ofgem
Making a positive difference
for energy consumers

# Consultation

## Price Cap: final consultation on updating the credit SMNCC allowance


| | | | |
|---|---|---|---|
| **Publication date:** | 29 April 2021 | **Contact:** | Karen Mayor, Deputy Director Retail Monitoring, Compliance and Price Cap Policy (interim) |
| | | **Team:** | Retail Price Regulation |
| **Response deadline:** | 11 June 2021 | **Tel:** | 020 7901 7000 |
| | | **Email:** | RetailPriceRegulation@ofgem.gov.uk |


This is our final consultation on updating the smart metering allowance (the Smart Metering Net Cost Change or SMNCC allowance) for credit meters in the default tariff cap in time for winter 2021-22. We would like views from stakeholders with an interest in the level of the default tariff cap. We particularly welcome responses from domestic energy suppliers, consumer groups 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**. 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.

# Contents

# Executive summary

The default tariff cap ('cap') protects domestic customers on default tariffs, ensuring that they pay a fair price for their energy. This consultation is on our annual review of the Smart Metering Net Cost Change (SMNCC) allowance in the cap for credit meters. This allowance reflects the change in smart metering costs since 2017.

**Rollout**

The Department for Business, Energy and Industrial Strategy (BEIS) has introduced a new smart meter policy framework, which will be implemented on 1 July 2021. BEIS has consulted on the proposed enforceable obligations that suppliers will face.

The rollout profile is a key input to the calculation of the SMNCC. There are several options for how we set the rollout profile, based on the combination of two variables.

- The first variable is the level of smart meter rollout achieved at the start of the new framework – this could be that of an average supplier (an 'average' approach) or a market leader supplier (a 'market leader' approach).
- The second variable is the rate of rollout during the new framework – whether suppliers roll out smart meters in line with BEIS's policy ambition of market-wide rollout by mid-2025 (a 'target' approach), or in line with their minimum installation requirements (a 'tolerance' approach).

We propose to use a tolerance approach to set the rollout profile, rather than a target approach. This reflects that suppliers are legally required to meet the tolerances, which increases our confidence that suppliers would spend the revenue available through the SMNCC on smart metering.

On balance, we propose to use a market leader tolerance approach rather than an average tolerance approach. This is to ensure adequate funding to support all efficient suppliers to deliver their rollout obligations, while maintaining the cost-effectiveness of the rollout as far as possible.

**COVID-19 and installation costs**

COVID-19 affected suppliers' ability to install smart meters and may have led to them incurring costs which did not result in installations (sunk installation costs). We included an estimate of sunk installation costs in our August 2020 decision. We have now been able to gather data on installation costs in 2020, including sunk installation costs. We propose to use

this data as part of this review, because this is the most direct way of estimating sunk installation costs.

COVID-19 has also had some impact on suppliers in 2021 so far, and suppliers may therefore incur sunk installation costs again. We propose to flatline sunk installation costs for 2021 at the same level as our 2020 data.

**Advanced payments**

Advanced payments reflect when suppliers have received payment in advance for smart metering costs they have not yet incurred. We note that – in line with our August 2020 decision – advanced payments would start to take effect from this review. These would take account of the cumulative revenues and costs since cap period three, to reach an appropriate cumulative position. At present, taking account of advanced payments reduces the SMNCC.

**Proposed SMNCC values**

For cap period seven, we propose to set the SMNCC at £13.59 per typical dual fuel customer. For cap period eight, we propose to set the SMNCC at £11.76 per typical dual fuel customer. Appendix 1 shows the detail on the proposed SMNCC values for individual fuels.

**Contingency allowance**

If we cannot reach a conclusion on our current review by early August 2021, we must still set an SMNCC allowance. In that event, we propose to use our updated SMNCC model as a starting point, which we would adapt to set the contingency allowance.

**Next steps**

We are seeking views by 11 June 2021. We intend to take a decision ahead of the next cap update in early August 2021. This would take effect from cap period seven, which begins on 1 October 2021.

# 1. Consultation process

## Consultation stages

1.1. As part of this review of the non-pass-through Smart Metering Net Cost Change (SMNCC) allowance for credit customers in the default tariff cap ('cap'), we previously published two working papers in November 2020 and February 2021.[1] This consultation follows on from these working papers.

1.2. We will consider feedback from this consultation before deciding whether to amend the SMNCC values in the cap. We intend to publish a decision in early August 2021, ahead of announcing the cap level for cap period seven. Any changes would take effect from 1 October 2021.

### Disclosure

1.3. Alongside this consultation, we are carrying out a similar disclosure process as for our May 2020 consultation.[2] This allows stakeholders to inspect the SMNCC model and their advisers to inspect certain other pieces of analysis, in each case subject to confidentiality restrictions.

1.4. If you would like to participate in the disclosure process and have not yet registered your interest, please contact us as soon as possible at: RetailPriceRegulation@ofgem.gov.uk.

[1] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper.
https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
Ofgem (2021), Smart meter rollout and the default tariff cap: working paper.
https://www.ofgem.gov.uk/publications-and-updates/smart-meter-rollout-and-default-tariff-cap-working-paper

[2] Ofgem (2021), Price Cap – Disclosure arrangements for the late-Spring 2021 consultations.
https://www.ofgem.gov.uk/publications-and-updates/price-cap-disclosure-arrangements-late-spring-2021-consultations

## Related publications

1.5. Key related publications:

- August 2020 decision on reviewing smart metering costs in the default tariff cap ('August 2020 decision'): https://www.ofgem.gov.uk/publications-and-updates/decision-reviewing-smart-metering-costs-default-tariff-cap
- November 2020 first credit SMNCC working paper ('SMNCC WP1'): https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
- November 2020 first prepayment (PPM) SMNCC working paper: https://www.ofgem.gov.uk/publications-and-updates/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
- February 2021 second credit SMNCC working paper ('SMNCC WP2'): https://www.ofgem.gov.uk/publications-and-updates/smart-meter-rollout-and-default-tariff-cap-working-paper
- February 2021 second PPM SMNCC working paper: https://www.ofgem.gov.uk/publications-and-updates/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper
- April 2021 consultation on the PPM SMNCC: Published alongside this consultation and available on our website
- The Department for Business, Energy and Industrial Strategy's (BEIS) June 2020 government response to the consultation on smart meter policy framework post 2020: https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020
- BEIS November 2020 consultation on post 2020 minimum annual installation requirements: https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

## How to respond

1.6. 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.

1.7. We do not ask specific questions in this document. Rather, we welcome views on any of the matters discussed in this consultation.

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

## Your response, data and confidentiality

1.9. You can ask us to keep your response, or parts of your response, confidential. We'll 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.

1.10. 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'll 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.

1.11. If the information you give in your response contains personal data under the UK General Data Protection Regulation (UK GDPR), the Gas and Electricity Markets Authority will be the data controller for the purposes of UK 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 8.

1.12. 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 will not 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

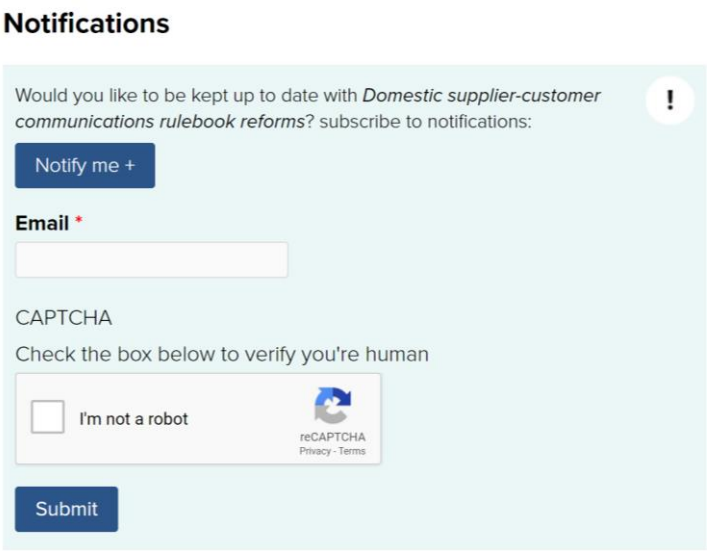
1.13. We believe that consultation is at the heart of good policy development. We welcome any comments about how we have run this consultation. We would also like to get your answers to these questions:

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?

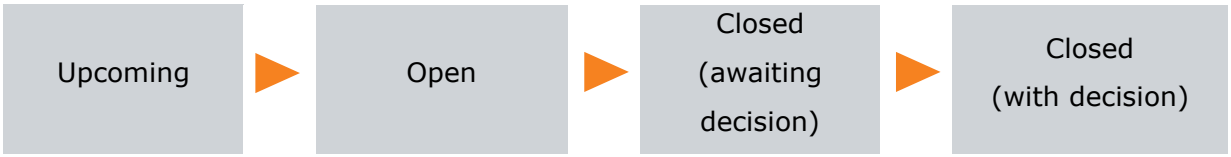
Please send any general feedback comments to stakeholders@ofgem.gov.uk

**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.



Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:



# 2. Introduction

## What are we consulting on?

2.1. The cap protects approximately 15 million domestic customers on standard variable and default tariffs (which we refer to collectively as 'default tariffs'), ensuring that they pay a fair price for their energy, reflecting its underlying costs. The cap is one of the key activities which fall within the outcome "consumers pay a fair price for energy and benefit from rights and protections" within our Forward Work Programme for 2021-22.[3] We set the cap by considering the different costs suppliers face. The cap is made up of a number of allowances which reflect these different costs.

2.2. One cost to suppliers is the net cost of installing and operating smart meters. We reflect this in the cap through two allowances. The operating cost allowance includes the cost of smart metering in the 2017 baseline year (alongside other operating costs).[4] The SMNCC allowance reflects the change in smart metering costs since 2017.

2.3. The SMNCC allowance comprises a 'pass-through' element covering industry charges relating to smart metering and a 'non-pass-through' element covering suppliers' smart metering costs.

- We update the pass-through element as part of the six-monthly cap updates. This element is not the focus of this consultation.

- We use a forward-looking modelled approach to set the non-pass-through element for future cap periods. **This consultation focuses on the non-pass-through SMNCC allowance for customers with credit meters** (which we refer to as '**the SMNCC**' for the remainder of this document).[5]

2.4. The purpose of this consultation is to give stakeholders the opportunity to comment on the key issues that we have considered as part of this review, and on the resulting proposed

[3] Ofgem (2021), Forward work programme 2021/22 https://www.ofgem.gov.uk/publications-and-updates/forward-work-programme-202122
[4] We index this allowance with inflation as part of the six-monthly cap update.
[5] This is with the exception of places where we need to distinguish the SMNCC allowance for customers with credit meters and the SMNCC allowance for customers with PPM meters. In those cases, we refer to the credit SMNCC and the PPM SMNCC.

SMNCC values. We have published a separate consultation on the non-pass-through SMNCC allowance for customers with PPM meters.[6] For the elements discussed in this consultation, we set out the similarities and differences between the credit SMNCC and the PPM SMNCC in Appendix 3.

**Overview of issues covered in this consultation**

2.5. Table 1 below provides a high-level view of the main elements which make up the calculation of the SMNCC. It indicates how the issues we discuss in this consultation fit into this overall structure.

[6] Published on the same date as this consultation, and available on our website.

**Table 1 – High-level SMNCC structure and issues covered in this consultation**

| High-level category | Overview of how categories interact | Sub-category | Main discussion in this document |
|---|---|---|---|
| Rollout | Feeds into cost and benefit calculations | | Chapter 3 (all), Appendix 5 (Minor updates) |
| Costs | Uses rollout and cost inputs to calculate different costs | In-premises costs | Chapter 4 (all), Chapter 5 (Installer productivity, Smart meter asset and installation costs), Appendix 5 (Smart Meters Annual Information Request data, Minor updates) |
| | | IT costs | - |
| | | Other costs | Chapter 5 (Marketing costs) |
| Benefits | Uses rollout and benefit inputs to calculate different benefits | Avoided site visits | Appendix 5 (Smart Meters Annual Information Request data) |
| | | Customer switching | Appendix 5 (Smart Meters Annual Information Request data) |
| | | Inbound customer calls | Appendix 5 (Smart Meters Annual Information Request data) |
| | | Debt handling | Appendix 5 (Smart Meters Annual Information Request data) |
| | | Remote change of tariff | Appendix 5 (Smart Meters Annual Information Request data) |
| Calculating SMNCC | Uses cost and benefit calculations to calculate change in net costs since 2017 baseline | Baseline adjustment | - |
| | | Calculating net costs | - |
| | | Calculating SMNCC | - |
| | | Uncertainty | Appendix 6 (all) |
| | | Advanced payments | Chapter 6 (Advanced payments) |

**Notes:** This is a high-level overview only. It is not intended to be comprehensive. In the final column, text in brackets indicates the section name within a given chapter (or "all" if the entire chapter relates to a particular sub-category).

# Context

### Previous process

2.6. We have already consulted on the SMNCC allowance multiple times, and published a decision in August 2020.[7] At a high level, the August 2020 decision covered our approaches to: setting the rollout profile, calculating the SMNCC allowance, and carrying out future reviews. As this was an in-depth review, we also considered a large number of individual issues.

2.7. This consultation is part of our annual review of the SMNCC. We are reviewing whether there are any changes we need to make when setting the SMNCC allowance from October 2021, particularly in light of updated information on the impact of COVID-19 and on BEIS's rollout policy.

- In this consultation, we set out the changes that we propose to make.
- We welcome any views from stakeholders on whether there are any further changes we should make.
- Where we do not discuss an element of the methodology for setting the SMNCC allowance in this consultation, we are not proposing to change that element of the methodology set out in our August 2020 decision. We therefore do not discuss the full methodology from scratch.

### The new rollout framework

2.8. In June 2020, BEIS confirmed a new smart meter rollout framework ('framework') to start on 1 July 2021. In this new framework, suppliers will be set individual installation targets subject to an annual tolerance level.[8]

---

[7] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision. https://www.ofgem.gov.uk/publications-and-updates/decision-reviewing-smart-metering-costs-default-tariff-cap
This August 2020 decision document contains links to preceding consultations.

[8] BEIS (2020), Delivering a Smart System Response to a Consultation on Smart Meter Policy Framework Post-2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/893124/delivering-smart-system-post-2020-govt-response-consultation.pdf

2.9. In November 2020, BEIS consulted on the annual tolerances associated with this framework.[9] Key elements of BEIS's proposals are as follows.

- BEIS has proposed tolerances for the first two years of its new framework (July 2021 to June 2023).[10]

- These tolerances are the same for all suppliers: 4% for year one of the framework (1 July 2021 to 30 June 2022), and 5.5% for year two of the framework (1 July 2022 to 30 June 2023).[11]

- Each supplier's rollout target is based on a profile to market-wide rollout by mid-2025.[12] As each supplier will have a different rollout position at the start of the framework, suppliers will have different targets.

- The tolerances are applied to the targets to calculate the minimum annual installation requirements. Suppliers' legal obligations are to meet these minimum installation requirements,[13] calculated after applying the tolerances.[14] Suppliers would therefore have different legally binding annual installation requirements.

[9] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[10] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 8.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[11] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 77.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[12] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 5.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[13] Technically the obligation is to install a certain number of smart meters in a given year (rather than to reach a certain rollout percentage at the end of the year). This is to cover the case where a supplier installs a smart meter and then the customer switches away. This distinction is not significant for our comparison of rollout profile options in this consultation.
[14] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 65.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

2.10. BEIS calculated its proposed tolerances by modelling an achievable level of rollout. It took into account: customers' attitudes towards smart meters, suppliers' operational performance in rolling out smart meters, and the industry capacity to roll out smart meters.[15]

2.11. BEIS then applied an Installation Calibration Mechanism to ensure that the model did not project meter installations at a rate above levels that the market has demonstrated it can successfully complete, currently and historically.[16]

2.12. The framework applies to both domestic and non-domestic rollout. In relation to domestic rollout, the framework applies without distinction between credit and PPM rollout.

2.13. BEIS intends to confirm the tolerance levels in the government response to its November 2020 consultation, which is planned for publication in spring 2021.[17] We intend to incorporate BEIS's final tolerance values in our decision, which we will publish in early August 2021.

**The statutory framework**

2.14. We set the cap in accordance with the Domestic Gas and Electricity (Tariff Cap) Act 2018 ('the Act'). Section 1(6) states that we must protect existing and future domestic customers who pay standard variable and default rates.[18] In doing so, we must have regard to the following matters:

- the need to create incentives for holders of supply licences to improve their efficiency

[15] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 43. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[16] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers. Annex B: Analytical Evidence, paragraph 24. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937398/smart-meter-policy-framework-post-2020-minimum-targets-reporting-thresholds-annex-b.pdf
[17] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 38. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[18] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 1(6). http://www.legislation.gov.uk/ukpga/2018/21/section/1/enacted

- the need to set the cap at a level that enables holders of supply licences to compete effectively for domestic supply contracts

- the need to maintain incentives for domestic customers to switch to different domestic supply contracts

- the need to ensure that holders of supply licences who operate efficiently are able to finance activities authorised by the licence.

2.15. The requirement to have regard to the four matters identified in section 1(6) of the Act does not mean that we must achieve all of these. In setting the cap, our primary consideration is the protection of existing and future consumers who pay standard variable and default rates. In reaching decisions on particular aspects of the cap, the weight to be given to each of these considerations is a matter of judgment. Often, a balance must be struck between competing considerations.

2.16. In setting the cap, we may not make different provisions for different holders of supply licences.[19] This means that we must set one cap level for all suppliers.

[19] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 2(2). http://www.legislation.gov.uk/ukpga/2018/21/section/2/enacted

# 3. Rollout

We set out our principles for considering different rollout profiles when setting the SMNCC for credit meters. We discuss the options for setting the rollout profile in future, as well as the options for setting rollout in the first half of 2021. We briefly discuss the concept of having a separate mechanism alongside the cap.

## Principles for considering different rollout profiles

**Context**

3.1. In SMNCC WP2, we set out four principles which we intended to use to help us choose between rollout profiles. These were:

- reducing costs to default tariff customers
- increasing the benefits from smart metering
- supporting suppliers to deliver their obligations
- ensuring cost-effectiveness.

