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Consultation

Protecting energy consumers with prepayment meters: May 2020 consultation

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We are consulting on our proposals to protect energy consumers with prepayment meters after the expiry of the prepayment charge restriction ("the PPM cap"). We would like views from people with an interest in energy tariffs for energy consumers with prepayment meters. We particularly welcome responses from energy suppliers, consumer groups, and charities. We would also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at **Ofgem.gov.uk/consultations**. 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.

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Executive summary

Protecting energy consumers with prepayment meters

Extending protection for PPM customers

The PPM cap protects about four million energy consumers with prepayment meters (PPM customers). At the end of this year, the PPM cap is due to expire. In this consultation we propose to extend protection for PPM customers with default tariffs by including a new cap level within the default tariff cap specifically for PPM customers.

Introducing a PPM cap level within the default tariff cap

We propose to protect PPM customers with default tariffs from 1 October 2020. We seek to set a cap level for PPM customers using the updated methodology we propose in this consultation, which introduces an allowance that recognises the net impact of the smart meter rollout on suppliers' operating costs. Table 1 (overleaf) sets out our proposals.

If, following this consultation, we need to refine our proposals we will set the cap level between 1 October 2020 and 31 March 2021 using the current PPM cap methodology, ensuring continued protection for PPM customers. We would introduce a new methodology on 1 April 2021, subject to further consultation.

Traditional prepayment meters are expensive, so PPM customers cost more to serve than direct debit customers do. We include an allowance, the PPM uplift, to recognise the majority of those additional costs. We also propose to include an allowance for the impact of the smart meter rollout on suppliers' operating costs. The gross cost of purchasing and installing smart meters is similar for prepayment customers and credit customers. However, smart meters are cheaper than traditional prepayment meters. So, replacing traditional prepayment meters with smart meters reduces suppliers' operating costs, eroding the additional costs of serving PPM customers. For that reason, the smart metering allowance reduces the cap level.

Future reviews of the impact of smart meters and adjustments

We propose to review the impact of the smart meter rollout on suppliers' operating costs every 12 months. The pace and cost of the rollout is uncertain, not least because social distancing arrangements to mitigate the impact of the coronavirus (COVID-19) pandemic have substantially reduced the number of installations. When setting the SMNCC allowance for future periods, we will take into account any difference between the amounts suppliers charge customers (from 1 October 2020) and an updated assessment of the impact that the smart meter rollout has had on their efficient costs in that time.

We continue to monitor the impact of COVID-19 more generally.

Table 1: Proposed methodology for PPM level in the default tariff cap (using 1 April 2020 to 31 September 2020 as an illustrative cap period)

Allowance	Proposed methodology	Electricity	Gas
Wholesale	Use the same methodology as for other payment methods.	£202	£206
Network	Use the same methodology as for other payment methods.	£141	£132
Policy	Use the same methodology as for other payment methods.	£144	£25
Operating costs	Use the same methodology as for other payment methods.	£83	£95
PPM uplift	Benchmark to the level of the PPM uplift in the current PPM cap	£26	£42
Non-pass-through Smart Metering Net Cost Change (SMNCC)	Introduce a new allowance accounting for the net impact on operating costs of replacing traditional prepayment meters with cheaper smart meters	-£2	-£17
Pass-through SMNCC	Use the same methodology as for other payment methods.	£7	£5
EBIT	Use the same methodology as for other payment methods.	£12	£9
Headroom	Use the same methodology as for other payment methods.	£7	£5
Total supplier costs		**£619**	**£504**
VAT	Use the same methodology as for other payment methods.	£31	£26
Cap level		**£649**	**£529**

Notes:

- We propose to update the methodology from 1 October 2020. If we are not able to implement our proposals on 1 October 2020, we will use the current methodology (i.e. including a non-pass-through SMNCC set to £0).
- The allowances are set for the Typical Domestic Consumption Value (TDCV), which is 12,000 kWh for gas and 3,100 kWh for electricity. Customers that consume more energy will pay more.
- The non-pass-through Smart Metering Net Cost Change (SMNCC) allowance is negative, meaning that compared with 2017 the replacing traditional PPMs with cheaper smart meters has reduced the efficient operating costs of a supplier with an average smart meter rollout profile.

1. Introduction

What are we consulting on?

1.1. This statutory consultation sets out our proposals and rationale for providing price protection to energy consumers with prepayment meters ("PPM customers") after the expiry of the prepayment charge restriction ("the PPM cap").

1.2. We seek stakeholders' views on our proposals for protecting PPM customers. Stakeholders' responses will inform our final decision, which we intend to publish at the end of July 2020.

1.3. In this consultation, we discuss:

- the context to protecting prepayment customers (Chapter 1);
- our proposals to continue protecting prepayment customers after the PPM cap expires, using the default tariff cap (Chapter 2);
- our proposals for setting each allowance in a default tariff cap level for PPM customers (Chapter 3);
- the reasons for our proposals to set the PPM uplift, which recognises that suppliers' efficient costs are higher when serving prepayment customers compared with customers paying by direct debit (Chapter 4);
- the reasons for our proposals to set a Smart Metering Net Cost Change (SMNCC) allowance, which accounts for the net impact of replacing expensive traditional prepayment meters with cheaper smart meters on the efficient operating costs of a suppliers with an average rollout profile (Chapter 5);
- the reasons for our proposals to set a SMNCC allowance using a single rollout profile representing suppliers' average progress (Chapter 6);
- our proposals to review the SMNCC allowance every 12 months (Chapter 7); and
- when we propose to introduce the cap level for PPM customers (Chapter 8).

1.4. Alongside this document, we have also published the following materials:

- draft notice of modification to the licence conditions – these changes are required to the licence conditions to implement our proposals;
- updated default tariff cap overview model – the new model incorporates a PPM level and the wholesale adjustment; and
- the SMNCC model – we have provided access to the SMNCC model and data that informs our SMNCC proposals. In this model, we calculate the credit and PPM levels of the SMNCC. Access to the model and data can still be made by application and is subject to our disclosure arrangement. Please see our website for details.

1.5. The consultation constitutes this document and the disclosed models and data. We do not, as a matter of style, ask questions explicitly about each specific aspect of our proposals and methodology. We present our proposals, the reasons and modelling underpinning them, and the issues we have considered. We invite stakeholders to comment on the contents of the consultation, providing their views and evidence as appropriate.

Context and related publications

The price caps currently protecting customers

The PPM cap

1.6. The Competition and Market's Authority (the CMA) designed and introduced the PPM cap as part of the package of remedies from the energy market investigation.[1] It found weak competition and barriers to engagement in the PPM segment of the retail energy market. It decided to protect PPM customers until the smart meter rollout was complete, which the CMA believed would remove technical barriers to engagement – a prerequisite for effective competition.

[1] CMA (2016), Energy market investigation – Final report. https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf

1.7. The PPM cap has been in place since April 2017, protecting all PPM customers without an interoperable smart meter – approximately four million customers at the time. In practice, we allow suppliers to charge PPM customers with an interoperable smart meter at the level of the PPM cap.[2] The PPM cap protects default tariff customers and customers that have actively chosen Fixed Term tariffs ("FTs").

The default tariff cap

1.8. We introduced the default tariff cap on 1 January 2019, protecting over 11 million customers on standard variable and default tariffs (which we refer to collectively as "default tariffs").[3] The default tariff cap ensures default tariff customers pay a fair price for the energy they consume, reflecting its underlying costs. These underlying costs change over time, so we update the cap every six months to reflect this.

1.9. Currently, the default tariff cap does not apply to PPM customers. Section 3 of the Domestic Gas and Electricity (Tariff Cap) Act 2018 ("the Act") excludes PPM customers because they already benefit from the PPM cap. When the PPM cap expires this exemption will cease, unless we replace the PPM cap. Otherwise, the default tariff cap will apply to all customers with default tariffs, including PPM customers.

1.10. The default tariff cap has different cap levels for customers paying by standard credit and those with other payment methods.[4] We set the cap levels for each payment method by:

- Setting the same level of allowance for common cost components. These are the allowances for wholesale costs, network charges, policy costs of environmental and social obligations, common operating costs, and headroom. These costs do not vary by payment method. We also include a common allowance to account for the net impact on operating costs of replacing traditional credit meters with smart meters (the Smart Metering Net Cost Change (SMNCC) allowance).

[2] Ofgem (2018), Default tariff cap – decision overview, paragraph 6.24. https://www.ofgem.gov.uk/system/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf
[3] Ofgem (2018), Default tariff cap: decision – overview. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview
[4] In practice, the overwhelming majority of customers charged at the level for "other payment methods" pay by direct debit.

- Setting a Payment Method Uplift, to account for the additional costs of serving standard credit customers, for whom suppliers incur additional bad debt, working capital, and administrative costs. We account for most of these costs in the Payment Method Uplift we include in the cap level for standard credit customers. We also include a smaller Payment Method Uplift in the cap level for other payment methods, as we spread a portion of the additional efficient operating costs of serving standard credit customers across all customers.

1.11. Alongside this consultation, we have also published proposals to (a) adjust the cap level for an error in the wholesale allowance of the first cap period, and (b) update the non-pass-through SMNCC allowance for credit customers.

Protecting PPM customers

The CMA's July 2019 review of the PPM cap

1.12. The CMA reviewed the PPM cap and published its decision in July 2019.[5] It found that the conditions for competition in the prepayment market had not improved materially since the CMA introduced the PPM cap and that levels of overall engagement among prepayment customers were still low. It concluded that protection for PPM customers should remain in place and continue after the PPM cap was due to expire.

1.13. The CMA reviewed whether its methodology for calculating the PPM cap level reflected the efficient costs of supplying PPM customers. It concluded that the PPM cap undervalued policy costs and smart meter industry charges.[6] As a result, in June 2019, the CMA decided to change the methodology for calculating the PPM cap.

1.14. The CMA adopted the methodology we developed to set the cap levels in the default tariff cap with two exceptions.

- **Payment Method Uplift**: The CMA removed the payment method uplifts in the default tariff cap, which account for the incremental efficient costs of standard

[5] CMA (2019), Review of the Energy Market Investigation (Prepayment Charge Restriction) Order 2016. https://www.gov.uk/cma-cases/review-of-the-energy-market-investigation-prepayment-charge-restriction-order-2016
[6] Smart costs related to charges from DCC, SEGB or SMICoP

credit. The CMA replaced the uplifts with the "PPM uplift" allowance, from its original methodology for the PPM cap.

- **The non-pass-through SMNCC**: the CMA excluded the allowance in the default tariff cap that accounts for the net change in operating costs since 2017 that result from replacing traditional credit meters with smart meters.

1.15. The CMA's changes to the methodology increased the PPM cap by about £50 for dual fuel customers.[7] The new PPM cap methodology came into effect from October 2019. Table 1.1 shows the allowances in the PPM cap for summer 2020.

Table 1.1 The PPM cap allowances for April 2020 to September 2020

Allowance	Electricity	Gas	Implied Dual fuel
Wholesale	£202	£206	£408
Network	£141	£132	£273
Policy	£144	£25	£169
Operating cost	£83	£95	£178
Payment method uplift for traditional PPM	£26	£42	£68
Pass-through SMNCC	£7	£5	£12
Non-pass-through SMNCC	£0	£0	£0
EBIT	£12	£10	£21
Headroom	£7	£6	£13
VAT	£31	£26	£57
Total	**£652**	**£548**	**£1,199**

Source: Ofgem (2020), Prepayment Meter Price Cap: 1 April 2020 to 30 September 2020.
https://www.ofgem.gov.uk/publications-and-updates/prepayment-meter-price-cap-1-april-2020-30-september-2020

Arrangements for when the PPM cap expires

1.16. The PPM cap is due to expire at the end of the 2020. In its review, the CMA concluded that PPM customers would require continued protection after the PPM cap expires. It considered that PPM customers would still face barriers to engagement, as the smart meter rollout will continue beyond 2020.

[7] CMA (2019), Review of the Energy Market Investigation (Prepayment Charge Restriction) Order 2016, paragraph 4.17. https://www.gov.uk/cma-cases/review-of-the-energy-market-investigation-prepayment-charge-restriction-order-2016

1.17. The CMA recommended that Ofgem consider providing protection for PPM customers after the expiry of the CMA's PPM cap in line with its objectives and duties. In that context, the CMA recommended we consider any future changes of circumstance in light of the original aims of the PPM cap when setting the level of any replacement charge restriction.[8]

1.18. The CMA stated that it is for Ofgem to decide whether and how to implement these recommendations in light of its own statutory objectives and duties. The CMA noted that one way to protect PPM customers would be to prepare the default tariff cap for all PPM customers on default tariffs, subject to adjustments to reflect underlying efficient costs of serving the prepayment segment.

1.19. In addition, the CMA recommended that Ofgem consider undertaking additional analysis in two areas in advance of any decision on how to protect PPM customers following the expiry of the PPM cap. These were:

- whether the headroom and approach to competition in the default tariff cap would be effective in generating competition on price or service levels for prepayment customers; and

- whether the level of the payment method uplift for PPM customers and the allowances for smart meter installation remain appropriate once the rollout of smart meters has progressed significantly as part of broader consideration of the costs of the smart metering programme.

March 2020 consultation

1.20. On 10 March 2020 we published our initial consultation on protecting consumers with prepayment meters.[9] We have developed this statutory consultation taking into account the responses we received.

[8] CMA (2019), Review of the Energy Market Investigation (Prepayment Charge Restriction) Order 2016. https://www.gov.uk/cma-cases/review-of-the-energy-market-investigation-prepayment-charge-restriction-order-2016
[9] Ofgem (2020), Policy consultation for protecting energy consumers with prepayment meters. https://www.ofgem.gov.uk/publications-and-updates/policy-consultation-protecting-energy-consumers-

Understanding how costs differ between PPM and credit customers

1.21. Most cost categories do not depend on a customers' payment method or meter type. For example, the price of gas does not change if a customer pays by direct debit rather than prepayment. For that reason, many of the allowances in the PPM cap are the same as the allowance in the default tariff cap (which currently includes only direct debit and standard credit customers). We discuss common allowances in Chapter 3.

1.22. PPM customers with a traditional meter costs more to serve. Primarily, this is because a traditional prepayment (and the accompanying infrastructure) is more expensive than a credit meter. The PPM cap has an allowance that seeks to recognise those additional costs, above the level of operating costs that direct debit customers incur: the PPM uplift. We do not include the PPM uplift in the default tariff cap, but we do include an analogous Payment Method Uplift relating to the additional costs of serving customers paying by Standard Credit. We discuss the PPM uplift in Chapter 4.

1.23. Suppliers must install smart meters, which has an impact on their operating costs. The gross cost of purchasing and installing smart meters is similar when serving PPM and credit customers. However, the impact on operating costs of replacing an expensive traditional prepayment meter with a smart meter is very different to the impact on costs of replacing a traditional credit meter. Replacing traditional prepayment meters with a cheaper smart meter reduces a supplier's operating costs, eroding the additional costs of serving PPM customers. Once the smart meter rollout is complete, the difference between the costs of serving PPM customers and credit customers will be substantially reduced, or removed. We discuss the impact of installing smart meters in Chapter 5.

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prepayment-meters

Related publications

1.24. The related publications are:

- The CMA's energy market investigation; The CMA (2016), Energy market investigation. https://www.gov.uk/cma-cases/energy-market-investigation
- The CMA's July 2019 review of the PPM cap. The CMA (2019), Review of the Energy Market Investigation (Prepayment Charge Restriction) Order 2016. https://www.gov.uk/cma-cases/review-of-the-energy-market-investigation-prepayment-charge-restriction-order-2016
- Our March 2020 consultation: Ofgem (2020), Policy consultation for protecting energy consumers with prepayment meters. https://www.ofgem.gov.uk/publications-and-updates/policy-consultation-protecting-energy-consumers-prepayment-meters

Consultation stages

Stages

1.25. This statutory consultation will remain open for six weeks, closing on **Friday 26 June**. Please provide responses by 11pm. We appreciate that some consultees are focussed on responding to COVID-19. The deadline reflects that our proposals require a decision by the end of July, to have effect in the next cap period (1 October to 31 March 2021).

1.26. We intend to publish our decision at the end of July 2020, with effect from 1 October 2020.

Contingency arrangements

1.27. It is possible that we will not implement the proposals set out in this consultation. Due to the formative nature of the consultation and depending on the stakeholder responses we receive, we might make changes to our proposals if that is appropriate.

1.28. In Chapter 8, we explain that if we cannot implement these proposals, we propose to:

- create a payment level in the default tariff cap for PPM customers, with effect from 1 October 2020; and

- for the period between 1 October 2020 and 31 March 2021, set the allowances in cap level for PPM customers using the same methodology already in place for the PPM cap, plus a non-pass-through SMNCC allowance set at £0.00 (i.e. no change in operating costs compared with the amount already included in the operating costs allowance).

1.29. We would consult on revised proposals in autumn or winter 2020 in order to publish a decision on a new methodology at the end of January 2021, with effect from April 2021.

Subsequent review and adjustment to the SMNCC in future cap periods

1.30. In Chapter 7, we propose to review the SMNCC allowance for PPM customers every 12 months, when new official data is available. When setting the SMNCC allowances in future cap periods we will compare the amounts suppliers have charged customers since we introduced the SMNCC allowance (1 October 2020) and our revised assessment of their efficient costs in that period. We will adjust the SMNCC allowance in future cap period to account for that difference, to ensure that we add net costs that suppliers have not been able to charge for, or deduct costs that suppliers have not incurred but have already charted customers for.

1.31. Were we to set a contingency SMNCC allowance at £0 (between 1 October 2020 and 31 March 2021), we expect that would allow efficient suppliers with an average rollout profile to charge more than they require, so we would remove that over-allowance from future periods to avoid doubling counting.

Disclosure arrangements

1.32. Alongside this consultation we have disclosed:

- Modelling ("Disclosed Model"): This includes the full SMNCC model, in the form which has informed the proposals we are consulting on. This is being made available to suppliers, upon application and subject to agreeing confidentiality arrangements.

- Underlying data ("Disclosed Data"): This includes underlying data that we have used to calculate inputs in the SMNCC model. This data includes specific information from individual suppliers and is commercially sensitive. This is being made available to

suppliers' advisers, upon application and subject to agreeing confidentiality arrangements.

