry would develop solutions to modify the relevant industry code (the Connection and Use of System Code ('CUSC'), which covers the charging provisions for BSUoS charges) in line with the Task Force recommendations through the code modification process. In this instance, it was not necessary for an industry party to raise a new code modification proposal as an existing modification, CMP308, was considered an appropriate way to give effect to the terms of the Task Force outputs with regards to moving liability for BSUoS charges solely to Final Demand.

1.11. In April 2022 we published our final decision approving the CMP308 Original Proposal. As a result, from April 2023 liability for BSUoS charges will move fully onto Final Demand. Our consultants' modelling suggests the proposed changes would reduce costs to electricity consumers, with the overall benefit valued at £320m in the period to 2040, assuming a Net Zero compliant scenario.

1.12. Our assessment found that by reducing distortions in the generation sector, CMP308 would see GB energy system costs reduced by around £400m as a result of more efficient dispatch and investment, and that when emissions reductions in other territories are considered, overall power sector CO2 emissions would fall.

CMP361 and CMP362

1.13. CMP361 and CMP362 were raised to implement the remainder of the second Task Force's conclusions to move BSUoS charges to a flat volumetric charge payable on an ex-ante basis.²³ These modification proposals, which also concern the arrangements that would allow the ESO to manage the additional tasks of forecasting such a charge and managing risks and cash flows, form the basis of this minded-to decision and consultation.

²³ It should be noted that in 2015 a modification, CMP250, was raised to fix BSUoS charges into a flat volumetric charge. We rejected CMP250 in 2018, before the establishment and findings of the first and second BSUoS Task Forces, and so before the first Task Force had established BSUoS charges were cost recovery charges. At the time, we did not consider that the evidence provided in the final modification report was sufficient to allow us to determine whether the solutions presented would have had a positive or negative impact on the relevant charging ACOs, and we were not satisfied that a case had been made that the proposed changes facilitated more effective competition. Ofgem's decision is available [here](#).

Wider context

1.14. Major changes to our energy system are required to deliver the Net Zero transition, with efficient investment needed in generation. We consider that well-functioning markets free from distortions are vital for the investment and flexibility needed to facilitate Net Zero at least cost, and that this proposal is likely to improve price signals and ensure cost recovery happens on a more efficient basis.

1.15. Our view was that CMP308 served these aims by making changes that encourage the most efficient or cost-effective providers of power or system services are used at any given time. CMP361, if approved, may have additional benefits to market signals by removing some perverse incentives associated with the existing charging arrangements.²⁴ It may also help suppliers and end users by improving the predictability of BSUoS costs and reducing volatility, which could aid competition. Together, these effects are likely to deliver lower costs for consumers in the years ahead.

1.16. Wholesale and balancing costs are very high at current, in part due to the ongoing gas price crisis. It is important that in addition to targeted action wherever needed to address the current concerns, key work on setting the GB markets up for the most cost-effective energy transition continues.

²⁴ These benefits are explained more fully later in this document

This consultation

Section summary

We describe the aims and processes of this consultation and the legal and regulatory framework that underpins it. We set out the timelines and privacy and data provisions of the consultation. We also summarise the questions and provide a summary of our minded-to position.

What are we consulting on?

2.1. This consultation focuses on our minded-to decision on CUSC proposals CMP361 and CMP362. These modifications include a number of alternatives, with 7 Workgroup Alternative CUSC Modifications (WACMs) produced for CMP361 in addition to the CMP361 Original proposal, and 6 WACMs produced for CMP362 in addition to the CMP362 Original proposal. CMP362 and its WACMs effectively provide the means to implement a CMP361 option by introducing and updating definitions in section 11 of the CUSC. The options under CMP362 therefore correspond to options under CMP361. This consultation therefore focuses on the following assessment areas:

- Assessment of each of the CMP361 options against the ACOs and our statutory duties;
- Assessments of costs and benefits, both monetised and non-monetised, of CMP361's various options;
- Distributional impacts of the options;
- Assessment of the relevant CMP362 WACMs that would be needed to implement a CMP361 solution against the ACOs and our statutory duties.

2.2. Through the work of the BSUoS Task Forces, and during the industry processes relating to CMP361, there were a number of consultations where stakeholders could provide their views, including the Workgroup and Code Administrator Consultations.

2.3. Due to the variable nature of BSUoS charges, exact assessment of the distributional impacts of the options is not possible, but we have carried out distributional modelling and wider systems modelling to quantify and support our assessment of the likely effects of this modification, which was shared during the workgroup process. We have taken the decision to

update our analysis to include further assessment of the potential for forecasting error. We have decided not to include current higher wholesale cost impacts on BSUoS, but are confident that in principle, higher and more volatile BSUoS costs would lead to greater benefits through CMP361, due to its effect on risk premiums and demand user incentives.

Our minded-to decision

2.4. We are minded-to direct that modifications CMP361 WACM5 and CMP362 Original proposal be made, with an implementation date of 1 April 2023. We would ask ESO to consider whether changes are needed to the CUSC, further to those identified by the CMP361 Workgroup's assessments of legal text changes, to enable a "K" correction factor to be reflected in the code to ensure compliance with the licence.

2.5. We are seeking views on our assessments of both these proposals against their relevant code objectives, and our duties, as well as views on the reasoning, modelling and impacts we have produced to support this work. The closing date for responses is 19 October 2022.

2.6. We are seeking responses on a number of questions to inform our final decision. These questions are presented throughout this document alongside the relevant discussion and are also presented below.

Questions

1. Do you agree with our assessment that CMP361 WACM5 better facilitates the Applicable CUSC Objectives?
2. Do you agree that implementation of CMP361 WACM5 reduces risks for BSUoS liable parties, and in doing so will deliver better outcomes for consumers?
3. Do you agree with our view that implementation of CMP361 WACM5 is likely to reduce risk premiums arising from existing BSUoS volatility and variability?
4. Do you agree that implementation of CMP361 WACM5 is likely to reduce perverse incentives to demand, and in doing so improve the cost reflectivity of signals elsewhere in the arrangements?
5. Do you agree with our views on the right balance of notice periods and fixed periods?

6. Do you agree with our views on the appropriate certainty of tariffs, and the appropriate way to manage BSUoS cashflow?
7. Do you agree with our reasoning around the length of time we consider is appropriate for building up a BSUoS fund?
8. Do you have any further feedback on our reasoning on the proposals' performance against the code objectives?
9. Do you have views on the modelled assessment of consumer and energy system benefits? Please provide quantitative analysis and any further information.
10. Do you have views on the risk premium analysis and the conclusions we draw from this? Please provide quantitative analysis and any further information.
11. Is our assessment of non-monetised benefits reasonable? Are there any other factors, benefits or costs, we should consider?
12. Do you consider the consumer and system benefits identified in our consultants' modelling to represent a reasonable view of the potential effects of this modification?
13. Do you consider that Ofgem has duly considered all relevant benefits? Are there any areas which could benefit from further analysis?
14. The benefits of avoiding resetting tariffs in the fixed period is that there would be a reduction in suppliers' risk premium. We would welcome evidence on the justification for the materiality of this benefit and whether the probabilities at extremes such as 1 in 100 can be meaningfully estimated and interpreted. In particular, should one in 100 (P99) be based on short-term exceptional years or on longer-run considerations?
15. Do you agree with our proposed implementation date of 1 April 2023? Please provide your reasoning.
16. Do you have any other information which is relevant to this consultation?

Our impact assessment

2.7. Where appropriate, regulatory proposals are accompanied by impact assessments (IAs) which assess and estimate the likely associated risks, costs and benefits that have an impact on business, individuals and the environment.

2.8. Section 5A²⁵ of the Utilities Act 2000 imposes a duty on the Authority (its 'Section 5A duty') to undertake an impact assessment in certain circumstances. In particular, that applies where it appears to the Authority that a proposal is important. A proposal is important for these purposes if its implementation would be likely to, among other things, "have a significant impact on persons engaged in commercial activities connected with the [...] generation, transmission, distribution or supply of electricity." Where this applies, the Authority is obliged to carry out an impact assessment. We consider that this impact assessment, which we have carried out in line with our impact assessment guidance,²⁶ meets our obligations under the Utilities Act in a proportionate, consistent and transparent manner.

2.9. This impact assessment looks at the impact of the proposed changes to BSUoS charges. It is informed by our consultants' modelling, which was previously reviewed and consulted upon by the relevant workgroups. This modelling has now been supplemented with further information.

2.10. We refer to all modelling within this document as "our consultants' modelling" or "the modelling" to aid understanding, and to draw a distinction between other analysis and assessments we have carried out, though we will highlight where the new modelling is particularly instructive for a given assessment.

2.11. In producing the modelling, our consultants had to make a range of simplifications and assumptions. The user groups were designed to represent a reasonable spread of different levels and shapes of consumption, but they were not representative of all consumers. As a result, the charges and bill impacts estimated were illustrative to provide an indication of the expected impacts.

2.12. To aid navigation and improve readability, we have integrated the impact assessment within this consultation document, as opposed to producing a separate IA document. We

²⁵ <https://www.legislation.gov.uk/ukpga/2000/27/section/5A>

²⁶ <https://www.ofgem.gov.uk/publications/impact-assessment-guidance>

consider this IA to be within scope of Public Sector Equality Duties²⁷ and consider this to be a non-qualifying measure for the Business Impact Target.

Consultation stages

2.13. The consultation period will close on 19 October 2022. We note that the majority of the modelling and workgroup discussion that supports this consultation has been available to industry since August 2021. Following this consultation, we will assess responses and consider whether any further analysis or engagement is required before publishing decisions on CMP361 and CMP362.

How to respond

2.14. We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

2.15. We have asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

2.16. We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, data and confidentiality

2.17. You can ask us to keep your response, or parts of your response, confidential. We will respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

²⁷ In broad terms, the duties set out in S.149 of the Equality Act 2010 require a public authority to have regard to a number of provisions that advance equality and avoid harms toward and between individuals with a range of protected characteristics. There are some overlaps between these duties and our statutory duties as set out in other legislation. The Small Business, Enterprise and Employment Act 2015 (SBEE Act 2015) creates a legal obligation on the Government to publish a Business Impact Target, and regulators are required to transparently report on the cost to business of qualifying changes to their regulatory policies and practices.

2.18. If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you *do* wish to be kept confidential and those that you *do not* wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we will get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

2.19. If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 1.

2.20. If you wish to respond confidentially, we will keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

2.21. We believe that consultation is at the heart of good policy development. We welcome any comments about how we have run this consultation. We would also like to get your answers to these questions:


1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. [Ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations).


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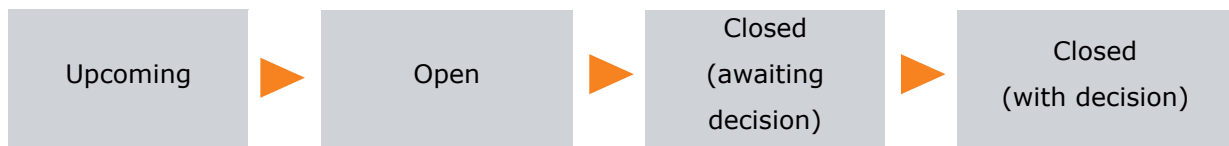
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The modification proposal and CUSC Panel assessment

Section summary

We describe the modification proposal for CMP361. We outline the process that led to the raising of this modification and the votes of the CUSC Panel. The CUSC Panel voted in support of this modification being better than the existing provisions (baseline).