3.2. We noted that there would be clear trade-offs between these principles, so there would be judgement about which rollout profile option to select.[20]

[20] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.22 to 2.26. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

**Proposals**

3.3. We propose to maintain the same principles from SMNCC WP2. These reflect the factors which we consider are important when selecting a rollout profile, for the reasons we described in SMNCC WP2.

**Overview of responses to our working papers**

3.4. The main comments on our proposed principles were about how stakeholders thought we should interpret and prioritise them, rather than to suggest different principles.

**Considerations**

3.5. We do not repeat our discussion of the principles from SMNCC WP2. We focus instead on responding to the feedback from stakeholders.

*General comments*

3.6. One stakeholder said that while it agreed with all four principles, we would need to have a level of prioritisation between them for our decision.

3.7. All four principles are desirable. We do not consider that we need to prioritise particular principles upfront. Rather, we will make judgements about how likely a rollout profile option is to achieve the different principles.

3.8. Different options will not deliver each principle to the same extent. Therefore, as indicated in SMNCC WP2, there will be trade-offs between these principles.

*Reducing costs to default tariff customers*

3.9. One supplier said it did not consider that the customer protection objective of the cap could properly be equated with reducing costs to default tariff customers, if this was at the expense of the other principles. It said that our guiding aim should be to support government policy objectives which are intended to deliver consumer benefits.

3.10. In our 2018 decision, we said that we: "consider customer protection to be related to the extent to which the customers will pay a price that fairly reflects efficient underlying costs."[21] This remains our general view on what the customer protection objective means.

3.11. We acknowledge that the smart meter rollout is likely to involve an increase in net costs for smart meters in credit mode (during the life of the cap).[22] However, we are seeking to ensure that the allowances we make available through the cap are used in a cost-effective way.

3.12. One supplier said that it accepted the need for us to consider the cost impact on customers. However, it said that we should consider the cost of different rollout options over the life of the rollout, not just over the life of the cap.

3.13. When setting the SMNCC, we must consider the costs while the cap is in place. However, we do not consider that it is necessary to assess costs beyond this (over the life of the rollout) for the purpose of this review. We are not trying to select a rollout profile to optimise the pace of the rollout. This is not the role of the cap – the pace of the rollout will be affected to a much greater extent by suppliers' rollout obligations, which is a matter for BEIS.

*Increasing the benefits from smart metering*

3.14. Two stakeholders commented on the interaction between smart meter benefits and protecting customers. One stakeholder said it recognised that we must set the cap at a level to protect customers. However, it said we must ensure that our decision does not restrict suppliers' ability to fund their rollouts and therefore realise longer-term customer benefits. One supplier said that, should our approach hinder rollout, a delay in smart meter benefits would be counter to protecting customers.

[21] Ofgem (2018), Default Tariff Cap: Decision. Appendix 2 – Cap level analysis and headroom, paragraph 3.13.
https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_2_-_cap_level_analysis_and_headroom.pdf

[22] Our analysis does not cover the period beyond 2023. BEIS considered the steady state for smart metering as part of its 2019 Cost-Benefit Analysis. It expected smart meters to deliver an ongoing net benefit to energy suppliers in the steady state. BEIS (2019), Smart meter roll-out: cost-benefit analysis (2019), p6.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831716/smart-meter-roll-out-cost-benefit-analysis-2019.pdf

3.15. We agree that achieving the benefits of smart metering will contribute to protecting customers, including default tariff customers. However, the benefits default tariff customers receive need to be in proportion to the costs they are likely to face. When considering the impact on default tariff customers, we also need to take into account that costs will be incurred in the near-term (affecting existing default tariff customers), whereas benefits will be realised over a longer timeframe (affecting future default tariff customers).

3.16. One supplier said that a delay in the benefits set out in BEIS's Cost-Benefit Analysis (CBA) could lead to higher overall costs to customers.

3.17. We agree that the timing of when benefits are delivered affects the overall CBA for the smart meter rollout. However, the objective of the Act is to protect default tariff customers, and so we would need strong evidence that the benefits to these customers of rolling out smart meters more quickly would justify the additional costs through the cap. No supplier has provided such evidence to date.

3.18. There is also not an automatic relationship between the revenue we allow suppliers to collect through the cap and the number of smart meters they roll out. As above, we need to consider how best to meet the needs of both existing and future default tariff customers. If we set a higher SMNCC, and then suppliers did not use this for smart metering, this would increase the cost to existing default tariff customers, without delivering smart metering benefits to future customers, including future default tariff customers.

*Supporting suppliers to deliver their obligations*

3.19. One supplier said that funding was a constraint on rollout, however the rollout obligations were framed. It therefore said that our ability to enforce the rollout obligations (ie the tolerances) would be compromised if we did not provide sufficient funding.

3.20. Suppliers' smart metering obligations are determined by BEIS through its rollout policy. We have taken these obligations into account in considering how best to define the SMNCC. We expect suppliers to comply with all their licence obligations, including those relating to smart metering. Failure to meet minimum installation requirements will be a breach of licence.

*Ensuring cost-effectiveness*

3.21. We did not receive comments specifically in relation to this principle.

# Discussing the rollout profile options

**Context**

*Background on rollout*

3.22. The rollout profile is a key factor affecting the costs of smart metering (and therefore the SMNCC allowance). There are two main effects which our SMNCC model accounts for.

- Smart meters in credit mode are a net ongoing cost to a supplier (during the life of the cap).[23] The number of smart meters that a supplier has installed (ie the stock) therefore affects its costs. Suppliers pay for the cumulative costs of smart meter assets and installations. They pay for these costs through meter rental charges.

- Suppliers pay for some costs in the year of an installation. The number of smart meters installed in-year (ie the flow) therefore also affects a supplier's costs. Suppliers pay for the remaining costs of traditional meters which are replaced early (through Premature Replacement Charges), and the costs of In-Home Displays (IHDs).[24]

3.23. The former effect is generally greater. The supplier with the largest stock of smart meters (as a percentage of its customer base) will generally have the highest net costs per customer in a given year.

*Description of rollout profile options*

3.24. In SMNCC WP2, we said that there are two main variables which affect our choice of a credit smart meter rollout profile.

- Whether we use an **average** or a **market leader** supplier rollout.

- The rate of rollout during the framework – whether the supplier rolls out smart meters in line with BEIS's policy ambition of market-wide rollout by mid-2025 (a

[23] Ie during the period covered by the SMNCC model.
[24] In-Home Displays are devices which show information to customers about their energy use.

'**target**' approach), or in line with their obligations, ie minimum installation requirements (a '**tolerance**' approach).[25]

3.25. These combine to give four rollout profile options, as shown in Table 2 below.

**Table 2 – Rollout profile options**

| | Average | Market leader |
|---|---|---|
| **Tolerance** | Option A – Average tolerance | Option C – Market leader tolerance |
| **Target** | Option B – Average target | Option D – Market leader target |

3.26. In SMNCC WP2, we also discussed how we could estimate rollout in the first half of 2021 – the period between the historical rollout data and the start of BEIS's new framework. We need to estimate rollout because we will publish our decision in early August 2021, before complete data on rollout in the first half of 2021 is available. We identified three options.[26] In each case, we would use different values under an average and a market leader approach.

- The first option would assume that the annualised rollout rate during the first half of 2021 would be the same as the average between 2017 and 2019 – ie before COVID-19.
- The second option would be to calculate the incremental rollout in the first half of 2021 using suppliers' annualised rollout rate in 2020 – ie a year affected by COVID-19.
- The third option would be to use suppliers' rollout plans for the first half of 2021, as provided to us.[27]

[25] We provided further detail on these options in SMNCC WP2.
Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.1 to 2.13.
https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[26] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.14 to 2.20.
https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[27] We receive this information as part of Ofgem's role to provide regulatory oversight of the rollout.

**Proposals**

3.27. We propose to use a market leader tolerance rollout profile. This would allow an efficient[28] supplier with a market leader rollout profile to meet its obligations under the new framework, while maintaining the cost-effectiveness of the rollout as far as possible. Most other suppliers will be able to collect more revenue than they require to meet their obligations – if they spent this on rolling out more smart meters, then this would help to increase the benefits from smart metering. A market leader tolerance rollout profile would mean higher costs to customers than an average tolerance rollout profile, but we consider that this is justified by supporting all efficient suppliers to deliver their obligations.

3.28. For the decision, we propose to estimate rollout in the first half of 2021 using actual data for Q1 2021 and suppliers' updated projections for Q2 2021.[29] This would reflect the latest information available. However, this data is not available for this consultation. For the estimated SMNCC values we present in this consultation, we therefore assume that rollout in the first half of 2021 is equal to the average semi-annual progress between the end of 2017 and the end of 2020.[30]

**Overview of responses to our working papers**

3.29. Suppliers generally supported using higher rollout profiles, based on a target and/or a market leader approach. However, one stakeholder said that it had a strong preference for average tolerance.

3.30. Among the main arguments that suppliers made in favour of higher profiles were that:

- providing low funding will have a self-fulfilling impact on rollout
- providing high funding would support the benefits of smart metering
- providing high funding would be a no regrets strategy as we could recover any excess funding through advanced payments

[28] We define efficient costs using an average efficiency standard for the purpose of the SMNCC review.
[29] This is a new option, which is different to the options we proposed in SMNCC WP2.
[30] This is also slightly different to the options we proposed in SMNCC WP2.

- the tolerances provide a safety margin which suppliers are entitled to
- suppliers have to aim above the tolerances in order to be confident of meeting them.

3.31. In relation to the choice between average tolerance and market leader tolerance, suppliers said that we should at least fund all suppliers to meet their rollout obligations.

3.32. For estimating rollout in the first half of 2021, suppliers suggested an alternative approach to make some use of actual data.

**Considerations: target options**

3.33. We set out our overall view on target rollout profile options in this section. We discuss the main points raised by stakeholders in support of target options in Appendix 4.

3.34. The target options would allow suppliers to collect more revenue than the equivalent tolerance options,[31] increasing the cost to customers. The question is whether this would lead to a sufficient increase in rollout, so as to ensure cost-effectiveness. We do not have sufficient confidence that this would occur, although we recognise that this judgement is subject to uncertainty. We are concerned about customers paying costs that suppliers (in aggregate) may not then invest in accelerating rollout delivery. Individual suppliers may make different judgements about how to use any additional revenue, but cost-effectiveness (with respect to the SMNCC allowances available through the cap) depends on what suppliers do as a group.

3.35. First, suppliers' legal obligations require them to roll out smart meters in line with the tolerance profiles. So, while we want suppliers to have ambitious rollout plans, we cannot hold them to account for not spending any additional revenue on smart metering (above their legal obligations). Allowing suppliers to charge more has a very high likelihood of increasing customers' bills (as most suppliers are highly likely to increase their default tariff prices to the maximum permitted), but suppliers would not be required to spend this revenue on smart metering.

[31] Eg market leader target would lead to a higher SMNCC than market leader tolerance.

3.36. In response to SMNCC WP2, one stakeholder said that the target is not legally enforceable, and thought it was more likely that suppliers would work towards a legal obligation (ie the tolerance).

3.37. Second, beyond what suppliers are required to do by their legal obligations, there is a question about what they will choose to do. This in turn depends on what they are able to do, and what they have the incentive to do.

- Suppliers are able to spend some or all of the additional revenue in other ways, and may choose to do so. We would not consider this to be appropriate – the SMNCC is intended for smart metering, and the cap already allows for efficient costs in other areas.

- At present, we do not have sufficient confidence that suppliers (in aggregate) would likely spend additional revenue on smart metering, so as to ensure cost-effectiveness. Smart meters in credit mode are a net cost to suppliers (during the life of the cap),[32] and so there is little incentive on suppliers to roll out smart meters above[33] their obligations.

3.38. One stakeholder agreed with our statement in SMNCC WP2 that there was no guarantee that suppliers would spend extra funding on rollout. However, one supplier disagreed with that statement. It said that the risk of legal penalties for missing targets was a compelling incentive to spend this extra funding. Suppliers must meet their legal obligations, and they must spend enough money in order to achieve this.

3.39. Some suppliers also said that using a higher rollout profile would align with BEIS's policy ambitions for the smart meter rollout. We too consider that smart meters are beneficial for customers and society, and want to see the rollout progress at pace. However, we must set the cap to meet the Act's objective of protecting default tariff customers. In doing this, we are focussed on whether allowing suppliers to collect extra revenue through the cap is likely to be a cost-effective way of achieving additional smart meter rollout.

[32] Ie during the period covered by the SMNCC model.
[33] See the section on overshooting in Appendix 4.

3.40. We propose to set the SMNCC on a forward-looking basis using a tolerance rather than a target approach. However, we will still take into account actual rollout data when it becomes available, and therefore recognise if rollout is above the tolerance. Under our proposed market leader tolerance rollout profile, if the market leader rolls out more smart meters than it is legally required to roll out, we would include the actual data in the SMNCC model during our next review, and recognise the impact through our calculation of advanced payments (see Chapter 6). This would provide revenue (in arrears) to reflect the rollout achieved by the market leader.

**Considerations: comparing average tolerance and market leader tolerance**

3.41. We first consider the points in favour of an average tolerance rollout profile, then do the same for the points in favour of a market leader tolerance rollout profile. We then reach a conclusion on which option to propose.

*Use of average tolerance*

3.42. In SMNCC WP2, we said that average tolerance is the lowest rollout profile option and would therefore deliver the lowest SMNCC. By limiting the revenue that suppliers would be able to collect, this option would deliver the lowest immediate costs to default tariff customers. We also said that average tolerance would give an average supplier sufficient revenue to reflect the efficient costs of meeting its obligations, but would avoid the risk of customers overpaying (on average) if suppliers did not roll out any smart meters beyond their obligations.[34]

3.43. One stakeholder said that the average supplier was more likely to be representative of the market as a whole than suppliers at an extreme. It said that the cap was meant to be challenging. It said that it was not credible to base costs on the highest levels in the market, and that this would not protect customers, particularly during the recovery from COVID-19.

3.44. We agree that an average supplier is more likely to represent the market as a whole. We are also very conscious of the importance of protecting customers, especially in the context of the economic difficulties caused by COVID-19. However, suppliers have made

[34] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.28 and 2.29. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

different progress on their smart meter rollouts to date, and will have individual rollout obligations going forward. These rollout differences mean that some suppliers will have above average costs – but we do not consider that this is an indication of inefficiency. We therefore consider that there is a distinction between setting the SMNCC in line with the costs of an inefficient supplier (which we agree would not protect customers) and using a market leader rollout profile as an input to the SMNCC calculation.

3.45. One stakeholder said that smart meter rollout is more advanced among large suppliers than smaller suppliers, despite them having more default tariff customers subject to the cap. It said that this suggested that the cap is not restricting rollout.

3.46. We do not agree with the reasoning in the previous paragraph. First, a large proportion of existing rollout was already achieved before the introduction of the cap. Second, the revenue available for smart metering through the cap to date has been higher than our current estimate of efficient costs, so should not have constrained rollout anyway. The historical situation therefore does not provide evidence on what the effect on rollout would be of using an average tolerance rollout profile calculated using our current estimate of efficient costs.

3.47. One stakeholder said that we had failed to recognise that there were advantages to suppliers to rolling out smart meters more quickly, including: customer service (and associated branding advantages), efficiencies in billing and meter reading, and early growth in smart markets.

3.48. As part of estimating the net costs to suppliers, the SMNCC model takes into account the direct benefits from smart meters for suppliers' operations, including cost savings for inbound enquiries and meter reading. We agree that suppliers may invest in smart meters to achieve wider benefits – for example by building a positive brand image or supporting growth in related products. However, these are inherently difficult to quantify. We do not consider that we could rely on such wider benefits to eliminate any shortfall between the efficient costs of delivering individual suppliers' rollout obligations and the revenue available with an average tolerance SMNCC. We do however note this point within our review of uncertainty (see Appendix 6).

*Use of market leader tolerance*

3.49. In SMNCC WP2, we said that market leader tolerance would mean that each supplier (including the market leader) could recover sufficient revenue to reflect the efficient costs of

meeting its obligations. A market leader tolerance rollout profile could therefore contribute to ensuring that efficient suppliers are able to finance their licensed activities.

3.50. We also said that suppliers other than the market leader would require a smaller amount of revenue (than available through a market leader tolerance SMNCC) to reflect the efficient costs of meeting their obligations. Other suppliers would be able to collect the revenue permitted through the SMNCC and could choose to use this to roll out more smart meters than their obligations. This could help to deliver the benefits of smart metering sooner.[35]

3.51. Some stakeholders said that a market leader profile would allow all suppliers – including those with above average rollout – to recover their efficient costs.

3.52. One of these suppliers said that we must have regard to the ability of an efficient supplier to finance its licensed activities, and that this "necessitates" an above average profile that allows each supplier to recover its own efficiently incurred costs. We continue to recognise that allowing suppliers to recover the efficient costs of meeting their obligations is an advantage of a market leader tolerance rollout profile. However, we do not accept that the financeability need "necessitates" the use of an above average profile. Under the Act, we must have regard to the need for an efficient supplier to be able to finance its licensed activities, though this does not mean that we must achieve this need irrespective of the duty to have regard to and balance other statutory needs.

3.53. Two suppliers said that there was an interaction between the rollout profile and the overall modelling approach. One of these suppliers said that what mattered was the level of the SMNCC allowance. Another of these suppliers said that setting a market leader rollout profile could minimise the risk of suppliers being unable to recover costs due to the estimates of smart metering costs in our modelling.

3.54. We consider that our proposed modelling approach is appropriate. We therefore do not consider that a higher rollout profile is required to mitigate the risk of modelling issues. While

[35] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.45 and 2.46. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

there will inevitably be some uncertainty, we do not consider that we must set a deliberately high rollout profile so that the revenue available exceeds costs in all circumstances.

*Conclusion*

3.55. An average tolerance rollout profile would reduce costs to default tariff customers (relative to a market leader tolerance rollout profile). An average tolerance rollout profile would also contribute to ensuring cost-effectiveness. This is because it would limit[36] the amount of revenue that suppliers could collect above the level needed to meet their obligations, and therefore reduce the scope for suppliers to use additional revenue in other ways (rather than for smart metering).