1.33. The disclosure arrangements enable suppliers to understand our proposals and respond intelligently to them.

- Stakeholders can understand how we have modelled costs and benefits and make representations on whether the approach is appropriate.
- Stakeholders can replace inputs with their own data to understand and assess whether the model is particularly sensitive to variation in certain variables, and make representations on the impact and likelihood of potential variations.
- Stakeholders can compare their costs and benefits with the model (at an aggregate and granular level) and make representations on those differences and their impact.
- Stakeholders can assess whether the model has weaknesses or computational errors.

1.34. We have also considered suppliers' prior requests for additional information, so that their advisers can, for example, quality assure the model's underlying data. We have made this information available under appropriate confidentiality arrangements.

How to respond

1.35. We want to hear from anyone interested in this consultation. Please send your response to retailpriceregulation@ofgem.gov.uk.

1.36. Please respond to the issues, options, and considerations in this consultation as fully as you can. This is a statutory consultation. It seeks stakeholders' views on our proposals and provides our considerations of stakeholders' responses to our policy consultation.

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

Your response, data and confidentiality

1.38. 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.

1.39. 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.

1.40. If the information you give in your response contains personal data under the General Data Protection Regulation 2016/379 (GDPR) and domestic legislation on data protection, the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 1.

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

General feedback

1.42. We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd 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?

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

How to track the progress of the consultation

1.44. 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.

2. Considering protection for PPM customers

Section summary

In this chapter, we conclude that PPM customers on default tariffs will require protection after the PPM cap expires. We propose to protect them under the default tariff cap with adjustments.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our proposals set out in this chapter.

Summary of proposals

2.1. We propose to protect PPM customers on default tariffs after the PPM cap expires, as barriers to competition and engagement remain. We propose to provide this protection using a new cap level within the default tariff cap, for PPM customers.

Protection for PPM customers

Our proposal

2.2. We have considered developments since July 2019 and we conclude that PPM customers will continue to require protection when the PPM cap expires.

Rationale

2.3. The CMA's 2016 Energy Market Investigation found weak competition and barriers to engagement for PPM customers. Its 2019 review concluded that technical barriers remain and market conditions has not improved. The CMA recommended we consider whether PPM customers would require protection after the PPM cap expires.

2.4. We propose to extend protection for PPM customers for three main reasons (which are the same as those we consulted on in March 2020).

2.5. First, technical barriers remain as the smart meter rollout continues. In September 2019, BEIS consulted on a policy framework for smart metering that would apply from 2021 to 2024, after the current obligation on energy suppliers ends.[10] There is no decision yet on the post-2020 framework for smart meter rollout, and COVID-19 has temporarily reduced the rate of rollout.

2.6. Second, the choice for PPM customers, in terms of the number of competitive PPM offers, remains limited. Most PPM tariffs are close to the PPM cap level, with the average tariff being around £30 below the cap. The number of PPM tariffs has slightly decreased between 2019 and 2020, largely due to some suppliers leaving the market. On the other hand, price dispersion between the PPM cap and cheaper fixed tariffs has increased since the CMA's July 2019 review, and are now over £200.

2.7. Third, there is low engagement among PPM customers. Most PPM customers are on default tariffs and may not be engaged in the market, and so unable to take advantages of dispersion and choice even if these did increase. By comparison, credit customers have extensive choice of cheaper tariffs, yet many are still on default tariffs. This, in part, was why Parliament introduced the default tariff cap to protect customers on default tariffs regardless of their payment method or meter type.

Considering stakeholders' views

2.8. All respondents to our consultation were supportive of extending protection for PPM customers upon expiry of the PPM cap. Several consumer groups noted that the reasons for the PPM cap's introduction have not gone away, including technical and engagement barriers.

[10] BEIS (2019), Smart meter policy framework post 2020. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020

How to protect PPM customers

Options

2.9. To protect customers, we have considered:

- Including PPM customers within the default tariff cap. This would apply to PPM customers with default tariffs only (98% of all PPM customers); or
- Creating a new independent PPM cap, under separate powers. This approach would include all PPM customers.

Our proposal

2.10. We propose to use the default tariff cap to provide protection to all PPM customers on a default tariff. This excludes around 2% of PPM customers who have actively chosen a fixed term tariff (FT).

Rationale

2.11. Both options allow us to protect PPM customers on default tariffs, which constitute nearly all PPM customers (98%). We cannot use the default tariff cap to protect PPM customers that actively chose an FT. That would require a new independent PPM cap.

2.12. We consider it appropriate to protect only default tariff customers. Firstly, customers choosing competitive tariffs are likely to pay less than the default tariff cap level in any case. The few competitive PPM FTs that are on offer would likely remain below the cap level for default tariffs. Most FTs on offer to direct debit customers are below the level of the default tariff cap, even though they are not price regulated. We would expect the PPM market to be similar.

2.13. Secondly, so long as customers have made an informed choice to accept a tariff that is above the level of the cap, we consider it unnecessary to cap those tariffs. In the absence of the current PPM cap, it is possible that some non-default PPM tariffs may

exceed the level of the cap. We expect that those customers can and will make an informed choice about paying more than they would pay on capped default tariff. On expiry of their FT, licence conditions require suppliers to inform customers of the default tariff they would otherwise pay.[11]

Considering stakeholders' views

FT customers

2.14. Most stakeholders, including the one consumer group that commented on this point were supportive of limiting the scope to default tariff customers only. The main rationale was that fixed term tariff customers are actively engaged with the market and so do not require protection. If any such customers become disengaged, they will in any case default onto a default tariff and so be protected.

Active SVT customers

2.15. One supplier proposed a narrower scope. It argued that some customers actively choose to move to a variable tariff, so are actively engaged and should be excluded from the cap.

2.16. This approach is incompatible with default tariff cap, as the Act requires that the cap applies to all SVT customers. Furthermore, we do not propose to create a new PPM cap to adopt this approach. SVTs do not require customers to renew their choice when prices change, so customers can become disengaged following their initial switch and would subsequently have no protection if they were excluded from the cap. In its investigation into the energy market, the CMA concluded that suppliers had market power over disengaged customers, charging them more than they would be able to in a competitive market. The majority of those disengaged customers had SVTs.

[11] See Condition 31I. Contract changes information (notifications of price increases, disadvantageous unilateral variations and end of fixed term contracts) in the Electricity Supply Standard Licence Conditions and Gas Supplier Standard Licence Conditions https://www.ofgem.gov.uk/licences-industry-codes-and-standards/licences/licence-conditions

Expiry of the default tariff cap

2.17. Three consumer groups, though not all, disagreed with our proposal. They considered the expiry of the PPM and default tariff caps should not be aligned and so advocated for a new PPM cap. In particular, they argued that there will likely be a large number of PPM customers with traditional meters at the end of 2023, a key reason for the CMA bringing in the cap in the first place.

2.18. We do not consider that the expiry of the default tariff cap is risk to PPM customers. We agree that a significant proportion of PPM customers may have traditional meters when the default tariff cap expires in 2023 or before. However, Section 9 of the Act requires that, before the tariff cap conditions have ceased to have effect, we must review whether there are categories of domestic customers who may in the future pay standard variable and default rates for whom protection against excessive charges should be provided.

2.19. The Act specifies that, if our review concludes that protection should be provided, we must take steps to ensure ongoing protection. If, upon expiry of the default tariff cap, PPM customers still require protection then we can either (a) put in place a new PPM cap of the kind we are currently considering, or (b) take an alternative approach that is not currently available, but would serve those customers more effectively. We do not need to anticipate now whether PPM customers will require protection, or what form that protection should take. Our proposed approach gives us more flexibility to respond to PPM customers' needs than would mandating a new PPM cap until 2024.

2.20. On that basis, we consider that using the default tariff cap is preferable. It has an existing timetable and framework for considering customers' ongoing needs. We consider it preferable and appropriate to align with that timetable and framework, rather than overlay a separate process for customers with broadly similar issues and considerations.

Suitability of the default tariff cap

2.21. Three consumer groups considered the default tariff cap unsuitable for protecting PPM customers. They argued the PPM cap was brought in for different reasons to the default tariff cap, that PPM customers are very different to other customers, with 'materially worse' competition and engagement, and that the cost make-ups are different.

2.22. The default tariff cap was introduced for different reasons to the PPM cap. However, in its July 2019 review the CMA chose to adopt the same methodology as the default tariff cap (expect for the PPM uplift and SMNCC, see Chapter 1). The outcome for PPM customers is the same. We consider this demonstrates that the methodology of the default tariff cap can achieve both sets of aims.

2.23. As we discuss above, PPM customers face greater barriers to competition and engagement. This is borne out in the fact that 98% of PPM customers are default tariff customers. On that basis, a much greater proportion of PPM customers would be protected by the default tariff cap than credit customers are. However, that does not mean that, *for the customers that are protected by the cap*, the default tariff cap would not protect them adequately.

2.24. PPM customers face different costs from credit customers. However, we can account for that within the default tariff cap by setting a separate cap level for PPM customers, using a payment method uplift. We already adopt this approach for customers paying by standard credit (see Chapter 1).

How to protect PPM customers within the default tariff cap

Options

2.25. In our March 2020 policy consultation we considered two options for how we could protect PPM customers after the PPM cap expires:

- do nothing, allowing the default tariff cap to protect PPM customers with default tariffs at the level intended for direct debit customers;
- set a specific default tariff cap level of PPM customers, with adjustments to our methodology for other payment levels.

Our proposal

2.26. We propose to set a specific default tariff cap level for PPM customers, with adjustments to our methodology for other payment levels.

2.27. In Chapters 3, 4, and 5 we discuss how we propose to adjust the default tariff cap methodology so that it is suitable for PPM customers.

2.28. We propose that relevant PPM customers who receive the Warm Home Discount will be covered by the PPM default tariff cap.

Rationale

2.29. Doing nothing means PPM customers would be automatically covered by the default tariff cap at a level reflective of costs for direct debit customers. This would result in a cap level we expect would be materially below the efficient cost of serving these customers – see Chapters 4 and 5 for details of cost differentials. We do not consider that this option would reasonably protect customers

2.30. In setting a new cap level within the default tariff cap for PPM customers we can ensure that suppliers charge PPM default tariff customers a fair price, that reflects the underlying costs of serving PPM customers. In Chapters 2, 3 and 4 of this consultation we explain which costs are the same across payment methods and which differ, and how and why we propose to adjust the default tariff cap to account for these differences.

Stakeholders' views

2.31. Most stakeholders were supportive of using an adjusted version of the default tariff cap. No stakeholder was supportive of PPM customers defaulting on to the non-standard credit default tariff cap (option 1).

2.32. One supplier stated that we should be clear that we intend for PPM customers who receive the Warm Home Discount to be covered by the PPM default tariff cap level, not the direct debit level, and that we should amend the license conditions appropriately.

Considering warm home discount customers

2.33. We propose that relevant PPM customers who receive the Warm Home Discount will be covered by the PPM default tariff cap.

2.34. The current licence conditions mean that any customer eligible for the Warm Home Discount up to the end of Scheme Year 8 would be capped at the direct debit cap level, rather than the cap level for the payment method they actually use. The intent was to prevent customers that benefited from the safeguard tariff (before we introduced the

default tariff) from experiencing a substantial increase in their bills, once we introduced the default tariff cap.[12]

2.35. No PPM customers benefited from the safeguard tariff, as they were already protected by the PPM cap. So the issue (of continuity with the level of protection the safeguard tariff provided) does not arise. However, we propose that PPM customers will not pay more under the default tariff cap than they would have done under the current PPM cap. We have amended the licence to ensure PPM customers receiving Warm Home Discount are charged in line with other PPM customers.

[12] Not all Warm Home Discount recipients were beneficiaries of the safeguard tariff customers. Customers who came into the Warm Home Discount scheme after March 2019 (Scheme Year 8) were not eligible.

3. Adjusting the default tariff cap for PPM customers

Section summary

In this chapter, we describe how we propose to adjust the default tariff cap to protect PPM customers on default tariffs.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our provisional proposals set out in this chapter.

Summary of proposals

3.1. We propose that a new PPM default tariff cap level would apply to all PPM customers with default tariffs, regardless of their meter type. We propose that all cost components will be calculated identically to the existing default tariff cap methodology, except for the payment method uplift and the non-pass-through Smart Metering Net Cost Change allowance. We discuss these two cost components in Chapters 4 (additional operating costs for PPM customers with traditional meters) and 5 (the net impact of the smart meter rollout on PPM operating costs).

Single cap level for all PPM default tariff customers

Our proposal

3.2. We propose that the new PPM default tariff cap level would apply to all PPM customers with default tariffs, regardless of their meter type (traditional, interoperable smart meter in prepayment mode, or non-interoperable smart meter in prepayment mode).

Rationale

3.3. A single cap for all PPM customers reduces complexity and reduces the risk of customer confusion. The only significant substantial difference in costs between different groups of PPM customers is between customers with traditional PPMs and customers with smart meters in prepayment mode. Traditional prepayment meters are significantly more expensive than smart meters. However as set out in our 2018

default tariff cap final decision, we consider that the costs and benefits of the smart meter rollout should be borne by all customers, since all customers will incur these once the smart meter rollout is complete.

Stakeholders' views

3.4. All respondents who commented on this point were supportive of a single PPM cap level. One supplier stated that multiple PPM cap levels would only create additional complexity for suppliers and confusion for customers with no benefit.

How to set each allowance in the cap level

Our proposal

3.5. We propose to use the default cap tariff methodology (and values) for all cost components except for the payment method uplift and the non-pass through SMNCC allowance (which are discussed in Chapters 4 and 5 respectively).

Rationale

3.6. Few cost categories vary depending on a customer's payment method. The CMA has already aligned the existing PPM cap's methodology with the default tariff cap methodology for most cost components.

3.7. In our March 2020 policy consultation, we set out that the majority of the allowances in the cap would not require reassessment or adjustment. Table 3.1 sets out our proposals, which have not changed from those in the March 2020 consultation. In each case we have considered whether to include an allowance, and whether to use the methodology in the default tariff cap and/or PPM cap.

3.8. We propose to maintain the current methodology for wholesale, policy, and network costs – these costs should not differ between payment methods and the PPM cap is already aligned to the default tariff cap. We are currently reassessing the wholesale allowance in the first cap period of the default tariff cap, and may introduce an

adjustment allowance in a limited number of future cap periods.[13] That adjustment should not apply to PPM customers, because it relates to the amount charged to default tariff cap customers in a previous period, when PPM customers were covered by the CMA's separate PPM cap.

Table 3.1 – Proposed allowances for a PPM level in the default tariff cap

Allowances	Description	Approach
Wholesale, Networks, and Policy	Allowances for purchasing energy, transporting energy, and funding social and environmental policies. These should not differ by payment method or meter type.	**No change.** The PPM cap already uses the default tariff cap methodology.
Operating cost	Allowance for operating costs. This applies to all payment methods, based on efficient costs in 2017 for direct debit customers.	**No change.** The PPM cap already uses the default tariff cap methodology.
Payment method uplift (PPM uplift)	Allowance for the additional operating costs of serving PPM customers with traditional meters.	**No change.** In Chapter 4, we explain our reasons.
Pass-through SMNCC	Allowance for the change in smart meter industry charges. This should not differ by payment method or meter type.	**No change.** The PPM cap already uses the default tariff cap methodology.
Non-pass-through SMNCC	Allowance for the net change in operating costs from replacing PPM with smart meters. This should differ by meter type.	**Include in cap.** In Chapter 5 we our reasons for introducing this allowance.
EBIT	Allowance for a normal profit. This should not differ by payment method.	**No change.** The PPM cap already uses the default tariff cap methodology.
Headroom	An allowance that 'tops up' the cap level for the net impact of uncertainty and to achieve the object of the Act.	**No change.** The PPM cap already uses the default tariff cap methodology.

[13] Ofgem (2020), Reassessing the wholesale allowance in the first default tariff cap period: January 2020 consultation. https://www.ofgem.gov.uk/publications-and-updates/reassessing-wholesale-allowance-first-default-tariff-cap-period-january-2020-consultation

3.9. We also propose to use the EBIT, VAT and headroom percentage figures from the default tariff cap, to which the PPM cap is already aligned. As these are set as percentages the absolute values may differ between payment methods.

3.10. We do not propose to amend the operating cost allowance from the default cap tariff methodology, to which the PPM cap is already aligned. Where operating costs for customers with traditional meters differ between payment methods we address this through the payment method uplift (discussed in Chapter 5) and the SMNCC allowance (discussed in Chapter 6).

Stakeholders' views

3.11. Stakeholders were generally supportive of our approach not to change most cost components. Every stakeholder who commented was supportive of unchanged allowances for wholesale, policy, networks, EBIT and VAT.

3.12. We address stakeholders' comments on operating costs, payment method uplifts and the SMNCC allowances are covered in Chapters 4 and 5 respectively.

Headroom for encouraging competition

3.13. One consumer group argued that headroom is unnecessary for PPM – reasoning that the PPM cap is linked to the smart meter rollout, not effective competition, and so headroom to encourage competition is not needed.

3.14. Headroom is a 'top-up' allowance serving two purposes. It ensures that the overall cap level achieves the objective of the Act, and in doing so, has regard to the other statutory needs set out in section 1(6).[14] The needs include ensuring incentives for suppliers to compete for customers, but headroom is not specifically for that purpose. Headroom allows for the net impact of uncertainty, not already accounted for in the other allowances.

[14] Ofgem (2018), Default Tariff Cap: Decision – overview, paragraph 2.4 (https://www.ofgem.gov.uk/system/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf) and Appendix 2 – Cap level analysis and headroom. https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_2_-_cap_level_analysis_and_headroom.pdf

3.15. In its July 2019 assessment, the CMA recommended that we consider whether headroom and the approach to competition in the default tariff cap would be effective in generating competition on price or service levels for prepayment customers. The CMA found that competition had not changed significantly since its original investigation, but it remained unclear how that would be affected by the future roll out of smart meters, and that should be assessed at the relevant time.

3.16. As discussed in Chapter 2, we do not consider that market conditions or technical barriers have changed significantly since July 2019. Therefore, we do not consider that changes in headroom would stimulate competition and lead to better outcomes for PPM customers at this stage. We do consider that increasing the cap level would increase prices for customers above their underlying efficient costs. In line with the CMA recommendation, we may reassess this issue when the smart meter roll out is more advanced.

Headroom for the net impact of uncertainty

3.17. A consumer group argued that, given the uncertainty resulting from COVID-19, there is no need to adjust headroom. One supplier argued that the impact of COVID-19 requires an increase to the headroom allowance, particularly for PPM customers due to the need to ensure such customers remain on supply and are fully supported through this exceptional period. The supplier also argued that another uncertain cost – the mutualisation of costs through the Supplier of Last Resort (SOLR) process – is likely to increase due to the impact of COVID-19 and so headroom should be increased to ensure suppliers can recover their efficient costs.