The modification proposal

3.1. CMP361 is a CUSC modification proposal which would change how BSUoS is charged to users. At present, BSUoS charges are currently recovered using a volumetric charge (£/MWh) from demand customers and liable generators based on the amount of energy imported from or exported onto the network within each half-hour period. The magnitude of the current volumetric charge currently varies significantly from period to period and is charged ex-post, meaning users understand their exposure to BSUoS charges only after the period for which those charges have applied.

3.2. Following our decision on CMP308, BSUoS will no longer be charged to liable generators from April 2023. As of April 2023, the existing variable BSUoS charge will be payable by Final Demand.

3.3. In February 2021 National Grid ESO raised CMP361 and CMP362 to bring BSUoS charges in line with the recommendations of the BSUoS Task Force, following Ofgem's response to the Task Force conclusions. In order to accommodate a move to flat volumetric charges, set ex-ante, ESO considered the following changes would be needed, facilitated by the two proposals:

- Provisions for working capital to allow for the ESO to finance the new arrangements;²⁸
- Provisions to allow for exceptional circumstances; and
- Introduction of and changes to definitions.

²⁸ Explained in more detail below

3.4. The BSUoS Task Forces agreed that the combined length of the period for which the BSUoS tariffs are set and the notice period given before a tariff comes into force should be 14 to 15 months. The proposer of CMP361 considered that 3 months' notice of the tariffs, followed by a 12 month period where BSUoS charges will not change was most appropriate, together amounting to 15 months total.

3.5. The CMP361 Workgroup carried out analysis on the capital that would be required to guarantee tariffs would only need to be reset²⁹ in exceptional (1-in-100 year) circumstances. ESO proposed that this amount be built up into a BSUoS "fund", to be held in a ringfenced account.

3.6. The proposer argued that a 3 month notice period allows for higher accuracy, as the future tariff is set closer to the time it starts, and that the fixing of tariffs for a period of 12 months allows for supplier certainty for a longer period. The length of the fixed period also minimises the effects of under and over recovery on the tariffs. Concerns were raised by suppliers that 3 months' notice may not be sufficient to allow suppliers to accurately set future supply prices for their customers.

3.7. CUSC proposals are assessed against the ACOs, and specifically on whether the proposals better facilitate the ACOs³⁰ than the baseline.³¹ The ACOs are presented below, and our assessment against them is detailed in full in section 4 below:

a) Facilitating effective competition

that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity

²⁹ Tariffs would need to be reset where the ESO has strong evidence that the combination of the BSUoS fund and the capacity available in their working capital facility will be insufficient to meet expected cashflow requirements from expected future balancing events. While the ESO has the automatic right to reset BSUoS tariffs, we expect that ESO will fully and proactively engage industry in such circumstances, in addition to providing accurate forecasts, as we set out later in this document.

³⁰ As set out in Standard Condition C5(5) of ESO's Transmission Licence, see: <https://epr.ofgem.gov.uk/Content/Documents/Electricity%20transmission%20full%20set%20of%20consolidated%20standard%20licence%20conditions%20-%20Current%20Version.pdf>

³¹ The status quo arrangements under the CUSC.

b) Cost-reflective charging

that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection)

c) Taking account of the developments of transmission licensees' businesses

that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses

d) Compliance with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Cooperation of Energy Regulators

e) Promoting efficiency in the implementation and administration of the charging methodology

3.8. A summary of the proposer's assessment of the CMP361 proposal against the ACOs is set out below.

CUSC Objectives	CMP361 - Summary of proposer's view
(a) Competition	Positive - Removes distortions by contributing to CMP308's aims, improves supplier competition through removing volatility leading to greater efficiency
(b) Cost-reflectivity	Neutral
(c) Reflects developments in the licensee's business	Positive - Furthers TCR principles, acts on industry concerns surrounding BSUoS unpredictability and risk premium
(d) Compliant with ER / EC / ACER decisions	Neutral
(e) Efficiency	Positive - Simplifies methodology and unlocks process efficiencies

3.9. During the workgroup process, a further 7 proposals, also known as WACMs, were devised and accepted by the workgroup. These focused on variations to the proposal elements.

Notice Period

3.10. This is the period for which tariffs will be known to users in advance of being in place. The options range from 3 months (less notice, and correspondingly more certainty of future costs for ESO, with shorter forecast time horizon for suppliers) to 9 months and 12 months (less certainty over costs for ESO but greater time horizon for suppliers.).

3.11. Alternatives were raised to address supplier concerns that a longer notice period than 3 months would be more appropriate.

Fixed period

3.12. This is the period for which tariffs will not change. Options range from 3 months (stretching from months 12-15 tariff setting) to 12 months (from months 3-15 from tariff setting).

3.13. Alternatives were raised to facilitate longer notice periods within the overall 15 month fixed and notice period.

P Level

3.14. The “P level” is a representation of a given proposal’s likelihood to provide tariffs that, once set, will not change. The P level is the probability that charges will not need to be reset within the fixed period and denotes an “x” in 100 likelihood of no change occurring. For example, options such as CMP361 Original are set to P99, reflecting a 1 in 100-year probability of tariffs needing to be reset within the fixed period. Other options are set to P90 (a 1 in 10 year likelihood of reset), and P77 (a roughly 1 in four year probability).

3.15. Alternatives were raised to reflect a higher likelihood of tariff reset where an option did not use a fund in addition to the Working Capital Facility, or where the build-up of the fund was capped, as a compromise option. Industry discussion during the workgroup noted that tariff reset probabilities might be higher at some times for some options, such as when the fund is still being built up and is not providing the full expected protection.

BSUoS fund

3.16. This is the buffer of industry money built up and used by ESO to allow for BSUoS volatility, with more certain P Levels corresponding to larger funds, as more eventualities will need to be covered. There is an important inter-relationship between the fund (or lack of it), the ESO’s Working Capital Facility, and the likelihood tariffs would need to be reset. WACMs cover options

with and without a fund. Where options have a fund, there are additional options around how quickly that fund is capitalised. The presence of a fund, and the speed in which the fund is built up has an impact on the likelihood of tariff reset.

3.17. Options without a fund address workgroup concerns that the fund was not recommended by the Task Force and could reduce the benefits of the change by introducing a need for suppliers to understand the ESOs financial position.

BSUoS fund recovery period

3.18. This is the period over which the BSUoS fund is built-up, if a fund is used. Options are two or five years or capping the build-up of the fund at £25m per annum.

3.19. Options with longer build-up periods, or annual caps on the level recovered, reflects the concern that the fund comes at a cost to consumers and that the burden of building up the fund can be reduced by spreading recovery over a longer period. Spreading the cost comes with a trade-off as tariff resets may be more likely in the short term as less money is available to the ESO to manage cashflow risks.

3.20. The full range of options proposed, and their characteristics, is set out below.

Ref	Alternative name	Notice Period	Fixed Period	P level	BSUoS Fund	BSUoS Fund recovery period	Relevant CMP362 solution
Original		3 months	12 months	P99	Yes	2 years	CMP362 Original
WACM1	12N 3F	12 months	3 months	P99	Yes	2 years	CMP362 WACM1
WACM2	9N 6F	9 months	6 months	P99	Yes	2 years	CMP362 WACM2
WACM3	9N 6F, No BSUoS Fund	9 months	6 months	P77	No	N/A	CMP362 WACM3
WACM4	12N 3F, No BSUoS Fund	12 months	3 months	P77	No	N/A	CMP362 WACM4
WACM5	5-year BSUoS Fund Recovery	3 months	12 months	P99	Yes	5 years	CMP362 Original
WACM6	9N 6F, P90, BSUoS Fund cap	9 months	6 months	P90	Yes	Capped at £25m per year	CMP362 profil
WACM7	12N 3F, P90, BSUoS Fund cap	12 months	3 months	P90	Yes	Capped at £25m per year	CMP362 WACM6

CUSC Panel recommendation

3.21. The CUSC Panel met and voted on CMP361 and CMP362 in February 2022.

3.22. All CMP361 options received majority support as better facilitating the ACOs than the baseline³² with their considerations on each ACO summarised below. In summary, the Panel most commonly considered ACO (a) to be better facilitated, with some support for (b) and (e). We discuss our own assessment against the ACOs in section 4 of this document, and present further detail of the Panel's assessment.

Option	Best Option	ACOs better facilitated					
		a)	b)	c)	d)	e)	Overall
CMP361 Original	3 Votes	9	5	3	0	3	9
WACM1	1 Vote	8	5	3	0	3	8
WACM2	3 Votes	9	5	3	0	3	9
WACM3	0 Votes	7	5	3	0	3	7
WACM4	1 Vote	7	5	3	0	3	7
WACM5	1 Vote	8	5	3	0	2	8
WACM6	0 Votes	8	5	3	0	2	8
WACM7	0 Votes	8	5	3	0	2	8

Table 1 - CUSC Panel voting

3.23. All CMP362 options received at least majority support. Some Panel members felt objective (d) of the non-charging objectives was better facilitated, reflecting that CMP362 is needed to implement CMP361. Other Panel members felt CMP362 better facilitated objective (b), in enabling CMP361, which in their view aids more effective competition.

³² It should be noted that at the time of the Panel vote, CMP308 had not yet been approved.

Our assessment and minded-to decision

Section summary

We are minded-to approve CMP361 WACM5 and consider that implementation should take place in April 2023. We are minded-to approve the corresponding CMP362 option, CMP362 Original. In our assessment of the options, we find WACM5 to better facilitate the achievement of the Applicable CUSC Charging Objectives and be consistent with our principal objective and statutory duties. We present some key impacts of CMP361 options and seek views on our minded-to decision.

Questions

1. Do you agree with our assessment that CMP361 WACM5 better facilitates the Applicable CUSC Objectives?
2. Do you agree that implementation of CMP361 WACM5 reduces risks for BSUoS liable parties, and in doing so will deliver better outcomes for consumers?
3. Do you agree with our view that implementation of CMP361 WACM5 is likely to reduce risk premiums arising from existing BSUoS volatility and variability?
4. Do you agree that implementation of CMP361 WACM5 is likely to reduce perverse incentives to demand, and in doing so improve the cost reflectivity of signals elsewhere in the arrangements?
5. Do you agree with our views on the right balance of notice periods and fixed periods?
6. Do you agree with our views on the appropriate certainty of tariffs, and the appropriate way to manage BSUoS cashflow?
7. Do you agree with our reasoning around the length of time we consider is appropriate for building up a BSUoS fund?
8. Do you have any further feedback on our reasoning on the proposals' performance against the code objectives?

Legal and regulatory assessment framework

3.24. We have evaluated this proposal on a holistic basis, taking into account our understanding of the potential impact on consumers, as well as different categories of market participants. The modification has been assessed against (i) the ACOs and (ii) our Principal Objective of protecting the interests of existing and future energy consumers wherever appropriate by promoting effective competition,³³ and our other statutory duties.