3.56. However, a market leader tolerance rollout profile would support all efficient suppliers to deliver their obligations – including those with above-average rollout. We consider that this is the main advantage of a market leader tolerance rollout profile. As this profile would allow most suppliers to collect more revenue than they require to meet their obligations, it could also increase the benefits from smart metering, should suppliers choose to spend this additional revenue on smart metering.

3.57. On balance, we consider that the advantages of a market leader tolerance profile are greater than those of an average tolerance rollout profile. We therefore propose to use a market leader tolerance rollout profile.

**Considerations: rollout in the first half of 2021**

*Stakeholder comments*

3.58. One supplier supported the third option we proposed (using suppliers' rollout plans), as it said this would be the most realistic option. However, two suppliers said that actual data on rollout in Q1 2021 would be available before we consulted, and we should make use of this.

[36] The average tolerance rollout profile would not allow suppliers on average to collect revenue above the efficient costs of meeting their obligations. However, some suppliers would still be able to collect more revenue than the efficient costs of meeting their own obligations. This means that even an average tolerance rollout profile cannot fully ensure cost-effectiveness.

- One of these suppliers said that suppliers would also provide projections at this point, which we could also use for Q2 2021.

- The other supplier said that we could estimate Q2 2021 rollout based on performance between 2017 and 2019, on the assumption that Q2 2021 would not be significantly impacted by COVID-19 restrictions.

*Q1 2021*

3.59. The actual rollout data for Q1 2021 will be available in May 2021, and therefore we cannot incorporate it before this consultation.

3.60. However, we intend to use the actual Q1 2021 data for the decision. We recognise that this means we are unable to include this data in the disclosure process alongside this consultation. Despite this, we consider that using actual data is preferable. This is because the rollout profile under our proposed market leader tolerance approach will be dependent on the progress of one supplier, so we would like to include accurate information on this supplier's progress in Q1 2021. This will contribute to developing a reliable estimate of rollout at the start of the new framework.

3.61. We recognise that the actual Q1 2021 data may be different from the data we currently include in the SMNCC model for the purpose of presenting estimated SMNCC values in this consultation (see the section below on the interim approach for this consultation). However, any difference in the SMNCC values for our decision (relative to this consultation) as a result of incorporating actual Q1 2021 data would reflect an improvement in accuracy.

*Q2 2021*

3.62. Based on the current levels of installation activity and the COVID-19 roadmap for each nation, we expect that installation activity should return close to pre-COVID-19 levels in Q2 2021. Using historical performance (pre-COVID-19) would therefore be a viable option. However, suppliers can take more up to date circumstances into account in their updated projections, including any residual impacts of COVID-19. On balance, using this more recent information (ie suppliers' updated projections for Q2 2021 provided alongside their Q1 2021 actual data) is likely to be preferable, given that there will be some judgement about how quickly suppliers can return to historical rollout levels.

3.63. Again, we are not able to take the updated projections into account for this consultation, but we intend to include them for the decision.

*Interim approach for this consultation*

3.64. Given our preferred data is not yet available, we need an interim approach to present a rollout profile in this consultation and to calculate the resulting SMNCC estimates. This is a placeholder only.

3.65. For this consultation, we assume that rollout in the first half of 2021 is equal to the average semi-annual progress between the end of 2017 and the end of 2020.[37] This is a broad approximation, which takes into account years before and during COVID-19.

**Considerations: calculation approach for our proposed rollout profile**

*Calculation steps for proposed rollout profile*

3.66. We would take the following calculation steps for our proposed rollout profile.

- In line with our approach in the August 2020 decision, we would continue to set the rollout up to and including 2017 using a weighted average rollout profile. This reflects that we are calculating the change in smart metering costs relative to a fixed 2017 operating cost baseline.

- We would set the rollout for the years between 2018 and 2020 using the market leader's historical (actual) rollout. We would select the market leader using the process set out in SMNCC WP2.[38,39]

- We would set the rollout for the first half of 2021 using actual data for the market leader for Q1 2021 and its updated projection for Q2 2021. When added to the

[37] We calculate this as the rollout at the end of 2020 minus the rollout at the end of 2017, divided by six (to reflect that there are six half years over this period)
[38] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 2.6. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[39] As set out in SMNCC WP2, we select the market leader from the large legacy suppliers. Where the large legacy suppliers have been subject to significant mergers over time, we look at the rollout profiles based on the current structure of these suppliers (ie as if these suppliers had been combined over the entire period).

historical rollout, this would give the starting point for the new framework – ie estimated cumulative rollout at the end of the first half of 2021.

- For the remaining years of the cap, we would calculate the obligation for a supplier with this starting point. We intend to use the tolerance values from BEIS's consultation. In the event that BEIS makes any revisions to its tolerance values in its decision, we would incorporate these for our decision. BEIS has only consulted on tolerance values for the first two years of its new framework, so we would estimate a tolerance value for the second half of 2023 as described in SMNCC WP2.[40]

*Annual reviews*

3.67. In line with our August 2020 decision, we will review the SMNCC each year. At each review, we would update the rollout profile.

- We would update the rollout percentage for the previous year (eg 2021) with actual data, once this was available. Under our proposal to use a market leader tolerance rollout profile, we would use the actual data for the market leader.[41]

- Suppliers' obligations will change each year depending on their progress to date and customer churn. We would reflect suppliers' revised obligations (in this case for a market leader) in the rollout profile.

- We will receive actual rollout data to the end of the calendar year, whereas suppliers' obligations under the new framework are in relation to a compliance year which starts in July. We will consult on how to address this discrepancy in our next review.

[40] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.9 to 2.11. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[41] We would select the market leader each time using the same process that we intend to use in this review. This means that the identity of the market leader could possibly change between reviews.

*Rollout for baseline adjustment*

3.68. As in our August 2020 decision, we would include an adjustment to reflect that our operating cost allowance will include smart metering costs relating to both credit and PPM meters, whereas we calculate separate SMNCC values for credit and PPM.[42] Given this relates to the baseline year, we would continue to use a weighted average rollout profile for this.

3.69. In line with our August 2020 decision, we would exclude one supplier which was not included in our operating cost benchmarking analysis and had high smart metering costs relating to PPM.[43] We would exclude this supplier from the weighted average PPM rollout profile.[44] We have considered whether we should exclude all suppliers who were not included in our operating cost benchmarking, but do not consider that this is necessary given that it would have no significant impact on the rollout values used for this adjustment.

## Separate mechanism

### Context

3.70. In SMNCC WP2, we noted that there is a risk that the amount customers pay may not be commensurate with the rollout suppliers achieve in practice, and that this risk is higher when we set a higher allowance. We said that we had received a suggestion that there should be a separate mechanism (parallel to the cap) to adjust suppliers' revenues based on their actual rollout performance. We noted that the intention would be to align the revenues suppliers can recover under the cap and the efficient costs of the rollout they deliver. However, we also noted that there would be a number of challenges to developing and implementing this mechanism.[45]

[42] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.78. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[43] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.79. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[44] This is in line with the approach we took when calculating the SMNCC for our August 2020 decision.
[45] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.59 and 2.60. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

**Proposals**

3.71. We are not proposing to consider a separate mechanism further at this stage.

**Overview of responses to our working papers**

3.72. Some stakeholders supported a separate mechanism. One supplier said that a separate levelisation mechanism could redistribute unspent allowances to market leading suppliers, ensuring that allowances intended to support rollout were used for that purpose. Another stakeholder said that we would need to consider a separate mechanism if we did not provide sufficient revenue through the cap for suppliers with above average profiles. It said that any such mechanism would need to provide suppliers with budgetary certainty given their planning lead times.

3.73. Other suppliers raised concerns about a separate mechanism. One supplier said that it would add complexity and risk to suppliers for no obvious customer benefit. Another supplier questioned the legal basis for any separate mechanism.

**Considerations**

3.74. There is a challenge to align the amount that customers pay under the cap and the amount that suppliers spend on rollout. However, there would be difficulties with introducing a separate mechanism.

3.75. A mechanism of this type would require a significant amount of time in order to develop the design, consider how to deliver it, and consult with stakeholders. It would then require further time for implementation. As such, it is not feasible to deliver a separate mechanism of this type alongside this review (in time for a decision in early August 2021). Given the timelines required from design to implementation, we also consider it would not be straightforward to deliver a separate mechanism of this type in a reasonable timescale within the duration of the cap.

# 4. COVID-19 and installation costs

We discuss how we update our estimates of sunk installation costs in 2020, 2021 and beyond 2021. We then similarly consider the consequences for our estimates of productive installation costs in 2020 and 2021.

## Background on installation costs and sunk installation costs

### Normal approach to installation costs

4.1. As set out in SMNCC WP1, data on installation costs is available in arrears through the Smart Meters Annual Installation Request[46] (SMAIR). For the years where we have actual data, our normal approach is to calculate the average cost per smart meter installation using this data. We divide the total installation costs by the total number of installations. We then amortise the average cost (to spread it over a number of years) and apply the meter rental uplift. The meter rental uplift reflects that the rental payments suppliers pay to Meter Asset Providers (MAPs) may not correspond to the way we model the costs of smart meter assets and installations.[47] We use this uplifted cost per installation in the SMNCC model. The total installation costs then depend on rollout in that year.

4.2. For future periods, we estimate the installation cost by taking the latest historical average installation cost and adjusting it based on expected future changes in productivity.[48] We then amortise this value and apply the meter rental uplift. The total installation costs are

[46] Suppliers submit Smart Meters Annual Information Request (SMAIR) data to BEIS each year. BEIS previously collected this information through a request known as the Annual Supplier Return (ASR). We use the term SMAIR throughout this consultation, whether referring to the SMAIR or its predecessor.
[47] We discussed the meter rental uplift in our previous documents. See for example Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 3.29 to 3.42.
https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[48] In our August 2020 decision, we maintained a level of productivity which reflected historical levels. However, we said that we would consider productivity in our next review, taking into account the new BEIS framework.
Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.28 and 2.29.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

the uplifted average cost multiplied by the number of smart meters that we expect will be rolled out in that year (according to the rollout profile used).[49]

**Installation costs under COVID-19**

4.3. As set out in SMNCC WP1, where suppliers were unable to install as many smart meters as expected due to COVID-19, they may have been unable to scale down their cost bases accordingly. Costs incurred in relation to meters which could not be installed would be an immediate (sunk) cost to suppliers.[50]

4.4. In our August 2020 decision, we included an estimate of sunk installation costs for 2020. One key assumption was that installation numbers in 2020 would be 30% of the level previously expected (absent COVID-19). We therefore assumed that suppliers incurred sunk costs in relation to the remaining 70% of expected installations. Another key assumption was that, where a meter could not be installed, nearly all installation costs would be sunk.[51] These were conservative assumptions (ie leading to a higher SMNCC), given the uncertainty about the impacts of COVID-19 at the time.[52]

[49] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.1 and 3.2. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[50] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.3 and 3.4. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[51] We provided a more extensive description of this methodology in SMNCC WP1. Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.5. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[52] We said that we would adopt a conservative interim approach to sunk installation costs and consider making a retrospective corrective adjustment in future cap periods. Ofgem (2020), Reviewing smart metering costs in the default tariff cap – August 2020 decision, paragraphs 3.117 and 3.118. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

# Updating 2020 sunk installation costs with actual data

**Context**

4.5. In SMNCC WP1, we explained why we could not simply update 2020 installation costs using our normal approach (ie without sunk installation costs).[53]

4.6. We set out several options for estimating sunk installation costs in 2020.[54] We indicated that one option was not likely to be best, leaving two remaining options.

- Method one was to gather information directly on sunk installation costs. We noted that suppliers might not be able to provide this data with any degree of precision, given that they would be unlikely to allocate their installation costs between sunk and productive costs[55] for their business purposes.

- Method two was to estimate sunk costs as a residual, starting with the total installation costs and subtracting the estimated cost for the meters which were installed. We said that this option would not require further data gathering. However, this option would rely on an assumption that the installation cost per meter for meters which were installed was unchanged despite COVID-19.

4.7. After considering comments in response to SMNCC WP1, we decided to gather data on sunk installation costs. This was to investigate the feasibility of method one. We issued the Request For Information (RFI) in February 2021.[56]

[53] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.6 to 3.10. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[54] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.16 to 3.24. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[55] Productive installation costs are those which relate to installations which are achieved.
[56] We issued the RFI to suppliers with at least a 1% domestic supply market share.

**Proposal**

4.8. We propose to estimate sunk installation costs in 2020 using the sunk installation cost data that suppliers provided following our recent RFI (ie using method one). This is the most direct approach to estimating sunk installation costs.

**Overview of responses to our working papers**

4.9. Suppliers supported us recognising a proportion of installation costs as sunk, rather than using our normal approach.

4.10. Suppliers had mixed views on how to estimate sunk installation costs.

- One supplier said that we would be able to gather data directly on sunk installation costs (method one). It considered that this would be more accurate than method two. Another supplier said that we should explore method one first, and otherwise use method two. It said that using actual data would reduce the potential for error.

- Two suppliers said that we should use method two. One of these suppliers said that method two would be more accurate, as it uses SMAIR data which suppliers report in a consistent way.

**Considerations**

4.11. We first review the results of the two methods. We then discuss which method to select.

*Results*

4.12. Table 3 below shows the total sunk installation costs under each method, and compares these against the estimate from August 2020.

**Table 3: Sunk installation costs in 2020**

| Approach | Value (£m, 2020 prices) |
|---|---|
| August 2020 decision | 445.3 |
| Method one | 38.7 |
| Method two | 176.2 |

**Notes:** All values are totals across both fuels, and across credit and PPM – this is solely for the purpose of presenting results in this table. The August 2020 decision value is uplifted to 2020 prices (from 2011 prices) using the GDP deflator. The figures for methods one and two include an adjustment to scale up the data from the suppliers included in the analysis to a representation of the full market.

4.13. Methods one and two both have much lower sunk installation costs than our August 2020 decision. There are three reasons for this.

- The main reason is that suppliers rolled out more smart meters than under our August 2020 assumption – in fact the number of smart meters suppliers installed in 2020 was 70% of the number installed in 2019.[57] In rough terms,[58] this implies that suppliers incurred sunk installation costs in relation to just 30% of meters, rather than 70% as we assumed in August 2020.

- The furlough scheme will also have reduced suppliers' sunk installation costs (in relation to staffing costs). While we were aware for the potential for furlough to reduce suppliers' costs in our August 2020 decision, we did not have evidence on the scale of the impact. Suppliers have now taken the impact of furlough into account in the figures they provided to us.

- In addition, the RFI shows that some medium suppliers incur few or no sunk installation costs. This is because they outsource their installations, and do not

[57] Calculated using information from: BEIS (2021), Smart meters in Great Britain, quarterly update December 2020, Data Table 6.
https://www.gov.uk/government/statistics/smart-meters-in-great-britain-quarterly-update-december-2020
[58] This is a rough illustration because the number of installations expected in 2020 (which could affect the resources suppliers had committed) is not necessarily the same as the installations achieved in 2019.

face any contractual exposure to any sunk installation costs incurred by their installer.

4.14. Table 3 also shows that method two has a significantly higher sunk installation cost than method one. The main reason is that the cost per installation for the meters that were installed was higher than in previous years, pushing up overall installation costs. As the indirect approach under method two holds the costs per installation constant from 2019,[59] it classifies the remainder of the overall installation costs as sunk installation costs. In other words, any increase in the cost per installation results in sunk installation costs under method two.

4.15. Over the life of a smart meter, there would be a smaller difference between these two methods. Using method one would mean lower sunk installation costs upfront (than under method two), but suppliers would pay more each year for the annual rental of the smart meters which were installed in 2020. However, the cap only covers part of the life of these smart meters, which reduces the importance of the future annual rental costs. Given the full reduction in sunk installation costs is within the duration of the cap, but only part of the increase in annual rental costs is within the duration of the cap, the reduction in sunk installation costs is therefore more important. The cost to suppliers (and therefore customers) during the cap will consequently be lower under method one.

*Method to select*

4.16. The main uncertainty about method one was whether suppliers would be able to provide information which split out their productive and sunk installation costs. In practice, we received usable data from nine of the 12 suppliers who were in scope for the RFI. We consider that the data from these suppliers is usable because they provided a breakdown between sunk and productive installation costs, and because our review of this data did not identify reasons to exclude it (including after following up some points with suppliers). The three cases where we did not receive usable data were due to suppliers being unable to provide a breakdown between sunk and productive installation costs.

4.17. Method one is the simplest and most direct way of estimating sunk installation costs. It uses the data provided by suppliers, rather than requiring us to make an assumption. We

[59] In real terms.

therefore consider that method one is the best approach to calculating sunk installation costs in 2020.

*Calculation notes for method one*

4.18. We start with the total sunk installation cost for the suppliers where we had usable data. We scale this up to represent the whole domestic supply market. We do this by assuming that the suppliers outside our data had the same per customer sunk installation costs as those included.

4.19. We gathered separate data on sunk installation costs for credit and PPM customers. We therefore have separate inputs to the SMNCC model for credit and PPM.

4.20. We did not gather data separately for electricity and gas. We propose to allocate sunk installation costs equally between fuels, as a straightforward assumption.

## Projecting sunk installation costs in 2021

**Context**

4.21. In our August 2020 decision, we only included sunk installation costs in 2020 in our analysis. However, COVID-19 has impacted suppliers' smart meter rollout activities in the first quarter of 2021. A reduction in installations (compared to a normal year) could lead to sunk installation costs again, unless suppliers are able to adjust their cost bases accordingly.

4.22. There are two issues to consider: whether to include sunk installation costs for 2021, and (if relevant) how to estimate them.

- **Whether to include sunk installation costs in 2021:** We said in SMNCC WP1 that the COVID-19 situation was very uncertain, but that we would have some more information by the time of our 2021 consultation.[60] We also said that an efficient supplier would make significant efforts to avoid incurring unproductive costs, given it would be aware of the uncertainty caused by COVID-19. However,

[60] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.28 and 3.29. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

we noted that suppliers may have contractual limitations on being able to make significant changes to their rollout programmes in the middle of the rollout.[61]

- **How to estimate sunk installation costs in 2021:** We said in SMNCC WP1 that we expected to follow a similar approach to the way we estimated sunk installation costs in 2020.[62]

**Proposals**

4.23. We propose to include sunk installation costs for 2021. This reflects that COVID-19 has affected smart meter installations for at least the first quarter of the year.