3.18. In normal circumstances, we do not consider that our proposals alter the net uncertainty in the combined allowances. Most allowances do not vary by payment method and we propose no change in the approach. The adjustments to the payment method uplift and the non-pass through SMNCC which we propose relate to the different costs of serving PPM customers, and we have not identified any additional (or fewer) uncertainties in these costs than for other payment methods.

3.19. The impact of COVID-19 is an exceptional circumstance that has increased suppliers' costs in some areas and decreased them in others. For headroom, it is long-run net impact of uncertainty that matters. At this stage we cannot reliably estimate the scale of additional activities (such as, emergency support for customers), the scale of reductions in costs (such as the ECO programme), or impact of risks that have not yet

been realised (such as those that might come from additional mutualisation) that may occur following the introduction of the new cap. We consider it would better protect customers to assess these net costs in arrears, once they are known. We can then assess whether we need to recognise any additional costs that suppliers have incurred since the introduction of the new PPM cap level.

3.20. We therefore propose to use the existing default tariff cap headroom allowance for the PPM level, unadjusted.

4. Additional efficient operating costs for PPM customers with traditional meters

Chapter summary

In this chapter, we consider whether or not to set a PPM uplift in the default tariff cap at the same level as the PPM uplift in the PPM cap.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our provisional proposals set out in this chapter.

Summary of proposals

4.1. We propose to set the payment method uplift for PPM at the level of the PPM uplift in the current PPM cap. We propose to set the PPM uplift using a tariff differential approach, seeking to maintain the current difference between the cap levels for direct debit customers and PPM customers. This ensure that, before considering the net impact of the smart meter rollout on the cap levels for each payment method, we do not reduce the level of protection PPM customers currently receive.[15]

4.2. In maintaining the PPM uplift in the current PPM cap methodology, there is a risk that efficient incremental PPM costs could exceed the PPM uplift by up to £17 (£7.95 electricity and £8.97 gas) per dual fuel PPM customer. We would spread these additional costs across all default tariff customers, increasing bills for those customers by between £0 and £4.08 (£1.91 electricity and £2.17 gas) compared with a cost reflective approach.

4.3. We estimate that the operating costs allowance already contains £4.16 (£2.07 electricity and £2.09 gas) of incremental PPM costs, due to the way we set the operating cost allowance using data on suppliers' total operating costs, adjusted by the

[15] We discuss the impact of the smart meter rollout in Chapter 5, and below we discuss the interaction between the PPM uplift and the SMNCC.

PPM uplift. In principle we should remove these costs from the operating cost allowance.

4.4. The combined impact of removing PPM costs already in the operating costs allowance and adding back the maximum potential level of efficient PPM costs that we would spread across all customers effectively cancel each other out. We propose to maintain the current operating costs allowance and the current PPM uplift without further adjustments (before considering the impact of smart costs). This means that we leave between £4.16 and £0.08 of inefficient PPM costs in the operating cost allowance (the combination of at least £0.16 of inefficient electricity costs in the operating cost allowance and a potential under-recovery of at most £0.08 of efficient gas costs).

4.5. In Chapter 5, we assess the net impact of the smart meter rollout on the efficient operating costs of a supplier with an average rollout profile. The smart meter rollout should largely erode the additional efficient costs of serving PPM customers with traditional meters. We do not seek to continue spreading PPM costs across all default tariff customers once smart meters have eroded the high additional costs of traditional PPM. Neither do we seek to increase tariff differentials for current PPM customers (i.e. we would not reduce the level of protection PPM customers currently receive). Maintaining those two principles, we will consider unwinding the subsidy of additional efficient PPM costs (i.e. reducing the amount we spread across all default tariff customers) during the smart meter rollout, by either increasing the PPM uplift we introduce on 1 October 2020, or through the SMNCC in subsequent cap periods (as the smart meter rollout continues).

The current PPM cap methodology

4.6. The current PPM cap provides for the efficient operating costs of serving PPM customers in two allowances: the PPM uplift; and the operating cost allowance.

The PPM uplift

4.7. The PPM uplift is an allowance that applies only to PPM customers. It increases tariffs for PPM customers to recognise, in part or in full, the additional cost suppliers incur in serving PPM customers with traditional meters compared with direct debit customers.

4.8. The CMA set the existing PPM uplift considering the outcomes of two sets of analyses.

- A benchmarking exercise, using supplier reported data on the costs to serve direct debit and the costs to serve PPM customers in 2014, from which the CMA calculated the cost differential per each supplier.

- A 'bottom up' exercise, to assess the differential costs between customers who paid by direct debit and those who had a prepayment meter. For that analysis, the CMA considered each element of indirect costs that had been identified by suppliers and calculated what the cost difference might be for an efficient supplier.

4.9. No analysis of efficient costs is definitive. The CMA judged that it should set the PPM uplift by combining the results of both approaches. They set the allowance at £63 (£24 for electricity and £39 for gas in 2014 prices).

Operating cost allowance

4.10. There is one level for the operating cost allowance and it applies to all customers, regardless of their payment method. It represents the efficient operating costs to serve direct debit customers. For other payment methods, the relevant payment method uplift 'tops-up' the operating cost allowance. Taken together, the operating cost allowance and the relevant uplift set the appropriate charge for customers using that payment method.

4.11. We describe the full methodology for the operating cost allowance in Appendix 6 of the 2018 decision.[16] The important points are:

- we analysed data on the ten largest suppliers' total operating costs per account in 2017;

[16] Ofgem (2018), Default tariff cap decision – overview. Appendix 6, Operating costs. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview

- to calculate the direct debit level, we adjusted each supplier's total operating costs per customer to account for the proportion of their customers that had a PPM or paid by standard credit;

- to set the operating cost allowance, we compared each supplier's direct debit operating costs per account after those adjustments for payment method; and

- we set the allowance at a level £5 below the dual fuel cost of the lower quartile supplier.

Interaction between the two allowances

4.12. The values of the operating cost allowance and the PPM uplift are related, not independent. That is because when we adjusted each supplier's total operating costs per customer to account for the proportion of their customers that had a PPM, we used the CMA's PPM uplift to do so. The significance of that adjustment is that if we changed the value of the PPM uplift (e.g. if we thought the efficient additional PPM costs exceeded the PPM uplift), that change would affect the allocation of costs between the PPM uplift and the operating cost allowance, but it would not change the total costs that we allocated.

The calculation

4.13. To set the operating costs allowance, we adjusted each supplier's total operating cost in 2017 using the PPM uplift. We did this because customers paying by standard credit or PPM are, on average, more expensive to serve than those paying by direct debit are. Therefore, the proportion of a supplier's customer base using different payment methods was likely to have a material impact on their total reported operating costs per customer in 2017. That adjustment increased comparability of each supplier's costs. It reduced the risk that suppliers with the lowest total operating costs per account simply had fewer customers with expensive payment methods, such as PPM.

4.14. To adjust and remove the proportion of PPM costs from the total operating costs, we calculated the weighted PPM costs for each supplier. We used the CMA PPM uplift (£64

in 2017 prices) multiplied by the supplier's PPM customers as a proportion of their domestic portfolio. We then subtracted that adjustment from the total operating costs per customer. We made a similar adjustment relating to customers paying by standard credit.[17]

The consequence of reassessing efficient incremental PPM costs in 2017

4.15. It is possible that the CMA's assessment of efficient incremental PPM costs in 2014 does not reflect the level that we would have assessed the efficient incremental PPM costs in 2017 to be. For instance, efficient incremental costs may have increased between 2014 and 2017, and/or we may have made a different judgment to the CMA (our assessment of efficient costs when setting the operating costs allowance was less strict than the judgment the CMA made when setting the original operating cost allowance in the PPM cap).

4.16. In principle, we could reassess suppliers' efficient incremental costs in 2017. That reassessment would affect both the PPM uplift and the operating costs allowance.

4.17. We calculate that the operating costs allowance already includes £4.16 of reported additional PPM costs (£2.07 electricity and £2.09 gas). If the PPM uplift accurately reflects efficient additional costs, then all of that £4.16 relates to inefficient PPM costs we have spread across all customers, and in principle we should remove it. If the PPM uplift understates efficient costs then (a) a proportion of that £4.16 represents efficient PPM costs that were not included in the PPM uplift and are spread across all customers instead and (b) the remainder would be inefficient costs.

4.18. On that basis, the operating cost allowance is conservative. Had we used a higher estimate of the additional costs of supplying PPM customers (i.e. an estimate of efficient costs higher than the PPM uplift), our operating cost benchmark would have therefore been lower for direct debit customers. So, if the true efficient incremental PPM costs in 2017 were higher than the CMA's assessment (of 2014 costs), then the operating cost allowance would have been lower. The converse is also true.

[17] Ofgem (2018), Default tariff cap: decision – overview. Appendix 6 – Operating costs (https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_6_-_operating_costs.pdf)

4.19. The true efficient incremental PPM costs in 2017 could differ from the CMA's assessment based on cost in 2014, but they could not exceed the actual costs included in the total operating costs that suppliers reported for 2017. On that basis, no reassessment of the efficient incremental PPM costs in 2017 can increase the total operating costs in 2017. It can only (a) reallocate costs between PPM customers and direct debit customers and (b) identify inefficient costs included in the operating costs allowance.

Setting the PPM uplift at typical consumption

Options

4.20. To set the PPM uplift, we consider there are two options available to us as highlighted in our March 2020 policy consultation. We could use the existing PPM uplift or we could reassess it.

4.21. If we were to reassess the PPM uplift, we consider that our two options are:

- A fully cost reflective approach: we could make the PPM uplift fully reflective of the efficient incremental cost-to-serve (compared with a direct debit customer). To do this, we would have to collect cost data from 2017, benchmark suppliers' incremental costs, and estimate an efficient level. We might analyse cost categories in aggregate, or consider each cost category separately (metering, customer service, etc.). Our considerations and options would be similar to those we discussed for estimating the efficient costs of serving standard credit customers, which we set out in our 2018 decision.[18]

- A tariff differential approach: we could restrict the PPM uplift to achieve a certain differential between PPM tariffs and direct debit tariffs (before considering the net impact on operating costs of the smart meter rollout). There are various ways we might do that (for example, with reference to the current difference between the cap levels, historical market prices, or some other reference). Where our

[18] Appendix 8 – Payment Method Uplift (https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_8_-_payment_method_uplift.pdf)

preferred tariff differential is less than the efficient cost differential, we would spread those excess efficient costs across all payment methods.

4.22. In both cases, we should remove the £4.16 already in the operating costs allowance first.[19]

4.23. We have no specific reason to doubt the CMA's analysis or judgment. The data it analysed is relative old now (the data shows costs in 2014). However, we have no evidence, or reason to believe, that the costs of serving PPM customers with a traditional meter have materially changed since. On the contrary, the principle of the PPM cap was that it improved incentives to reduce costs, and it has been in place since 2017. We may have come to a different judgment on what the level of efficient incremental PPM costs would be. This is to be expected, as no analysis is definitive. Efficiency is a matter of judgment and experts can differ depending on their views about the purpose, context, and conservatism required from the analysis.

Our proposal

Tariff differential approach

4.24. We propose a tariff differential approach, in order to maintain the current differential between the direct debit and PPM cap levels. Even if the efficient incremental costs of serving PPM customers exceeded the current PPM uplift, we would seek to spread those excess costs across all payment methods sufficiently to maintain the tariff differential. In practice, this means that we would maintain the existing PPM differential (£64.7 dual fuel, £24.41 electricity, and £39.66 gas in 2017 prices), before considering the net impact of smart meters.[20]

Spreading efficient costs that exceed the tariff differential

4.25. We propose to spread any efficient PPM costs that exceed the tariff differential (i.e. PPM uplift) across all default tariff customers.[21] We estimate that efficient incremental

[19] See paragraphs 4.12 to 4.19.
[20] Below we consider the interaction between the PPM uplift and SMNCC, and the implication for the overall cap level for PPM customers (paragraphs 4.87. to 4.89).
[21] In our March 2020 consultation we propose to spread these costs over all customer, including

PPM costs could exceed the PPM uplift by between £0 and £17 per dual fuel PPM customer (£7.95 electricity and £8.97 gas).[22] That means we should ensure that up to £4.08 of excess PPM costs are included in the allowances applied to all default tariff customers (£1.91 electricity and £2.17 gas).

4.26. We propose to leave the operating cost allowance and PPM uplift as they are, in the current PPM cap methodology. We calculate that the operating costs allowance already includes £4.16 of PPM costs (£2.07 for electricity and £2.09 for gas),[23] due to the way we set the operating costs allowance using the PPM uplift.[24] In principle, we should remove these costs. However, using our highest estimate of efficient PPM costs, spreading excess efficient costs would be effectively offset by removing PPM costs that are already in the operating costs allowance.

4.27. Using our lower bound or a more central estimate of efficient additional PPM costs, the amount of efficient PPM costs we would spread across all default tariff customers would be less than the PPM costs that are already in the operating costs allowance. We do not propose to remove the remaining inefficient costs in this circumstance, as doing so would reduce the overall cap level; that would alter our 2018 decision on the overall cap level for customers with credit meters, which we do not propose to reassess.

Rationale

Efficient costs

4.28. The PPM uplift may accurately reflect true efficient incremental PPM costs. If it does, then it does not matter whether we choose a cost reflective approach or the tariff differential approach. The impact would be the same; we would keep the PPM uplift as it is in the current PPM cap methodology.

[22] See paragraphs 4.37 to 4.55 for a discussion of the lower and upper bounds of estimated efficient costs.
[23] If the PPM uplift accurately reflects efficient additional costs of serving PPM customer with traditional meters, then all of that £4.16 is inefficient. If the PPM uplift understates efficient costs by up to £17, then up to £2.11 (£1.10 electricity and £1.02 gas) is efficient costs allocated to the operating cost allowance and the remainder of the £4.16 is inefficient (at least £2.05).
[24] As discussed above, in paragraphs 4.12 to 4.19.

4.29. The PPM uplift may understate efficient incremental PPM costs, or at least the CMA's judgment on efficient costs may differ from the judgment that we would have made. We have reviewed the data that the CMA considered and consider that efficient PPM costs could exceed the PPM uplift by £0 to £17.[25] On that basis:

- applying a cost reflective approach, we would remove the PPM costs already in the operating costs allowance (£4.16) and increase the PPM uplift by up to £17; and

- applying the tariff differential approach, we would remove the £4.16 of PPM costs that are already included in the operating costs allowance, maintain the PPM uplift as it is, and then add back excess efficient costs that we seek to spread across all default tariff customers (between £0 and £4.08 per dual fuel customer depending on the level of additional efficient costs).

4.30. If either of the approaches above would result in reducing the cap level for credit customers, then we would not do so. In our 2018 decision, we considered the overall level of the cap and set the headroom allowance in order to "top up" the cap. In setting the level of headroom, we ensured that the overall cap level protected customers, had regard to the needs in Section 1(6) of the Act, and took into account the impact of net uncertainty (including the conservatism in the other allowances). Reducing the overall level of the cap would alter that decision, which we do not propose to do.

Considering protection

4.31. Before considering the impact of smart meters, we do not consider that the cost reflective approach would protect PPM customers, which is our primary focus under the Act. If efficient costs exceed the PPM uplift, then the cost reflective approach would increase the cap level for PPM customers compared with the current level of protection they receive (before considering the net impact of the smart meter rollout).

4.32. In the circumstance where the cost reflective approach would reduce the overall level of protection for PPM customers with traditional meters, we would adopt a tariff differential approach, restricting the PPM uplift so that the cap level for PPM customers

[25] See paragraphs 4.37 to 4.55 below.

did not increase. We would spread any excess efficient incremental costs across all default tariff customers.

Considering suppliers' efficient costs

4.33. Regarding suppliers' ability to recover their efficient costs, the tariff differential approach would mean that suppliers will partially under-recover the efficient cost of each PPM customer with a traditional meter and over-recover for each direct debit customer. Suppliers with fewer PPM customers than average will be able to over-recover their costs. In practice, most non-specialist suppliers have customer mixes that allow them to recover their efficient PPM costs, or a substantial proportion of them.

4.34. If we set the PPM uplift at a cost reflective level, that would allow specialist suppliers to recover their efficient costs in full. However, all PPM customers (whether they were served by a specialist supplier or not) would be charged substantially more (before considering the net impact of the smart meter rollout). We consider our proposal protects customers, which is our primary focus, and in doing so has regard to suppliers' efficient costs, which vary depending on suppliers' circumstances and business models.

An overview of stakeholders' views

4.35. Suppliers' and consumer representatives' views varied. In summary, each of the options we are considering had supporters and some stakeholders suggested alternative approaches, as follows:

- Cost reflective approach – supporters of this approach prioritised ensuring that suppliers with a higher than average proportion of PPM customers could recover their efficient costs.

- Tariff approach – supporters of this approach prioritised protecting PPM customers as they tend to be more vulnerable than other groups of customers.

- Other approaches – some stakeholders suggested further subsidisation to provide PPM customers more protection. One stakeholder proposed charging both direct debit and PPM customers more than their underlying efficient costs.

4.36. We consider the main issues below, including suppliers' detailed comments. We consider:

- estimating efficient PPM costs;
- the cost reflective approach;
- the tariff differential approach;
- protecting customers;
- efficient suppliers' finances and effect on competition; and
- the impact of the smart meter rollout on operating costs.

Considering estimating efficient PPM costs

Stakeholders' views

4.37. Two suppliers expressed the view that the PPM uplift in the PPM cap is unreflective of the costs to serve PPM customers. One of those suppliers recommended we revisit the methodology to identify and make any adjustments to improve accuracy.

4.38. One supplier argued that we should be cautious about statements on possible inefficiency of some PPM costs. It considered that the incremental PPM costs could be influenced by suppliers' business decisions and therefore were we to set a cost reflective benchmark or comment on inefficiency, we should consider both direct debit and PPM costs together.

4.39. One supplier agreed that we should not reopen the operating costs allowance and collect new data. They stated we have not planned in a review of the default tariff cap operating costs allowance and that pressures from COVID-19 on Ofgem and suppliers would reduce their ability to commit to such a review at this time.