³³ As set out in Section 3A of the Electricity Act 1989

3.25. In determining whether to approve, reject or send back this proposal, the Authority must consider whether it better facilitates the achievement of the charging ACOs as compared with the current methodology.³⁴

Our assessment against the Applicable Code Objectives

3.26. We have considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 08 March 2022. Overall, we consider all options to better facilitate the objectives, with WACM5 the best option. Our reasoning for each option across each ACO is set out below,³⁵ broken down by ACO and into a number of considerations within the ACO.

ACO (a) Facilitating effective competition

Workgroup and Panel Views

A significant proportion of respondents to the Workgroup and Code Administrator Consultation felt that CMP361 would better facilitate ACO (a) and supported implementation overall. Typically, respondents felt that CMP361 had the potential to improve competition amongst suppliers by reducing their BSUoS risk, with some stressing that any option out of the original or WACMs would significantly improve on the baseline methodology, which features variable BSUoS charges that vary half-hour by half-hour. In particular, competition was seen to be improved by reduced risk premiums and reduced volatility transferring into improved offers to customers.

Many suppliers advocated for the longer notice periods, with some advocating for combinations of fixed and notice periods in excess of the 15 months set out by the BSUoS Task Force recommendations in their consultation responses. Some respondents noted that depending on the notice period chosen, there may be different competition effects. For example, for short notice periods, those with contract starts at certain points may have greater reductions in risk than others. It was suggested that more frequent engagement and forecasting may minimise risk premiums. The ESO

³⁴ The licence sets out that modifications should be made as required for “the purpose of better achieving the relevant objectives”.

³⁵ Having approved CMP308 in April 2022, our assessment baseline includes the changes made in that modification to have been implemented.

considered that shorter notice periods would reduce overall risk, a view echoed by some suppliers, who considered shorter notice periods to provide greater potential for accurate forecasts.

Suppliers noted the links to the default tariff cap (known colloquially as the “price cap”), and suggested for effective competition, the impacts of this change, including any increase in tariffs needed to build-up a BSUoS fund, would need to be reflected in the default tariff cap from implementation in April 2023. One supplier felt that options with a 3 month fixed period may not better facilitate ACO (a) due to a perceived incompatibility with the default tariff cap, which at the time of the Code Administrator consultation included price cap periods of 6 months.

A number of suppliers raised concerns that the inclusion of a BSUoS fund may add uncertainty to the level of tariffs and noted that this was not discussed in the Task Forces. These included concerns that to have confidence in the tariffs set, suppliers and end consumers might need to understand and forecast the fund’s performance and the likelihood it would be sufficient to manage cashflow. The potential for these forecasts to be incorrect could lead to higher risk premiums.

Whether a fund is present or not, suppliers generally set out their expectation that occurrence of tariff resets should be minimised, with the suggestion that frequent resets would reintroduce risk premiums. Some respondents noted that a fund requires ESO to hold industry capital, with the costs associated with this potentially reducing benefits of the change. Some consultation respondents considered these arrangements inefficient due to demands on industry funding. It was suggested that the level of the fund could increase if balancing costs grow. ESO considered that presence of a fund built up using additional payments on top of the BSUoS tariff, would reduce the potential for tariff resets and so would bring greater benefits. Some stakeholders instead advocated for alternatives to be considered, such as an increase to the size of ESO’s Working Capital Facility.³⁶

The Workgroup concluded that the Original proposal and its alternatives better facilitated ACO (a). The CUSC Panel generally agreed. Panel members highlighted improvements to the allocation of cashflow risk within the industry, with ESO

³⁶ No WACMs propose such an increase

considered by some to be better able to manage cashflow impacts than suppliers.³⁷ Panel members broadly felt that CMP361 and its alternatives would decrease risk for suppliers and consequently reduce the level of risk premium built into consumers' prices. Other members specifically noted the benefits to competition from reduced volatility in BSUoS charges.

The fund provoked mixed feelings from the Panel, with members noting benefits to competition from its protection against resets, whilst also noting its detrimental impacts while it is being capitalised, such as finite industry cash being tied up and effective BSUoS charges being higher than they otherwise would be. Some Panel members felt a faster build-up of the fund was more conducive to effective competition, as it would more effectively mitigate the potential for mid-year tariff changes. Other Panel member feedback included:

- One member suggested that a fund was undesirable but ultimately necessary to provide tariff certainty;
- Some questioned whether the increased tariffs needed to build up the fund would affect the wider benefits of change, though others felt the benefits would outweigh the costs.

Some Panel members considered options that restrict the build-up of the fund using a defined limit to be less beneficial and less able to evolve with changing balancing costs. They considered these options to increase the need for subsequent modifications or interventions to rebuild the fund after a significant impact. Some Panel members, notably ESO, considered only the options with the shortest notice periods to be beneficial for competition as the purported improvements to accuracy were claimed to reduce tariff reset risks, avoiding some of the challenges of longer notice periods.

Our view

³⁷ The volatile nature of BSUoS means that even where a supplier accurately forecasts the average charge correctly, there may be periods where charges are substantially above average for a period of time. This can tie up finite cash reserves for suppliers.

Our analysis agrees with the general views of the Workgroup and Panel that fixed ex-ante BSUoS charges are likely to provide significant competition benefits from improved certainty, reduced volatility and reduced risk premiums. We discuss some benefits to competition in more detail below.

Reduced risk premiums

We consider that the move to fixed volumetric BSUoS charges, set ex-ante, would provide significant benefits to suppliers when setting tariffs. Rather than building risk premiums into contracts to account for periods of potentially high BSUoS, suppliers can price according to a BSUoS tariff that is intended to be fixed. While suppliers may choose to still build in some risk premium to account for the possibility of events that lead to tariff reset, we would expect that this will be a far smaller amount even in the case of higher risk alternatives and situations, such as options without BSUoS funds and long notice periods.

In the round, the level of certainty with any ex-ante option is significantly greater than the existing arrangements, where no element of certainty is given. Reduced risk premiums will be beneficial to competition and along with greater certainty and transparency in charging will lead to a more competitive market which will be beneficial to consumers. The change will focus competition in areas that are more fully within suppliers' control than BSUoS, which is difficult to predict even for the most sophisticated operators.

We think options with shorter notice periods are likely to provide the most certainty of charges during the fix period and lower chance of tariff reset being required due to better forecasting accuracy, though such options may not always align with suppliers' contracts. More information can be found in our assessment of the fixed and notice periods in our section on the assessment of costs and benefits.

We consider options with BSUoS funds to bring greatest certainty, and for the options where the fund is built up sooner to provide the highest overall level of certainty, though we think there is a trade-off between short term price impact and certainty, particularly in the context of the ongoing energy crisis. Options that have slower build ups are less certain, as less money is available in the BSUoS fund in the early years to cope with costly balancing events. Those with limited build ups are less certain again, as they further reduce the levels in the BSUoS fund in the early years when compared to other options. Options without funds seem weakest when it comes to providing

certainty, and so may be least effective at reducing risk premiums and facilitating effective competition, as they do not have the key mechanism for managing cashflow impacts that is present in other options.

The presence of a fund comes at a cost to suppliers (and therefore to consumers), with faster build ups front-loading these costs to a greater extent. On balance, our assessment finds costs to be low when compared with benefits, though we think that particularly given the current market conditions³⁸ there is a strong case to consider a slightly longer fund build up, even where this comes at the expense of slightly higher tariff reset probability.

Reduced barriers to entry and supplier exit

The existing BSUoS arrangements require complex forecasting and are difficult to predict even for sophisticated market participants. New entrants who are otherwise suitable may find market entry more feasible in a regime with more predictable BSUoS arrangements, improving competition. Similarly, more predictable BSUoS and lower cashflow risk, as well as a more level playing field for BSUoS tariff setting, may marginally reduce pressure on suppliers to exit the market. We would expect greater certainty of tariffs to transfer into lower risk premiums and better competition, and for this to feed through into lower prices for consumers.

Reduced demand incentives

The existing volatile BSUoS charges introduce a level of risk for exposed parties. For example, use of the system at times of expensive BSUoS, particularly overnight, may be disincentivised under the current system. This issue was described as “overnight signal distortion” in the First BSUoS Task Force Report³⁹ and typically sees periods of expected expensive BSUoS charges become more expensive still due to the effects of demand reduction. This is due to there being fewer parties over which to share balancing costs for a given period, and also in some cases due to lower demand increasing the need for system operation activity. Incentives to users to reduce

³⁸ Consistently high wholesale and balancing costs, driven by a various factors, continue to increase costs for consumers.

³⁹ [ESO Word Template - Full Width \(chargingfutures.com\)](#)

demand in zones with high costs driven by excess generation may increase the need for ESO intervention; we would expect these to be reduced with a flat BSUoS charge.

The existing arrangements mean that users who can respond by avoiding these periods may benefit compared to those with flatter profiles who cannot, despite the avoidance not leading to reduced system operation costs. This might favour some industry participants over others for directly exposed demand users or might favour suppliers with particular business models or customer types over others. Equally, users whose behaviour might benefit the system may be unable to do so due to these perverse signals. We would expect more effective competition if such signals were not present, as there would be a greater ability for effective and efficient market participants to find reward for useful activity.

End-user benefits

In addition to the potential benefits from lower risk premiums, directly exposed users would be shielded from paying high BSUoS charges in periods with sharp BSUoS price spikes. Instead, they will face an average BSUoS charge. This may protect end users from harmful cost impacts at certain times of the year and prevent high costs falling on users in a way that may not be predictable.

End users pay the overall costs of BSUoS and also the costs of building up any fund. We think there is a trade-off between increased tariff certainty bringing improvements to competition, and the impact on consumers who will need to pay to capitalise a fund. We are minded to consider, given wider energy market developments, and the low level of certainty in the current model, that some risk of tariff resets may be appropriate in the short term to keep overall costs down for network users.

Effects on users with behind the meter generation

Behind The Meter Generation (BTMG) or onsite generation can allow a demand site to reduce its demand BSUoS charges below what it would pay if it took power from the networks, as BSUoS charges for demand are not levied on consumed power where that power was generated behind the meter. In the event that CMP361 is approved, this would remain the case.

Currently, demand sites with on-site generation may use it to reduce supply costs, including BSUoS. Under the current variable BSUoS charges, the value of using BTMG

to fulfil demand, rather than drawing power from the network, can fluctuate. Under ex-ante BSUoS as per CMP361, the BSUoS charge level would be more stable. Depending on the efficiency of the generator and the periods it runs, under CMP361, BTMG may run less as there would no longer be periods of fluctuating high costs that users are incentivised to avoid. These effects may lead to competition effects, with users who are sophisticated and have typically been able to predict periods of high BSUoS losing an advantage over users less able to do so. BTMG operators may find that an advantage they currently hold over users without BTMG may be reduced, but on the other hand, users may find improvements to other market signals stemming from reduced non-cost-reflective signals from BSUoS may be useful.

Overall

In the round, we are minded-to consider CMP361 to bring a number of improvements to competition, including from reduced risk premiums and reduced cost impact and influence on consumer behaviour from volatile charges, and therefore that ACO (a) is better facilitated.