4.24. We propose to estimate sunk installation costs in 2021 by flatlining (in real terms) the sunk installation cost figures that suppliers provided for 2020. We consider that using actual data from a previous year is likely to be more accurate than our previous approach to modelling sunk installation costs (which would lead to a higher projected sunk installation cost for 2021). Our proposed approach could still be too high, but we will take any difference against actual data into account through advanced payments in our next review.

**Overview of responses to our working papers**

4.25. One supplier said that it was possible that there would be sunk costs in 2021 but agreed that suppliers should be able to take action to avoid some costs. It supported using our previous approach to estimating sunk installation costs. Another supplier said that long planning lead times placed limitations on the extent to which suppliers could adjust their rollout plans.

[61] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.31 and 3.32. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[62] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.34. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

**Considerations: whether suppliers will incur sunk installation costs in 2021**

4.26. The COVID-19 situation remains uncertain. We do not have certainty on the extent that COVID-19 will impact society over the remainder of 2021.

4.27. However, we already know that there has been an impact of COVID-19 in the first quarter of 2021. Smart meter installations were not prevented by government restrictions (except in Scotland, where only essential work in homes was permitted). However, some suppliers decided to suspend non-essential smart meter installations during the first quarter of 2021. Even where suppliers were trying to install smart meters, some customers may have been reluctant to allow an installer into their homes.

4.28. These impacts have affected a non-trivial proportion of the year. This means that suppliers are likely to install fewer smart meters in 2021 than in a normal year. We would otherwise need to assume that suppliers would be able to roll out smart meters more quickly in the remainder of 2021 than in a normal year, in order to catch up.

4.29. This shortfall in smart meter installations is likely to lead to some sunk installation costs. We continue to consider that an efficient supplier would make significant efforts to try to avoid unproductive costs, and that it would be able to take additional steps as more time becomes available. However, we also continue to recognise that there may be contractual limits on this. Given there is evidence from our RFI that suppliers incurred some sunk installation costs in 2020, we cannot say with confidence that the situation would have changed sufficiently by 2021, such that an efficient supplier would be able to avoid all material sunk installation costs.

**Considerations: how to estimate sunk installation costs for 2021**

4.30. We consider two approaches. We first discuss the approach we used to project sunk installation costs for 2020 in our August 2020 decision (a bottom-up approach). We then discuss how we could use the information we gathered through the RFI on sunk installation costs in 2020 (a top-down approach).

*Bottom-up approach*

4.31. To use this approach, we would need to select values for three parameters: the proportion of normal rollout which is not achieved, the proportion of costs which are sunk when an installation does not occur, and the cost per installation in a normal year.

- **Proportion of normal rollout which is not achieved:** This will depend on rollout progress over 2021. To develop an estimate for this bottom-up approach, we only assume that suppliers would have a reduction in rollout (and therefore incur sunk installation costs) in relation to Q1 2021. This reflects that COVID-19 restrictions are being relaxed (in part) from the end of Q1 2021, and that the COVID-19 situation is improving.

  We discuss rollout in the first half of 2021 in Chapter 3, and note that we should be able to use actual data on rollout in Q1 2021 in time for our decision. Under our proposal to use a market leader tolerance rollout profile, this actual data on rollout would be data for the market leader. If we were using a bottom-up approach in our decision, then we would align with the actual Q1 2021 rollout data for the market leader.

  For the moment, we need to make an assumption about rollout in Q1 2021. To do this, we consider the case where a supplier only carried out emergency installations. This will be much lower than the rollout that suppliers are likely to achieve on average. As a rough assumption, we might assume that a supplier who only carried out emergency installations in Q1 2021 would have rollout at 20% of usual levels for that quarter. When combined with the assumption that suppliers would only incur sunk installation costs in Q1 2021, this would give an assumption that rollout over the whole of 2021 would be at 80% of normal levels.[63]

- **Proportion of costs which are sunk when an installation does not occur:** We would maintain the same assumption as in our August 2020 decision (ie that almost all costs are sunk). We do not have evidence for an alternative bottom-up assumption on the proportions of individual cost categories which are sunk. Factors like the furlough scheme would likely mean that this assumption would be high-sided.

- **Cost per installation in a normal year:** We would use the same projected cost (in real terms) as we used for 2020 in our August 2020 decision (ie what we

[63] Ie 20% of normal rollout for one quarter, then 100% of normal rollout for three quarters. For normal rollout, we would use the incremental rollout in 2021 under our proposed market leader tolerance rollout profile.

expected installation costs to be in 2020 absent COVID-19). As noted in SMNCC WP1, we cannot use actual installation costs in 2020 as a baseline to project costs, as these values are affected by COVID-19.[64]

4.32. Using these assumptions, we have carried out a rough estimate of the implied sunk installation costs under a bottom-up approach. This gives around £120.5m of sunk installation costs in 2021.[65]

*Top-down approach and conclusion*

4.33. The bottom-up approach gives a higher estimate than the data we have on sunk installation costs in 2020. This would imply that COVID-19 would have a greater impact on rollout in 2021 than in 2020. This currently appears unlikely, given the expected reduction in societal restrictions in response to the COVID-19 pandemic.

4.34. Given our proposal above on 2020 sunk installation costs, we consider that it would be reasonable to cap sunk installation costs in 2021 at the same level as 2020 (in real terms). We therefore propose to adopt this top-down approach.

4.35. This top-down approach could still overstate sunk installation costs in 2021 to some extent. We note the potential conservatism within our review of uncertainty – see Appendix 6.

- Some suppliers may have seen similar impacts on rollout in the first quarter of 2021 as they did in some of the most-impacted months of 2020. However, for the annual impact on rollout (and therefore sunk installation costs) to be as significant as in 2020, the speed at which suppliers restart their rollout would also have to be the same as in 2020. This may be pessimistic. Suppliers now have experience of developing procedures to roll out smart meters in a COVID-secure way, so they should be able to restart more quickly.

[64] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.38. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[65] In 2020 prices, for comparison against the earlier information on sunk installation costs in 2020. Converted to 2020 prices from the 2011 prices used in the SMNCC model using the GDP deflator.

- The top-down approach could also overstate sunk installation costs if suppliers had been able to add any flexibility to their cost base, in anticipation of potential restrictions (or other limitations) on installing smart meters in 2021 due to COVID-19.

4.36. Even if this approach did overstate sunk installation costs, we would be able to update this figure with actual data in our next review, by gathering data on sunk installation costs in 2021. We would be able to take any difference into account through advanced payments.[66]

## Sunk installation costs beyond 2021

### Context

4.37. In principle, there could also be sunk installation costs due to COVID-19 in 2022 (or 2023).

4.38. In SMNCC WP1, our initial view was that we would not include sunk installation costs for 2022 as part of this review, and that we would consider these instead as part of any future review.[67]

### Proposals

4.39. We do not propose to include sunk installation costs for the years beyond 2021. This reflects that while the impacts of COVID-19 are uncertain, it is expected that they will decrease as the societal restrictions in response to the pandemic are removed. It also reflects that suppliers may be able to include more flexibility in their plans over time to reduce the risk of sunk installation costs.

[66] This is similar to taking into account updated rollout data in our next review, which we discuss in Chapter 3.
[67] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.41. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

**Overview of responses to our working papers**

4.40. One supplier agreed that it would be premature to include sunk installation costs for 2022 as part of this review and that these should be part of a future review.

**Considerations**

4.41. As set out in SMNCC WP1, the impacts of COVID-19 are uncertain, meaning that we would have no confidence that making a sunk installation cost adjustment for 2022 would increase the accuracy of our SMNCC allowance.[68]

4.42. Since we published SMNCC WP1 in November 2020, expectations around the removal of societal restrictions in response to COVID-19 have improved, especially given the rollout of vaccines. This could reduce the likelihood of COVID-19 having a significant impact on rollout in future years (and therefore of sunk installation costs).

4.43. Furthermore, to the extent that suppliers are able to include more flexibility in their plans when they have more time to do so, this would apply to a greater extent by 2022. This could also reduce the likelihood of suppliers incurring sunk installation costs.[69]

## Updating 2020 costs per installation achieved with actual data

**Context**

4.44. Our earlier consideration of sunk installation costs in 2020 discusses the cases where suppliers were unable to install smart meters in 2020. However, there were many cases where suppliers were able to install smart meters in 2020, and where installation costs were therefore productive. We need to consider what cost per installation to use for 2020.

[68] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.39. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

[69] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.40. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

**Proposals**

4.45. We propose to estimate the cost per installation achieved (ie where suppliers were able to install smart meters) for 2020 using the RFI data from suppliers. This is to ensure that our approach is coherent, by using the same data source as for sunk installation costs.

**Overview of responses to our working papers**

4.46. We did not discuss the interaction between productive and sunk installation costs in SMNCC WP1.

**Considerations**

*Data source*

4.47. Given our proposal above to use supplier data to estimate sunk installation costs, we should estimate the cost per installation achieved in 2020 using the same data source. This ensures that our approach is coherent to these related items, which together make up installation costs. If we instead assumed that the cost per installation was unchanged from a previous year,[70] we would risk ignoring the impact of COVID-19 on the cost per installation achieved.

4.48. We gathered data from suppliers on both sunk and productive installation costs, with the sum of the two representing suppliers' overall installation costs. We can therefore calculate the cost per installation achieved as the productive installation cost divided by the number of actual installations. This is as shown in Table 4 below.

**Table 4: Breakdown of total installation costs**

| Total installation costs | |
|---|---|
| **Sunk installation costs** | **Productive installation costs** |
| Included in SMNCC model as described in the section "Calculation notes for method one" above. | Included in the SMNCC model after dividing by the number of actual installations, to give the cost per installation achieved. |

[70] This would be the same assumption used to estimate sunk installation costs under method two – ie data from 2019.

4.49. Under this approach, the cost per installation achieved is higher than for 2019 (the last year pre-COVID-19). It is reasonable that there would be some increase in installation costs in 2020 as a result of COVID-19 – for example due to precautions such as Personal Protective Equipment (PPE). Part of the increase may also reflect natural variation in costs between years for other (non-COVID-19) reasons.

*Calculation notes*

4.50. The SMNCC model does not differentiate between credit and PPM installation costs – there is a combined input for the cost per installation. We therefore calculate a combined cost per installation using the credit and PPM data, rather than calculating separate credit and PPM installation costs.

4.51. The SMNCC model does differentiate between single fuel and dual fuel installations. We gathered information on installation costs split between single fuel and dual fuel installations, so we do not need to make an assumption to provide this split.

## Projecting costs per installation achieved in 2021

**Context**

4.52. As with 2020, we need to consider the cost per installation achieved, not just the sunk installation cost. We do not have actual data for 2021, so this is a projection.

**Proposals**

4.53. We propose to maintain the cost per installation at the same level (in real terms) calculated for 2020. This is to ensure that we are being coherent in using the same data source for sunk and productive installation costs in 2021.

4.54. We do not propose to use this value as the starting point for projecting installation costs in future years (ie 2022 and 2023). This is because we are not proposing to include sunk installation costs for future years, so the same issue of coherence does not apply.

**Overview of responses to our working papers**

4.55. We did not discuss this issue in SMNCC WP1.[71]

**Considerations**

*Value for 2021*

4.56. As in 2020, we should ensure that our approach to the cost per installation in 2021 is coherent with our approach to sunk installation costs. If we are flatlining sunk installation cost data from 2020, then we should also flatline the installation cost data from that year (in real terms). This reflects that we would be treating 2021 as a year when sunk installation costs would apply.

*Starting point for projecting installation costs in future years*

4.57. We would not use the costs per installation from 2020 and 2021 as the starting point to project costs per installation in future years (ie 2022 and 2023). This is because we would not be assuming that there would be sunk installation costs in future years, so the same considerations about coherence do not apply.

4.58. It is possible that COVID-19 could have some persistent impacts on installation costs in future years (eg if there is an ongoing need for PPE). However, we do not consider that trying to forecast impacts at this level of detail would be likely to increase the accuracy of the SMNCC model given the COVID-19 situation remains uncertain.

[71] We discussed the approach to projecting installer productivity (which affects installation costs in future years) in SMNCC WP2. We cover this issue in Chapter 5.

# 5. Implications of rollout profile

This chapter covers other issues that could be affected by the rollout profile chosen (beyond installation costs in 2020 and 2021, which we cover in Chapter 4). We set out our proposals for installer productivity, which will affect installation costs in 2022 and 2023. We propose not to allow for additional marketing costs, beyond those which we include in the cap already. We also discuss the impact of our rollout profile proposal on the unit costs of smart meter assets and installations.

## Installer productivity

### Context

5.1. Installer productivity ('productivity') is the number of smart meters that a supplier can install a day per installer. We use productivity when estimating the cost per installation in future years. Specifically, we use productivity to model the change in in-house installation costs (excluding training costs).[72] If productivity improves, then the cost per installation falls. This reduces the SMNCC.

5.2. BEIS has developed expectations for how suppliers' operational fulfilment[73] will improve in future. BEIS assumes that suppliers will improve their operational fulfilment gradually between the second half of 2021 and the second half of 2022, and that this will increase average market conversion rates[74] by 7% by the second half of 2022. This is based

[72] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.81.
https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[73] Operational fulfilment is about the effectiveness of suppliers' processes to carry out smart meter installations, once a customer is eligible for a smart meter and willing to accept one.
BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 43(ii) and figure 1.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937448/smart-meter-policy-framework-post-2020-minimum-targets-reporting-thresholds-condoc.pdf
[74] Going from customers who are willing to accept a smart meter to those who have one installed.

on discussions with suppliers, as well as improvements already delivered by some suppliers.[75] Improvement in operational fulfilment would mean higher productivity.[76]

5.3. In SMNCC WP2, our initial view was that it would be appropriate to apply BEIS's expected improvements in operational fulfilment if we were using a tolerance rollout profile. This was to reflect an achievable level of productivity improvement in future cap periods.[77]

5.4. We noted that BEIS has only set out expectations for improvements in operational fulfilment. Its modelling of meter installations does not make assumptions about the level of installer productivity. We would therefore need to be able to apply the improvements in operational fulfilment to a base level of productivity. Our initial view was that this base level of productivity could be the level we currently use in the SMNCC model, based on the average productivity between 2017 and 2019.[78] We said that we would not use productivity data from 2020 to project future productivity, given that this data would be affected by COVID-19.[79]

**Proposals**

5.5. We propose to incorporate BEIS's assumed improvement in operational fulfilment. This reflects that BEIS's work is the best analysis we are aware of for whether there will be an improvement in operational fulfilment. Given our proposal in Chapter 4 to project installation costs in 2021 at the same level (in real terms) as in 2020, the operational fulfilment assumption would only affect installation costs in 2022 and 2023.

[75] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 54. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937448/smart-meter-policy-framework-post-2020-minimum-targets-reporting-thresholds-condoc.pdf
[76] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 89. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937448/smart-meter-policy-framework-post-2020-minimum-targets-reporting-thresholds-condoc.pdf
[77] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.6. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[78] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.63. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[79] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.7. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

5.6. We propose to apply this improvement in operational fulfilment to the base level of productivity that we currently use in the SMNCC model for years starting from 2020, which is based on the average productivity between 2017 and 2019. We would continue to use actual data for 2019 productivity.

**Overview of responses to our working papers**

5.7. Suppliers who commented either said that productivity would not improve as assumed by BEIS, or that it would decrease. They commented on the operational fulfilment assumption, 'hard to reach' customers, and COVID-19 impacts.

5.8. In response to SMNCC WP1, one supplier also commented on the year we were using for our base productivity assumption.

**Considerations**

*Operational fulfilment*

5.9. Two suppliers raised concerns about BEIS's assumed improvement in operational fulfilment. Both suppliers said that it had not been possible to identify this in supplier data.

5.10. If we considered that there was sufficient evidence of an expected improvement in operational fulfilment, we should incorporate this in our analysis. This would mean that our estimated cost per installation in 2022 and 2023 would be a better reflection of efficient costs in those years, improving the accuracy of our SMNCC calculation.

5.11. BEIS's work is the best analysis we are aware of for whether there will be an improvement in operational fulfilment.

- BEIS's expectations for improvements in operational fulfilment (and therefore productivity) presented in its consultation were informed by its experience and evidence-gathering. BEIS has extensive knowledge and expertise relating to the smart meter rollout, and is in a position to take judgements on what it considers is achievable for suppliers.

- BEIS's analysis has been subject to consultation. BEIS is best-placed to consider stakeholders' comments on its analysis. BEIS's decision on tolerances will be available by the time of our decision, and so we will be able to take its conclusion on the operational fulfilment assumption into account.

5.12. Given the points above, we consider that it is proportionate to rely on BEIS's assessment (as set out in its upcoming decision) rather than attempting to estimate improvements in operational fulfilment separately.

5.13. We therefore propose to incorporate BEIS's expected improvement in productivity when calculating the SMNCC.[80]

*'Hard to reach' customers*

5.14. One supplier said that it was approaching the 'hard to reach' customers, who it associated with lower installer productivity, based on its own analysis.

5.15. The analysis from one supplier provides information about the trends in its own smart meter installation activities. BEIS's operational fulfilment assumption relates to suppliers in general, so the two are not necessarily contradictory. BEIS will be able to consider the supplier's analysis when reaching its conclusion on the operational fulfilment assumption.

*COVID-19 impacts*

5.16. One supplier said: "we expect installer productivity to be lower (and installation costs higher) post-COVID for a range of reasons including: longer travel times between jobs; increased duration of calls to customers to discuss social distancing in advance of an engineer visit; and the additional time it takes the engineer to prepare themselves before and after each visit".

5.17. We recognise that COVID-19 may have some impact on suppliers' installation activities. We expect this to be less relevant from 2022. As discussed in Chapter 4, it is possible that there are persistent impacts of COVID-19 on installation costs in future years, but this is uncertain. BEIS will be able to take COVID-19 into account when determining what an appropriate operational fulfilment assumption is.