Recalculating efficient costs with data on costs in 2017

4.40. We cannot be certain whether the PPM uplift, which reflects the CMA's assessment of efficient incremental PPM costs in 2014, accurately reflects suppliers' 'true' efficient

incremental costs in 2017. For the reasons set out in our March 2020 consultation, we do not consider suppliers' efficient additional operating costs of serving PPM customers with a traditional meter have changed since 2017.[26]

4.41. We do not propose to recalculate efficient costs in 2017. In our March 2020 consultation we proposed not to collect the data necessary to reassess efficient costs. We considered that this was not in consumers' or suppliers' interests and was disproportionate. The analysis could only (a) reallocate costs between the cap levels and/or (b) remove inefficient costs included in the operating costs allowance. It would not change the total operating costs which we have already considered.

Assessing different judgements on efficient costs

4.42. We have assessed the same data that the CMA considered when it set the PPM uplift – suppliers' evidence on their operating costs per PPM and direct debit customers in 2014. This allows us to assess and consider the possibility that the PPM uplift understates efficient costs in 2017 and the implications of that.

4.43. In considering different efficient benchmarks, we do not conclude or imply that the CMA's judgement was inaccurate. Any assessment of efficiency contains a degree of uncertainty. Different analyses come to different conclusions depending on their approach and purpose. We deliberately compare the CMA's benchmark to more conservative analytic approaches to understand the potential impact on customers and suppliers.

4.44. We consider the CMA's estimate (and therefore the PPM uplift) a reasonable lower bound estimate of efficient costs: £64.07 in 2017 prices (£24.41 for electricity and £39.66 for gas). We consider it possible that the PPM uplift accurately reflects the efficient incremental PPM costs. The CMA analysed data from 2014, taking its decision in 2016. The CMA conducted two sets of analysis. Firstly, it benchmarked suppliers' costs. It recognised that providing data was not a simple exercise for suppliers and it

[26] Ofgem (2020), Protecting energy consumers with prepayment meters https://www.ofgem.gov.uk/system/files/docs/2020/03/protecting_energy_consumers_with_prepayment_meters.pdf

had concerns about data quality.[27] To verify the results of its benchmarking analysis, it also carried out a bottom-up analysis to assess efficient costs. The CMA considered and responded to suppliers' concerns that the PPM uplift might be too low, adjusting its analysis where necessary. The PPM cap was in place from 2017, with the PPM uplift a constituent part of it.

4.45. In its 2019 review, the CMA considered that the PPM uplift would need review once the rollout of smart meters has progressed significantly, but until then it did not consider a review was necessary.[28] We consider that the smart meter rollout has progressed since July 2019 but not significantly enough to conclude the CMA's assessment is no longer valid.

4.46. Assessing the same data as the CMA, we have estimated a higher level of efficient costs, which is our upper bound: £81 in 2017 prices (£32.36 for electricity and £48.63 for gas). We calculate this benchmark by taking the difference between (a) the weighted average costs to serve direct debit customers reported by the six largest suppliers and (b) the weighted average costs to serve PPM customers. We analyse each fuel separately.

4.47. Our upper bound estimate is deliberately conservative. The additional conservatism allows for the possibility that true efficient costs changed between 2014 and 2017, or the possibility that the CMA's assessment was stricter than we would judge. In response to our March 2020 consultation no supplier suggested reasons why efficient costs would change between 2014 and 2017, or raised issues with the CMA's analysis that the CMA did not consider during its design or review of the PPM cap.

Considering inefficient costs

4.48. The analyses above suggest that between £2.05 and all of the £4.16 already included in the operating costs allowance is inefficient. In principle, we should remove these

[27] CMA (2015), Paragraph 49
https://assets.publishing.service.gov.uk/media/576bcc08ed915d3cfd0000b9/appendix-9-8-analysis-of-costs-by-payment-method-fr.pdf
[28] CMA (2019), Para 5.10 (b)
https://assets.publishing.service.gov.uk/media/5d405962e5274a4016893bd0/Final_Decision_PPPC.pdf

costs, or we could leave them in the allowances as conservative assumptions (in effect, providing additional headroom).

4.49. However, other analyses of efficiency are possible, including approaches that are even more conservative than our upper bound. For instance, one supplier suggested that we should benchmark total costs, taking both direct debit and PPM costs together on the basis that business decisions could affect the allocation of costs or investment between payment methods. On that basis, the apparently inefficient costs we have calculated should be interpreted as misallocated direct debit costs, or costs that could be efficiently incurred in either activity depending on particular business decisions, but nonetheless they need to be incurred somewhere.

4.50. We agree in principle and abstract that a supplier might take decisions that mean it can only achieve low costs in one cost category (such as PPM costs) if it has high costs in another category (such as direct debit costs), or vice versa. Similarly, costs are not always simple to allocate to specific activities, so some costs reported as PPM costs may in fact be common or direct debit costs.

4.51. However, in this specific context, we consider that this approach is excessively conservative. We do not consider it necessary to treat operating costs for different payment methods together in this case.

4.52. Firstly, before considering whether it is likely in practice that business decisions affect the relationship between these costs, we already guard against the risk that allocation errors and business decisions could distort our analysis. That is because we use the average costs in each range of direct debit costs and PPM costs, not frontier costs. If suppliers skew their data, that impact would be averaged out.

4.53. Secondly, there are significant areas of additional PPM costs that are separately identifiable and should be independent of costs for other payment types, such as meter costs and prepayment infrastructure costs. That reduces the scope for potential allocation errors and business decisions that could distort costs.

4.54. Thirdly, this conservative approach assumes that the total operating costs contain no inefficient PPM costs whatsoever. We consider that assumption unnecessarily conservative, in light of the CMA's findings that suppliers had considerable market power over PPM customers and default tariff customers leading to inefficient operating

costs. In addition, the CMA's bottom up analysis suggested each supplier had unnecessarily high and inefficient reported costs.

4.55. For the purposes of the discussion below, we have used our upper bound estimate of efficient additional PPM costs (i.e. that additional efficient costs of serving PPM customers with a traditional meter are £81, £17 higher than the PPM uplift). In practice, the true efficient costs may be lower.

Considering the cost reflective approach

Lower bound

4.56. Assuming our lower bound estimate of efficient additional PPM costs is appropriate, we would not need to change the PPM uplift when taking a cost reflective approach. It would already reflect efficient additional PPM costs.

4.57. Using a cost reflective approach we, in principle, should remove the PPM costs already in the operating costs allowance (£4.16 dual fuel), which would be inefficient PPM costs. However, this would reduce the overall level of the default tariff cap for credit customers.

4.58. We consider that we would not remove inefficient PPM costs from the operating costs allowance in the circumstance in which doing so would reduce the current overall cap level for credit customers. In our 2018 decision, we set the headroom allowance so that the overall cap (a) allowed for the net long-run costs of uncertainty, above the level already covered by conservative assumptions in the other allowances and (b) protected customers and in doing so, had regard to the statutory needs in section 1(6) of the Act. Reducing the cap level would alter that decision which we do not propose to do. In effect, this means we would include £4.16 of conservatism or headroom in the operating costs allowance.

4.59. PPM customers were not part of our 2018 decision on headroom. In principle, we might not choose to include the £4.16 of inefficient PPM costs in the cap level of PPM customers. We could not deduct it from the operating costs allowance, as it applies to all payment methods, but we could deduct it from the PPM uplift. That way the overall cap level for PPM customers would be at the efficient level. In this circumstance, we would not propose to remove the inefficient costs, as that would effectively set different levels of headroom for credit customers and PPM customers.

Upper bound

4.60. Assuming our upper bound estimate of efficient additional PPM costs is correct, when taking a cost reflective approach we would increase the PPM uplift by £16.92 (£7.95 electricity and £8.97 gas) to £80.99 (£32.36 electricity and £48.63 gas).

4.61. We should also remove the £4.16 of PPM costs from the operating costs allowance (£2.05 of which is inefficient PPM costs and £2.11 relates to efficient PPM costs that we would now recognise in the PPM uplift). For the reasons stated above, we would propose not to do so, where this would reduce the overall cap level for credit customers.[29]

Considering the tariff based approach

Lower bound

4.62. Using our lower bound estimate (which assumes the PPM uplift is accurate), the tariff reference approach has the same impact as the cost reflective approach. The PPM uplift would be £64 in either case.

4.63. In principle, we should remove £4.16 of inefficient PPM costs from the operating costs allowance, but would not propose to do so for the reasons stated above.[30]

Upper bound

4.64. In our proposed tariff differential approach, using our upper bound estimate (which uses our conservative assessment of efficient costs), we would nonetheless set the PPM uplift to £64, benchmarking it to the current approach.

4.65. We would spread the portion of efficient incremental PPM costs (£17) that exceeds the PPM uplift across all default tariff customers. That would result in an increase of £4.08 (£1.91 for electricity and £2.17 for gas).

[29] See paragraphs 4.58 to 4.59.
[30] See paragraphs 4.58 to 4.59.

4.66. We should also remove the £4.16 (£2.07 for electricity and £2.09 for gas) of PPM costs from the operating costs allowance. At the level of our upper bound, the £4.08 (£1.91 for electricity and £2.17 for gas) we would spread across all default tariff customers effectively offsets the costs already included in the operating cost allowance that we should remove. On that basis, we propose to leave the operating costs allowance and PPM uplift as they are in the current PPM cap methodology. If the efficient costs are less than our upper bound, the net effect would reduce the overall level of the cap, which we do not propose to do for the reasons stated above.[31]

4.67. In response to our March 2020 consultation, two suppliers observed that we previously proposed to spread PPM costs across all customers, including those with a FT. If we socialised costs across all customers, we would charge £2.11 per customer (£1.10 electricity and £1.01 gas). The suppliers considered that we should not adopt that approach, as they would be unable to recover those socialised costs from FT customers. They propose we recover costs only from default tariff customers. Using the market average proportion of PPM customers on default tariffs means we would increase the charge by £1.97 (£0.81 electricity and £1.16 gas) from £2.11 to £4.08 per default tariff customer.

4.68. In theory, suppliers would not be able to recover PPM costs that are spread over FT customers, as their tariff should be competitively set *by competing suppliers with few PPM customers, if any.* Those competitors would not include socialised costs in their tariffs. However, in practice, it is not the case that large suppliers price their competitive FTs at the same price as low cost competitors. Data shows that the large supplier price their FTs in various ways, but on average, they are higher than competitors' tariffs. Neither is it is clear that suppliers would be unable to recover an additional £2 of socialised costs without increasing switching rates (i.e. losing customers).

4.69. However, it is clear that suppliers price their FTs as part of competitive process, where competitors do not have socialised costs. On that basis, we err on the side of caution and assume that socialised costs cannot be recovered from FT customers. We propose to spread socialised costs across default tariff customers only.

[31] See paragraphs 4.58 to 4.59.

4.70. As stated in our March 2020 consultation it would be more precise to reallocate the socialised costs the payment method uplifts on each payment method. The impact on the overall cap level is negligible, so we do not propose to reallocate costs between allowances.

Considering protecting customers

Stakeholders' views

4.71. Two suppliers and two consumer groups supported our proposal to maintain the current PPM uplift, using the tariff differential approach and spreading any additional efficient PPM costs over all payment methods. The consumer groups considered that PPM required additional protection (compared to direct debit customers) given that PPM customers are more likely to be fuel poor and in vulnerable situations. They considered that our proposal would help towards the affordability of energy for prepayment customers.

4.72. Another consumer group agreed that we should provide more protection to PPM customers than default tariff customers paying by direct debit. However, it considered that we should provide more protection than we had proposed. It said that there should be no tariff differential between the two payment methods (i.e. we should spread incremental PPM costs across all customers equally, increasing the cap level for all payment methods). It considered that suppliers install prepayment meters to recover debt, leading to the perverse outcome that installing a prepayment meter to recover debt increases energy costs, leading to greater levels of self-disconnection and self-rationing.

Our considerations

4.73. To the extent that true efficient incremental PPM costs exceed the PPM uplift, the tariff reference approach affords greater protection to PPM customers. We consider this appropriate.

4.74. A cost reflective approach would increase prices for PPM customers (before considering the impact of the smart meter rollout.[32] We do not consider it desirable to increase the tariffs for PPM customers, compared to the current tariff differential they already pay. In line with consumer groups' views, we consider that PPM customers are more likely to be vulnerable than direct debit customers. In line with the CMA's findings they also face additional barriers to switching, are likely able or likely to switch to cheaper tariffs independently.

4.75. Given that there are fewer PPM customers than direct debit customers, the impact of spreading PPM costs across all payment methods decreases bills for PPM customers to a greater extent than it increases bills for direct debit customers. A £4 reduction in PPM tariffs increases charges for all default tariff customers by about £1. (As we do not propose to reduce the cap for direct debit customers, in any event, customers will not actually pay more).

4.76. We consider that the impact of high cost traditional PPMs do have the perverse outcome of increasing costs for customers who are more likely to already be vulnerable or in financial difficulty. This is a legacy problem that should reduce as smart meters replace traditional meters. Smart meters do not cost significantly more in prepayment mode than they do in credit mode. We consider that is appropriate to provide additional protection to PPM customers (potentially setting the PPM uplift below efficient costs) during that transition.

4.77. However, in principle, we seek to (a) not increase operating costs charges for PPM customers above their current levels and (b) not spread PPM costs across all default tariff customers once smart meters have eroded the majority of high traditional PPM costs. In Chapter 5, we consider how we could remove that subsidy as the smart meter rollout reduces the costs to serve PPM customers. Below we consider how we might reduce the amount of traditional PPM costs we spread across all customers as the smart meter rollout continues.

[32] We discuss the impact of the smart meter rollout in Chapter 5, and the interaction with PPM uplift below, see paragraphs 4.87 to 4.89.

Considering efficient suppliers' finances and effect on competition

Stakeholders' views

4.78. A few suppliers disagreed with our provisional proposal to spread any increase in the efficient PPM cost differential over all payment methods. Suppliers noted that spreading costs distorted competition, such that suppliers with PPM customers were less able to compete for direct debit customers (as competitors with few PPM customers did not price in PPM costs to their tariffs).

4.79. Suppliers also noted that spreading any PPM costs meant that suppliers with more PPM customers than average could not fully recover their efficient costs, and would mean that PPM specialists would be disadvantaged

Impact on competition for default tariff customers

4.80. We estimate that the tariff differential approach increases the cap level for direct debit default tariff customer by £0 to £4.08 depending on the extent to which true efficient incremental costs exceed the PPM uplift. The average difference between the default tariff cap and the basket of competitive fixed tariffs in the market has been around £200 to £300.[33] We do not consider that £0 to £4 makes a significant difference to the ability of suppliers to compete, or the likelihood that default tariff customers will switch to cheaper tariffs. Furthermore, there is weak competition in the default tariff market (hence, the introduction of the cap).

Impact on suppliers with more PPM customers than average

4.81. If the PPM uplift is accurate, then the tariff reference approach allows suppliers to recover their efficient costs, regardless of what proportion of their customers pay by PPM.

[33] Ofgem indicator – Retail price comparison by company and tariff type (https://www.ofgem.gov.uk/data-portal/retail-market-indicators#thumbchart-c7770745751913637-n95437)

4.82. If true efficient costs are closer to our upper estimate, then under a tariff differential approach a supplier's ability to recover, or over-recover, its costs would depend on the mix of customers in its portfolio. Suppliers with an average proportion of PPM customers would recover their efficient costs.

4.83. Suppliers with more PPM customers than average would under-recover efficient costs to an extent (as they lack enough non-PPM customers to recover the efficient PPM costs over). The inverse is true of suppliers with more direct debit customers than average – they could over-recover from direct debit customers. This is a matter of degree: the more a supplier differs from market average proportions, the greater the impact.

4.84. In principle, we are not opposed to the effect created by allocating a portion of PPM costs to other customers and therefore we propose a tariff differential approach. We consider the impact for customers and suppliers to be consistent with section 1 of the Act, of which the primary objective is to protect customers. In our 2018 decision on the default tariff cap, we decided to set the uplift for standard credit customers using a tariff differential approach that was not fully cost reflective. We considered that this approach protected customers, and in doing so, we had regard to suppliers' finances, notwithstanding the potentially distorting impact the approach has on cost-recovery.

4.85. This approach has greater impact on suppliers with business models that specialise in serving customers with high costs traditional PPMs to recover their efficient costs. We do not consider that is a reason to increase tariffs and reduce protection for 4 million PPM customers, most of whom are not served by specialist suppliers.[34]

4.86. The rollout of smart meters is likely to erode the high costs differential of serving traditional PPM customers. We would not seek to continue spreading the additional PPM costs over all payment methods once the costs to serve PPM has decreased from the rollout.

[34] PPM specialists cover approximately 20% of the PPM market based on 2019 customer accounts.

Considering the impact of the smart meter rollout on operating costs

4.87. In Chapter 5, we assess the net impact of the smart meter rollout on the efficient operating costs of a supplier with an average rollout profile. The smart meter rollout should largely erode the additional efficient costs of serving PPM customers. If we were to leave the PPM uplift at a level lower than efficient costs, then we could continue to spread PPM costs across all default tariff customers, even after the smart meter rollout has reduced suppliers' operating costs.

4.88. We seek to achieve two outcomes:

- that we do not continue subsidising PPM customers once the high costs of traditional PPMs are removed and the costs of serving PPM customers is comparable to other customers; and

- that we do not increase tariffs for PPM customers with expensive traditional PPMs, who are more likely to be vulnerable than other customers.

4.89. To achieve both outcomes, we propose to unwind the subsidy as the rollout continues and erodes suppliers' additional operating costs. Based on our current PPM SMNCC estimate, that may include increasing the PPM uplift from 1 October 2020, to the extent that increase is offset by the reduction in costs attributable to the impact of the smart meter rollout. This maintains the tariff differential approach, as the overall PPM cap level would not increase above the current tariff differential. Even after that adjustment, some subsidy will likely remain (i.e. the PPM uplift would still not fully reflect costs). We would propose to unwind the remaining subsidy during future cap periods using the SMNCC.

Other considerations

Stakeholders' views

4.90. One supplier considered that we should set the default tariff cap to prevent excess charging and not seek to set the level at a calculation of efficient costs. It considered that our proposal does not take into account suppliers with different business models. It suggested that we set the standard credit cap level for all payment methods and allow suppliers to compete under that level of protection.

Our considerations

4.91. This proposal would allow suppliers to charge direct debit customers and PPM customers more than their underlying efficient costs. We do not consider this would protect customers and as such, it is not consistent with the objective of the Act.

Setting the PPM uplift at nil consumption

Options

4.92. We set the cap level at nil consumption and typical consumption, from which we calculate a maximum variable change and maximum standing charge. The lower the cap level at nil consumption, the lower the standing charge and the higher the variable charge.