ACO (b) Cost-reflective charging

Workgroup and Panel Views

A majority of Panel members felt this ACO was better facilitated. The Panel noted the BSUoS Task Force's view that BSUoS should be treated as cost-recovery, but also that CMP361 would remove the potentially non-cost-reflective signals delivered by the status quo arrangements to demand users. In removing these, many Panel members felt cost reflectivity was improved, with one noting greater overall accuracy with reduced volatility. One Panel member noted that under existing arrangements the variation in BSUoS costs can be driven by changes in the charging base, rather than costs, and so the move to ex-ante BSUoS is more reflective of costs, with the demand effect removed. Other Panel members felt that the implementation of CMP361 and the removal of these price signals would be neutral against the objective as the charge relates to a residual cost and does not need to reflect direct half-hourly costs. One noted that half-hourly BSUoS charges are in some cases more granular than the ESO actions from which the costs arise, as some costs span multiple periods and even months.

It should be noted that some Workgroup participants considered implementation of CMP308 to increase the size of the behaviourally distortive signals sent to demand by BSUoS. These participants considered CMP361 to effectively mitigate these signals, as an averaged, more uniform ex-ante charge would reduce the strength of operationally important signals.

Our view

In our view, the move to ex-ante charges is appropriate for BSUoS charges and improves cost-reflectivity in the regime overall. We consider BSUoS, as a cost-recovery charge, to need to reflect overall costs of the balancing service which arise from many users. These are recovered from the beneficiaries of that service. Charging for this service in a broader sense dampens distortive signals that arise when this service is charged in such a way that would reflect instantaneous costs, and also reflects that many costs cover services that span longer periods. A flatter cost-recovery style payment for balancing services leads to more effective market pricing elsewhere, as CMP361 dampens a source of distortive signals. This dampening reduces the impact of these signals on the efficient signals present elsewhere, improving users' access to information on their cost impacts which they can then internalise. We think a relatively small amount of demand is sensitive to real time BSUoS costs, but that this effect is material, particularly for large end users in the context of the increased share of BSUoS costs payable by demand following our decision on CMP308. CMP361 will mean BSUoS volatility is less likely to have detrimental impacts on end users. This allows charges to be better aligned to overall costs and is likely to be seen as more appropriate by users.

Overall, we are minded-to consider that CMP361 better facilitates ACO (b), as it reduces distortive behavioural signals.

ACO (c) Taking account of the developments of transmission licensees' businesses

Workgroup and Panel Views

Three Panel members felt this ACO was better facilitated. One Panel member felt those options without a BSUoS fund would be negative against this objective, as they would require ESO to bear industry risk which the member viewed as inappropriate given the ESOs position as a financially neutral party to BSUoS. ESO considered options with a

12 month notice period to fail to better facilitate this objective due to the challenges of forecasting these costs.

Our view

We consider that this modification is on the whole neutral in terms of ACO (c). We have considered whether this change reflects necessary changes in the transmission licensees' businesses and do not consider there to be significant relevant changes that are reflected in this modification.

ACO (d) Compliance with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Cooperation of Energy Regulators

Workgroup and Panel Views

No Workgroup or Panel members suggested this ACO was better facilitated. One Code Administrator Consultation response noted this objective.

Our view

We believe that ACO (d) is not relevant for the modification. We are minded to consider that moving BSUoS charges to an ex-ante volumetric basis does not affect compliance with the Electricity Regulation or other relevant legally binding decisions. It is our view that the impact on this ACO is therefore neutral.

ACO (e) Promoting efficiency in the implementation and administration of the charging methodology

Workgroup and Panel Views

The proposer felt this ACO was better facilitated by CMP361. Panel members had mixed views on the proposal's impacts on this objective, with many considering it neutral. Whilst thinking the proposal positive overall, one Panel member suggested that in requiring additional efforts in forecasting and financing, the proposal would increase administration and be negative against ACO (e). Others felt that certain alternatives were negative, with one member feeling that options with capped fund build ups would make subsequent urgent modifications more likely. The ESO

considered the majority of options to be simplifying, and so positive, but felt options with constraints on the build-up of the fund to add complexity for industry.

Our view

We consider that all options will lead to greatly simplified arrangements from a user perspective. We recognise that additional administration may be necessary to forecast BSUoS costs and to manage the BSUoS fund where applicable. In addition, the potential for tariff resets will exist, and this will require management from both ESO and market participants. That said, when compared to the existing arrangements, the overall system looks far simpler. It is therefore our view that all options better facilitate ACO (e). It can be argued that options without a fund are simpler still, though this must be weighed against the competition impacts of lower tariff certainty. We would note that in earlier years for all options with a fund, and particularly for those options where the fund is built up slowly, tariff reset is a more likely occurrence.

Summary of minded-to assessment against the ACOs

3.27. In summary, we are minded-to agree with the Panel's recommendation that the proposal and its alternatives better facilitate the ACOs than the baseline methodology, in particular ACOs (a), (b) and (e). We consider those options that have shorter notice periods, and so greater forecasting accuracy, to be best for competition, with this accuracy of greater value than increased supplier certainty of a long fix. We set out more detail on these considerations in the next section.

3.28. Given the current market conditions, longer fixed periods that may lead to more frequent tariff resets or require significantly more industry cashflow to be held are less likely to lead to lower costs overall.

3.29. We consider the use of a fund to be a prudent way to manage tariff risk and, if combined with suitable forecasting, communications and engagement, consider it should provide the necessary certainty and visibility for industry parties to reduce risk premiums. At a time when all energy consumers are under considerable cost pressure, we consider that slower fund build ups, though worse for certainty in the short term, may be appropriate to manage immediate bill impacts.

Minded-to assessment of CMP361 against the ACOs

Option	a)	b)	c)	d)	e)
CMP361 Original	Positive	Positive	Neutral	Neutral	Positive
WACM1	Positive	Positive	Neutral	Neutral	Positive
WACM2	Positive	Positive	Neutral	Neutral	Positive
WACM3	Positive	Positive	Neutral	Neutral	Positive
WACM4	Positive	Positive	Neutral	Neutral	Positive
WACM5	Positive	Positive	Neutral	Neutral	Positive
WACM6	Positive	Positive	Neutral	Neutral	Positive
WACM7	Positive	Positive	Neutral	Neutral	Positive

3.30. We are therefore minded to consider that options with shorter notice periods, the presence of a fund, and slower build-up of the fund to be preferable, and most likely to best facilitate the objectives. These options promote, in the longer term, a more certain BSUoS tariff. Our reasoning is set out below.

	Notice Period	Fixed Period	BSUoS Fund	BSUoS Fund build up
Consideration	Longer is better for suppliers, worse for accuracy	Longer is better for suppliers, trade off with notice	Presence reduces risk of tariff reset, requires funds to be built up using supplier funds	Longer means lower tariff, higher chance of tariff reset in short term
Implications	Options with long notice (9m, 12m) improve supplier foresight, increase tariff reset chance	Options with longer fixed period have lower tariff reset chance, but less notice	Options with funds most certain, and those with no fund less certain	Slower options (5 years, £25m cap) lower cost but less certain in short term. Capped options least certain
Our view	Accuracy more important, as foresight not useful if tariffs need to be reset Prefer short notice	Led by view on notice period	Fund is prudent, with benefits in the long term Prefer presence of fund	Slower build up is appropriate given market situation Prefer slower build-up

3.31. We would particularly note that recent market developments suggest a shorter notice period has a better chance of reflecting changing conditions, whilst a longer notice period is more likely to see substantial market changes that were not foreseen. While a slower build-up of the fund contributes less to certainty, it is a short-term effect and relates to the immediate market conditions. We think in the context of the existing charges, this reflects a significant increase in certainty while managing additional costs related to providing that certainty.

3.32. Only CMP361 Original and WACM5 have short notice periods. Both have funds, and of the two, WACM5 has a slower fund build up. We consider this option likely to best facilitate the objectives, with CMP361 Original next most likely to do so. Given market conditions, we think a slower build-up is more suitable as it minimises cashflow requirements on suppliers, aiding stability and preserving competition in the market.

CMP362

3.33. We consider CMP362 Original and its WACMs, which act as the relevant enabling modifications for the various CMP361 options, to better facilitate the relevant non-charging objectives. In particular, we consider them to better facilitate non-charging objective (d) in promoting efficiency in the implementation and administration of the CUSC, and non-charging objective (b) in facilitating effective competition.

Assessment against the Authority's statutory duties

3.34. We consider that implementing CMP361 is in the best interests of existing and future consumers and is consistent with our Principal Objective and statutory duties. We consider CMP361 to provide more effective competition for suppliers and those end consumers who are directly exposed to BSUoS by reducing volatility of BSUoS charges and associated risk premiums. In addition, we would expect reduced distortions to the price signals seen by demand users, both directly and indirectly through suppliers' multi-rate tariffs, is likely to lead to a system that is less expensive to balance and more likely to accommodate variable renewable generation than the status quo.

3.35. We consider our minded-to preferred option of CMP361 WACM5 to best reflect the balance of competition benefits to consumers, the lowest implementation costs possible and our obligations to ensure the licensees activities are financeable. We consider the presence of the BSUoS fund a reasonable development to achieve this aim. We also consider that CMP361 is likely to bring greater efficiency and predictability to billing, which will improve customers understanding and reduce their exposure to unforeseen price impacts. In summary, we think this is an important change that will benefit consumers, however they are exposed to BSUoS.

3.36. We consider that our impact assessment, set out in section 5, suggests change is associated with consumer benefit, and we also consider there to be some unquantified but non-trivial benefits from the reduced incentives to avoid certain periods of currently expensive BSUoS charges. We understand that stakeholders consider the changes brought in by CMP361

significantly mitigate volatility in the regime. We expect such a reduction in volatility and risk to bring lower costs to consumers.

3.37. We have a statutory duty to consider persons who have a disability or are chronically sick, have a low income, are of pensionable age, or reside in rural areas. We consider this change to have only a very small impact on all domestic users, and as such does not lead to significant vulnerability impacts. Our assessment of these impacts and others is set out later in this document.

3.38. We think this decision engages, in a limited way, our statutory duties around greenhouse gas emissions.⁴⁰ Our modelling suggests that a move to ex-ante BSUoS leads to a reduction in carbon emissions if emissions related to interconnectors are taken into account, and an even greater impact where they are not considered. We note that combined with the impacts of CMP308, which we expect to lead to an overall reduction in GB-associated emissions, CMP361 is likely to provide environmental benefits. To the extent that CMP361 may also reduce perverse price signals, it may also aid in the integration of higher levels of renewable generation.

3.39. As with CMP308, the modelling that has informed this minded-to decision considers, among other things changes to investments and dispatch of gas-fired generation. We note that given the current market conditions, there may be changes to these outcomes. Broadly, we think the increased investment in, or dispatch of, gas-fired generation may not be as likely an outcome as previously. We think the broad impact identified by this modelling is that BSUoS charges can affect plant dispatch. As we have approved CMP308, following implementation, this effect will largely be on BTMG plant, with impacts on other generation stemming from when it is no longer the marginal plant due to BTMG taking its place. There is likely to be a reduction in the strength of signals for BTMG or demand response to take place at some times, and an increase in others. Overall, we think the impacts are likely to be small. We think overall less distortive signals are likely to improve market operation and flexibility, and in turn support the efficient integration of low carbon sources.

CMP362

⁴⁰ Electricity Act 1989 s. 3A(1A) (a) provides that consumers have an interest in "the reduction of electricity-supply emissions of targeted greenhouse gases". s. 3A(5B) defines such emissions to include "any... emissions [of a targeted greenhouse gas] (wherever their source) that are wholly or partly attributable to, or to commercial activities connected with, the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors"

3.40. We consider CMP362 Original and its WACMs, which act as the relevant enabling modifications for the various CMP361 options, to be consistent with our principal objective and other statutory duties.