[80] The improvement in operational fulfilment is 7% over 18 months (between the second half of 2021 and the second half of 2022). We propose to apply this evenly over the period. We need a single productivity value for each calendar year, so we propose to apply the average of the improvements in operational fulfilment for the end of the previous year and the end of that year.

*Base productivity assumption*

5.18. In response to SMNCC WP1, one supplier considered that we should have used productivity data from 2019, as this would be the same as the starting installation costs.

5.19. In August 2020, we decided to use average productivity between 2017 and 2019 to project installation costs in future years. This was to reflect historical levels.[81] For this productivity assumption, we consider that it is more appropriate to use data from several years rather than relying on a single historical year. Productivity may have been temporarily affected in 2019 by the transition from primarily rolling out SMETS1 meters to primarily rolling out SMETS2 meters.

5.20. 2019 productivity was 2.8 meters installed per installer per day, and the average productivity between 2017 and 2019 was 3.1 meters installed per installer per day.[82] The difference is therefore small.

## Marketing costs

### Context

5.21. Suppliers may incur marketing costs[83] to encourage customers to take up smart meters. We include marketing costs as a category in the SMNCC model. Higher marketing costs therefore increase the SMNCC.

[81] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.23 and 2.29.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[82] 2019 productivity: Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, table 5.6.
https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf
2017-2019 average productivity: Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 4.48.
https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf
[83] In this consultation, we use the term 'marketing costs' for consistency with our previous publications on the SMNCC. This does not indicate that we consider that offering smart meters to customers constitutes marketing from a data privacy perspective.

5.22. In SMNCC WP2, we noted previous feedback that we should consider how higher rollout obligations could increase marketing costs.[84] Under a tolerance rollout profile, our initial view was that no additional allowance for marketing was required. This reflected that the tolerances do not require suppliers to roll out more smart meters than they currently do, removing one reason why suppliers might incur increased marketing costs. It also reflected that BEIS is not assuming that suppliers manage to persuade customers to develop more positive attitudes to smart meters at a greater rate than previously.[85]

**Proposals**

5.23. We propose to maintain the current approach to calculating marketing costs.[86] Under a market leader tolerance rollout profile, we do not consider that suppliers will incur higher total marketing costs than historically.

**Overview of responses to our working papers**

5.24. Two suppliers encouraged us to gather data on marketing costs.

5.25. Several suppliers commented on trends in marketing costs.

- Two suppliers said that marketing costs would increase as the rollout progressed, given that willing customers would already have received a smart meter. Both suppliers noted the cost of providing attractive tariffs linked to smart meters. One of these suppliers also referred to the cost of incentives to encourage consumers to accept a smart meter, and of additional customer service support.

- One supplier said that, under the new rollout framework, suppliers would look to adopt additional measures to address customer engagement challenges. In response to a follow-up question, the supplier said that these additional measures

[84] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.14. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[85] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.15 to 3.18. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[86] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.316. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

could include financial incentives, marketing campaigns (eg TV), and area-specific campaigns.

**Considerations**

*Data gathering on marketing costs*

5.26. Suppliers may have cut back on marketing costs in 2020 given the difficulty of rolling out smart meters for part of the year due to COVID-19. For historical years, gathering data would therefore only add one more normal historical year (without COVID-19) to our existing data (ie 2019), which already covers the period to 2018. We do not consider that it would be proportionate to carry out a full RFI for one additional year of historical data, particularly when suppliers' points were primarily about how marketing costs will evolve in future years under the new BEIS framework.

5.27. For future years, we would need to ask for projections or budgets, rather than actual costs. These figures could only ever be indicative. Any RFI would however need to be complex, in order to allow us to understand the basis for the estimates provided. This complexity would be disproportionate, given that the figures would still not be precise.

5.28. We therefore do not consider that data gathering on marketing costs is necessary.

*Trends in marketing costs*

5.29. We include marketing costs in the SMNCC model, based on a 2019 RFI. We froze total marketing costs in real terms after the end of this data (after 2018). This reflects that although suppliers will need to engage fewer customers over time, those who remain without a smart meter may be harder to engage.[87] We are therefore already taking some account of changes in customers' willingness to accept a smart meter.

5.30. Under a tolerance profile, suppliers would not need to roll out more smart meters than they have done historically. BEIS's modelling also only assumes that customers' attitudes

[87] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.320. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

towards smart meters evolve over time in line with historical experience.[88] We therefore do not consider that suppliers will have to spend more on marketing as a result of the new rollout framework.

5.31. This view is not affected by the specific marketing cost items raised by suppliers.

- We discussed discounted tariffs in SMNCC WP2. As part of this, we noted that it would be "practically difficult to distinguish discounts offered to encourage customers to select a smart meter from discounts offered for general customer acquisition purposes".[89] No supplier provided an explanation for how we could address this concern.

- Customer service costs relating to appointment setting are already included in the installation cost data suppliers provide to BEIS. We will take into account updated installation cost data annually in arrears, so suppliers would only see a temporary shortfall if appointment setting costs increased.

- Suppliers have a choice of how they allocate their marketing budgets between areas such as financial incentives and marketing campaigns. Suppliers may change this allocation as the smart meter rollout progresses, in order to maximise effectiveness. Any increases in individual cost areas therefore do not prove that there is an increase in total marketing costs.

*Other point - central marketing costs*

5.32. One supplier said that it was unclear how much it would have to contribute to the costs of advertising through Smart Energy GB.

[88] Further information on these points is available in SMNCC WP2. Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.15 and 3.16. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[89] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.23. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

5.33. This is not relevant to our review of the non-pass-through SMNCC. We take Smart Energy GB costs into account through the pass-through SMNCC.

## Smart meter asset and installation costs

### Context

5.34. Two significant smart metering costs are buying and installing smart meters. These costs depend on both the number of smart meters installed, and the unit costs of smart meter assets and installations. The higher these costs, the higher the SMNCC.

5.35. In SMNCC WP2, we said that increasing the number of smart meters rolled out could, in some circumstances, create pressure on unit costs. We noted that the tolerances do not require suppliers to increase their rollout, so the risk of increased unit costs therefore only applies in the case of a target rollout profile. We also said that we had not identified a reason why there would be increased unit costs, even if rollout increased.[90]

### Proposals

5.36. We do not propose to increase the unit costs of smart meter assets and installations due to the change in rollout profile. This reflects that suppliers would not have to increase their rollout under a tolerance rollout profile.

### Overview of responses to our working papers

5.37. Suppliers commented on potential developments affecting these costs, data gathering, and costs for suppliers who are further advanced in their rollout.

### Considerations

5.38. As noted above, the risk of increased unit costs only applied to a target rollout profile, which we are not proposing to adopt. However, we respond on this area briefly for completeness.

[90] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.26 to 3.27. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

*Potential developments affecting these costs*

5.39. One supplier said that: "it is challenging to fully crystallise the implications of the pandemic and Brexit on smart meter assets and installation costs".

5.40. For both asset and installation costs, we will receive actual data for 2021 in time for our next review and will include this in the SMNCC model. We would be able to take the impact of any discrepancies into account in arrears, through advanced payments. Should either cost increase, suppliers would therefore only see a temporary shortfall.

*Data gathering*

5.41. One supplier encouraged us to consider requesting information from suppliers on trends in smart meter asset and installation costs.

5.42. We do not consider that data gathering is necessary.

- **Asset costs:** There was no clear case made as to why asset costs would be likely to change in future. We therefore do not consider that it would be proportionate to request information, given that completing each RFI requires time from suppliers.

- **Installation costs:** We are considering trends in installation costs through the impact on installer productivity (see above). Gathering our own data would duplicate BEIS's work in this area.

*Suppliers who are further advanced with rollout*

5.43. One supplier said that suppliers who are further advanced in their rollout would have higher costs. It said that installation costs would be higher due to factors such as greater travel between sites, and that it would be harder to contact customers to accept an installation. It said that these suppliers would be underfunded, and that this would not meet our duty to ensure that suppliers can fund their regulated activities.

5.44. We do not consider that the unit costs we use (or any of our cost and benefit assumptions) should be tailored to a supplier who is further advanced in its rollout.

- Using an average efficiency standard for smart metering is already more conservative than in the rest of the cap, where we assessed efficiency at (or just below) the lower quartile. Using an even more conservative efficiency standard would risk allowing inefficient suppliers to recover their costs. We must protect default tariff customers, and we must also have regard to the need to provide incentives for suppliers to improve their efficiency.

- Furthermore, we have not seen compelling evidence that a supplier who was further advanced in its rollout would necessarily have above average unit asset or installation costs. In principle, a supplier with greater experience of rolling out smart meters could have refined its processes to reduce its costs.

# 6. Other areas

We discuss the issue of advanced payments from previous cap periods. We set out the contingency approach that we would follow in the event that we are unable to conclude this review.

## Data updates

6.1. In Appendix 5, we explain which inputs we propose to update using data that suppliers provide to BEIS. We set out minor updates that we propose to carry out in other areas. We also note that we have simplified the SMNCC model.

## Review of uncertainty

6.2. In Appendix 6, we set out our view that we should continue to assess the uncertainty around our calculated SMNCC values qualitatively. We explain our view that the net effect of the uncertainty is roughly neutral, and that we therefore do not propose to make a numerical uncertainty adjustment.

## Advanced payments

### Context

6.3. Advanced payments reflect when suppliers have received payment in advance for smart metering costs they have not yet incurred. The opposite case could also occur, where suppliers have incurred costs in advance of payment through the allowance.[91,92]

[91] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 2.18. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[92] The opposite case would technically involve lagged payments (rather than advanced payments). However, for simplicity, we use the term advanced payments throughout this section. This is regardless of whether we are referring to suppliers receiving payments in advance or in arrears.

6.4. In our decision in August 2020 we said that we would include advanced payments when we updated the SMNCC in our next review. In our decision in August 2020 we also said that we would not include advanced payments for the first two cap periods in any calculation. For cap periods three, four and five, we said that we would consider advanced payments based on a market-leading rollout profile only.[93]

6.5. In SMNCC WP1, we confirmed to stakeholders that advanced payments would be included in the next cap review following our August 2020 decision. We noted that we had consulted several times on the issue of advanced payments, but gave stakeholders an opportunity to provide any further comments.[94]

**Approach**

6.6. In line with our August 2020 decision we remain of the view that it is appropriate to include advanced payments in this review. This ensures that we take into account the allowances collected and costs incurred in previous cap periods, to reach an appropriate cumulative position. Table 5 and Table 6 below show the impact of including advanced payments on the resulting SMNCC (for electricity and gas respectively).

[93] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.47 and 2.48.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[94] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraphs 4.10 and 4.12.
https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

**Table 5: Impact of including advanced payments – electricity**

| Title | Cap period seven | Cap period eight | Cap period nine | Cap period ten | Cap period eleven |
|---|---|---|---|---|---|
| SMNCC: Electricity | 10.31 | 9.82 | 9.93 | 10.04 | 10.04 |
| Advanced payments adjustment: Electricity | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 |
| **Final SMNCC: Electricity** | **10.26** | **9.78** | **9.89** | **10.00** | **10.00** |

**Notes:** All values are £/customer, nominal. A positive advanced payments adjustment means that cumulative allowances have exceeded cumulative costs to date. The final SMNCC is the SMNCC minus the advanced payments adjustment.

**Table 6: Impact of including advanced payments – gas**

| Title | Cap period seven | Cap period eight | Cap period nine | Cap period ten | Cap period eleven |
|---|---|---|---|---|---|
| SMNCC: Gas | 5.24 | 3.92 | 3.61 | 3.30 | 3.30 |
| Advanced payments adjustment: Gas | 1.92 | 1.93 | 1.96 | 1.98 | 1.98 |
| **Final SMNCC: Gas** | **3.33** | **1.99** | **1.65** | **1.32** | **1.32** |

**Notes:** All values are £/customer, nominal. A positive advanced payments adjustment means that cumulative allowances have exceeded cumulative costs to date. The final SMNCC is the SMNCC minus the advanced payments adjustment.

### Overview of responses to our working papers

6.7. The main comments in relation to advanced payments were: that this constituted a retrospective "clawback", that funds have already been invested, the impact on certainty for suppliers, and the impact on the smart meter rollout.

**Considerations**

6.8. Please see Appendix 7 for our consideration of stakeholder feedback on advanced payments.

## Contingency allowance

**Context**

6.9. Through this review, we intend to develop revised values to update the SMNCC allowances which will apply from October 2021 onwards. However, we need to consider what the contingency SMNCC allowance should be for cap period seven, in the event that we cannot complete this review in time.

6.10. We need a contingency SMNCC allowance because we must set the level for cap period seven by a fixed date. A contingency allowance therefore ensures that there is still a reasonable SMNCC allowance in place, even if we are not able to conclude our review in time.

6.11. We discussed the contingency allowance in SMNCC WP1.[95] We explained that – as a result of our August 2020 decision – the relevant model used to set the cap (Annex 5 of standard condition 28AD of the electricity and gas supply licences) now specifies SMNCC values for future cap periods. We said that these values could be a suitable fallback, but that the appropriateness of these default values would depend on our revised assessment of net costs.

**Proposals**

6.12. If we require a contingency allowance, we propose to use our updated SMNCC model as a starting point, which we would adapt to set the contingency allowance. This would make use of the most recent data available.

6.13. However, if we considered (after examining stakeholders' representations) that we could place limited or no weight on the updated SMNCC model to set the contingency

[95] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 4.13 to 4.18. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

allowance, then we propose to use the same SMNCC values as in cap periods five and six. This would reflect that some of our proposals would increase the SMNCC, as it would be the higher of the two remaining contingency options in this situation.

**Overview of responses to our working papers**

6.14. One supplier said that "our current view is that the allowance implied by Annex 5 will be insufficient to fund the minimum volumes foreseen in BEIS current consultation".

**Considerations**

6.15. In this section, we first consider the purpose of a contingency allowance. We set out options for a contingency allowance, and then discuss them.

*Purpose of a contingency allowance*

6.16. In response to our May 2020 consultation, one supplier said that the objective of contingency "is to protect rollout while Ofgem reaches a considered view". It said that we needed to consider whether suppliers would be "forced to scale back their rollout plans" as a result of contingency. It said this would harm consumers and make it difficult for suppliers to scale their rollout programmes back up at a later date. We did not respond to this point in our August 2020 decision. It was not relevant then, given that we decided not to adopt a contingency allowance.

6.17. This point assumes that the cap is a binding constraint on the amount suppliers can spend on their smart meter rollout programmes, even in the short term. We do not agree – we consider that suppliers have some ability to manage any temporary differences between revenues and costs. We therefore do not accept that a temporary[96] shortfall in the SMNCC would compel a supplier to reduce its smart metering operations.

[96] Any shortfall in the SMNCC would be temporary, because we would take it into account through advanced payments in our next review.

*Options for a contingency allowance for cap period seven*

6.18. We have identified three options for a contingency allowance for cap period seven.

- **Annex 5 SMNCC:** In our August 2020 decision, we defined SMNCC allowances for all remaining cap periods. This means that we have existing SMNCC values in Annex 5. For cap period seven, the Annex 5 SMNCC is £11.37 for a typical dual fuel customer.

- **Cap five/six SMNCC:** We set the SMNCC for cap period five using our August 2020 SMNCC model. We then froze the SMNCC at the same value for cap period six. This was £17.12 for a typical dual fuel customer. Another contingency option is therefore to keep the SMNCC for cap period seven at this level.

- **Updated model contingency:** We have developed an updated SMNCC model as part of this review. We could therefore start with the SMNCC values from this model (as set out in Appendix 1) and adjust them upwards to provide a contingency value.

*Discussion of options*

6.19. Even if we were unable to use our revised assessment of net costs to update the SMNCC allowance, it might still provide a broad indication of the likely scale of costs. The reliability of the updated SMNCC model as a starting point would depend on the extent to which we considered stakeholders had raised valid concerns in response to this consultation.

6.20. We propose to use the updated model contingency because it would take into account the most recent data available. The precise adjustment that we would apply would depend on the issues raised by stakeholders in response to the consultation.

6.21. However, for completeness, we need to consider the case where we could place limited or no weight on the updated SMNCC model. In that situation, we propose to use the cap five/six SMNCC. This reflects that we are proposing to use a market leader tolerance rollout profile (rather than an average target rollout profile), and to include some sunk installation costs in 2021. Both these proposals increase the SMNCC for cap period seven. Neither the Annex 5 SMNCC nor the cap five/six SMNCC take these proposals into account. However, the cap five/six SMNCC is higher than the Annex 5 SMNCC, and therefore could be more appropriate as an approximate way of reflecting these proposed positions.

6.22. In a future review, we would then consider any difference between the allowance provided and our revised assessment of the SMNCC for cap period seven. We would take this difference into account through advanced payments. This would ensure that we were eventually recovering the appropriate level of efficient costs.

# Appendices

**Index**

| Appendix | Name of appendix |
|---|---|
| 1 | Current estimate of proposed SMNCC values |
| 2 | Current estimate of average tolerance SMNCC values |
| 3 | Similarities and differences between the credit SMNCC and PPM SMNCC |
| 4 | Consideration of stakeholder comments on a target approach |
| 5 | Data updates |
| 6 | Review of uncertainty |
| 7 | Consideration of stakeholder comments on advanced payments |
| 8 | Privacy notice on consultations |

# Appendix 1 – Current estimate of proposed SMNCC values

1.1. We propose to make the changes to the SMNCC (as set out in this consultation) in the document 'Annex 5 – Methodology for determining the Smart Metering Net Cost Change' referred to in standard condition 28AD of the electricity and gas supply licences.

1.2. Within that document, we propose to make changes to sheet '2a Non pass-through costs', cells O7:S8.

1.3. The values we currently propose to insert are set out in the table below. These are the output values from the SMNCC model we have disclosed. At the decision stage, we intend to use the output values from the SMNCC model as revised (for example to include new information on rollout in the first half of 2021).