Proposal

4.93. We propose to apply the PPM uplift equally at typical and nil levels of consumption as is done in the current PPM cap. This proposal is in line with our policy consultation position.

Stakeholders' responses

4.94. Two stakeholders responded on this topic. One supplier agreed that the additional costs to serve a PPM customer did not vary with consumption and therefore the uplift should be applied equally at all levels of consumption.

4.95. However, one consumer group disagreed with the approach. They argued that our reluctance to stray away from cost reflectivity in terms of the PPM uplift at nil consumption has perverse consequences for PPM customers. When a PPM customer self-disconnects, they still incur the standing charge and build up debt. The debt they build up (which is in proportion to the standing charge) may make it harder for some customers to get back on supply as they need to repay accumulated standing charges when they next top-up, meaning these customers could go without electricity and heating for more prolonged periods of time.

Our considerations

4.96. In the default tariff cap, the differential between the standard credit tariffs and the direct debit tariffs varies with consumption. This is because the underlying costs vary with consumption, largely due to bad debt and working capital. On that basis the standard credit uplift is smaller at nil consumption than it is at typical consumption. These variable cost categories are less significant for PPM customers.

4.97. The cost differentials between those with credit meters and PPM meters mainly reflect assets and services that do not seem to vary with consumption. On that basis, the PPM uplift at nil consumption should match the uplift at typical consumption.

4.98. We appreciate that while this is the approach that best reflects the cost difference between direct debit and prepayment, there is a negative impact on vulnerable customers that have low consumption and those that are at risk of self-disconnection. We believe these issues should not be addressed directly in the default tariff cap.

4.99. Our review into self-disconnection and self-rationing identified that the impact of standing charges on vulnerable PPM customers is mainly a seasonal issue, where customers do not top up their gas PPM meters during summer and they accrue standing charges, which can lead to self-disconnection when they next top-up in the winter.[35] Existing obligations require suppliers to treat customers fairly and identify those who are in vulnerable circumstances. Suppliers are also required to provide information so that each consumer can understand the key features of their tariff and make informed choices on when and how much energy they consume. We expect this to include customers having the necessary information about standing charges and the potential build-up of these charges during periods of no consumption. We have also highlighted good practice by suppliers who run summer information campaigns to remind customers to keep their PPM meters topped-up to a minimum where possible.

4.100. Last year we consulted on our proposals to require suppliers to proactively identify customers who are self-disconnecting or self-rationing and provide appropriate support as needed, including by taking into account customers' ability to pay when repaying

[35] https://www.ofgem.gov.uk/system/files/docs/2019/08/proposals_to_improve_consumer_outcomes_self-disconnection_and_self-rationing_1.pdf

debt. We will consult on our final proposals shortly this year. We expect the new obligations to provide the necessary consumer protection to those negatively impacted by self-disconnection.

4.101. If at any point our stance on standing charges were to change, we would look to reflect this in the default tariff cap. However for now, we propose to be reflective of how costs are portioned between nil and typical consumption in the default tariff cap.

5. Allowing for the costs of the smart meter rollout to prepayment customers

Section summary

In this chapter, we propose how to account for the impact of the smart meter rollout on costs relating to PPM customers.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our proposals set out in this chapter.

Summary of proposals

5.1. We propose to include allowances for efficient smart metering costs in the PPM level of the default tariff cap. These comprise the allowance contained within the operating cost allowance, an allowance for pass-through smart metering net cost changes (pass-through SMNCC), and an allowance for non-pass through smart metering net cost changes (non-pass through SMNCC).

5.2. We propose to include the operating cost allowance at the same level as the existing default tariff caps. In our consultation on the SMNCC allowance for credit meters, we estimate the operating cost allowance in the default tariff cap already contains about £8 per fuel that relates to the smart meter rollout, before considering relevant IT costs.[36] As set out in Chapter 4, we do not propose to amend that operating cost allowance when setting the cap level for PPM customers.[37]

[36] This figure is slightly higher than the value shown in our October 2019 consultation on the SMNCC (Table 4.4, https://www.ofgem.gov.uk/system/files/docs/2019/10/smart_metering_review_in_the_default_tariff_cap_-_october_consultation.pdf). This is due to the methodological improvements and error corrections identified through the consultation process.

[37] We discuss in 5.110 – 5.113 how the operating cost allowance allows for over-recovery from PPM customers, and so we amend the SMNCC in each period to avoid systematic over-recovery of costs.

5.3. We propose to set the pass-through SMNCC using the same methodology we use to set the default tariff cap for other payment methods. The existing PPM cap already includes this allowance, so there would be no change in terms of the impact on customers and suppliers.

5.4. We propose to set a PPM-specific non-pass through SMNCC allowance for the PPM default tariff cap. We have assessed the net impact of the smart meter rollout on the efficient operating costs for a supplier with an average rollout profile for each year between 2017 and 2023. Suppliers incur costs purchasing and installing smart meters, and pay charges on meters replaced before the end of their asset lives. These costs increase as they install more meters. Suppliers avoid both the cost of purchasing and installing new traditional PPM meters that they otherwise would have installed when the previous meter expired, and the rental costs on traditional meters that are replaced early. That reduction in their efficient operating costs increases over time. In addition suppliers incur operating benefits and incur fixed IT and programme management costs.

5.5. Our proposed non-pass-through SMNCC allowance for cap period 5 (1 October 2020 to 31 March 2021) is -£17.29 for gas and -£2.34 for electricity. These negative values represent a reduction in efficient PPM costs below the level already provided in the operating costs allowance. The gross cost to suppliers of purchasing and installing smart meters is similar to those costs for credit customers. However, smart meters are much cheaper than the new expensive traditional prepayment meters that suppliers would otherwise install each year when old meters expire. Avoiding those costs is a benefit to suppliers more than offsetting the gross costs of installing smart meters. We calculate these estimates using the SMNCC model, with PPM-specific input data where appropriate. We are disclosing the model used for these calculations and describe below the costs and benefits, for suppliers to consider and scrutinise.

5.6. We set out in Chapter 7 our contingency proposals in the event it is not possible for us to develop a sufficiently robust and scrutinised set of values for the non-pass-through SMNCC in time for cap period 5. In that case we would include a PPM-specific non-pass-through SMNCC allowance at £0 (in effect, maintaining the cap level that would be set using the current PPM cap methodology).

Table 5.1: Current PPM cap and proposed non-pass-through smart metering net cost change allowance, cap periods 5 to 7 (£)

	Current allowance for PPM customers	Proposed allowance, Cap 5	Proposed allowance, Cap 6	Proposed allowance, Cap 7
		Oct 20 - March 21	April 21 - Sept 21	Oct 21 - March 22
Elec	0	-2.34	-6.47	-7.32
Gas	0	-17.29	-21.47	-22.88
Implied dual fuel	0.00	-19.63	-27.94	-30.21

Notes:

(1) All figures are shown in nominal terms.

(2) The current PPM cap set by the Competition and Markets Authority does not include an allowance for non-pass through smart metering costs, and so this is set to zero.

Accounting for the smart meter programme

Allowances for smart metering costs

5.7. The default tariff cap allows for the costs and benefits of the smart metering rollout (compared to the continued use of traditional meters) through:

- The operating costs allowance, which rises with inflation each period. This includes the costs of the smart meter programme in 2017.
- The SMNCC allowance. This accounts for the net impact on the costs in our operating costs allowance baseline of replacing traditional prepayment meters with smart meters. This net impact can be positive or negative. The SMNCC is **not** an allowance for the gross costs of the smart meter rollout, it only allows for changes in operating costs due to smart meters compared to the 2017 baseline. It has two components:
  - the pass-through SMNCC, accounting for the costs to suppliers of industry charges relating to the smart meter programme; and
  - the non-pass through SMNCC, accounting for all other efficient changes to costs and benefits of the smart meter rollout to suppliers since 2017.

The SMNCC

5.8. The SMNCC is designed to track changes in smart metering rollout in a cost-reflective way, with no explicit sharing of costs between payment types or fuels.

5.9. Over time, the gross costs of the rollout to suppliers accumulate, as much of the cost is annualised in the smart rental charge and paid in subsequent years. The operational benefits also accumulate in a similar manner, as suppliers' installed base of smart meters increases.

5.10. As set out in Chapter 4, we propose to include a PPM payment method uplift. This accounts for the additional costs of serving traditional PPM customers, such as higher meter asset costs and higher costs to serve. The payment method uplift is constant over time, growing only with inflation. As the smart meter rollout continues, it will erode the additional costs of serving PPM customers with a traditional meter. That means the SMNCC allowance will grow increasingly large and negative, offsetting the PPM uplift, as the reasons for cost differences between credit and PPM customers reduce. As such, the impact of the PPM SMNCC is quite different to that of the SMNCC for credit meters.

Comparison with the SMNCC for credit meters

5.11. Customers with traditional PPM meters have different underlying costs to traditional credit meter customers. For example, the asset cost of a traditional PPM is typically higher than for a traditional credit meter, and so the avoided cost of installing a new traditional meter is much greater for PPM than it is for credit. The benefits in reduced cost to serve are also estimated to be greater for PPM customers than for credit meter customers. As a result, the net costs of smart meter rollout are very specific to the meter type.

5.12. This chapter sets out, for the PPM default tariff cap, our:

- proposals for the pass-through SMNCC;
- proposed principles for assessing the non-pass through SMNCC;
- proposed approach to calculating the net cost of the smart meter rollout for each year; and

- proposals for setting the non-pass through SMNCC allowance to account for the net impact of the rollout in each cap period.

5.13. We discuss how we set the rollout profile in the SMNCC and estimate potentially sunk costs due to COVID-19 in Chapter 6.

Assessing the pass-through SMNCC

5.14. As the smart meter rollout progresses, suppliers pay industry body charges. These cover the costs incurred by the Smart Data and Communications Company (DCC), Smart Energy Great Britain (SEGB), Alt Han Co, and SMICoP.[38]

Options

5.15. To reflect the costs of industry charges we have considered:

- using the pass-through SMNCC already used in the default tariff cap and PPM cap; or

- developing a new methodology to calculate a value specifically for PPM customers.

Proposal

5.16. We propose to maintain the pass-through SMNCC allowance for PPM customers, using the same methodology we use for credit customers. We calculate the change using industry charging statements

Rationale

5.17. We do not consider that the costs covered in the pass-through SMNCC would vary by payment method. The pass-through SMNCC methodology is set out in our 2018 decision and was adopted by the CMA in their 2019 review of the PPM cap.[39]

[38] Smart Meter Implementation Code of Practice
[39] Ofgem (2018), Default tariff cap: decision – overview, Appendix 7 – Smart metering costs.

Stakeholders' views

5.18. Two consumer groups commented on our proposal. No other stakeholders commented. The two consumer groups both argue that the pass-through SMNCC allowance should not be included for PPM customers, because most PPM customers are not benefiting from the smart meter rollout, claiming there are low rollout volumes so far and technical issues such as network connectivity.

Considerations

Progress of the rollout

5.19. Whilst we note that the rollout of SMETS2 meters is not as advanced for prepayment customers as for credit customers, overall the rollout for PPM customers is progressing at a similar pace as for other customers, and so it is appropriate that both groups of customers (those with PPM and those with credit meters) pay the pass-through SMNCC allowance.

5.20. We do not consider it appropriate for only customers with smart meters pay the pass through SMNCC allowance. In due course, all customers will have smart meters, so all customers should contribute to the costs, rather than placing additional burden on those who have installed a smart meter relatively early in the rollout. Placing additional costs only on customers with smart meters could deter customers from accepting a smart meter, which ultimately would increase costs for all customers, failing to protect their long-term interests. This is the same reasoning we used to set the existing default tariff cap.

Technical barriers

5.21. Regarding technical issues such as network connectivity, in principle, the impact of the industry bodies' activities[40] may not exactly reflect the market proportions of credit

https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_7_-_smart_metering_costs.pdf

[40] DCC, SEGB, Alt Han Co, and SMICoP

and PPM customers. For instance, marketing activities (SEGB) or those in premises that cannot connect to standard Home Area Networks (HAN) could be disproportionately relevant to PPM customers. We expect that impact to be difficult to estimate and the net impact, if any, to be minor. We also note that the majority of the costs within the pass-through SMNCC allowance are charged on a market share basis without a breakdown by payment method.

Principles of assessing the non-pass-through SMNCC

5.22. We set the non-pass-through SMNCC allowance in the default tariff cap to account for the net change in efficient operating costs since 2017 due to the smart meter rollout. Importantly, the non-pass-through SMNCC allowance is not a measure of smart costs overall – it is a measure of the change in those costs, compared with costs included in the operating cost allowance.

5.23. As discussed in our consultation on the SMNCC allowance for credit meters, we propose to set the non-pass-through SMNCC allowance for credit customers considering:

- the change in the rollout profile and the number of smart meters that have been installed compared with 2017;
- the change in the costs and benefits of replacing traditional credit meters with smart meters; and
- an adjustment to account for the different definitions of 'efficiency' we used to assess total operating costs in 2017, and to assess smart metering costs in isolation.

5.24. We set out below our proposals for setting the non-pass-through SMNCC for PPM customers. For the remainder of this document we refer to the non-pass-through SMNCC allowance for PPM customers as the PPM SMNCC.

Options

5.25. The current PPM cap does not account for the impact of the smart meter rollout on the costs of serving PPM customers. First, we have considered whether to include a PPM SMNCC.

5.26. Second, on the basis of including a PPM SMNCC , we have considered whether to include it for all PPM customers on the PPM default tariff cap, or only include it for those PPM customers with a smart meter (in prepayment mode).

5.27. Third, we consider whether the value of the PPM SMNCC should be determined by:

- setting it to the same level as the credit meter non-pass-through SMNCC;
- calculating a new PPM specific PPM SMNCC; or
- calculating a PPM specific SMNCC, then calculating the weighted average non-pass-through SMNCC across all payment types and apply this new non-pass-through SMNCC to all cap levels.

Proposal

5.28. We consider that the PPM default tariff cap should include a PPM-specific SMNCC which applies to all PPM customers within the scope of the cap.

Rationale

Including a PPM SMNCC

5.29. We consider that including a PPM SMNCC is necessary. As set out in 5.1 to 5.5, the smart meter rollout affects net costs. Excluding this cost category would assume that installing smart meters has no impact on suppliers' net costs. The operating costs allowance would remain constant in real terms, diverging from suppliers' underlying efficient operating costs of supplying PPM customers over time as suppliers replaced expensive traditional PPMs with cheaper smart meters. Suppliers would consistently over-recover their efficient costs.

A single allowance for all PPM customers

5.30. We consider the PPM SMNCC should apply to all customers in scope of the PPM cap level, not just those with a smart meter. This is because we do not consider it appropriate for only smart metered customers to pay for the smart meter programme. In due course, all customers will have smart meters, so all customers should contribute to the costs, rather than placing additional burden on those who have installed a smart meter relatively early in the rollout. Placing additional costs only on customers with

smart meters could deter customers from accepting a smart meter, which ultimately would increase costs for all customers, failing to protect their long term interests. This is the same reasoning we used to set the existing default tariff cap.

A specific allowance for PPM customers

5.31. We expect that rolling out smart meters to PPM customers reduces suppliers' operating costs, whereas rolling out smart meters to credit meter customers increases suppliers' operating costs (on average, in both cases). As the non-pass-through SMNCC tracks the change in suppliers' efficient costs, we cannot use the same allowance for PPM as we do for credit meters. This is discussed in more detail in 5.40 to 5.104 later in this chapter.

An overview of stakeholders' views

5.32. All stakeholders (including suppliers and consumer groups) who commented agreed that the PPM default tariff cap should include a PPM SMNCC. Further, all stakeholders who commented also agreed that we should set one cap level for all PPM customers in scope of the cap.

5.33. The vast majority of respondents favoured a PPM-specific SMNCC, recognising (notwithstanding their views on the level) there are different costs and benefits for PPM customers switching to a smart meter, and therefore did not favour an approach which would socialise smart meter costs and benefits across all payment types.

5.34. One supplier disagreed, arguing that elsewhere in the price cap we allow cross-subsidy between customer groups, and so we should adopt the same approach in this case. One supplier agreed with our proposals but noted that it socialises all of its smart metering costs across all customers, and believes that other suppliers do the same. Another supplier noted that the PPM SMNCC should not be set 'too low' as suppliers need to be able to recover their costs.

Our considerations

Spreading costs

5.35. As discussed in Chapter 4, we propose to set the PPM uplift using a tariff differential approach, seeking to maintain the current difference between the cap levels for direct debit customers and PPM customers. This means that a proportion of the costs of

serving customers with traditional PPM will be included in operating costs (and therefore spread over all payment methods). This protects PPM customers (who are more likely to be vulnerable) from potentially substantial bill increases.

5.36. We do not consider that cost socialisation is an end in itself. It would clearly not be appropriate to spread smart meter net costs from credit customers onto PPM customers. That would increase costs for those least able to bear them. Credit customers already have lower tariffs and are less vulnerable on average.

5.37. We consider that suppliers should be able to recover their net efficient costs for rolling out smart meters to PPM customers, through the PPM default tariff cap. This includes both costs and benefits. Whilst some suppliers may spread their gross costs across its customer base (for example installation costs for both PPM and credit meter customers), some costs and benefits will not be spread this way - for example, the benefits of avoided traditional PPM asset costs.

Suppliers' current practices

5.38. We must distinguish between the gross costs of the smart meter rollout and the net impact of that rollout on suppliers' operating costs. The gross costs of buying and installing smart meters are similar between credit customers and PPM customers. In each case, the smart meters being installed, the workforce installing those assets, and the programme team supporting them would not differ substantially.

5.39. However, it is important that we do not spread the net impact (i.e. benefit) of replacing expensive traditional PPMs with cheaper smart meters across all customers. Avoiding that expense reduces the cost of serving PPM customers; it does not affect the costs of serving credit customers. It negates one important driver of higher PPM tariffs: on-going and high traditional PPM asset costs.

Estimating the relevant net costs of the smart meter rollout for PPM customers

Context – the credit meter SMNCC

5.40. The default tariff cap includes a detailed methodology for calculating the SMNCC for credit customers. We are currently consulting on our review of this methodology in our consultation on the SMNCC allowance for credit meters. In the review we propose to:

- use the 2019 BEIS Cost Benefit Analysis (CBA)[41] as a starting point;
- exclude or apportion costs and benefits not relevant to suppliers' net costs of serving default tariff customers with credit meters;
- review cost and benefit categories in the 2019 CBA, and made modifications where this is more appropriate for our purpose (setting the SMNCC allowance); and
- use the average rollout profile up to 2019, and project rollout for 2020 and 2021 using the average installation rate between 2017 and 2019. For 2020, we reduce this estimate by 70% due to the impact of COVID-19 (discussed in Chapter 6 of this document).