Minded-to decision

3.41. We have considered the issues raised by the modification proposal and the Final Modification Report (FMR). We have considered and taken into account the responses to the industry consultations on the modification proposal which are attached to the FMR. We are minded-to conclude that:

- Implementation of CMP361 WACM5 to better facilitate the achievement of the ACOs than the baseline methodology; and
- Directing that the modification be made will be consistent with our Principal Objective and statutory duties.⁴¹

3.42. We are minded-to consider that CMP361 WACM5 will best facilitate the ACOs. We consider that we should consult, for a short period,⁴² on our minded-to position and impact assessment before reaching our final CMP361 decision, in particular to allow industry to review updated modelling produced since the conclusion of the workgroups. Our minded-to decision is therefore to direct that the modification be made.

3.43. We consider CMP362 Original, the relevant enabling modification for CMP361 WACM5, to better facilitate the relevant objectives and to be consistent with our duties.

⁴¹ The Authority's statutory duties are wider than matters which the CUSC Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

⁴² We would ask that any parties who consider themselves to require more time to respond to communicate this to us as soon as possible.

Assessment of Costs and Benefits

Section summary

This section reports the results of our consultants' modelling of the quantifiable impacts of the CMP361 proposal and WACM variants. It explains the method, main assumptions and results from the wider system modelling and the assessment of risk premium benefits over the counterfactual. It also identifies important hard to monetise benefits that are part of our assessment of the proposed modification.

Questions

1. Do you have views on the modelled assessment of consumer and energy system benefits? Please provide quantitative analysis and any further information.
2. Do you have views on the risk premium analysis and the conclusions we draw from this? Please provide quantitative analysis and any further information.
3. Is our assessment of non-monetised benefits reasonable? Are there any other factors, benefits or costs, we should consider?
4. Do you consider the consumer and system benefits identified in our consultants' modelling to represent a reasonable view of the potential effects of this modification?
5. Do you consider that Ofgem has duly considered all relevant benefits? Are there any areas which could benefit from further analysis?
6. The benefits of avoiding resetting tariffs in the fixed period is that there would be a reduction in suppliers' risk premium. We would welcome evidence on the justification for the materiality of this benefit and whether the probabilities at extremes such as 1 in 100 can be meaningfully estimated and interpreted. In particular, should one in 100 (P99) be based on short-term exceptional years or on longer-run considerations?

Impacts

4.1. Our assessment of the options for recovering BSUoS costs with an *ex-ante* fixed charge aims to apply principles of cost-benefit analysis consistent with the HMT Green Book,⁴³ BEIS/HMT guidance⁴⁴ and our own guidance.⁴⁵

⁴³ [The Green Book \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672222/green-book-2020.pdf)

⁴⁴ [Valuation of energy use and greenhouse gas emissions \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672222/valuation-of-energy-use-and-greenhouse-gas-emissions.pdf)

⁴⁵ [Impact Assessment Guidance | Ofgem](https://www.ofgem.gov.uk/publications/consultations-published-and-final/impact-assessment-guidance)

4.2. To assess the broad impacts of implementing this proposal, we commissioned Frontier Economics and Lane Clark and Peacock (LCP) to carry out quantified analysis⁴⁶ of the impact of the options on:

- System and consumers
- Bill Impacts
- Risk Premiums

4.3. The impact of fixing BSUoS for six months, for the total costs of operating the electricity system and costs to consumers between 2023 and 2040 are calculated using the consultants' Envision Model. Costs and benefits over this period are measured in real 2020 prices. Discounting is carried out at the Treasury rate of 3.5% to give Net Present Benefits, Costs or Values in 2022. The strengths and limitations of the Envision model have already been considered in our decision on CMP308 and we do not repeat them again.

4.4. Bill impacts were assessed using the same categories as used in the Targeted Charging Review. This is presented as a dynamic impact.

4.5. In the risk premium analysis, our consultants assessed the benefit from the reallocation of forecasting risk from suppliers to the ESO under a range of different lengths of fixed and notice periods-

- 12 months' notice, 3 months fixed (12N 3F)
- 9 months' notice, 6 months fixed (9N 6F)
- 3 months' notice, 12 months fixed (3N 12F)
- 12 months' notice, 12 months fixed (12N 12F)

The last of these combinations was not brought forward as a WACM for this modification proposal and so as far as possible, we have excluded consideration of it here.

4.6. Following publication of our consultants' report, the ESO raised concerns about the values for ESO exposure and its ability to absorb BSUoS variability risk. In addition, it drew attention to the consultants' assumption that forecast accuracy does not change over time. This was a recognised limitation of the study but to address this point we commissioned a sensitivity analysis of the impact of relaxing this assumption (referred to as the additional analysis).

⁴⁶ Impacts of recovering balancing services costs with an *ex ante* fixed charge. [Link to main report]

4.7. We would direct stakeholders intending to respond to this consultation to our consultants' report for full details and context, and the additional analysis which assesses the impact of forecast accuracy on benefits.⁴⁷

Assessment Methodology

4.8. In the modelling, a comparison is made between a counterfactual in which BSUoS is recovered from suppliers on a variable £/MWh basis. Following our approval of CMP308, the latter is the mechanism that would apply from April 2023, if CMP361 was not approved. This places all generation sources that are not behind the meter and interconnection on a level footing. However, under this model, BTMG continues to benefit from reducing supplier BSUoS exposure and this benefit is approximately double the level pre-CMP308, when supply and Large Generators were both liable for BSUoS charges.

4.9. The factual scenario is where BSUoS is recovered from suppliers on a fixed £/MWh basis. The average BSUoS charge is derived from the counterfactual run. For the systems modelling, it is assumed that BSUoS is fixed for six months. During this period, any BTMG receives a uniform charge and any shaping of dispatch as occurred in the counterfactual is removed.

4.10. The analysis is conducted using National Grid's FES 2020 Consumer Transformation (CT) scenario which is one of four credible decarbonisation pathways to 2050 for the GB energy system. At a high level it assumes that there is electrification of heating, consumers are willing to change behaviour, there is high energy efficiency and much use of demand side flexibility. The detailed background assumptions for commodity prices, demand, generation and interconnector build all formed inputs to the consultants' model.

4.11. The annual BSUoS cost projections are derived from thermal, non-thermal constraints, and a scaling of other BSUoS costs (see 2.3.2 of the main report). The annual average BSUoS charge projections under each scenario over time are illustrated below. As there is only a minor difference in the charging base, the average annual BSUoS charges are indistinguishable on the graph and illustrated by the top line.

⁴⁷ https://www.ofgem.gov.uk/sites/default/files/2021-07/CMP308_Wider%20System%20and%20Distributional%20Impacts%20of%20Recovering%20Balancing%20Services%20Costs%20from%20Demand_FINAL%20STC%20300621.pdf

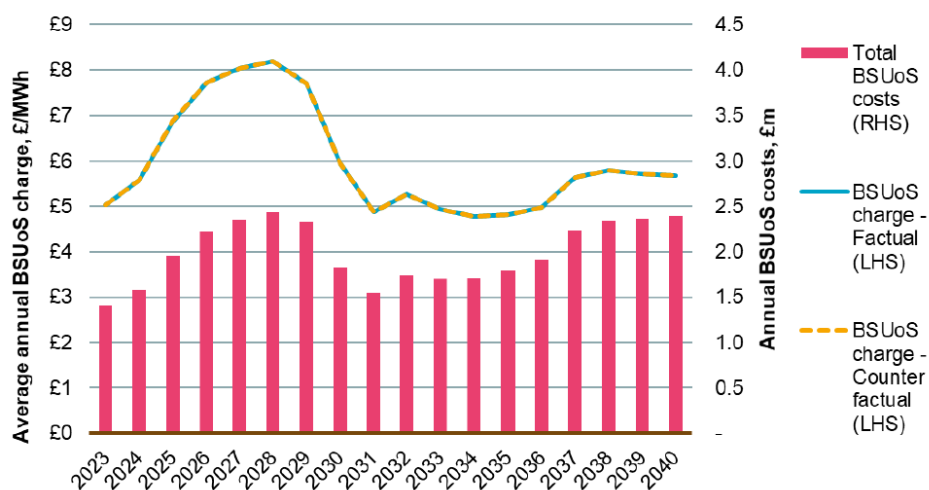


Figure 1 – Per MWh BSUoS charges in the two scenario runs (volume weighted) and total BSUoS costs Source: LCP/Frontier

4.12. Whilst the exact illustrated BSUoS costs are unlikely to be manifest in practice, we consider that from an analytical viewpoint, it is useful to maintain consistency with our analysis of CMP308. Moreover, we consider that the recent BSUoS costs are primarily driven by recent high gas prices, and we expect in the long run for BSUoS to return to historic norms. While prices remain elevated, the potential benefits of the reform are enhanced.

4.13. Figure 2 illustrates the assumed average BSUoS in winter and summer 2025. Due to the different approaches in recovering the BSUoS costs, the charge profiles between the two scenarios differ. While the Factual case has flat values across all days within the seasons, the Counterfactual has higher charges on non-business days and overnight, as these are the periods with lower overall demand and so higher constraints costs due to intermittent generation. Both scenarios have higher per MWh charges in summer than winter, also due to the lower overall demand and a higher proportion of intermittent generation.