**Table A1.1: Values to insert into annex 5 of SLC28AD**

| Title | Cap period seven | Cap period eight | Cap period nine | Cap period ten | Cap period eleven |
|---|---|---|---|---|---|
| Electricity | 10.26 | 9.78 | 9.89 | 10.00 | 10.00 |
| Gas | 3.33 | 1.99 | 1.65 | 1.32 | 1.32 |

**Notes:** All values are £/customer, nominal.

# Appendix 2 – Current estimate of average tolerance SMNCC values

1.1. As set out in this consultation, we are proposing to use a market leader tolerance rollout profile to set the SMNCC. This appendix shows what the SMNCC would be if we alternatively calculated it using an average tolerance rollout profile.

1.2. In line with Appendix 1, we produced these figures using our current SMNCC model (except in this case we use an average tolerance rollout profile). If we were calculating the SMNCC using an average tolerance rollout profile for our decision, we would use the output values from the SMNCC model as revised (for example to include new information on rollout in the first half of 2021).

**Table A2.1: SMNCC calculated using an average tolerance rollout profile - electricity**

| Title | Cap period seven | Cap period eight | Cap period nine | Cap period ten | Cap period eleven |
|---|---|---|---|---|---|
| SMNCC: Electricity | 9.49 | 9.42 | 9.72 | 10.03 | 10.03 |
| Advanced payments adjustment: Electricity | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 |
| **Final SMNCC: Electricity** | **9.44** | **9.38** | **9.68** | **9.98** | **9.98** |

**Notes:** All values are £/customer, nominal.

**Table A2.2: SMNCC calculated using an average tolerance rollout profile - gas**

| Title | Cap period seven | Cap period eight | Cap period nine | Cap period ten | Cap period eleven |
|---|---|---|---|---|---|
| SMNCC: Gas | 4.75 | 4.13 | 3.95 | 3.77 | 3.77 |
| Advanced payments adjustment: Gas | 1.92 | 1.93 | 1.96 | 1.98 | 1.98 |
| **Final SMNCC: Gas** | **2.83** | **2.19** | **1.99** | **1.79** | **1.79** |

**Notes:** All values are £/customer, nominal.

# Appendix 3 – Similarities and differences between the credit SMNCC and the PPM SMNCC

1.1. For the elements covered in this consultation, the table below sets out how our approach is the same or different between the credit SMNCC and the PPM SMNCC.

**Table A3.1: Similarities and differences between the credit SMNCC and the PPM SMNCC**

| Subject in this consultation | Approach for the PPM SMNCC |
|---|---|
| Rollout (Chapter 3) | Different approach for the PPM SMNCC |
| Sunk installation costs (Chapter 4) | Same methodology used to set the PPM SMNCC – but different values as uses PPM-specific data |
| Costs per installation achieved (Chapter 4) | Same methodology and values |
| Installer productivity (Chapter 5) | Same methodology and values |
| Marketing costs (Chapter 5) | Same methodology and values |
| Smart meter asset and installation costs (Chapter 5) | Same methodology and values |
| Advanced payments (Chapter 6) | Different approach for the PPM SMNCC |
| Contingency allowance (Chapter 6) | Different approach for the PPM SMNCC |
| Smart Meters Annual Information Request data (Appendix 5) | Costs have same methodology and values. Benefits not used to set the PPM SMNCC |
| Other data gathering (Appendix 5) | Applies to the PPM SMNCC |
| Minor updates (Appendix 5) | Same methodology and values – except for the meter rental uplift, which has PPM-specific values for traditional meters |
| Model simplification (Appendix 5) | Applies to the PPM SMNCC |
| Review of uncertainty (Appendix 6) | PPM SMNCC consultation has a review of uncertainty which cross-refers where relevant |

# Appendix 4 – Consideration of stakeholder comments on a target approach

1.1. This appendix contains our consideration of stakeholder comments on a target approach to setting the rollout profile.

**Self-fulfilling**

1.2. One supplier said that we had suggested suppliers could not be trusted to use funds to achieve the target (rather than the tolerance). It said that only funding to the tolerance would make this a "self-fulfilling prophecy". Similarly, another supplier said that if we do not provide funding to the target "there is no prospect whatever of targets being achieved".

1.3. As we are proposing a market leader tolerance approach, most suppliers will be able to collect more revenue than they require to meet their obligations. They could choose to spend this additional revenue on delivering more smart meters, and we would strongly encourage them to do so. Some suppliers will also have below average unit costs and would therefore be able to roll out more smart meters than average with a given amount of revenue. Many suppliers would therefore be able to roll out more smart meters than their obligations.

1.4. A target approach would enable suppliers to collect further revenue beyond that needed to meet their obligations. A supplier may spend this money on rolling out smart meters. However, as discussed in Chapter 3, we do not have sufficient confidence that suppliers (in aggregate) would spend additional revenue on smart metering. We therefore do not consider that our proposed rollout profile will have a significant impact on the rollout that suppliers achieve in practice.

**Smart meter benefits**

1.5. Several stakeholders said that a lower SMNCC could delay the realisation of smart meter benefits for customers.

1.6. The SMNCC only affects smart meter benefits insofar as it affects the number of smart meters that suppliers roll out. As set out in Chapter 3, the key driver of the number of smart meters that suppliers roll out will be their obligations. We therefore do not consider that the SMNCC will have a significant impact on the timing of smart meter benefits.

1.7. Even if the SMNCC did affect some suppliers' decisions about how many smart meters to roll out, we cannot consider the benefits of smart metering in isolation – we also need to

consider the costs to customers of providing a higher SMNCC. These costs to customers (through the cap) would be immediate and highly likely.

**No regrets**

1.8. One supplier said that setting a high SMNCC allowance would be a no regrets strategy, as we could use annual reviews and advanced payments to make a downward correction if necessary. It said that a high SMNCC allowance would remove barriers to rollout.

1.9. A high SMNCC allowance has an immediate cost to customers. As set out in our decision on the COVID-19 float for cap periods four to six, suppliers are better placed to manage cash flow risk than default tariff customers are. They typically have better access to capital and at a lower cost.[97] We would therefore be concerned about customers paying more than suppliers are likely to require, even if it was temporary.

1.10. The advanced payments[98] point is also applicable in the opposite situation. If suppliers[99] roll out more smart meters than expected, then advanced payments would provide additional revenue to suppliers in later periods. We therefore do not need to provide suppliers with a large upfront allowance to cover any potential overperformance. (Two stakeholders made a related point in response to SMNCC WP2 and the second PPM working paper. One stakeholder said that it would be fairer to set a less generous allowance immediately and then correct ex post, while the other stakeholder said that an annual review could allow for the possibility of suppliers exceeding their obligations).

**Safety margin**

1.11. Several stakeholders referred to the intended role within the framework of the annual tolerance levels. One supplier said that the purpose of the tolerances is to allow a contingency margin ('safety margin') before suppliers become exposed to penalties for non-compliance. Two stakeholders said that failing to fund to the target makes the concept of tolerance levels meaningless.

[97] Ofgem (2021), Decision on the potential impact of COVID-19 on the default tariff cap, paragraph 3.18. https://www.ofgem.gov.uk/system/files/docs/2021/02/decision_on_the_potential_impact_of_covid-19_on_the_default_tariff_cap.pdf
[98] We cover advanced payments in Chapter 6.
[99] Under our proposal to use a market leader tolerance rollout profile, this would depend on the performance of the market leader only.

1.12. The tolerance profiles are suppliers' legal obligations. There is no legal requirement on suppliers to roll out more smart meters than this.[100] Using a higher rollout profile would increase costs to customers, with a significant risk that it would not be a cost-effective way of increasing rollout.

**Overshooting**

1.13. The 'overshooting' point relates to whether suppliers may choose to aim above the tolerance profile for compliance reasons. (This is separate to the safety margin point before – while both were intended to support providing revenue above the tolerances for compliance reasons, the overshooting point is specifically about the actions of suppliers, rather than the intended role of the annual tolerance levels).

1.14. Several suppliers said that suppliers would aim to roll out more smart meters than the tolerance. One supplier said that prudent suppliers would aim to overshoot the tolerance, given the penalties for non-compliance. In response to a clarification question, one supplier set out several reasons why suppliers would need to aim above the tolerance. In summary, it said:

- customer demand is unpredictable, so suppliers have to maximise activities to generate demand
- whether a booking results in a successful installation is not wholly within suppliers' control, given factors such as physical and technical limitations and customers not being present at the time of the appointment
- when a customer with a smart meter switches away, the supplier's obligation will be higher in future years, so it is prudent to mitigate this risk by rolling out as many smart meters as possible
- the new framework places fixed requirements on suppliers, so suppliers need a cushion to account for the above.

[100] The target rollout profile for each supplier and the annual tolerance level which is applied to each supplier's target are both just intermediate steps in BEIS's calculation of suppliers' legal obligations.

1.15. Looking first from a compliance perspective, we consider that suppliers are likely to aim slightly above their obligations, to reduce the chances that their outturn rollout is below their obligations. However, even if they do this, most suppliers will still receive sufficient revenue to cover their efficient costs, given our proposal to use a market leader tolerance rollout profile.

1.16. Failure to meet minimum installation obligations will be a breach of licence. Suppliers should be mindful of the financial and reputational risks of enforcement action. In particular, as well as recovering any supplier gain from non-compliance (including consideration of funding received via the cap), penalties include an additional penal element, meaning that the total penalty significantly exceeds the gains.

1.17. Smart meters in credit mode are a net cost to suppliers (during the life of the cap),[101] so a supplier would have little incentive to roll out smart meters beyond its obligations. However, there is not a precise relationship between the resources suppliers commit to their rollout programmes and the rollout they achieve, given that rollout can also be affected by factors outside suppliers' control. This limits the extent to which suppliers can precisely calibrate their resources to exactly deliver their obligations, while still remaining confident of meeting their obligations in most years.

1.18. Suppliers can aim for an even higher level of rollout – in line with (or above) their targets. This would align with BEIS's policy ambition of market-wide rollout. Individual suppliers may make different decisions about the level of rollout that they aim for. However, as noted above, there is little incentive for suppliers to roll out smart meters beyond their obligations.

1.19. A market leader tolerance profile will already provide most suppliers with more revenue than they require to cover the efficient costs of meeting their obligations. There is only a potential risk of incurring higher efficient costs than the allowances for the market leader (or suppliers close to the market leader). However, this risk is mitigated by our policy design.

- If the market leader rolls out more smart meters than its obligations, then we would take this into account in our next review.

[101] Ie during the period covered by the SMNCC model.

- If suppliers[102] plan installations above their obligations, but external factors mean that their outturn rollout is only in line with their obligations, then this would result in a higher cost per installation. The SMAIR data from BEIS includes the cost per successful installation. We would be able to take this into account in our next review.

- In each case, we would take any cost difference into account through advanced payments. Suppliers would therefore receive additional revenue in this case, albeit in arrears.

**Other point**

1.20. One supplier said that there was a precedent for a target approach, referring back to our use of an EU target when setting the rollout profile for our 2018 decision.[103]

1.21. We do not agree that our previous decision sets a precedent. There is a new rollout framework coming into force which provides clear numerical values for the obligations that suppliers will have to meet, reducing the degree to which we need to estimate a suitable rollout profile.

[102] We calculate costs based on data across suppliers, so this would not solely be driven by the market leader.
[103] In our 2018 decision, we used a rollout profile based on the EU target for installing electricity smart meters by the end of 2020.
Ofgem (2018), Default Tariff Cap: Decision. Appendix 7 – Smart metering costs, paragraph 1.13.
https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_7_-_smart_metering_costs.pdf

# Appendix 5 – Data updates

## Smart Meters Annual Information Request data

### Context

1.1. Suppliers[104] submit SMAIR data to BEIS each year. This data provides information on costs related to smart and traditional metering that they have incurred in the previous year.

1.2. We discussed this data in SMNCC WP1.[105] We said that we intended to update the SMNCC model using SMAIR data in certain areas. We did not intend to update the other areas included in the SMAIR.

### Proposals

1.3. In line with our August 2020 decision, we propose to update the SMNCC model using SMAIR data in the following areas: the costs of smart meters, communications hubs and IHDs; and the number and cost of avoided site visits. This is to ensure that the significant inputs are updated.

1.4. We do not propose to use SMAIR data to update smart meter installation costs, as we have gathered our own data (see Chapter 4).

1.5. We propose to update the remaining areas where we receive data through the SMAIR. This means updating four additional smart metering benefits: change of supplier, inbound enquiries, debt, and remote change of tariff. We are proposing to carry out these updates given that we have received this data from BEIS.

[104] Those defined as Large Energy Suppliers for the purpose of smart meter reporting.
[105] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 2.1 to 2.5. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

1.6. We propose to make some consequential edits as a result of using the SMAIR data. These are: removing optimism bias from the 2020 values, starting any assumed cost erosion[106] from after the last actual data, and updating the baseline adjustment for payment methods.[107]

**Overview of responses to our working papers**

1.7. One supplier said that it broadly agreed that we should use SMAIR data to update the SMNCC model.

1.8. One supplier said that the assumed benefits of smart metering were too high. Another supplier disagreed that a general update using SMAIR data would be disproportionate, given that this data would be available to us. It said that any selective use of data would require careful consideration.

**Considerations**

*Main areas to update*

1.9. Our considerations for the main areas to update are unchanged since SMNCC WP1. This is with the exception of installation costs, where we now propose to use the data we gathered (see Chapter 4), rather than the SMAIR data.

*Additional benefits to update*

1.10. After considering stakeholder feedback, we are now proposing to update the four additional benefits. This is because we will receive this data anyway, so it is relatively straightforward to update these benefits.

[106] The SMNCC model assumes that the costs of smart meter assets and SMETS1 communications hubs decline slightly over time, for years where data is forecast. The SMNCC model refers to this as cost erosion.
[107] For the avoidance of doubt, the figures in Appendix 1 and Appendix 2 incorporate all the proposals in this appendix.

1.11. The rationale for updating these benefits is not based on their scale, or on the age of the data we used in the August 2020 decision.

- These four additional benefits are small in relation to other aspects of the SMNCC model, especially the costs of buying and installing meters.

- We would not expect that the benefits per smart meter would change significantly over time. This is given that these savings are largely based on the costs of suppliers' operational processes for traditional meters, which are established. The values in the August 2020 SMNCC model are based on SMAIR data from 2019, and so remain recent.

1.12. Updating these benefits therefore does not establish a general principle that we must update all other (non-SMAIR) inputs to the SMNCC model. We would have to carry out bespoke data gathering to update other inputs which are based on previous RFIs. We do not consider this would be proportionate, especially given we would not expect significant changes since our August 2020 decision.

1.13. We maintain the position from our August 2020 decision that we do not expect to carry out future reviews with the same level of detail as our May 2020 consultation, as we consider this would be disproportionate.[108]

*Consequential changes*

1.14. As indicated in SMNCC WP1,[109] where we update input data, we also propose to make consequential changes to the SMNCC model to reflect the fact that this data is now actual rather than forecast.

[108] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 5.39.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[109] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 2.4.
https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

1.15. We propose to no longer apply optimism bias[110] to the 2020 values which are now based on actual data. Optimism bias should only apply to the remaining years (2021 and beyond) where data is forecast.

1.16. We propose to start any assumed cost erosion from after the last actual data – ie from 2021. We would not apply cost erosion to years where we have actual data, as this would change the actual data.

1.17. We have an adjustment in 2017 to split the combined baseline net cost of smart metering (ie the amount reflected in the operating cost allowance) between credit and PPM. This adjustment accounts for the different costs across payment methods in that year.[111] The updated benefit input values affect the calculations for each year, including 2017, so have affected the size of this baseline adjustment slightly. We therefore propose to update this adjustment in the SMNCC model.

## Other data gathering

### Context

1.18. In SMNCC WP1, we said that we did not intend to carry out any further data gathering. We encouraged any stakeholders who disagreed to explain their rationale.[112]

### Proposals

1.19. We do not propose to gather other data to update the SMNCC model. We do not consider that further data gathering is likely to increase the accuracy of the SMNCC model significantly, or that this would be a proportionate use of resources.

[110] For more information about optimism bias, see: Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 3.338 to 3.351. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[111] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.78. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[112] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraphs 2.6 to 2.10. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

### Overview of responses to our working papers

1.20. One supplier said that it broadly agreed that extensive further data gathering was unlikely to be necessary.

### Considerations

1.21. We maintain our previous considerations from SMNCC WP1.

## Minor updates

### Context

1.22. We discuss the rollout profile in Chapter 3 of this consultation. This section discusses some more minor issues which relate to, or are affected by, rollout. These are points which do not require RFIs.

### Proposals

1.23. We propose to update the following inputs to the SMNCC model: the profile for the proportion of SMETS1 meters enrolled with the DCC, the date at which SMETS1 meters are treated as enrolled, the proportion of SMETS1 meters expiring early, the scaling factors for the proportion of SMETS1 meters losing smart functionality, and the proportion of installations which are SMETS1 or SMETS2 for 2020 and 2021. These updates are to better reflect the current situation, given the impact of COVID-19 on installations and the enrolment of SMETS1 meters.

1.24. We propose to turn off the bottleneck uplifts in the SMNCC model (which increase costs in years when a large number of smart meters are installed), as otherwise these would be triggered by our proposal to apply a market leader tolerance rollout profile from 2018. This would not reflect reality.

1.25. We propose to update the meter rental uplift values, taking into account the revised rollout in our proposal.

### Overview of responses to our working papers

1.26. We did not discuss these minor issues in our working papers.

**Considerations**

*SMETS1 enrolment*

1.27. The net costs of SMETS1 meters in the SMNCC model depend on whether they have been enrolled with the DCC or not. The net costs are lower once the meter has been enrolled.

1.28. In response to SMNCC WP1, one supplier said that we should incorporate additional costs due to ongoing delays to enrolment.

1.29. SMETS1 enrolment is ongoing. However, we recognise that the progress of enrolment is behind the expectations in our August 2020 decision.[113] We therefore consider that it is reasonable to update the assumptions in this area. These relate to the following points.

- **Profile for the proportion of SMETS1 meters enrolled with the DCC:** In our August 2020 decision, we used a profile provided by BEIS. We do not have an updated expectation for the rate of enrolment in future years. However, enrolment is behind previous expectations, but will continue progressing in future years. We therefore propose to shift the August 2020 decision enrolment profile back one year for all the years that were forecasts (ie 2020 and subsequent years). This reflects later enrolment, while still using the best information available to us on how enrolment is likely to progress over time. We then propose to estimate enrolment in 2020 by averaging the enrolment profile values for 2019 and 2021. If more accurate information becomes available in time for the decision, then we intend to update this profile accordingly.