5.41. Stakeholder comments on the credit meter SMNCC methodology are out of scope for this PPM statutory consultation, and should be provided in response to our consultation on the SMNCC allowance for credit meters. Where stakeholder comments cut across both the credit and PPM SMNCC, it would be helpful if stakeholders can make this clear in their responses.

Our proposals

5.42. For the purposes of the PPM default tariff cap, we propose to take as our starting point the credit meter non-pass-through SMNCC as proposed in our consultation on the SMNCC allowance for credit meters. We then make changes to reflect the specific costs and benefits incurred through the smart meter rollout to PPM customers. Where we make changes to reflect PPM specific values, we use the method and values set out in the BEIS 2019 smart meter cost-benefit analysis wherever possible, except where more up-to-date information is available (e.g. the 2019 ASRs). Each change is discussed below.

5.43. Our proposals result in a PPM SMNCC allowance that is lower than the SMNCC for credit meters. This is because:

[41] Smart Meter Roll Out – Cost Benefit Analysis (2019), BEIS https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831716/smart-meter-roll-out-cost-benefit-analysis-2019.pdf

- The benefit resulting from not installing traditional meters is higher for PPM meters than for credit meters. This is primarily because traditional PPM asset costs are more expensive than both smart meters and traditional credit meters, and because their asset life is shorter (and so they need replacing more frequently, spreading the cost over fewer years).

- There are larger benefits of reduced cost to serve for PPM customers than for credit customers. Moving to a smart meter reduces several of these costs, even though it does not remove the entire cost differential between credit and prepayment customers. This benefit grows over time as rollout progresses

5.44. We discuss the details of our modelling and assumptions later in this section.

Stakeholders' views

5.45. No stakeholder commented directly on our proposal to use the same methodology to calculate SMNCC for PPM customers that we use to calculate the SMNCC for credit customers, though one supplier noted its existing concerns with the model used to calculate the credit SMNCC.

5.46. Most stakeholders did not comment directly on detailed costs and benefits, instead stating that it would be important to scrutinise the details of our proposals when they became available.

5.47. A small number of stakeholders noted that they expected PPM customers to have a lower SMNCC than credit customers, due to the greater benefits incurred. One supplier commented we should use the latest ASR data where possible. One supplier stated that in its experience there is a transition period following a smart installation during which costs to serve go up for a customer who moves from a traditional PPM to a smart meter in prepayment mode.

5.48. One supplier provided detailed views on the costs of smart metering for PPM customers. It highlighted that it expects that PPM customers (even with a smart meter) will call their supplier more frequently than credit customers due to the practicalities of the payment method, issues relating to vulnerabilities, and behavioural preferences. It also notes that there will continue to be payment infrastructure charges, and that premature replacement costs will be higher for traditional PPM meters than for credit meters. The supplier also noted additional costs compared to

credit relating to stranded SMETS1 assets and it being 'safe and reasonably practicable' for a smart meter to operate in prepayment mode.

5.49. We set out below our data sources. Where possible, we use the latest ASR data available. We discuss the costs to serve, including transition costs and inbound calls, in 5.94 to 5.103. We include the ongoing costs of prepayment infrastructure in the costs, as discussed in 5.101. We discuss premature replacement costs, which are higher for PPM than credit, in 5.79 to 5.83.

Our considerations - approach

5.50. For the reasons set out in our April 2019, October 2019, and May 2020 consultations, we consider that the BEIS CBA remains the most robust and detailed assessment of the cost and benefits of the smart meter rollout. As such we consider that the credit SMNCC, which adapts the 2019 BEIS CBA to consider the relevant costs, benefits and time period, is the most appropriate starting point. For PPM we propose to use the SMNCC model, with adjustments to reflect the differing costs and benefits of PPM.

5.51. The vast majority of the PPM SMNCC inputs and calculations have been seen previously by stakeholders. The gross costs of buying and installing smart meters are common between PPM and credit customers. The SMNCC model has been disclosed to stakeholders twice, most recently in October 2019. BEIS has published detailed documentation regarding its 2019 CBA and its underlying assumptions. The BEIS 2019 CBA documentation also contains the main PPM–specific input values which we use.

5.52. Where we state below that we have used the same value as the credit SMNCC, please see our consultation on the SMNCC allowance for credit meters for details on the data source and calculation approach.

Table 5.2: Net smart metering costs to suppliers per electricity account.[(1)(2)(3)(4)]

	2017	2018	2019	2020	2021	2022	2023
In-premise: installation and asset net costs	4.81	6.07	5.78	2.91	4.40	5.36	6.33
Operation and maintenance costs	0.95	1.39	1.56	1.23	0.86	0.90	1.02
Organisational costs	0.35	0.35	0.34	0.34	0.33	0.32	0.32
Net reduction in energy theft	-0.06	-0.11	-0.14	-0.16	-0.19	-0.22	-0.26
Advertising costs	0.55	0.39	0.38	0.38	0.38	0.37	0.37
Other costs [(3)]	0.59	0.87	0.98	0.83	0.87	0.89	0.83
Direct operational Benefits	-1.37	-2.41	-3.30	-3.84	-5.00	-6.53	-7.64
Net costs excluding IT	**5.81**	**6.55**	**5.60**	**1.70**	**1.64**	**1.08**	**0.98**
Sunk cost adjustment	0.00	0.00	0.00	6.55	0.00	0.00	0.00
Baseline adjustment: definition of efficiency	NA	1.02	1.02	1.02	1.02	1.02	1.02
Baseline adjustment: Weighted average payment type	NA	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82
Total efficient net costs excluding IT and including adjustments	**5.81**	**5.75**	**4.80**	**7.45**	**0.84**	**0.28**	**0.17**
Net cost change since 2017, excluding IT and including adjustments	0.00	-0.06	-1.01	1.64	-4.97	-5.53	-5.63
Change in IT costs	0.00	0.12	0.52	-0.08	-0.55	-1.32	-1.93
Net cost change including IT and including adjustments	**NA**	**0.06**	**-0.49**	**1.56**	**-5.52**	**-6.85**	**-7.57**

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

(2) The CBA estimates the solely additional costs for rolling out smart meters (ie costs that supplier incur over and above the costs that would have incurred in a world without the smart meter rollout). Isolating the additional costs of IT investment is particularly challenging. Our analysis is less sensitive to the allocation between counterfactual and additional IT costs, because the total combined costs are included in the operating costs allowance. For that reason we track the change in IT costs.

(3) The sunk cost adjustment accounts for the expected sunk costs arising from planned installations not delivered due to the impact of Covid-19. See Chapter 6 for details of our approach to sunk costs.

(4) The baseline adjustments account for (1) adjusting to the less 'strict' definition of efficiency in the SMNCC compared to the operating cost allowance (see 5.108 and 5.109), and (2) adjusting for the weighted average of payment type SMNCC costs in the operating cost allowance (see 5.110 to 5.113).

Table 5.3: Net smart metering costs to suppliers per gas account.[(1)(2)(3)(4)]

	2017	2018	2019	2020	2021	2022	2023
In-premise: installation and asset net costs	4.89	2.32	0.38	-8.11	-7.03	-6.79	-6.50
Operation and maintenance costs	0.23	0.31	0.10	-0.34	-1.08	-1.38	-1.59
Organisational costs	0.35	0.35	0.34	0.34	0.33	0.32	0.32
Net reduction in energy theft	-0.05	-0.09	-0.11	-0.11	-0.14	-0.17	-0.19
Advertising costs	0.55	0.39	0.38	0.38	0.38	0.37	0.37
Other costs [(3)]	0.58	0.85	0.99	0.83	0.86	0.88	0.84
Direct operational Benefits	-0.67	-1.40	-2.14	-2.66	-3.55	-4.75	-5.62
Net costs excluding IT	**5.89**	**2.73**	**-0.05**	**-9.67**	**-10.23**	**-11.51**	**-12.37**
Sunk cost adjustment	0.00	0.00	0.00	5.90	0.00	0.00	0.00
Baseline adjustment: definition of efficiency	NA	0.91	0.91	0.91	0.91	0.91	0.91
Baseline adjustment: Weighted average payment type	NA	-2.55	-2.55	-2.55	-2.55	-2.55	-2.55
Total efficient net costs excluding IT and including adjustments	5.89	1.08	-1.69	-5.42	-11.88	-13.15	-14.01
Net cost change since 2017, excluding IT and including adjustments	0.00	-4.81	-7.58	-11.30	-17.77	-19.04	-19.90
Change in IT costs	0.00	0.12	0.52	-0.08	-0.55	-1.32	-1.93
Net cost change including IT and including adjustments	NA	-4.68	-7.06	-11.38	-18.32	-20.37	-21.84

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

(2) The CBA estimates the solely additional costs for rolling out smart meters (ie costs that supplier incur over and above the costs that would have incurred in a world without the smart meter rollout). Isolating the additional costs of IT investment is particularly challenging. Our analysis is less sensitive to the allocation between counterfactual and additional IT costs, because the total combined costs are included in the operating costs allowance. For that reason we track the change in IT costs.

(3) The sunk cost adjustment accounts for the expected sunk costs arising from planned installations not delivered due to the impact of Covid-19. See Chapter 6 for details of our approach to sunk costs.

(4) The baseline adjustments account for (1) adjusting to the less 'strict' definition of efficiency in the SMNCC compared to the operating cost allowance (see 5.108 and 5.109), and (2) adjusting for the weighted average of payment type SMNCC costs in the operating cost allowance (see 5.110 to 5.113).

Summary of results

5.53. The proposed PPM smart meter net cost is lower than the credit meter net cost. As set out in 5.43, this is primarily due to differences in asset cost, asset lifetime, and the operational benefits of reduced costs to serve. We discuss these differences, other more minor differences, and where we consider no change is necessary, below.

5.54. The PPM net cost change is also lower than the equivalent credit meter value. This is primarily because the benefits of avoided traditional PPM replacements are large and accumulate over time, pushing the net cost down more each year. By contrast this benefit is relatively small for traditional credit meters.

5.55. This chapter focuses on the costs and benefits of each smart meter. Changes to the rollout profile are discussed in Chapter 6.

Our considerations – rollout

5.56. The profile of the rollout of smart meters is an important input – most costs and benefits vary with the volume of meters rolled out. We set out our proposed rollout profile and associated rationale in Chapter 6. In brief, we set use suppliers' data on their weighted average rollout profile up to and including 2019 (in other words, the weighted average progress is suppliers' aggregate progress). For future, years we assume that suppliers will install smart meters at the same rate they have done between 2017 and 2019. To approximate the impact of COVID-19 in 2020, we assume that suppliers will install 30% of the average rollout for the preceding three years. This reduces both costs and benefits, though does not affect the accumulated costs and benefits from smart meters installed in previous years.

5.57. Whilst the costs of installing smart meters falls when smart meter rollout reduces compared to plan, the benefit of traditional meter installs avoided does not change as a result of COVID. This is because the SMNCC is not a cost benefit analysis - it tracks changes to costs compared to the 2017 efficient cost baseline. The 2017 baseline includes the costs of replacing traditional meters, and due to COVID-19 there is a large reduction in any assets being installed, and so these costs are not incurred and should not be included in an allowance for efficient costs.

5.58. Suppliers may also have incurred some sunk costs relating to planned meter installs that are no longer possible due to COVID-19; these are also discussed in Chapter 6.

Table 5.4: Proposed percentage annual smart meter coverage of domestic prepayment customers under different rollout scenarios – electricity(1)

Profile	2017	2018	2019	2020	2021	2022	2023
2019 CBA	20.0%	30.3%	38.5%	54.4%	67.6%	78.6%	87.3%
"All Reasonable Steps", absent COVID-19	20.0%	30.3%	38.5%	47.5%	56.4%	65.2%	73.8%
Delayed rollout, accounting for COVID-19	20.0%	30.3%	38.5%	41.2%	50.2%	58.9%	67.6%

Notes:

(1) Figures shown are cumulative percentage rollout of smart meters to domestic customers with an electricity meter

Table 5.5: Proposed percentage annual smart meter coverage of domestic prepayment customers under different rollout scenarios – gas(1)

	2017	2018	2019	2020	2021	2022	2023
2019 CBA	17.8%	26.2%	35.8%	51.0%	65.2%	77.0%	86.3%
"All Reasonable Steps", absent COVID-19	17.8%	26.2%	35.8%	44.4%	52.8%	61.0%	69.1%
Delayed rollout, accounting for COVID-19	17.8%	26.2%	35.8%	38.4%	46.9%	55.1%	63.3%

Notes:

(1) Figures shown are cumulative percentage rollout of smart meters to domestic customers with a gas meter

Our considerations - Assessment of efficient costs

5.59. We consider the following categories of costs: in-premise costs, IT costs, Operations and Maintenance (O&M) costs, and other costs. In-premise costs are further broken down into the install and asset costs of smart meters (including In-Home Dispays), the install and asset avoided costs from fewer traditional meter replacements, and premature replacement charges.

In-premises costs

Overview

5.60. The majority of suppliers' costs relate to the net impact on operating costs of replacing traditional PPMs with smart meter (In-premise costs) The key components are:

- Suppliers incur gross costs purchasing and installing smart meter assets. These costs largely increase in proportion to suppliers' cumulative progress installing smart meters

(though In-Home Display costs depend on the number of installations in that year). Each year, suppliers install new assets, and continue to pay rental charges on the smart meters they installed in previous years. These costs are the same for customers with a traditional credit meter or a PPM.

- Suppliers avoid the cost of replacing expired traditional meters with new traditional meters, because they install smart meters instead. Each year, suppliers would have purchased and installed a certain number of traditional meters to replace meters that expired that year. Due to the smart meter rollout, suppliers avoid the costs of replacing traditional meters. The avoided cost builds up over time in line with the cumulative number of traditional meters that suppliers would have needed to install. The larger benefits in later years also reflect that suppliers were still installing some traditional meters in 2017, the year of the operating cost benchmark. Due to the higher asset costs and the need to replace them more frequently, these avoided costs are much larger for PPM than for credit meters.

- Suppliers incur charges for replacing traditional meters prematurely. In the year of replacement they pay the remaining cost of the prematurely replaced meter. In subsequent years, they have the benefit of no longer paying rent included in our operating cost allowance baseline.

Table 5.6: In-premise costs breakdown – electricity (£/customer)[(1)(2)(3)]

PPM Elec	2017	2018	2019	2020	2021	2022	2023
Smart Meter Asset Costs	1.65	2.52	3.12	3.11	3.50	3.80	4.19
Traditional meter asset costs	-0.44	-1.17	-2.19	-3.24	-3.53	-3.69	-4.01
Smart Installation costs	3.09	5.35	7.02	7.13	8.30	9.28	10.47
Traditional installation costs	-0.54	-1.55	-2.95	-4.40	-4.81	-5.04	-5.43
IHD costs	1.04	0.92	0.78	0.32	0.94	1.01	1.11
Total	**4.81**	**6.07**	**5.78**	**2.91**	**4.40**	**5.36**	**6.33**

Notes:

(1) All figures in 2011 prices, as per the 2019 CBA.

(2) Asset and installation costs include PRCs and benefit of avoided rental payment that would have been paid on traditional meters replaced by smart meters.

(3) IHD refers to smart meter in-home display units.

Table 5.7: In-premise costs breakdown – gas (£/customer)[1][2][3]

PPM Gas	2017	2018	2019	2020	2021	2022	2023
Smart Meter Asset Costs	2.00	2.86	3.71	3.69	4.25	4.67	5.18
Traditional meter asset costs	-0.69	-3.70	-6.47	-11.27	-12.03	-12.72	-13.59
Smart Installation costs	2.68	4.34	6.24	6.17	7.29	8.15	9.21
Traditional installation costs	-0.14	-2.09	-3.88	-7.01	-7.49	-7.91	-8.41
IHD costs	1.04	0.92	0.78	0.32	0.94	1.01	1.11
Total	**4.89**	**2.32**	**0.38**	**-8.11**	**-7.03**	**-6.79**	**-6.50**

Notes:

(1) All figures in 2011 prices, as per the 2019 CBA.

(2) Asset and installation costs include PRCs and benefit of avoided rental payment that would have been paid on traditional meters replaced by smart meters.

(3) IHD refers to smart meter in-home display units.

Net installation costs

5.61. Net installation costs consist of smart meter installation costs and the avoided costs of installing traditional meters.

5.62. First, smart meter installation costs. These are the costs of paying for staff to install smart meters in customers' homes, providing installers with the equipment they need (e.g. vans), and organising back office support. These costs are capitalised and amortised over the life of the assets being installed through meter rental payments.

5.63. These gross costs are similar to the costs of installing smart meters in credit customers' homes. The installation costs in the credit SMNCC are based on a weighted average of supplier installation costs taken from the ASRs, which are undifferentiated by meter type, and an assumption based on historical productivity. Further, there is no difference between a smart meter for a credit or PPM customer (other than it being put into prepayment mode and existing credit loaded). There may be some differences in customer characteristics which impact costs, such as taking additional time to discuss the installation with a vulnerable customer. However, overall we consider that these are likely to be relatively small, and that it would be disproportionate to attempt to differentiate between credit and smart meter installation costs. As the allowance is a weighted average, efficient costs are recovered at an industry level.

5.64. Overall, we **consider that it is appropriate to use the same cost per smart PPM installation as the credit SMNCC.** However we use PPM-specific meter rental uplifts for both gas and electricity SMETS1 meters. These are sourced from a supplier RFI we conducted in February 2020, and account for the difference between commercial costs of meter rental and the economic (amortised) costs of the installation.

5.65. Second, avoided costs of installing new traditional meters. Each year suppliers would have incurred costs installing new traditional meters to replace meters that have expired. Due to the smart meter rollout, suppliers do not need to install as many new traditional meters, if any, so they avoid the cost of doing so.[42] This is a benefit of smart meter rollout.

5.66. The ASR data separates the costs of installing a traditional meter by both meter type and fuel type. As such, and consistent with the BEIS 2019 CBA, we **use the PPM specific ASR values for traditional meter installation costs**. In practice, this unit cost is similar for PPM and credit meters. As for smart meters, we use a PPM-specific meter rental uplift for both gas and electricity, to account for the difference between actual meter rental payments paid by suppliers and the economic (amortised) costs of the installation.