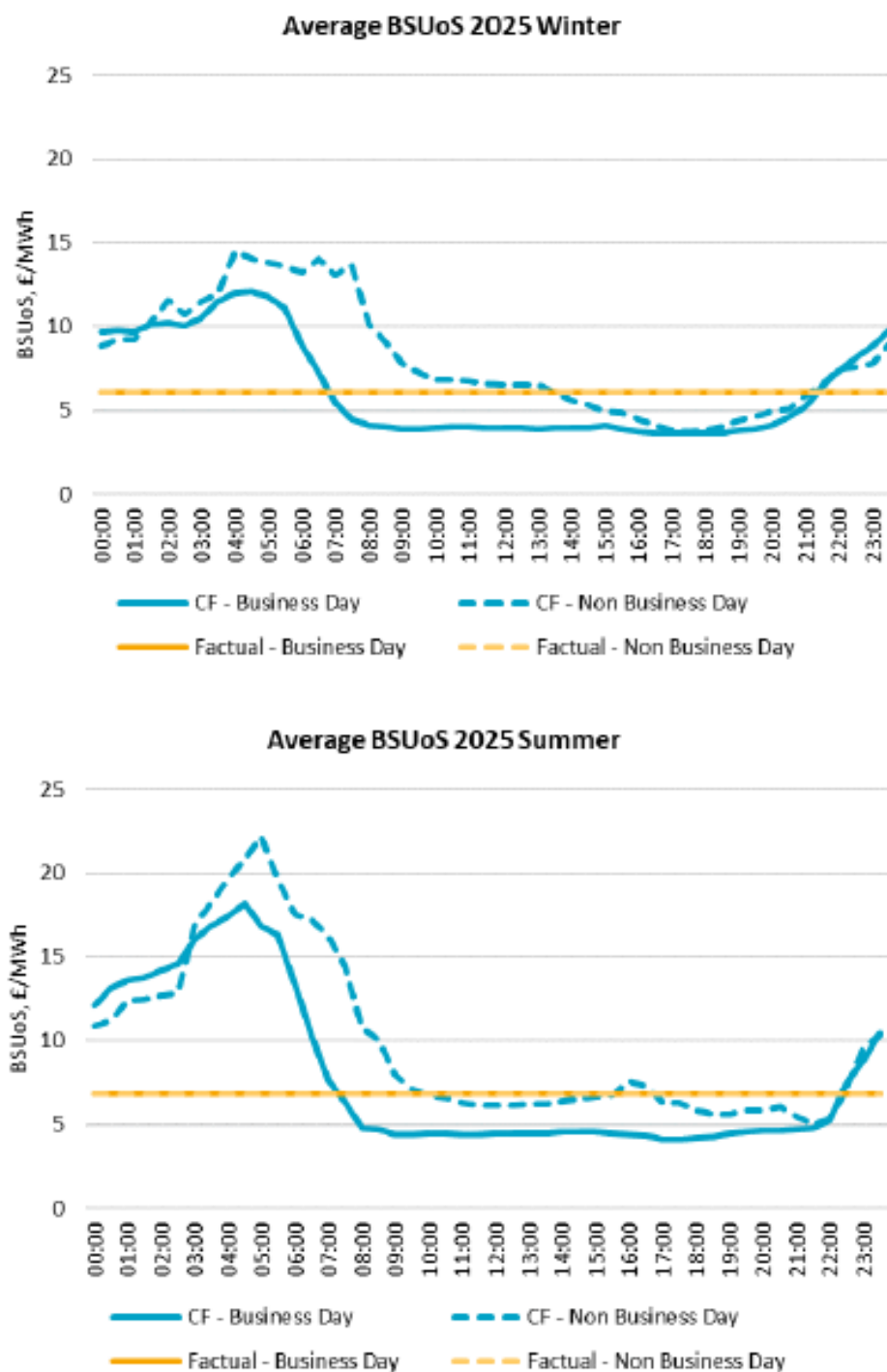


Figure 2 - BSUoS charge by period for 2025 (Source: LCP/Frontier)

Assessment Findings

Consumer and system benefits

4.1. Section 2.4 of the consultants' main report concludes: 'based on the system modelling results set out in this section, the moving of BSUoS from a variable charge to a fixed charge

(in both cases fully recovered from suppliers) results in a small increase in overall system and consumer costs. These increases are very small in the context of the overall system, and we would expect these to be well within the margin of error for modelling of this type.’ In contrast, it was found that CMP308 would benefit consumers by £320million in the CT scenario.

Bill impacts

4.14. Section 3 of the main consultants' report deals with distributional impacts in detail. Bill impacts are assessed over the average period 2025 to 2035 with spot values given for 2025, 2030, and 2035. Impacts are measured against the counterfactual as a total bill impact, £/MWh and as a percentage of BSUoS bill savings.

4.15. Bill impacts are driven by the difference between the variable half hourly charges in the counterfactual and the uniform costs of the factual. For example, the specific example of Figure 2 for 2025 illustrates that during the summer overnight counterfactual costs are higher between 10.30pm and 7am than the uniform factual rate. Any consumption during this time is charged less after reform reducing the customer's bill. Conversely, during the rest of the day any consumption becomes more expensive.

4.16. Other factors that drive benefits include Low Carbon Support impacts, Capacity Market impacts and changes in wholesale electricity prices.

4.17. Figure 3 presents the results of the bill analysis by each customer profile on a £/MWh basis. This allows a comparison to be made across the customer types even though the volumes consumed vary immensely.

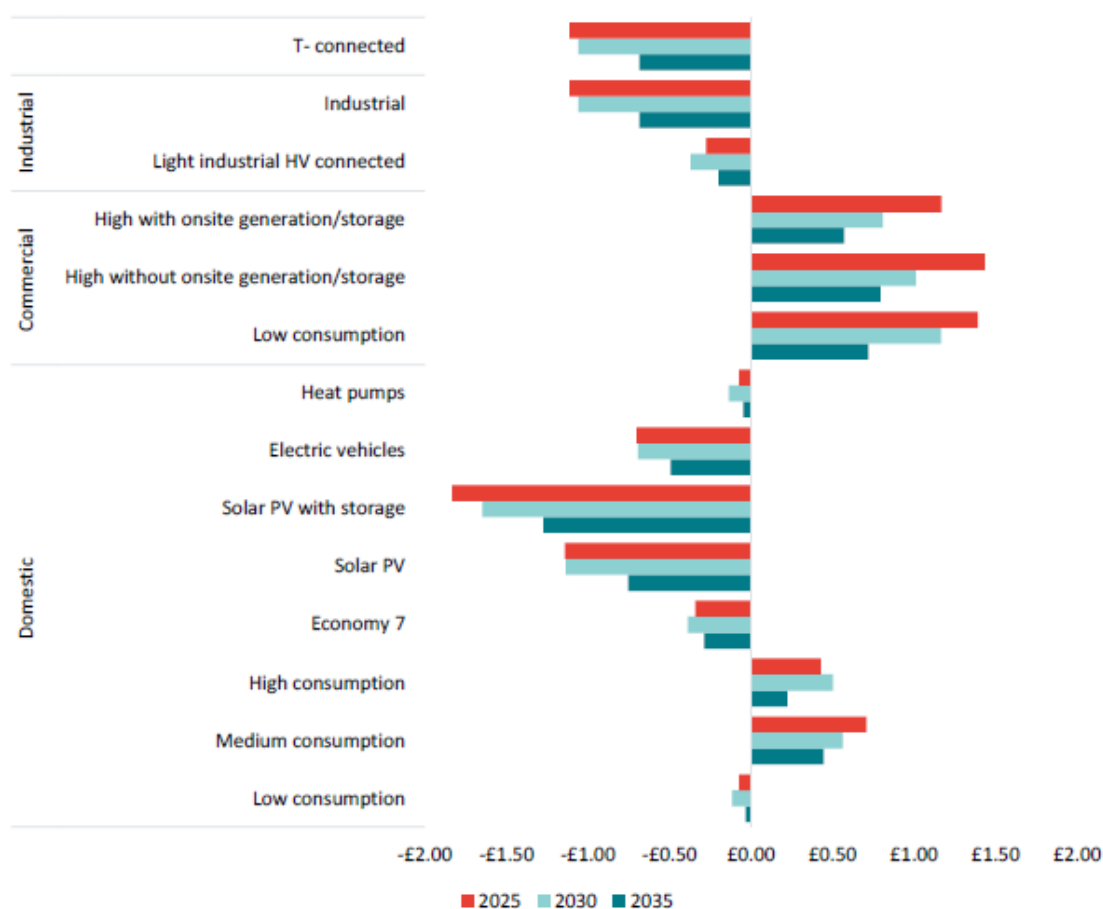


Figure 3 Impact on bills of introducing a 6 month fix by customer group (£/MWh)

Domestic Customers (no Low Carbon Technology)

4.18. For domestic customers with no Low Carbon Technology, annual impacts were low. Medium and high consuming customers have increased BSUoS costs of approximately £0.65 per annum. The total BSUoS costs reduce for low consuming customers by £0.13 per annum. Economy 7 customers stand to benefit as much of their consumption is overnight (a costly period in the counterfactual) and would save £2.40 per annum in BSUoS costs.

Domestic Customers (with Low Carbon Technology)

4.19. Customers with Low Carbon Technology can shift consumption to periods in the night (in the case of electric vehicles and heat pumps) or they can reduce daytime consumption (Solar). All groups would save on BSUoS charges, but the greatest savings would be £2.66 per annum for domestic customers with an electric vehicle. Greatest savings are made by customers in 2025, apart from customers with heat pumps who gain most in 2030. The latter, reflects that their share of the Contracts for Differences and Renewable Obligation Certificates support costs. These support costs largely offset the BSUoS savings in 2025 but have limited impact in later years.

Commercial Customers

4.20. Small and Medium Enterprise (SME) electricity consumption is mostly in the day. A shift to more uniform BSUoS could increase costs by £0.85/MWh for a large SME with on-site generation and storage. For demand-only sites BSUoS costs could increase by £1.09/MWh.

Industrial customers

4.21. The industrial groups considered were light HV-Connected customers, large EHV connected customers with onsite generation and large transmission connected customers without onsite generation. Their consumption is skewed more towards the night-time than the average profile, especially in the case of EHV and T Connected customers, for whom we assume a flat profile. As a result, taking the average from 2025-2035, modelling suggests that annual BSUoS costs will reduce by £0.28/MWh, £0.95/MWh and £0.95/MWh.

Interlinkage with CMP308

4.22. Our consultants conclude that: 'the main distributional impact of introducing a fixed BSUoS charge announced with a notice period is the unwinding of the distributional impacts that would be introduced by CMP308. Broadly speaking, those user groups that would see an increase (decrease) in bills from the introduction of CMP308 in isolation see a decrease (increases) in bills from the subsequent introduction of CMP361. The offsetting is not perfect but considering those users in each user group category that are most affected by CMP308 alone the mitigation is significant'.

Risk Premium Analysis

4.23. The approach to the risk premium analysis used by our consultants is described in section 4 of their main report (page 22).

4.24. The conceptual framework is illustrated below in Figure 4. It is reiterated here that our decision on CMP308 on its own would mean that BSUoS would be fully recovered from demand by a variable charge set ex-post. Therefore, under the counterfactual, all BSUoS forecasting risk would sit with suppliers (or end users if they agree passthrough contracts with their suppliers). Under any of the options in CMP361, BSUoS would be fixed in advance for suppliers and end users. This would allow suppliers to more accurately price in BSUoS costs into customer contracts. The BSUoS forecasting risk would shift to the ESO, resulting in cashflow risk management costs for the ESO that need to be recovered from customers.

	<u>Counterfactual</u>	<u>Factual</u>
	Ex post variable £/MWh	Ex ante fixed £/MWh
Suppliers/ large users	Supplier fully exposed to BSUoS forecast error for contract term	Exposure to BSUoS risk is significantly reduced, though residual risks remain where contracts extend beyond period for which BSUoS is fixed
ESO	ESO recovers full BSUoS cost with no risk	ESO exposed to BSUoS forecast error, for the period until it can adjust its prices. This is a cashflow risk as opposed to a risk of permanent loss.

Figure 4 - BSUoS forecast risk in the counterfactual and factual (Source: LCP/Frontier)

4.25. The value at risk for the ESO and suppliers, and hence their capital requirements, varies by scenario. For the ESO, there is no risk in the counterfactual while the risk in the factual scenarios, varies depending on both the fix and notice period and the length of time since the most recent tariff announcement. For suppliers, the risk in the counterfactual varies depending on the length of the contracts agreed with end customers, and the amount of time remaining on that contract.

4.26. These considerations are described in detail in the main consultants' report. In simple terms, an analysis of deflated historical BSUoS data establishes that BSUoS has a positive skew, has seasonality (highest in August to December inclusive) and is increasing over time. A Monte Carlo Simulation technique is used to generate a distribution of forecast errors. Using assumptions in relation to the risk management of capital, it is possible to estimate risk capital requirements. These are then aggregated to total costs to industry based on knowledge of contractual structures in the electricity supply market.