- **Date at which SMETS1 meters are treated as enrolled:** The SMNCC model also includes a single date value when enrolment is treated as complete. This assumption was previously 2021 – we propose to change this to 2022.

- **Proportion of SMETS1 meters expiring early:** The SMNCC model includes an assumption for the proportion of SMETS1 meters expiring early for reasons unrelated to enrolment. We assumed that this would fall from a level based on

[113] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.141. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

historical data to a low enduring rate once enrolment was complete and assumed a straight line decline between these points. Given the revised enrolment competition date, we now assume a more gradual decline.

*Proportion of SMETS1 meters losing smart functionality in each year*

1.30. Smart meters can lose smart functionality. In particular, if a customer with a SMETS1 meter which is not enrolled with the DCC switches supplier, the gaining supplier may not be able to communicate with the meter.[114] In our August 2020 decision, we decided to amend the assumed number of SMETS1 meters losing smart functionality to align with the latest data.[115] We used a scalar to do this.

1.31. As noted above, SMETS1 enrolment is not yet complete. Some unenrolled SMETS1 meters will therefore have lost smart functionality in 2020. This reduces the benefits of smart metering, as we assume that SMETS1 meters which lose smart functionality do not deliver benefits to suppliers.

1.32. BEIS has published updated data on the number of smart meters operating in traditional mode.[116] We therefore propose to use this data to calculate an updated scalar, so that the stock of smart meters in traditional mode at the end of 2020 reflects the BEIS smart metering statistics. This updated scalar would apply for 2020 (and beyond).

1.33. We maintain a separate scalar for 2019 (and previous years). However, we need to edit the value of this scalar, as a consequence of changing the proposed rollout profile. By using a higher rollout profile, there are more smart meters in total. However, the absolute number of

[114] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.25 and 4.26. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[115] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.24. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[116] BEIS (2021), Smart Meter Statistics in Great Britain: Quarterly Report to end December 2020, Table 1. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968356/Q4_2020_Smart_Meters_Statistics_Reportv2.pdf

smart meters in traditional mode in 2019 is still the same. We therefore need to adjust the scalar so that it maintains the same absolute value.

*Proportion of SMETS1/SMETS2 installations*

1.34. The SMNCC model includes an assumption for the proportion of SMETS1 and SMETS2 installations for each year. The meter type affects factors such as the smart meter asset cost.

1.35. Suppliers should now be installing SMETS2 meters. The assumptions in the August 2020 model reflected this, assuming a very low proportion of SMETS1 installations in 2020, and 100% SMETS2 installations in 2021.

1.36. However, industry data shows there are still a small number of SMETS1 installations ongoing. We therefore propose to update the assumption for 2020 to reflect a full year of data, and for 2021 to reflect the proportion in the first months of 2021. In each case, we propose to use industry data, which is the best source available to us for these years.

1.37. The proportion of SMETS1 meters installed might decline over the course of 2021. However, we consider that it is sufficient to use the proportion from the first months of 2021, rather than estimating a decline over 2021. The impact of a decline would be very small given that SMETS1 meters are already a small proportion of total installations.

*Bottleneck uplifts*

1.38. The SMNCC model includes bottleneck uplifts for installations, smart meter assets and IHDs. These increase those costs in years where a large proportion of smart meters are installed (above a certain threshold).

1.39. These bottleneck uplifts are not ordinarily triggered by the annual rates of rollout in the SMNCC model. However, under our proposal to use a market leader tolerance rollout profile, there is a significant jump in rollout in 2018. This reflects that we do not change the rollout figure in 2017 (or before), as we are calculating the change in smart metering costs relative to a fixed 2017 operating cost baseline.[117] There is therefore a jump between a weighted

[117] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 2.2. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

average rollout profile in 2017 and a market leader tolerance rollout profile in 2018. This jump could be sufficient to trigger the bottleneck uplifts (dependent on which supplier was the market leader).

1.40. This does not reflect a real-world issue – in practice the market leader did not install a large proportion of its smart meters in a single year, and therefore would not have incurred a cost increase as a result. We therefore propose to switch off the bottleneck uplifts, in order to avoid this issue in the SMNCC model.

*Meter rental uplifts*

1.41. In our August 2020 decision, we applied a meter rental uplift in certain cases to reflect the difference between our bottom-up estimate in the SMNCC model of installation and asset costs, and the data we collected on suppliers' meter rental payments.[118]

1.42. We gathered data on meter rental payments for 2019. When calculating the meter rental uplift, we therefore compare this against the costs of meters installed up to and including 2019 in the SMNCC model. (We then apply the same meter rental uplift to all years in the SMNCC model).

- The unit costs for this period were already historical at the time of our August 2020 decision, and so have not changed.

- However, the number of meters installed up to and including 2019 has changed in the SMNCC model, as a result of our proposal to use a market leader tolerance rollout profile. This affects the weighting given to the unit costs from different years (when calculating an average for comparison against meter rental payments).

[118] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.31.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
For further detail on the meter rental uplift, see: Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 3.27 to 3.57.
https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

1.43. We therefore propose to update the rollout profile used when calculating the meter rental uplifts, to reflect the changes to the SMNCC model. This is a consequential amendment following our proposed change from an average to a market leader approach. This corresponds to the approach we took in our August 2020 decision, when the rollout profile changed between our May 2020 consultation and our August 2020 decision.[119]

## Model simplification

1.44. In our August 2020 decision, we decided to review the SMNCC every 12 months.[120] In light of this, we have made some changes to simplify the model, so that it is more user-friendly for a series of annual reviews.

1.45. The changes have largely been to remove irrelevant material – particularly most of the non-domestic information,[121] and information on advanced meters. We have also made structural changes to reduce the number of input sheets in the SMNCC model. These changes were presentational – they did not affect the modelling results.

1.46. The SMNCC model still uses BEIS's 2019 CBA model as a starting point. We have not made wholesale changes to the modelling approach. We do not consider that this is necessary or proportionate. We respond below on a couple of specific points raised in response to the May 2020 consultation.

- We still model the change in the additional costs of smart metering (above a counterfactual without smart metering) since 2017. This is as opposed to removing the counterfactual costs and solely looking at the change in the total costs of smart metering since 2017, as suggested by one stakeholder previously. We agree that the two approaches should generate similar SMNCC results. However, the current approach gives us the ability to look at the additional costs of smart metering, rather than solely the total costs. The total costs could give a

[119] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.40. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[120] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 2.44. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[121] We have retained a small amount of non-domestic information, where this affects the calculated SMNCC values.

misleading impression of the costs of the smart metering programme. Removing the counterfactual would also involve significant changes to the 2019 CBA modelling approach.

- The SMNCC model has a number of subsidiary models. We have not merged these calculations into a single model, as suggested by one stakeholder previously. Given the number of calculations involved, we do not consider it would be practical to carry out all calculations within a single model. Having separate models is also more straightforward for disclosure purposes, as it allows us to share some material with suppliers and commercially-sensitive material with their advisers only.

# Appendix 6: Review of uncertainty

1.1. In this appendix, we first set out our high-level review of uncertainty. We then provide a more detailed assessment of individual sources of uncertainty, as supporting information for our high-level review.

## High-level review of uncertainty

**Context**

1.2. We calculate the SMNCC using the SMNCC model, which includes a significant amount of detail. However, our analysis is still subject to uncertainty. This is made up of uncertainties about individual elements of the analysis. These uncertainties can arise from (for example): assumptions, simplifications to the analytical approach, and choices about whether to gather and update data.

1.3. Some of these uncertainties are likely be conservative (increasing the SMNCC), and others are likely to be less-conservative (decreasing the SMNCC). This gives an overall balance of uncertainty – whether our calculated SMNCC is conservative or less-conservative. We can then consider whether to make a numerical uncertainty adjustment to the calculated SMNCC.

1.4. In our previous consultations and our August 2020 decision, we set out our assessment of the uncertainty around our calculated SMNCC values. In our August 2020 decision, we said that the net effect was roughly neutral. However, we said that there was a significant degree of conservatism for the period until our next review (ie cap periods five and six). This was due to our decisions to include sunk installation costs for 2020 and to freeze the SMNCC allowance for cap period six. We therefore did not include an uncertainty adjustment.[122]

1.5. However, the situation for cap period seven could be different. The previous reasons for our analysis to be significantly conservative should no longer apply – we have a more

[122] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.87 to 4.89. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

accurate estimate of sunk installation costs in 2020, and we are proposing to use the calculated SMNCC rather than freezing a previous allowance.

1.6. In SMNCC WP1, we included a short section on uncertainty. We welcomed comments on our August 2020 assessment of uncertainty, and on how we could determine the value of an uncertainty adjustment, if we considered that one was required.[123]

**Proposals**

1.7. We propose to continue assessing uncertainty qualitatively, in the same way that we did for our August 2020 decision. We consider that this is a straightforward and proportionate approach.

1.8. Our assessment of uncertainty suggests that the net effect is roughly neutral. We therefore do not propose to make a numerical uncertainty adjustment.

**Overview of responses to our working papers**

1.9. Suppliers commented on the scope of our review, and on our approach to assessing uncertainty.

**Considerations**

*Scope of review*

1.10. In response to SMNCC WP1, one supplier said that we should instead be consulting on adequacy of the headroom allowance, rather than on uncertainty. We do not consider the headroom allowance in this consultation, as it is outside the scope of this review of the SMNCC.

[123] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 4.3 to 4.7. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

*Approach to assessing uncertainty*

1.11. Two suppliers commented on our approach to assessing uncertainty.

- One supplier said that it welcomed our intention to consider uncertainty further. It acknowledged that uncertainties are difficult to quantify, but did not consider that we could be confident in the degree of conservatism claimed.

- One supplier said that the uncertainty assessment to date had been "subjective and not sufficiently transparent". However, it said that it was opposed to a numerical uncertainty adjustment, given that this would be based on a largely qualitative assessment.

1.12. We have considered whether there are viable alternatives to our previous approach (for example having a framework which classifies each uncertainty in a qualitative way). However, as set out in SMNCC WP1,[124] by their nature uncertainties are hard (or impossible) to quantify in a precise way. Even where we could quantify some uncertainties, we would not be able to do this in a consistent way for each uncertainty. Comparing different uncertainties would therefore inevitably require judgements. Furthermore, even if we had a framework for assessing uncertainty qualitatively, it would still not tell us what the value of any numerical uncertainty adjustment should be.

1.13. We consider that our existing approach is straightforward. It provides stakeholders with significant information on what we consider the uncertainties are, allowing stakeholders to comment on them. It does not go beyond this to suggest that our uncertainty assessment can achieve a high degree of precision, given that we know this is impossible.

1.14. We also consider that our existing approach is proportionate. Carrying out significant additional work on uncertainty would likely have a limited impact on the accuracy of the SMNCC allowance we set, given the inevitable degree of judgement involved. Assessing uncertainty is also only one step in setting the SMNCC.

[124] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 4.7. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

*Consideration of uncertainty*

1.15. The detailed review of uncertainty later in this appendix lists the full set of uncertainties – both those which are conservative (increasing the SMNCC) and less-conservative (reducing the SMNCC). These are largely unchanged from our August 2020 decision.

1.16. As noted above, the previous temporary conservative points (the sunk cost adjustment for 2020 and freezing the SMNCC allowance for cap period six) are no longer relevant. We have still included a sunk installation cost adjustment for 2021. This may be conservative, but to a lesser degree than in 2020.

1.17. We therefore consider that the net degree of conservatism remains roughly neutral. This reflects two factors:

- There are a large number of uncertainties in both directions, so these will net off to some extent.
- We do not consider that the uncertainties in one direction are systematically larger than those in the other direction.

1.18. Given our assessment is roughly neutral, we do not consider that a numerical uncertainty adjustment is required. As we cannot calibrate a precise numerical uncertainty adjustment, this conclusion would not be affected by small changes to our assessment of uncertainty.

## Detailed review of uncertainty: introduction

1.19. In this detailed review of uncertainty, we discuss conservative assumptions (ie those which increase the SMNCC), less-conservative assumptions (ie those which decrease the SMNCC), and further sources of uncertainty which do not have a particular direction.

1.20. In each case, our assessment is unchanged from the August 2020 decision, except where stated. We indicate which elements we have maintained, added and removed.

1.21. Given our assessment is largely unchanged, we do not explain each element in full. For background on each element, please see the technical annex to our August 2020 decision.[125]

## Detailed review of uncertainty: assessment of conservative assumptions

### Methodological considerations

1.22. We consider the following aspects of our methodological approach to be conservative.

*Choice of efficient benchmark (Maintained)*

1.23. We adopt a more conservative benchmark in our review of efficient costs than would normally be the case (ie average rather than lower quartile costs). This has regard to suppliers that have made above-average progress with their rollout. This will become even more conservative over time, as suppliers install more smart meters.

1.24. While we have not changed our approach since our August 2020 decision, our choice of efficient benchmark is more conservative than previously. This is because we are now proposing to take into account the impact on suppliers with above-average rollout through another mechanism (by using a market leader tolerance rollout profile). This reduces one reason for adopting a more conservative benchmark.

### Rollout profile

1.25. We consider the following aspects of our approach to rollout to be conservative.

[125] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

*Sunk installation costs in 2020 (Removed)*

1.26. In our August 2020 decision, we said that our approach to sunk installation costs in 2020 was conservative. This is no longer relevant, as we have updated 2020 sunk installation costs with actual data.

*Sunk installation costs in 2021 (New)*

1.27. As set out in Chapter 4, we now propose to include sunk installation costs in 2021. We propose to estimate this by flatlining the 2020 level (in real terms). We explain our reasoning why we consider this is conservative in Chapter 4.

*'Business as usual' in the first half of 2021 (Removed)*

1.28. In our August 2020 decision, we said that our assumption for suppliers' rollout performance for the first half of 2021 was conservative. We have changed our approach to estimating rollout in the first half of 2021, so this is no longer relevant.

*The new rollout target (Removed)*

1.29. In our August 2020 decision, we said that including the BEIS target to complete the rollout by mid-2025 was conservative. We are now proposing to adopt a tolerance approach to the rollout profile, so this is no longer relevant.

1.30. In our August 2020 decision, we said that it was conservative to use a historical productivity assumption (3.1 installations per installer per day), rather than the assumption in the 2019 CBA that suppliers would improve productivity to 5.0 installations per installer per day. We are now proposing to align to BEIS's latest analysis by including its operational fulfilment assumption, so this is no longer relevant.

**Smart metering in-premises costs**

1.31. We consider the following aspects of our smart metering in-premises cost assessment to be conservative.

*Premature Replacement Charges (Maintained)*

1.32. We have set PRCs based on modelled costs. The modelled costs exceed the actual charges suppliers paid in 2018 for traditional meters. (This is true before applying the meter rental uplift for electricity, and after applying the meter rental uplift for gas). This could indicate that our approach has a degree of conservatism. However, actual payments are likely understated due to internal transfers (particularly for electricity).

*Proportion of SMETS1 meters subject to PRCs (Maintained)*

1.33. Our PRC modelling assumes that all SMETS1 meters are subject to PRCs. However, the rental uplift we apply to our bottom-up calculation is based on SMETS1 meters, including the minority that are not subject to PRCs. This will therefore slightly double count the costs of removing meters early.

*868MHz asset costs (Maintained)*

1.34. We have included the costs of 868MHz assets.[126] However, as they are generally based on suppliers' expectations, there is a lower degree of confidence in these costs as opposed to other areas.

*Communications hub liquidated damages (Maintained)*

1.35. We maintain the liquidated damages assumption, even though this is much higher than the cost of a communications hub. The impact of changing this would be very small.

**Smart metering IT cost assessment**

1.36. We consider the following aspects of our smart metering IT cost assessment to be conservative.

[126] 868MHz assets are required in certain properties where the standard frequency (2.4GHz) would not enable communication between the smart meter, IHD and communications hub.

*Isolating additional IT costs from counterfactual costs (Maintained)*

1.37. We have taken account of the trend in reported IT costs related to smart metering, which likely overstates the trend in purely additional IT costs related to smart metering. We have also assessed the trend in total IT costs, which may better reflect the trend in truly additional IT costs (if we assume that counterfactual IT costs remain relatively constant over time). On that basis, the SMNCC may be higher than it should be. We have not modified this assumption, but consider that is conservative, and that the true costs are likely to be between the two assessments. (However, see the countervailing point within our less-conservative assumptions).

*DCC adaptor cost (Maintained)*

1.38. We maintain the DCC adaptor cost. This is conservative, because we already included the IT systems costs of large and mid-tier suppliers, and scaled them up to represent the full market. Adding the DCC adaptor cost as well may double count some of the IT costs for smaller suppliers. We expect this effect to be small, given the scale of these costs.

**Other costs**

1.39. We consider the following other aspects of our smart metering cost assessment to be conservative.

*Legal and organisational costs (Maintained)*

1.40. We have frozen legal and organisational costs at the 2017 level given suppliers' data, rather than reduce them in line with the 2019 CBA. Suppliers' RFI data suggests these costs will reduce, but the extent varies, and these costs are uncertain. We take a conservative approach, keeping the costs flat. We consider it particularly conservative to assume that these costs will be flat over the full potential length of the cap (ie right through to 2023).

*Tax (Maintained)*

1.41. We apply a tax adjustment to the full cost of capital. This assumes that the average market participant is entirely equity financed.

*Optimism bias (Maintained)*

1.42. We apply optimism bias at 10% to forecast costs (using the value from the Green Book).[127] This is conservative in our circumstances, because our input data for forecast years draw on realised costs in previous years.

*Operating and maintenance costs (O&M) (Maintained)*

1.43. Where a smart meter is replaced by another smart meter, we include the O&M costs for both smart meters in our assessment. This is conservative (in relation to meters operating in credit mode). The impact is very small, because of the small number of such replacements and the small scale of O&M costs.