5.67. The net impact of avoiding new traditional meter installations depends on the asset's life. This is because the asset life affects the proportion of traditional meters that need to be replaced each year. In line with the 2019 CBA, we assume that traditional PPM meters last 10 years, which mean suppliers would have typically replaced around 10% of their traditional PPMs each year. If asset lives are longer, then fewer meters would have been replaced each year (in the absence of smart meter rollout), and the actual benefit will be lower. We consider the average case – clearly circumstances differ for individual suppliers.

[42] Suppliers do not avoid installing new traditional meters entirely. In some cases a supplier cannot install a smart meter when a traditional meter expires. In that case it would install a new traditional meter. However, the number of new traditional meters installed is much less than it would have been without the smart meter rollout.

5.68. Overall we consider that maintaining the BEIS CBA asset lifetime assumptions is reasonable, given the available evidence. In choosing to maintain the BEIS 2019 CBA assumption, we have considered data on asset ages, and other data sources.

- Supplier data on the distribution of meter asset ages (as of 2018). The average asset life in the data appears somewhat older than the average value implied by the 2019 CBA assumption (with an average age of 7-8 years for PPMs). This reflects that a) traditional meter installs are fewer in recent years due to the smart meter rollout, skewing the average age upwards, and b) there are some meters which are much older than the assumed life, further skewing the average age upwards. The data also shows that in the early 2010s (the most recent period prior to the smart meter rollout substantially impacting traditional meter rollout) around 8%- 9% of traditional PPMs were replaced each year.

- Certifications – we note that there are a range of meter models available, which have certification periods (as specified by the Office for Product Safety and Standards) for a range of years.

- The Competition and Markets Authority's (CMA) Energy Market Investigation Final Report Appendix 9.8 notes that a large supplier informed the CMA that it assumed an asset life of 10 years for electricity PPM and 15 years for gas PPM.

5.69. As the costs of installations (traditional or smart) are amortised and so accumulate, the impact of this larger avoided cost grows over the life of the rollout.

5.70. There are also premature replacement charges (PRCs) associated with installation costs – we discuss these below in the section on asset costs, as the issues and approach are common to both cost categories.

Table 5.8: Asset and installation starting costs, asset lifetime assumptions and meter rental uplift values[1][2][3][4][5]

Meter category	Credit install cost (£)	PPM install cost (£)	Credit asset cost (£)	PPM asset cost (£)	Credit asset lifetime (years)	PPM asset lifetime (years)	Meter rental uplift credit (%)	Meter rental uplift PPM (%)
Traditional electricity meter	53	57	6	41	20	10	0%	0%
Traditional gas meter	54	60	16	91	20	10	118%	56%
Elec – SMETS1 meter	117	117	26	26	15	15	40%	40%
Elec – SMETS2 meter	117	117	36	36	15	15	0%	0%
Gas – SMETS1 meter	117	117	31	31	15	15	39%	39%
Gas – SMETS2 meter	117	117	47	47	15	15	0%	0%

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 BEIS CBA.
(2) Cost inputs are based on ASR data and Ofgem assumptions on installer productivity based on historic averages.
(3) All asset and installation costs are shown for the year 2020 for illustrative purposes. For calculation, different values are used for each year.
(4) Asset lifetimes are based on BEIS CBA assumptions.
(5) Meter rental uplift values are based on our analysis of responses to our February 2020 RFI.

Table 5.9: Smart meter installation costs breakdown – electricity (£/customer)[1]

	2017	2018	2019	2020	2021	2022	2023
Installation costs of installing smart meters during rollout	3.00	5.07	6.50	6.97	8.32	9.60	10.85
Cost of prematurely replacing SMETS1	0.11	0.37	0.77	0.51	0.42	0.15	0.10
Benefit of avoided rental charges for prematurely replaced SMETS1 meters	-0.02	-0.09	-0.25	-0.35	-0.45	-0.47	-0.48
Total	**3.09**	**5.35**	**7.02**	**7.13**	**8.30**	**9.28**	**10.47**

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.10: Smart meter installation costs breakdown – gas (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Installation costs of installing smart meters during rollout	2.58	4.11	5.68	6.09	7.29	8.44	9.56
Cost of prematurely replacing SMETS1	0.13	0.32	0.82	0.43	0.44	0.18	0.14
Benefit of avoided rental charges for prematurely replaced SMETS1 meters	-0.02	-0.09	-0.26	-0.35	-0.44	-0.47	-0.48
Total	**2.68**	**4.34**	**6.24**	**6.17**	**7.29**	**8.15**	**9.21**

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.11: Traditional meter installation costs breakdown – electricity (£/customer)(1)

PPM Elec	2017	2018	2019	2020	2021	2022	2023
Installation costs of installing traditional meters during rollout	3.20	3.35	3.48	3.46	3.44	3.93	3.60
Cost of prematurely replacing traditional meters	1.63	1.60	1.03	0.23	0.66	0.47	0.32
Benefit of avoided rental charges for prematurely replaced traditional meters	-0.73	-1.10	-1.29	-1.18	-1.26	-1.21	-1.12
Benefit of not replacing old traditional meters with a new traditional meter	-4.63	-5.40	-6.17	-6.92	-7.66	-8.23	-8.23
Total	**-0.54**	**-1.55**	**-2.95**	**-4.40**	**-4.81**	**-5.04**	**-5.43**

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.12: Traditional meter installation costs breakdown – gas (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Installation costs of installing traditional meters during rollout	5.13	5.37	5.59	5.55	5.52	6.88	6.44
Cost of prematurely replacing traditional meters	3.04	2.70	2.52	0.44	1.29	0.90	0.61
Benefit of avoided rental charges for prematurely replaced traditional meters	-1.21	-1.87	-2.51	-2.37	-2.51	-2.44	-2.22
Benefit of not replacing old traditional meters with a new traditional meter	-7.09	-8.30	-9.48	-10.64	-11.78	-13.24	-13.24
Total	**-0.14**	**-2.09**	**-3.88**	**-7.01**	**-7.49**	**-7.91**	**-8.41**

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Net asset costs

5.71. Net asset costs consist of four cost categories: smart meter asset costs, IHD costs, communication hubs cost, and the avoided costs of traditional meters.

5.72. Smart meter asset costs. We use supplier data from the ASRs. We amortise these over the average smart meter rental period. As the smart meter asset is identical for PPM and credit, there is no reason to use a different value for PPM and credit. As such, and consistent with the BEIS 2019 CBA, we **use the same smart meter asset unit cost as in the credit SMNCC.** However as for installation costs, we apply a PPM-specific meter rental uplift for SMETS1 meters, to account for the difference between commercial costs of meter rental and the economic (amortised) costs of the installation.

5.73. Communication hubs cost. The cost of communications hubs for SMETS2 meters is recovered through DCC charges. These are included in the pass-through SMNCC allowance and therefore we do not include them here. We include the cost of non-interoperable SMETS1 communications hubs from the ASRs (because they have not been enrolled in the DCC), and amortise the costs over their lifetimes. As the communication hub is identical for a PPM or credit meter customer, there is no reason

to use a different value for PPM than for credit meters. As such we **use the same communication hub unit cost as for credit SMNCC.**

5.74. Suppliers install In-Home Displays (IHDs) alongside smart meters. We base the cost calculation on supplier data from the ASRs, and include a downward adjustment to reflect that several suppliers have purchased IHDs with enhanced functionality above the Smart Metering Equipment Technical Specifications (SMETS) requirements at an additional cost. The costs of IHDs are expensed in-year (rather than being amortised).

5.75. There may be some differences in costs between the IHD for PPM and credit smart meters. However the ASR data does not distinguish between payment types for IHD costs and so a weighted average cost is already being used in the credit SMNCC. For consistency we consider it is appropriate to adopt the same approach for the PPM SMNCC, and so we **use the same IHD unit cost as for the credit SMNCC**. As the weighted average cost is used for all payment types, the overall allowance allows for efficient cost-recovery at an industry level.

5.76. The avoided costs of traditional meters: As with installation costs, suppliers avoid having to pay for new traditional meters that they would have needed in the absence of a smart meter rollout programme. However, they still need to pay for the relatively small volume of new traditional meters they install as part of the rollout.

5.77. The BEIS 2019 CBA separates asset costs by meter type. The asset costs for traditional PPMs, particularly gas, are much higher than for credit and so we **use the PPM-specific traditional meter asset costs, including a PPM specific meter rental uplift**. As discussed in 5.67 and 5.68 above, the asset lifetime is also shorter for PPMs. In the absence of a smart meter programme, suppliers would have to install replacement PPMs much more frequently and at a much higher asset unit cost than for traditional credit meter customers. Due to the smart rollout, these asset replacements are no longer required (except in the small number of cases where installing a smart meter is not feasible). This is a benefit for PPM, and is larger than for credit meters.

5.78. As with installation costs, the asset costs (traditional or smart) are amortised and so accumulate over time as cumulative smart rollout grows. As such, the greater benefits of the avoided costs for PPM customers becomes larger over time, both in absolute terms and relative to the benefits of avoided asset costs for credit meter customers.

Table 5.13: Smart meter asset costs breakdown – electricity(1)

	2017	2018	2019	2020	2021	2022	2023
Cost of smart meter assets installed during rollout	1.60	2.38	2.84	3.00	3.46	3.89	4.30
Cost of prematurely replacing SMETS1	0.06	0.17	0.35	0.21	0.17	0.04	0.02
Benefit of avoided rental charges for prematurely replaced SMETS1 meters	-0.01	-0.03	-0.08	-0.10	-0.12	-0.13	-0.13
Total	**1.65**	**2.52**	**3.12**	**3.11**	**3.50**	**3.80**	**4.19**

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.14: Smart meter asset costs breakdown – gas(1)

	2017	2018	2019	2020	2021	2022	2023
Cost of smart meter assets installed during rollout	1.94	2.74	3.43	3.61	4.19	4.74	5.27
Cost of prematurely replacing SMETS1	0.07	0.14	0.35	0.16	0.16	0.04	0.02
Benefit of avoided rental charges for prematurely replaced SMETS1 meters	-0.01	-0.03	-0.07	-0.09	-0.11	-0.11	-0.11
Total	**2.00**	**2.86**	**3.71**	**3.69**	**4.25**	**4.67**	**5.18**

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.15: Traditional meter asset costs breakdown – electricity(1)

	2017	2018	2019	2020	2021	2022	2023
Asset costs of installing traditional meters during rollout	2.48	2.59	2.68	2.67	2.66	3.01	3.70
Cost of prematurely replacing traditional meters	1.18	1.17	0.75	0.17	0.48	0.34	0.23
Benefit of avoided rental charges for prematurely replaced traditional meters	-0.55	-0.81	-0.95	-0.87	-0.92	-0.88	-0.82
Benefit of not replacing old traditional meters with a new traditional meter	-3.55	-4.11	-4.67	-5.21	-5.75	-6.16	-7.13
Total	**-0.44**	**-1.17**	**-2.19**	**-3.24**	**-3.53**	**-3.69**	**-4.01**

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.16: Traditional meter asset costs breakdown – gas(1)

	2017	2018	2019	2020	2021	2022	2023
Asset costs of installing traditional meters during rollout	8.31	8.67	9.00	8.94	8.89	10.95	13.13
Cost of prematurely replacing traditional meters	4.61	4.11	3.82	0.67	1.96	1.37	0.92
Benefit of avoided rental charges for prematurely replaced traditional meters	-1.89	-2.88	-3.85	-3.63	-3.84	-3.73	-3.39
Benefit of not replacing old traditional meters with a new traditional meter	-11.73	-13.61	-15.45	-17.26	-19.03	-21.31	-24.25
Total	**-0.69**	**-3.70**	**-6.47**	**-11.27**	**-12.03**	**-12.72**	**-13.59**

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Premature replacement charges

5.79. Suppliers incur a charge for replacing a meter before the end of its rental period – a premature replacement charge (PRC). The level of the PRC depends on a number of factors including the contract with the meter owner and (in particular) the age of the

meter. Generally, the PRC decreases as the meter ages. We do not amortise the PRC – it is an in-year cost to suppliers.

5.80. The credit SMNCC calculates PRCs based on a) the age stock of existing traditional credit meters, b) the asset and installation costs of existing traditional credit meters, c) the expected lifetime of the asset, d) the Meter Rental Uplift (MRU) and e) the number of meters being prematurely replaced. PRCs could apply for replacing traditional, SMETS1, or SMETS2 meters. For credit, SMNCC PRCs are calculated for replacing traditional and SMETS1 meters prematurely. As very few SMETS2 meters are expected to be replaced prematurely during the smart meter rollout programme, we do not include PRCs for SMETS2 meters in our calculations.

5.81. We use the same calculation approach for PPM – there are no structural differences between PRCs for credit and PPMs. However, the inputs for PPM are different. As set out above in 5.61 to 5.78, we use PPM-specific asset costs, installation costs, MRUs and lifetimes. We discuss the rollout profile in Chapter 6, which we use in this calculation to calculate early replacement volumes.

5.82. We also have meter-type specific data on the age stock of traditional PPM from a previous supplier RFI and so **use PPM specific meter stock age data**. As with credit meters, we assume that the age of the meters replaced reflects the age of the population of meters, and that the PRC decreases linearly over the asset life, reaching zero once the asset reaches the end of its expected life.

5.83. The asset costs (and hence the PRCs, which are based on annual rental payments for the asset) for traditional PPMs are higher than credit. However, their shorter asset lifetimes partially offset this higher cost, with a smaller percentage of the remaining asset cost left to pay through rental payments, on average. Overall, and as noted by the supplier who commented on this topic, PRCs are higher for PPM than for credit meters.

Avoided costs of rental payments of prematurely replaced meters

5.84. Once a supplier pays the PRC, it pays no rent in subsequent years for the meter it removed. Without a smart meter rollout programme, the supplier would have paid these rental payments. This benefit recurs for each year that the prematurely replaced asset would otherwise have incurred a rental charge. For both traditional and SMETS1 meters, we propose to include the offsetting asset and installation costs that a supplier

avoids in future years after replacing a meter early. We calculate this by looking at the annual charges that a supplier would have faced in future years (including financing costs and, where relevant, a meter rental uplift).

5.85. We calculate this using an identical method to the credit SMNCC, with PPM-specific inputs for asset and install costs, lifetime, meter age stock, MRUs and volumes prematurely replaced.

5.86. Overall, the benefits to suppliers of avoided rental payments on prematurely replaced meters are larger than the PRC for the meter. This is because the avoided rental payments include a financing cost, which the PRC does not. However the PRC is incurred wholly in the year the meter is prematurely replaced, whereas the avoided rental payment benefits are spread over several years (and may extend into years not covered by the default tariff cap).

5.87. The net impact of PRCs and avoided rent varies by year. This is because in any individual year, a supplier will incur the PRCs of any asset it prematurely replaces in that year, but will benefit from reduced rent relating to every meter it prematurely replaced in previous years (that otherwise would have still been in place in that year).

Table 5.17: Costs and benefits associated with prematurely replacing meters for traditional and SMETS1 electricity meters (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Cost of prematurely replacing traditional meters (asset and installation costs)	2.81	2.77	1.77	0.40	1.14	0.80	0.55
Cost of prematurely replacing SMETS1 meters (asset and installation costs)	0.18	0.54	1.12	0.72	0.59	0.19	0.12
Benefit of avoided rental charges for prematurely replaced traditional meters (asset and installation costs)	-1.28	-1.91	-2.24	-2.04	-2.18	-2.09	-1.93
Benefit of avoided rental charges for prematurely replaced SMETS1 meters (asset and installation costs)	-0.03	-0.13	-0.33	-0.45	-0.57	-0.59	-0.61

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.18: Costs and benefits associated with prematurely replacing meters for traditional and SMETS1 electricity meters (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Cost of prematurely replacing traditional meters (asset and installation costs)	7.65	6.81	6.34	1.11	3.25	2.27	1.53
Cost of prematurely replacing SMETS1 meters (asset and installation costs)	0.19	0.46	1.17	0.59	0.60	0.23	0.16
Benefit of avoided rental charges for prematurely replaced traditional meters (asset and installation costs)	-3.10	-4.74	-6.35	-5.99	-6.35	-6.17	-5.61
Benefit of avoided rental charges for prematurely replaced SMETS1 meters (asset and installation costs)	-0.03	-0.12	-0.33	-0.44	-0.55	-0.58	-0.59

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

IT costs

5.88. We expect suppliers to incur additional IT costs related to the smart meter rollout. These are set out in detail in our consultation on the SMNCC allowance for credit meters.

5.89. These costs are supplier overheads relating to the smart meter rollout. IT costs are equally relevant for the PPM and credit SMNCC, and are not disaggregated based on payment method. We assume that suppliers do not identify IT costs based on payment method. As such, **we propose to use the same supplier IT costs as for credit meters (on a per meter basis).** Where supplier IT costs are included in the costs to serve, any changes in these from moving a customer from traditional PPM to smart PPM are included in the cost to serve calculation (discussed in 5.95 to 5.103 below).

Operations and maintenance costs

5.90. Operations and maintenance (O&M) costs are incurred over the lifetime of the smart meter, largely reflecting costs associated with replacing fault meter equipment. As the asset is the same for credit and prepayment customers, we expect the costs of O&M to be the same for both customer types. However as there are different O&M costs for traditional PPM and credit meters, there are different benefits associated with moving customers to smart meters.

5.91. The credit SMNCC estimates the net O&M cost as a fixed amount for each meter and fuel type. This fixed amount is derived from a 2019 supplier RFI, and represents the additional cost of operations and maintenance costs compared to the meter type and fuel it is replacing. The RFI also includes PPM-specific O&M information. As the costs of the traditional meters differ, **we propose to use the PPM-specific values for the additional O&M costs of smart meter rollout.**

Other costs

5.92. There are several other categories of smaller costs associated with the smart meter rollout: organisation costs, advertising costs, and marketing costs.

5.93. Organisation costs include the legal, institutional and organisational set-up costs for the smart meter rollout. Advertising costs are for advertising undertaken by individual suppliers. The data sources and more detail on these costs are discussed in our consultation on the SMNCC allowance for credit meters. Both organisational and advertising costs are supplier overheads associated with the smart meter rollout overall. They are relevant for PPM as well as credit meters and we do not consider there is any reason for them to differ materially between payment types. As such we **propose to use the same organisational and advertising costs as for credit meters (on a per meter basis).**

Table 5.19: Costs breakdown (excluding in-premise) – electricity (£/customer)[(1)(2)]

	2017	2018	2019	2020	2021	2022	2023
Operation and maintenance costs	0.95	1.39	1.56	1.23	0.86	0.90	1.02
Organisational costs	0.35	0.35	0.34	0.34	0.33	0.32	0.32
Advertising costs	0.55	0.39	0.38	0.38	0.38	0.37	0.37
Other costs	0.59	0.87	0.98	0.83	0.87	0.89	0.83
Total	2.44	3.00	3.26	2.79	2.43	2.48	2.54

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.
(2) "Other costs" include communication hub operating costs and amortised costs (SMETS1), legal and organisational costs, marketing costs, and disposal.