4.27. As risk is shifted to the ESO, a key metric is the capital requirement under the different notice and fixed requirements. The differences between the notice and fixed combinations for this measure are illustrated in Figure 5 which also includes the 12N 12F option included in analysis but not proposed as a modification. The capital requirements in each period are the result of the period of uncertainty faced by the ESO (as described in the main consultants' report, and the modelled variation in BSUoS over that time period. For example, in month 1 under the 12-month notice, 3-month fix scenario, the ESO faces uncertainty for the following

15 months. Its capital requirement will be the difference between the mean BSUoS cost over 15 months (£2.45bn) and the P95 BSUoS cost over this period (£2.73bn).

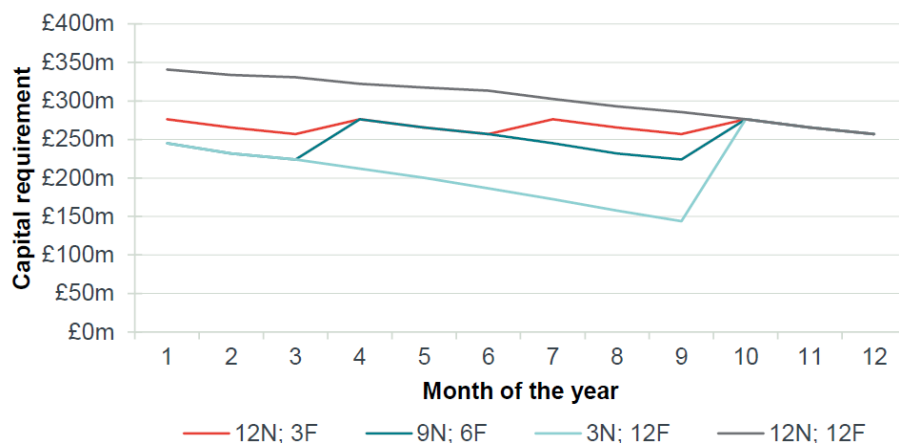


Figure 5 -ESO capital requirements for notice and fixed combinations (including 12N, 12F which is out of scope of our decision). (Source: LCP/Frontier)

4.28. Section 5 (Page 41) of the consultants' report presents the results of their analysis. Below we present the results relevant to our decision. These calculations have been carried using evidence-based assumptions of the cost of risk capital to the ESO and suppliers of 1.8% and 9.6% respectively. The estimated annual risk premium benefit for the sample year of 2025 is £10.2-10.8m. If this benefit was achieved each year in the period 2022-2040 then the Net Present Benefit would be £140-148m. It cannot be described as an analogous benefit to consumer welfare in CMP308 as the complexities of market structure and pass-through may dissipate benefits across several parties. Nevertheless, it is an important benefit.

Table: Industry benefits by scenario and contract length, constant forecast error results (Source: LCP/Frontier)

Notice/Fix	6 month contracts	1 year contracts	2 year contracts	3 year contracts	Weighted average
12N 3F	£7.5m	£11.7m	£12.0m	£9.8m	£10.7m
9N 6F	£7.8m	£11.9m	£11.3m	£9.2m	£10.8m
3N 12F	£8.4m	£11.0m	£10.0m	£7.9m	£10.2m

4.29. A sensitivity was applied to examine the assumptions on the cost of capital to the ESO. This applied the ESO's regulatory cost of capital of 5.4% that might apply if short-term borrowing was insufficient. As illustrated in Figure 48 (page 50) of our consultants' report, this

would reduce benefits significantly. However, our consultants highlight this would be conservative as the ESO has a regulatory guarantee of full BSUoS cost recovery so would not face a permanent risk of loss. On the same page of the consultants' report is a sensitivity analysis of the ESO and suppliers carrying a one in one hundred (P99) risk value compared to five in one hundred (P95) which was their central assumption.

4.30. In response to the consultants' initial report,⁴⁸ the ESO highlighted that, amongst other things, the acknowledged limitation of the modelling regarding forecast accuracy could be important to the results. The second report from the consultants addresses this limitation, by reparametrizing the model to reflect the ESO's assessment of how forecasting error changes over time. This report examined the extreme combinations of 3N 12F and 12N 3F notice. This should be viewed as a sensitivity test like those earlier, as it depends on parameters that cannot be precisely known.

4.31. Figure 6 presents the capital requirements for the ESO. In comparison to original report results (dotted lines) the new analysis has a higher capital requirement, most markedly for the 12N 3F scenario so there is a clearer preference for 3N 12F.

⁴⁸ See annex 5 to the CMP361 Final Modification report available here <https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp361-cmp362>

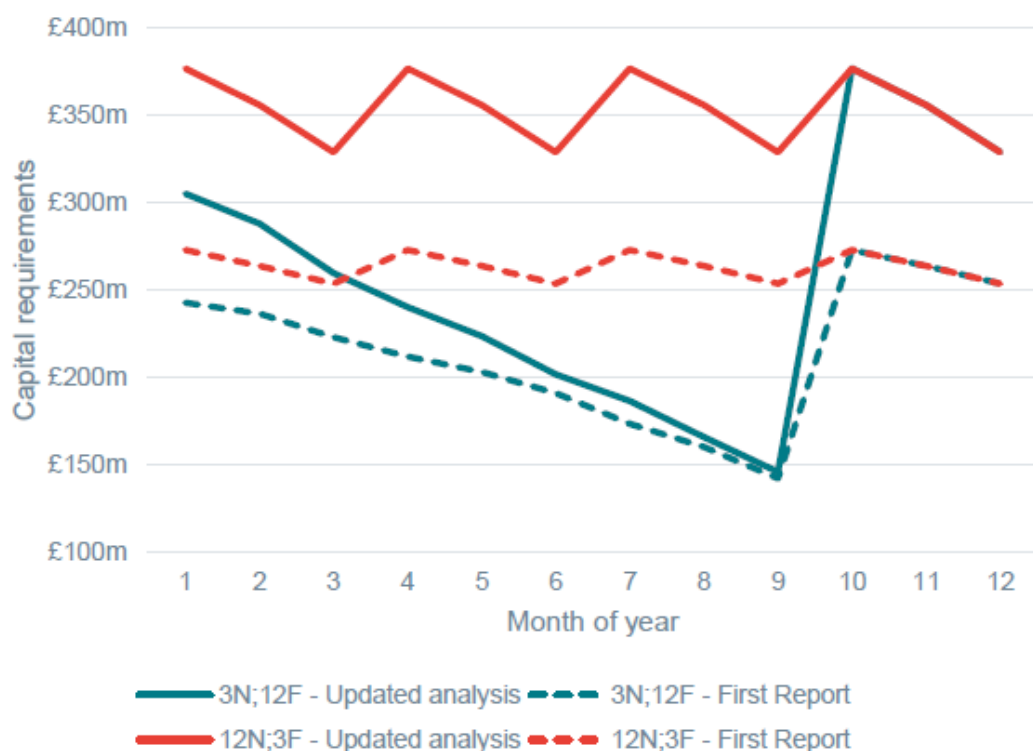


Figure 6 -ESO forecast risk for notice and fixed combinations (boundary combinations i.e., 3N,12F and 12N,3F). (Source: LCP/Frontier)

Table: Comparison of original and updated benefits.

Scenario	ESO cost	Supplier cost	Total cost	Benefit over counterfactual
Original results (with constant forecast error)				
Counterfactual		£16.8m	£16.8m	
12N 3F	£4.8m	£1.3m	£6.1m	£10.7m
3N 12F	£3.9m	£2.8m	£10.2m	£10.2m
Updated (with increasing forecast error)				
Counterfactual		£20.0m	£20.0m	
12N 3F	£6.4m	£1.4m	£7.7m	£12.2m
3N 12F	£4.6m	£1.9m	£6.6m	£13.4m

4.32. The overall assessed benefits of CMP361 in all options have increased. However, based on this sensitivity analysis, the 3N 12F option has the higher overall benefits. Expressed over the whole appraisal period these would have a Net Present Benefit of £185m. Although 9N 6F

was not modelled it would be expected to have benefits close to 12N 3F as in the consultants' first report.

4.33. There is an economic cost of the fund according to how much is passed back to consumers and when. Our approach to estimating this has assumed that the fund regularly becomes depleted and requires topping up. Our assumption, for the purposes of calculating costs and demonstrating the magnitude of these costs, is that the BSUoS fund is set at £250m, that the depletion takes place over four years and funds build up either in two years (original) or five (WACM5). This repeating cycle means that the average fund is lower than the initial target. In this simple model, the cost to consumers is measured as the average cost in the first appraisal year, matched by a return of this cost in the final year of appraisal. The difference between the values when discounted is a measure of cost to consumers of supporting the facility. For WACM5 the Present Cost is about £29m and for the original the Present Cost about £59m but these are crude estimates.

4.34. These reduce the benefits against the counterfactual. It is only in the case of the fund consistently remaining at £250m that there would there be a Present Cost of £110m which would materially reduce the benefits accrued from the risk premium. As the estimates are crude and not based upon a definitive level of the BSUoS fund they are for illustrative purposes only, to demonstrate that the build-up of a BSUoS fund imposes costs on consumers and that a longer recovery period is preferable to consumers, all else being equal. Although values may superficially suggest that non-funded options are preferred, the calculated benefits by our consultants would be affected by the likelihood of the fixed charge being reset, which is likely to be higher in non-funded options.

4.35. The model used to estimate risk premium benefits, is based on two key assumptions. First, that suppliers face substantial BSUoS forecasting risk under all the counterfactual scenario where BSUoS is set ex post. Second, that it is cheaper for the ESO to hold risk capital than suppliers. We consider that the recent changes that have occurred in the energy market have not affected these assumptions and the subsequent benefit. In other words, although the risk capital has increased markedly it is best addressed through the ESO holding the risk capital (in preference to supplier/consumer funding through a BSUoS fund). The costs of the fund to consumers (3.5% Social Time Preference Rate) does represent a cost which should be traded-off against the benefits.

4.36. Our conclusion in terms of quantified benefits is that both the Original and all WACMs provide benefit over the counterfactual. With central assumptions on the cost of capital and a key assumption that forecast error remained constant over time, quantified benefits were

similar. A more realistic assumption about forecast error, examined through a sensitivity analysis, suggests that the Original proposal or WACM5, which both use 3N 12F, would be slightly preferred.

Limitations, key assumptions and risks

4.37. For this analysis we consider the risk premium study to be important as it helps separate the quantified benefits associated with the options. The original study by Frontier and LCP was discussed at the Work Group and we consider that relaxing the forecasting error assumption in the follow up report provides additional insight. It highlights that if forecasting error is increasing over time, there are advantages from providing a shorter notice period rather than a longer one. Intuitively this is since under a 3 month fix, forecasts are between 3 and 15 months old, whereas for a 12 month fix forecasts are always 12 to 15 months old. Under a 3 month fix forecasts therefore have less time for unforeseen events to impact BSUoS and unmoor forecasts from realised values.

4.38. The way in which companies derive and apply risk premiums for BSUoS charges is necessarily complex. We do not expect our modelling to be a perfect reflection of this system. However, we consider that the framework is logical and coherent. Several respondents to the first BSUoS task force consultation highlighted the presence of a risk premium associated with BSUoS volatility and we would welcome comments on this aspect of the modelling.