**Our assessment of benefits**

1.44. We consider the following aspects of our benefits assessment to be conservative.

*Safety visit efficiency (Maintained)*

1.45. In our August 2020 decision, we decided to apply the same pavement reading inefficiency to safety visits that the 2019 CBA applies to meter readings. Although the distance between a supplier's smart meters at the end of the rollout would be the same as the distance between its traditional meters before the rollout, we consider it unlikely that during the transition period an efficient supplier would maintain the same level of efficiency that it currently has.

*Less debt (Maintained)*

1.46. We cannot robustly estimate the impact of reduced debt write off, which clearly benefits suppliers. The 2019 CBA considers this may save suppliers up to £60m a year – although this includes the consequential impact of increasing billing frequency for standard credit customers, which we decided to remove in our August 2020 decision.

[127] HM Treasury, Green Book supplementary guidance: optimism bias. https://www.gov.uk/government/publications/green-book-supplementary-guidance-optimism-bias

*Electricity-only SMETS1 switches (Maintained)*

1.47. We remove the switching benefit for all non-enrolled SMETS1 meters. This is because the benefit may not be achievable for gas meters (and therefore dual fuel customers). However, the model therefore does not include the benefit (which would be achievable) for SMETS1 electricity-only switches. We consider that the impact of this is likely to be very small, given the expected number of such switches.

*Theft (Maintained)*

1.48. We do not include any provision within the SMNCC model for smart meters leading to cost reductions in relation to theft. However, in line with the 2019 CBA, we still consider that smart meters are likely to help suppliers make savings in relation to theft. Not including theft within the SMNCC model is therefore conservative.

*Non-quantifiable benefits (New)*

1.49. We do not include any provision in the SMNCC model for wider benefits to suppliers from installing smart meters – for example by building a positive brand image or supporting growth in related products. These are inherently difficult to quantify.

## Detailed assessment: assessment of less-conservative assumptions

**In-premises costs**

*SMETS2 meters on deemed contracts (Maintained)*

1.50. The proportion of SMETS2 meters on deemed contracts (and therefore where suppliers pay higher rental charges) could rise over time as more customers switch away from the supplier who originally installed the meter.

*Recycled meters (Maintained)*

1.51. Some suppliers may face additional immediate costs when they re-install a meter that has previously been installed, if they have to pay for the entire installation cost upfront rather than amortising it over time.

*Non-installed meters (Maintained)*

1.52. Some suppliers may incur costs (rental charges) for meters and other assets that they have not yet installed. We would expect this generally to be small, as a supplier would have had a stock of smart meters in 2017 – although any impact could be larger in 2020 as a result of COVID-19.

*Stranded meter costs and DCC functionality (Maintained)*

1.53. Suppliers could incur additional stranded meter costs (or PRCs) if the DCC functionality ultimately does not allow them to reuse SMETS1 meters to replace failed SMETS1 meters post enrolment. This is small, because we already included stranded meter costs in the SMNCC model – the additional cost would therefore only occur where more meters are stranded than previously expected.

*Traditional meter age profile and PRCs (Maintained)*

1.54. We assume that no further traditional meters are installed since 2018. In practice, some traditional meters have still been installed, at least in 2019 and 2020. This means the actual age profile is slightly younger than we assume, and therefore the PRCs are higher. The effect is small, given the small numbers of traditional meters installed since 2018.

*SMETS1 meters failing enrolment (Maintained)*

1.55. As discussed in our August 2020 decision, recent data at that point raised the possibility that the proportion of SMETS1 meters failing enrolment, and therefore incurring PRCs, might be higher than we assume. However, we consider that any uncertainty is small, as we place limited weight on this data.

*SMETS2 PRCs (Maintained)*

1.56. We do not include PRCs for SMETS2 meters. A small proportion of SMETS2 meters may be replaced early due to meter faults.

*Use of lower quartile (Maintained)*

1.57. We use a lower quartile when applying the adjustment for differences in efficiency to certain cost areas in the 2017 baseline. This is slightly less-conservative, as the operating cost benchmark is set at lower quartile minus £5, rather than the lower quartile itself.

*Lags in SMAIR data (Maintained)*

1.58. Over time, we can replace forecast cost data for a given year with actual ASR data, through annual reviews. However, SMAIR data is only available with a lag. If costs are increasing over time (as has generally been the case for installation costs, and some suppliers expect that to continue), then the costs included when setting the SMNCC allowance would be lower than the costs suppliers incur (at the time they incur them). This would only create a timing impact on suppliers, until consideration of any advanced payments through a future review. If costs started falling, lags would have the opposite effect. However, based on current trends and representations we take the view that the effect of lags is not likely to be conservative.

**Smart metering IT costs**

*IT operating costs (Maintained)*

1.59. We assume future IT operating costs decrease by 25% in future years. There is a risk that they fall by a smaller percentage or flatline for future years.

*Allocation of IT costs into the operating cost benchmark (Maintained)*

1.60. The smart metering IT costs which may be included in the operating cost benchmark are affected by any potential misallocation of suppliers' non-smart IT costs as smart IT costs. This is moderately less conservative.

*Impact of misallocation of smart IT costs on the trend (Maintained)*

1.61. Any misallocation of smart metering IT costs will also affect the absolute size of the reductions in smart metering IT costs over time. This is moderately less conservative.

**Other costs**

*Marketing costs (Maintained)*

1.62. In line with representations, we have not recognised financial benefits from marketing, only the reported costs. On average, these costs peaked in 2017. By not recognising any financial benefits we reduce the SMNCC allowance in 2018 by more than if we recognised benefits. We then freeze marketing costs at 2018 levels, which should become increasingly conservative in later years, as there will be fewer customers to contact.

*Restructuring costs (Maintained)*

1.63. Efficient suppliers may incur some restructuring costs as a result of adapting their businesses to smart metering (eg to realise benefits).

**Benefits**

*Differences in customers (Maintained)*

1.64. It is possible that customers that disproportionately create debt management costs will be less likely to get a smart meter early in the rollout. This could delay the benefits from smart meters reducing debt management costs. Similar issues arise for inbound customer calls, and when multi-register customers adopt a smart meter.

*Inbound customer calls (Maintained)*

1.65. In line with the 2019 CBA, we assume that the cost of calls from customers with a smart meter returns to the cost level of a customer with a traditional meter (as staff become more familiar with issues, and legacy problems are resolved). It is also possible that smart customers have persistently more complicated calls as the smart meters remove the need for 'simple' calls.

*Earlier identification of debt (Maintained)*

1.66. We include the earlier identification benefit, even though part of this relates to moving customers to prepayment remotely, which may not always be possible for gas customers due to safety reasons. At most, if a large fraction of the earlier identification relied on remote

switching to prepayment, this could eliminate the remaining value of the debt handling benefit.

*Remote change of tariff (Maintained)*

1.67. Some suppliers may have deprioritised the installation of smart meters for multi-register electricity meters. This could reduce the size of this benefit, at least in the early years of the rollout.

*Trends in Long-Run Variable Cost (Maintained)*

1.68. We use a Long-Run Variable Cost (LRVC) profile to project future energy costs, rather than flatlining. Flatlining would deliver a slightly lower LRVC, slightly reducing the debt benefit.

## Detailed assessment: assessing further uncertainty

**Default tariff customers (Maintained)**

1.69. The SMNCC model looks at the costs of the rollout for the domestic supply market, rather than focussing specifically on the default tariff customers who are the subject of the cap. We have not labelled this as a conservative or less conservative assumption, as the impact is ambiguous.

1.70. Suppliers suggest that default tariff customers are less likely than average to get a smart meter installed in the early years of the rollout (due to being on average less engaged). On that basis the costs and benefits in the early phase of the rollout may differ significantly from later in the rollout (as default tariff customers may require greater inducement or resources to install a smart meter, but the benefit of doing so could be higher).

*Timing differences in costs (Maintained)*

1.71. If installations for default tariff customers are cheaper than installations for customers as a whole, then later in the rollout (when the rate of installation is faster for default tariff customers than for customers as a whole) the SMNCC allowance would overstate their costs. If default tariff customers are more expensive (eg if they require more contact time per installation), then the opposite would be true.

*Timing difference in benefits (Maintained)*

1.72. The impact on benefits may be symmetrical and offsetting to costs. Suppliers are likely to receive greater benefits from default tariff customers following the installation of a smart meter than on average from customers as a whole. For instance, they are less likely to already submit accurate meter readings online, so the impact of a smart meter is greater than it would be for an engaged online customer with a fixed tariff.

**Impact of COVID-19 (Maintained)**

1.73. In our August 2020 decision, we said that COVID-19 could increase the degree of uncertainty around our assessment. This could still be true, but to a lesser extent, as we have now been able to incorporate 2020 data which takes into account the impacts of COVID-19.

**IT amortisation period (Maintained)**

1.74. There is some residual uncertainty around the IT amortisation period. We do not consider that this uncertainty necessarily has a direction – the assumption is conservative for some suppliers, and may be less conservative for other suppliers.

**Quality of SMAIR data (Maintained)**

1.75. There is some risk that suppliers have completed the SMAIR templates in different ways. This does not create a bias in a particular direction, but it could create uncertainty around our estimates. We consider that the likely impact is small however, given that the SMAIR is an established information request and that BEIS has checked submissions.

# Appendix 7 – Consideration of stakeholder comments on advanced payments

1.1. We considered advanced payments in detail in our August 2020 decision.[128] We do not duplicate the full discussion here – we focus on the points stakeholders raised in response to SMNCC WP1. This appendix should therefore be read alongside our August 2020 decision, which constitutes our consideration of the points stakeholders raised in earlier consultations. In practice, many of the points stakeholders raised in response to SMNCC WP1 were the same as those raised in earlier consultations.

**Alleged "clawback"**

1.2. Several stakeholders referred to the proposal as "clawback".

1.3. The smart meter rollout is a multi-year programme to reach an end goal of market-wide rollout. Suppliers have a degree of flexibility about the timing of installations. This affects their costs – partly because the installations already delivered have costs, but also because progress to date affects how many smart meters suppliers have left to install, and therefore the costs of future installations.

1.4. The upcoming cap periods therefore do not exist in isolation. The additional revenue that suppliers require in future depends on the allowances that they have already received through the cap and the costs that they have already incurred. As set out in our August 2020 decision, we are considering the cumulative costs and cumulative allowances.[129]

1.5. Historically, the smart meter rollout has been behind expectations, for a variety of reasons. Suppliers will therefore have received allowances in advance of carrying out installations (when looking on a dual fuel basis). We do not consider that it is appropriate for

[128] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.47 to 5.70.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[129] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.48.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

customers to pay twice for the same installations. This would not align with the customer protection objective of the Act.

1.6. However, there could also be cases where the cumulative allowances were below the cumulative costs. For historical periods,[130] this could occur because we are assessing advanced payments using a market leader rollout profile. In future, it is also possible that the market leader supplier rolls out more smart meters than it is required to. In each case, adjusting for advanced payments would ensure that suppliers are able to recover revenue which reflects the efficient costs of their smart meter rollout.

**Funds have already been invested**

1.7. One supplier said that funds which have already been invested in past periods cannot also contribute to rollout in future periods. Another supplier said that although rollout had been lower than expected in 2019, net costs were higher.

1.8. We considered this issue in the August 2020 decision. We noted that if a supplier had invested the SMNCC fully, the supplier would either have above average unit costs (inefficient costs) or above average rollout progress, or both.[131]

- We incorporate actual data on unit costs (for the key cost categories) once this is available. If unit costs are generally higher than expected (on average across suppliers) in a particular year, we will therefore take this into account before calculating advanced payments. However, as set out in our August 2020 decision, we do not consider that a supplier having above average unit costs is relevant.[132] We assess smart metering costs using an average efficiency standard. Individual suppliers' costs will vary around this.

[130] From cap period three onwards.
[131] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 5.65. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[132] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 5.66. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

- We incorporate actual rollout data once this is available. As we propose to assess rollout using a market leader tolerance rollout profile, we would incorporate data on the rollout that the market leader achieved. Therefore, if the market leader invested SMNCC allowances productively and increased its rollout, we would take this into account before calculating advanced payments.

1.9. For the avoidance of doubt, we are not suggesting that an individual supplier can spend money in a future period which it has already invested. Our proposed SMNCC (including our calculation of advanced payments) is based on an average efficiency standard and a market leader tolerance rollout profile, rather than being based on a particular supplier. Suppliers' individual situations will vary. Many suppliers will have spent less in previous cap periods than the SMNCC model suggests (given our proposal to use a market leader tolerance rollout profile), but it is possible that some suppliers have spent more (if they have high rollout and above-average unit costs). We must set a single cap level across suppliers, so we cannot reflect each supplier's individual circumstances.

**Impact on certainty for suppliers**

1.10. Two stakeholders said that the potential for further adjustments (based on annual reviews) would undermine suppliers' ability to plan and budget for their smart meter rollout programmes.

1.11. We considered similar points on certainty in our August 2020 decision.[133] In summary, while we considered that stability for planning is beneficial, we considered that avoiding the harm to customers or suppliers that would come from letting the allowances deviate substantially from suppliers' costs (in either direction) outweighs any incremental uncertainty from such an approach.

1.12. We recognise that a supplier will not have certainty on what advanced payment adjustments may later apply, and that the extent of advanced payments will depend on another supplier's rollout.[134] This could reduce a supplier's willingness to carry out discretionary spending on smart metering, beyond the amount required to meet its

[133] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.69 and 5.70. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[134] Except for the market leader.

obligations. However, we generally expect that suppliers' smart metering obligations will be the main driver for their planning. We would still expect this to be true even if we did not include advanced payments, given that smart meters in credit mode are a net cost to suppliers (during the life of the cap).[135]

1.13. One supplier also said that taking into account advanced payments would add risk, when suppliers were returning to business as usual rollout and facing a new set of smart metering obligations.

1.14. We recognise that suppliers will be having to take the impacts of COVID-19 into account when planning their rollout programmes, as well as their obligations under the new rollout framework. However, the new rollout obligations make it clear to suppliers what they must achieve, and these are separate to the cap.

**Impact on the smart meter rollout**

1.15. Two stakeholders said that taking advanced payments into account risked harm to the smart meter rollout programme. We do not agree. Advanced payments are the result of considering the cumulative allowances and cumulative efficient costs. Suppliers will receive sufficient revenue on a cumulative basis. The cumulative revenue is the relevant aspect – the revenue available through the cap does not have to match costs in any individual period.

**Addressing other comments in response to SMNCC WP1**

1.16. One supplier said that we could not lawfully prejudge future decisions. We take this to be a reference to our statement in SMNCC WP1 that: "In line with our August 2020 decision, we will therefore include advanced payments from the third cap period onwards in the seventh cap period (which starts in October 2021)".[136] For the avoidance of doubt, this statement was a reference to a decision that we already made in August 2020, following consultation. We have considered the feedback that suppliers provided on advanced

[135] Ie during the period covered by the SMNCC model.
[136] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 4.10. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

payments in response to SMNCC WP1 and will likewise consider the feedback received in response to this consultation.

1.17. One supplier said that we should carry out enforcement action against suppliers who had failed to invest allowances appropriately. We will assess all suppliers' compliance against their licence obligation, which is to take 'all reasonable steps' to complete the rollout by June 2021, in the round. Decisions on enforcement action, and any resulting penalty, will be taken in line with our enforcement guidelines. As well as recovering any supplier gain from non-compliance (including consideration of funding received via the cap), penalties include an additional penal element, meaning that the total penalty significantly exceeds the gains.

1.18. One supplier said that we had not explained our position that we cannot require suppliers to ring-fence allowances intended to support the smart meter rollout for that purpose. We still consider that this is the case.

- We cannot use the Act to require suppliers to ring-fence allowances. The Act requires us to control the revenue that suppliers can collect from their default tariff customers – but it requires us to set a single cap level across suppliers.

- Even if we could introduce ring-fencing requirements using our powers under another piece of legislation, we do not consider that this would be effective. The cap only applies to a subset of a suppliers' customers – there are no defined allowances in the fixed tariff segment to ring-fence. If we ring-fenced default tariff cap allowances only,[137] there would be a risk that suppliers would reduce the amount they spend on smart metering using revenue from the fixed tariff segment. This could mean no overall increase in smart metering spending, which would make ring-fencing ineffective.

1.19. One supplier said that new or growing suppliers would be underfunded, as the allowances for future periods would be reduced, without these suppliers having received advanced payments previously. We considered this point in our May 2020 consultation. As noted there, fast growing suppliers tend to price below the cap and serve a small proportion of default tariff customers.[138] Furthermore, we must set a single cap level across suppliers –

[137] Through a licence modification under the Electricity Act 1989 and Gas Act 1986.
[138] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory

this means that we cannot take into account changes in the size of each supplier's customer base. We consider that the priority (in line with the objective of the Act) is to protect customers by avoiding overfunding.

1.20. One supplier said that previous SMNCC allowances had been based on Ofgem assessing the funding required to meet 'all reasonable steps'. We set previous SMNCC allowances taking suppliers' obligations into account. However, we do not consider that this prevents us from reassessing what the SMNCC allowances should have been, and taking the difference (against previous SMNCC allowances) into account through advanced payments. When we have set previous SMNCC allowances, these have necessarily been based on projections. New information has become available over time for material cost areas, and we therefore consider that it is appropriate to incorporate this, in order to improve the accuracy of the cumulative allowances.

1.21. One supplier said that any overpayment would already have been returned to customers by suppliers offering lower prices than they would otherwise have been able to offer. We considered this point about competitive tariffs in our August 2020 decision.[139] To reiterate – the objective of the Act is to protect default tariff customers. We would not protect default tariff customers by allowing suppliers to overcharge them, even if the money was returned to fixed tariff customers. The large suppliers who have the majority of default tariff customers continue to price their default tariffs at the cap level, so we can be confident that default tariff customers did not receive lower prices as a consequence of suppliers receiving excess revenue through the SMNCC.

consultation, paragraph 7.47.
https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf

[139] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 5.62.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

# Appendix 8 – Privacy notice on consultations

**Personal data**

The following explains your rights and gives you the information you are entitled to under the UK General Data Protection Regulation (UK 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. ie a consultation.

**4. With whom we will be sharing your personal data**

We may share consultation responses with BEIS.
Please note that responses not marked as confidential will be published on our website. Please be mindful of this when including personal details.

**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 six months after the project, including subsequent projects or legal proceedings regarding a decision based on this consultation, 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".