Implementation Costs

4.39. We consider the implementation of ex ante fixed charges will result in several relatively small changes for the ESO. All aspects of forecasting, billing and settlement costs that are related to volumes should be largely unchanged. Establishing ex ante fixed charges will be a new function but represents an evolution of current forecasting activities.

Hard to monetise costs and benefits

4.40. The monetised results do not represent the full impact that we expect to see from any of the options proposed under CMP361. We think this reform, if implemented, may have the following hard to monetise impacts:

Improved systems management. For the ESO, there is a challenge of balancing the system at night when demand is low. This challenge is exacerbated by an overnight signal distortion that was described in Figure 7 of the first BSUoS Task Force report. The figure below updates that figure and highlights that there has been no change in this pattern for

the most recent year (2021), during which overall demand was affected by Covid restrictions. Higher BSUoS charges can disincentivise users from consuming power, lowering demand further and making system operation harder still. Any further reduction in demand (potentially as a result of higher BSUoS) will also further increase BSUoS charges. This is due to the “denominator factor” effect, where half-hourly costs are divided by less MWhs. A move to fixed ex-ante charges will ease the operational challenges associated with the current distortion.

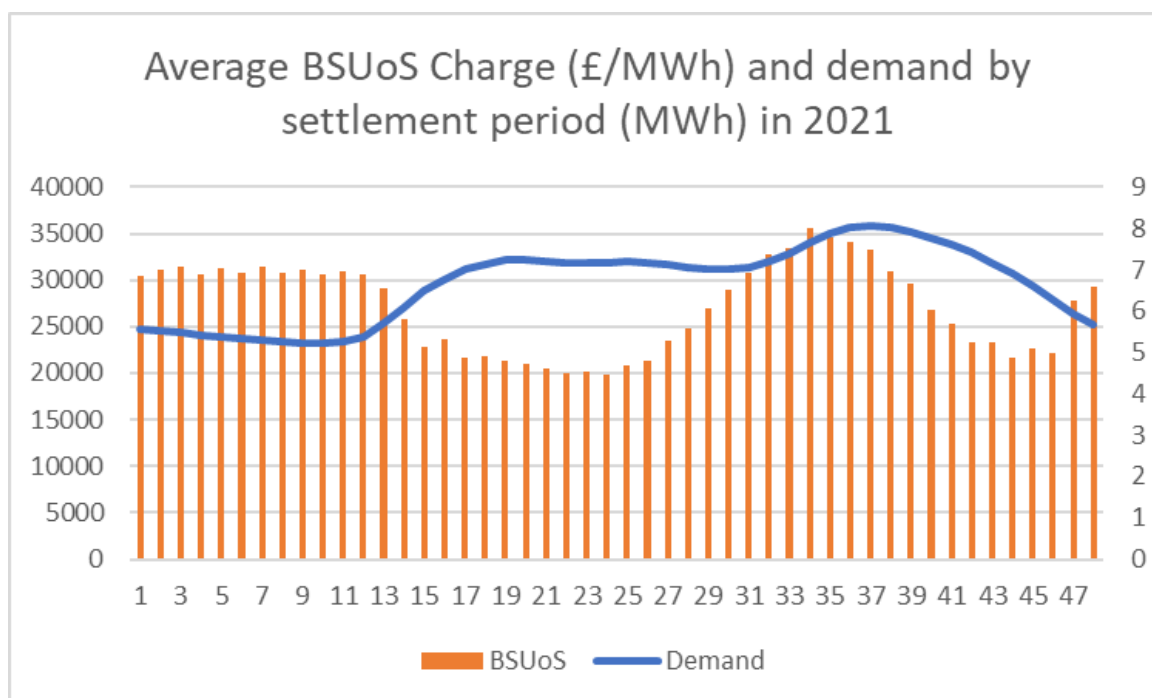


Figure 5 *BSUoS charges and demand (transmission system only).*

. As BSUoS costs currently increase overnight they may influence operational decisions by Energy Intensive Industries. For example, a large energy user in the manufacturing sector might choose to reduce its manufacturing activities during night hours in anticipation of high BSUoS charges. This would be rational in terms of maximising profit but could be operationally inefficient. The BSUoS Task Force concluded that BSUoS was not a useful signal, so such firms would be acting in an inefficient way. Moving to stable predictable BSUoS charges will likely encourage more efficient decisions, however the benefits of this cannot be easily quantified.

Saving of BSUoS prediction costs. As a corollary to the above, some third parties have developed short term BSUoS forecasting services. These would be no longer required if charges are stable so the analytical resources can be reallocated to other uses. Although some of this expertise is still likely to be needed to provide long term forecasts for industry.

Strategic Consumer benefits. The introduction of fixed ex ante BSUoS charges will enable the true costs of energy to be signalled to domestic consumers. This is important as we expect to see greater loads at night due to the electrification of heat and transport. A flat BSUoS charge aligns with other major reforms such as market-wide half hour settlement which provide more precise cost information to consumers.

System complexity. As part of our decision on CMP308, we suggested that no longer levying variable BSUoS charges on generators and having it feed into wholesale price bids will reduce system complexity, and complex interactivity. This may in itself help with system efficiency and contribute towards keeping bills down for consumers. Reduced system complexity may help more targeted policy measures to work effectively and make systemic risks easier to identify. This benefit may be amplified if charge volatility is removed by CMP361 alternatives.

While these are all benefits, we do not consider that there is sufficient delineation between the specific CMP361 options to affect the choice of preferred option. The exception to this is ESO forecasting and forward guidance costs where we consider in principle that the task of forecasting 3 months, 9 months, and 12 months, become more difficult proportionally. This supports options based on 3 months' notice.

Summary

4.41. The introduction of ex ante fixed BSUoS charges is not expected to have a material effect on consumers or the cost of the energy system. However, all options would reduce the risk premium associated with BSUoS. Initial analysis by our consultants suggested that there was a benefit over the counterfactual, but no clear preferred combination of notice and fixed period.

4.42. Further sensitivity analysis suggests that if account is taken of differences in forecasting risk, then the largest benefit is associated with a 3 month notice period and then fixing BSUoS for 12 months. An important finding is that the apparent benefit to suppliers from having considerable notice is not as significant when forecast error is taken into consideration.

4.43. All of the options are expected to have significant non-monetisable benefits through avoiding perverse signals that increase the cost of system operation, improved business operations, saving of BSUoS forecasting costs by third parties, clearer signalling of energy costs to end consumers, and in reducing system complexity. We consider that from a pragmatic view the task of forecasting for the system operator is easier with a short notice period, reducing the risk of BSUoS deviating too severely from forecast.

Implementation

Section summary

This section covers implementation of this proposal. We are minded to direct that the proposal be implemented from 01 April 2023, and below discuss some of the considerations around this.

Questions

14. Do you agree with our proposed implementation date of 1 April 2023? Please provide your reasoning.

Implementation

4.44. We consider that for maximum consumer benefits, CMP361 WACM5 should be implemented for April 2023, alongside CMP308. Together, these modifications will implement the BSUoS reform objectives set out by the BSUoS Task Forces. Industry support for implementation at this time is understood to be strong, with a number of responses to Workgroup and Code Administrator Consultations noting a preference for this implementation date. It was suggested that implementation of CMP361 alongside CMP308 would provide effective mitigation for increases in BSUoS demand charges and reduce BSUoS forecasting risk. Having discussed such an implementation timetable with ESO, we are confident this is achievable.

Tariff setting, forecasting and financing

4.45. We recognise the BSUoS fund, alongside the ESO's Working Capital Facility represents a way for the ESO to manage the cashflow requirements of ex-ante BSUoS tariffs. We understand that ESO is developing a process to ensure industry have appropriate levels of visibility of this fund, should such an option be approved. We expect the ESO to engage industry on this issue, and in particular, ensure there is suitable communication of any expected impacts from market developments on the BSUoS fund or the likelihood of tariff reset. The BSUoS fund will need to be built up over time by including an additional payment on top of the forecasted BSUoS cost. We expect ESO to provide timely forecasts of the level of the payment required.

4.46. We have had initial discussions with the ESO where they have raised potential benefits of tariffs that profiled throughout the year, while still being fixed for the same periods. In particular, the potential for a year-long fixed period with a different rates for the initial and

later 6 month periods may reduce the level of BSUoS fund necessary to manage cashflow impacts. We would ask that ESO engages industry on any potential benefits and, if appropriate, raise any further modifications.

4.47. A move to ex-ante BSUoS tariffs will require ESO to regularly engage industry on projected BSUoS cost forecasts and provide frequent tariff estimates. While WACM5, our preferred option, provides a 3 month notice period for tariffs, we expect that draft tariffs are provided significantly in advance of this in future years using a transparent process, with industry feedback taken into consideration as appropriate.

The Default Tariff Cap

4.48. Alongside this consultation, we are commencing a Call for Input on how best to reflect the changes brought in by CMP361 in the Default Tariff Cap. The existing arrangements include a backwards-looking element that allows for increases in BSUoS charges to flow through. If the modification is approved, we will need to replace the backward-looking allowance with the ex-ante fixed volumetric allowance in time for cap period 10a (April 2023-June 2023). This change means that we would also need to consider a transitional arrangement. A Call for Input which focusses on the arrangements moving forward was published and closes on 03 October 2022.

Licence changes

4.49. We are also consulting on licence changes to ESO's Transmission Licence to enable the implementation of CMP361. In particular, we consider that a licence change is required to provide a licence term to reflect over- or under-recovery of money in subsequent charging years. Further detail can be found in that consultation, which closes on 19 October 2022.

ESO Funding

4.50. We are currently in discussion with the ESO regarding funding for the 2nd business plan period of RIIO-2, 1 April 2023 to 31 March 2025. Consistent with the framework set out in Final Determinations,⁴⁹ we will consult on the level of the additional funding the ESO may need to manage its cashflow risk during this period.

⁴⁹ [RIIO-2 Final Determinations – Electricity System Operator \(REVISED\) \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/rrio-2-final-determinations-electricity-system-operator-revised)

Our minded-to position

4.51. On balance, we are minded to consider that 1 April 2023 implementation would be in the interest of consumers and welcome views from stakeholders on this.

Next Steps

Section summary

This consultation will be open until 19 October 2022, after which we will assess responses and consider whether any further engagement is necessary.

Questions

15. Do you have any other information which is relevant to this consultation?

Next steps

5.1. This consultation will be open until 19 October 2022. We will then assess any responses received, before publishing our final decision on CMP361. We aim to make a decision on the proposed licence changes at the same time. We welcome other engagement from stakeholders, particularly where this enables them to make reasoned, informed representations within this process. Interested parties should contact the Ofgem representative named at the beginning of this document.

Appendices

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1	Privacy notice on consultations	55
2	LCP/Frontier report – CMP361	Separate document
3	LCP/Frontier additional work on forecasting risk – CMP361	Separate document
4	Licence changes – Statutory Consultation	Separate document
5	Price cap consultation – call for input.	Separate document

Appendix 1 – Privacy notice on consultations

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. i.e., a consultation.

4. With whom we will be sharing your personal data

We will not share your personal data with other organisations. We will publish non-confidential consultation responses, redacting any personal data that may be contained within them.

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for one year after the project is closed.

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties

- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas.

8. Your personal data will not be used for any automated decision making.

9. Your personal data will be stored in a secure government IT system.

10. More information For more information on how Ofgem processes your data, click on the link to our "[Ofgem privacy promise](#)".