Table 5.20: Costs breakdown (excluding in-premise) – gas (£/customer)[1][2]

	2017	2018	2019	2020	2021	2022	2023
Operation and maintenance costs	0.23	0.31	0.10	-0.34	-1.08	-1.38	-1.59
Organisational costs	0.35	0.35	0.34	0.34	0.33	0.32	0.32
Advertising costs	0.55	0.39	0.38	0.38	0.38	0.37	0.37
Other costs	0.58	0.85	0.99	0.83	0.86	0.88	0.84
Total	1.71	1.90	1.82	1.21	0.49	0.20	-0.06

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.
(2) "Other costs" include communication hub operating costs and amortised costs (SMETS1), legal and organisational costs, marketing costs, and disposal.

Considerations - Assessment of efficient operational benefits

5.94. We consider two sources of benefits: operational benefits (reductions in costs to serve), and reductions in energy theft.

Operational benefits (reductions in cost to serve)

5.95. The credit SMNCC contains several categories of benefits from reduced costs to serve: debt handling, customer calls, change of tariff (for example from a single rate tariff to Economy 7), customer switching, and meter read visit efficiency. For PPM we propose to align to the BEIS 2019 CBA and replace most of these with a single 'cost to serve' benefit.

5.96. Specifically, we propose to account for the benefits of **reduced customer calls**, **customer switching benefits, changing tariffs remotely,** and **reduced costs of a change of supplier meter reading** in the PPM specific cost to serve benefit calculation (see below).

5.97. We propose to **exclude the benefits of debt handling for PPM**, as debt can only be accumulated under a credit meter. Debt handling benefits are accounted for under the payment method under which they are accrued.

5.98. We also propose to **exclude the benefits of meter read visit efficiency.** As PPMs do not require frequent readings, this category of benefits is not applicable to PPM

SMNCC. Any benefits from reduced meter safety related visits are captured in the PPM specific cost to serve benefit calculation (see below).

5.99. The BEIS 2019 CBA includes a separate calculation for the **PPM cost-to-serve** benefit. Following discussion with BEIS we have made some amendments to this calculation for our purposes. We set out our proposed approach below.

5.100. To estimate the cost to serve benefit for PPM, we use ASR data. The BEIS 2019 CBA used data from the Competition and Market Authority's Energy Market Investigation, which is less up to date. The 2019 ASR includes supplier cost-to-serve data for traditional PPM customers (separately for gas and electricity), and comparable figures for smart meters in prepayment mode. This cost-to-serve data explicitly excludes costs relating to installation and asset costs, and so does not double count benefits or costs included elsewhere in the PPM SMNCC.

5.101. We calculate the cost-to-serve benefit of moving a customer from traditional PPM to a smart PPM.

- For each supplier who submitted cost-to-serve data in the 2019 ASR for both traditional PPM and smart PPM, we calculate the difference between the traditional PPM and smart PPM cost-to-serve. Seven suppliers provided sufficient information for us to make this calculation.

- We then take the average of these seven values, weighting using the number of smart prepayment customers for each of the seven suppliers. This results in an estimated saving of £14 for electricity, and £12 for gas. We then apply this unit cost saving to the total number of smart prepayment meters.

- We subtract from these savings the fixed ongoing costs of the prepayment infrastructure, which are still required.

5.102. One supplier commented in response to our consultation that we should account for a transitional increase in costs when a PPM customer moves to a smart meter. We consider that these unit cost savings reflect suppliers' actual costs – which will in include customers who have recently transitioned. As such, our proposed values account for transitional increases in costs.

5.103. These values are larger than the corresponding benefits for credit meters. This reflects the particular characteristics of PPM, and is a key benefit of smart metering rollout for PPM customers. As the benefit is annual rather than one-off, this benefit accumulates over time at a supplier and industry level, as cumulative smart rollout increases.

Net reduction in energy theft

5.104. By providing suppliers with more information about consumption, smart meters can help them detect and resolve energy theft. The credit SMNCC includes a benefit from this reduction in theft. Details on the calculation are set out in the BEIS CBA. We do not consider that this benefit will differ between meter types and so **we propose to use the same benefits as for credit meters**.

Table 5.21: cost to serve benefits of rolling out smart meters to PPM customers – electricity (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Net reduction in energy theft	-0.06	-0.11	-0.14	-0.16	-0.19	-0.22	-0.26
Prepayment cost to serve benefit	-1.37	-2.41	-3.30	-3.84	-5.00	-6.53	-7.64
Total	-1.44	-2.52	-3.44	-4.00	-5.19	-6.76	-7.90

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Table 5.22: cost to serve benefits of rolling out smart meters to PPM customers – gas (£/customer)(1)

	2017	2018	2019	2020	2021	2022	2023
Net reduction in energy theft	-0.05	-0.09	-0.11	-0.11	-0.14	-0.17	-0.19
Prepayment cost to serve benefit	-0.67	-1.40	-2.14	-2.66	-3.55	-4.75	-5.62
Total	-0.71	-1.50	-2.25	-2.77	-3.69	-4.91	-5.81

Notes:
(1) Costs and benefits are in 2011 prices, as per the 2019 CBA.

Setting the allowance to account for efficient net costs

Summary of proposals

5.105. Our consultation on the SMNCC allowance for credit meters sets out our current proposals for calculating the credit SMNNC to reflect the change in efficient operating costs relative to 2017 for a supplier with an average smart meter rollout profile. We proposed to use the same approach for PPM, and so briefly describe the proposals here, and focus on the impact of our proposals on the PPM SMNCC.

5.106. We account for the costs of the smart metering programme through a) the operating cost allowance, which captures the costs of smart metering in 2017, and b) the SMNCC, which captures incremental changes in costs since 2017.

5.107. To set the SMNCC, we propose the following approach:

- recognise the change relative to 2017 in our assessment of the net impact of the smart meter rollout on the efficient operating costs of a supplier with an average rollout profile;
- allocate our estimate of efficient smart metering rollout costs in 2017 between (a) costs already included in the operating cost allowance and (b) costs we still need to recognise in the SMNCC (this includes an adjustment for the impact of the stricter definition of the 'efficient benchmark' we used to assess total operating costs in 2017, and an adjustment for the difference between portfolio-wide costs and costs for replacing PPMs in isolation);
- adjust for the sunk costs incurred as a result of COVID-19; and
- convert our annual SMNCCs into values for six monthly cap periods.

Adjusting for different 'efficient' benchmark definitions

5.108. Our definitions of 'efficiency' differ in the analyses of the operating cost allowance and the SMNCC. For the SMNCC, we benchmark efficient smart metering costs to the *average* costs suppliers incur with an average rollout profile. To set the operating cost allowance we benchmarked suppliers' costs to the lower quartile (a 'stricter' benchmark), so we need to recognise the difference.

5.109. As set out in our consultation on the SMNCC allowance for credit meters, the SMNCC corrects for this by subtracting the lower quartile 2017 baseline costs from the relevant year's average efficient costs. This adds around £1 per fuel to the SMNCC allowance. This means that the SMNCC allowance includes both the allowance for costs changing over time and for the move to different definition of efficiency.

Smart meter 2017 baseline costs – removing the impact of weighted average smart meter costs in the operating cost allowance.

5.110. If the efficient net costs of the smart meter rollout in 2017 were fully included in the operating cost allowance, then the SMNCC would only need to account for the change in efficient costs since 2017. However, the operating cost allowance is not payment-type-specific, and so it includes the weighted average cost of replacing *all* traditional meters, including prepayment meters. As such, whilst the PPM SMNCC captures changes to net costs since 2017, the total smart allowance (across the operating cost plus the SMNCC) for PPM will systematically understate or overstate the efficient costs of smart meter rollout.

5.111. As credit smart metering costs are (per customer) estimated to be higher than PPM smart metering costs in 2017, the weighted average figure included in the operating cost allowance is too low for credit, and too high for PPM. In other words, the 2017 baseline cost included in the operating cost allowance is below efficient cost recovery for credit meters, and above efficient cost recovery for PPM meters. As the operating cost allowance does not change over time (except with inflation), this implies the allowance in every cap period would be too high (for PPM) or low (for credit).

5.112. By calculating the weighted average of the credit and PPM 2017 smart metering efficient costs, we estimate the weighted average efficient cost included in the 2017 baseline to be around £8 for electricity and £9 for gas (excluding IT). Dual fuel, the operating cost allowance is £0.93 too low for credit, and £4.81 too high for PPM.

Table 5.23: Adjustment required to calculate PPM-specific baseline[(1)(2)(3)]

	2017 lower quartile efficient costs baseline, excluding IT	Total domestic meters, 2017	Efficient costs weighted average, per fuel	Payment type variance to the baseline
Elec Credit	7.69	23.3m	7.27	0.43
Elec PPM	5.26	5.0m		-2.00
Gas Credit	8.78	20.3m	8.28	0.50
Gas PPM	5.47	3.6m		-2.81

Notes:
(1) Costs are in 2017 prices
(2) Meter numbers rounded to nearest 0.1m
(3) As IT costs are the same across payment types (within fuel) this has no impact on the variance from the baseline

5.113. We propose to adjust the credit SMNCC and PPM SMNCC by these values in the model for every cap period (i.e. from cap period 1, starting 1 January 2019, onwards), so that the total allowance in the price cap (the 2017 baseline smart costs within the operating cost allowance, plus the SMNCC) equals the estimate of smart meter efficient costs for each meter type. This increases the SMNCC (dual fuel) by £0.93 for all credit default tariff caps for all cap periods, and correspondingly reduces it by £4.81 for the PPM default tariff cap. We adjust this figure for inflation in each period. This ensures that suppliers recover their efficient costs for PPM, and do not over-recover due to the over-recovery within the operating cost allowance. We also make the corresponding adjustment in the credit SMNCC, increasing the allowance.

Adjusting for sunk costs

5.114. As set out in paragraph 5.66 and in Chapter 6, we include an allowance to reflect the impact of COVID-19. We anticipate there being sunk costs of planned but not delivered smart meter rollout in 2020.

5.115. The impact of each of these adjustments on net costs is summarised in Table 5.24 and Table 5.25 below.

Table 5.24: Net cost change including baseline and sunk cost adjustments – electricity[(1)(2)(3)(4)]

	2017	2018	2019	2020	2021	2022	2023
Total efficient net costs excluding IT	5.81	6.55	5.60	1.70	1.64	1.08	0.98
Sunk cost adjustment	0.00	0.00	0.00	6.55	0.00	0.00	0.00
Baseline adjustment: definition of efficiency	NA	1.02	1.02	1.02	1.02	1.02	1.02
Baseline adjustment: Weighted average payment type	NA	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82
Total efficient net costs excluding IT and including adjustments	5.81	5.75	4.80	7.45	0.84	0.28	0.17
Net cost change since 2017, excluding IT and including adjustments	0.00	-0.06	-1.01	1.64	-4.97	-5.53	-5.63
Change in IT costs	0.00	0.12	0.52	-0.08	-0.55	-1.32	-1.93
Net cost change including IT and including adjustments	NA	0.06	-0.49	1.56	-5.52	-6.85	-7.57
Net cost change including IT and including adjustments (*Nominal prices*)	NA	0.07	-0.56	1.80	-6.47	-8.18	-9.24

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA, except the final row which is shown in nominal prices. These nominal values can be used to calculate the final SMNCC for each cap period in Table 5.26.

(2) The CBA estimates the solely additional costs for rolling out smart meters (ie costs that supplier incur over and above the costs that would have incurred in a world without the smart meter rollout). Isolating the additional costs of IT investment is particularly challenging. Our analysis is less sensitive to the allocation between counterfactual and additional IT costs, because the total combined costs are included in the operating costs allowance. For that reason we track the change in IT costs.

(3) The sunk cost adjustment accounts for the expected sunk costs arising from planned installations not delivered due to the impact of Covid-19. See Chapter 6 for details of our approach to sunk costs.

(4) The baseline adjustments account for (1) adjusting to the less 'strict' definition of efficiency in the SMNCC compared to the operating cost allowance (see 5.108 and 5.109), and (2) adjusting for the weighted average of payment type SMNCC costs in the operating cost allowance (see 5.110 to 5.113).

Table 5.25: Net cost change including baseline and sunk cost adjustments – gas (£/customer)[(1)(2)(3)(4)]

	2017	2018	2019	2020	2021	2022	2023
Total efficient net costs excluding IT	5.89	2.73	-0.05	-9.67	-10.23	-11.51	-12.37
Sunk cost adjustment	0.00	0.00	0.00	5.90	0.00	0.00	0.00
Baseline adjustment: definition of efficiency	NA	0.91	0.91	0.91	0.91	0.91	0.91
Baseline adjustment: Weighted average payment type	NA	-2.55	-2.55	-2.55	-2.55	-2.55	-2.55
Total efficient net costs excluding IT and including adjustments	5.89	1.08	-1.69	-5.42	-11.88	-13.15	-14.01
Net cost change since 2017, excluding IT and including adjustments	0.00	-4.81	-7.58	-11.30	-17.77	-19.04	-19.90
Change in IT costs	0.00	0.12	0.52	-0.08	-0.55	-1.32	-1.93
Net cost change including IT and including adjustments	NA	-4.68	-7.06	-11.38	-18.32	-20.37	-21.84
Net cost change including IT and including adjustments *(Nominal prices)*	NA	-5.23	-8.00	-13.12	-21.47	-24.30	-26.65

Notes:

(1) Costs and benefits are in 2011 prices, as per the 2019 CBA, except the final row which is shown in nominal prices. These nominal values can be used to calculate the final SMNCC for each cap period in Table 5.26.

(2) The CBA estimates the solely additional costs for rolling out smart meters (ie costs that supplier incur over and above the costs that would have incurred in a world without the smart meter rollout). Isolating the additional costs of IT investment is particularly challenging. Our analysis is less sensitive to the allocation between counterfactual and additional IT costs, because the total combined costs are included in the operating costs allowance. For that reason we track the change in IT costs.

(3) The sunk cost adjustment accounts for the expected sunk costs arising from planned installations not delivered due to the impact of Covid-19. See Chapter 6 for details of our approach to sunk costs.

(4) The baseline adjustments account for (1) adjusting to the less 'strict' definition of efficiency in the SMNCC compared to the operating cost allowance (see 5.108 and 5.109), and (2) adjusting for the weighted average of payment type SMNCC costs in the operating cost allowance (see 5.110 to 5.113).

Converting from annual allowances to 6 month cap periods

5.116. We propose to use the same methodology as the credit SMNCC. Each 6 month cap period value is set to either:

- The same value as the annual SMNCC, if the cap period is entirely within that year; or
- The average of the annual SMNCC values for the two years covered by the price cap period.

5.117. This is discussed further in the SMNCC statutory consultation. We set out SMNCC levels for all potential cap periods. This does not indicate that we have formed a judgement on whether we expect the cap to be extended. Only that, if the cap is extended, then an SMNCC allowance will be required. We intend to conduct reviews when the next set of ASR data is available, and the post 2020 policy framework and impact of covid-19 is clear. As such, we intend to replace the values in the later cap periods in due course.

Table 5.26: SMNCC values for all cap periods from Cap 5 for electricity and gas – delayed rollout(1)

	Cap 5	Cap 6	Cap 7	Cap 8	Cap 9	Cap 10	Cap 11
	Oct 20 - March 21	April 21 - Sept 21	Oct 21 - March 22	April 22 - Sept 22	Oct 22 - March 23	April 23 - Sept 23	Oct 23 - Dec 23
Electricity	-2.34	-6.47	-7.32	-8.18	-8.71	-9.24	-9.24
Gas	-17.29	-21.47	-22.88	-24.30	-25.48	-26.65	-26.65

Notes:
(1) All prices in nominal terms.

Carry forward

5.118. We propose to adopt the same approach to carry forward for PPM as for credit, but starting only when the PPM default tariff cap comes into force (1 October 2020). Our contingency option for when the cap is introduced is discussed in Chapter 7.

6. Setting a single rollout profile

In this chapter, we consider at what level to set the single rollout profile in the SMNCC model

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our proposals set out in this chapter.

Summary of proposals

6.1. We propose to assess the net impact of the smart meter rollout on the efficient operating costs of a supplier with a weighted average rollout profile (the weighted average progress of each supplier is, in effect, the aggregate progress of all suppliers).

6.2. We propose to set a single rollout profile, using the same proportion of rollout for PPM and credit meters, representing average progress, so that:

- for years up to and including 2019: the rollout profile for each type of meter reflects suppliers' weighted average cumulative progress as a proportion of mandated meters for each fuel type, as shown by data published by BEIS;
- for subsequent years: we set the rollout profile for each type of meter in 2020 at 30% of the average annual installations between 2017 and 2019 (to approximate the impact of COVID-19), and at 100% of that level in 2021 and subsequent years.[43]

6.3. The net impact of the rollout in 2020 on the efficient operating costs of a supplier with an average rollout profile is unavoidably uncertain. Due to COVID-19, suppliers are

[43] We expect to review the SMNCC before setting the allowance for the seventh cap period (1 October 2021 to 31 March 2022). On that basis, our estimate for 2022 may be replaced by a future review. See Chapter 8 for more our proposal relating to future reviews.

installing fewer smart meters. That reduced activity means that suppliers avoid costs in some areas, but some suppliers will incur sunk installation costs to an extent. To set an appropriate allowance for the next two cap periods, we have sought to approximate the impact of COVID-19 on installations, adopted a conservative assumption that all installation costs (except tools and materials) will be sunk, and will consider making a retrospective corrective adjustment in future cap periods to account for any inaccuracy in the assumptions (see Chapter 7 on future reviews).[44]

6.4. We must set a single cap level, but suppliers' efficient net costs vary because their progress with the rollout varies. Suppliers whose rollout of smart meters in prepayment mode (which we refer to as 'smart PPMs' for the remainder of this chapter) is higher than average will have higher efficient costs than we allow for, as they incur the additional cost of installing more smart meters. Suppliers whose smart PPM rollout is below average will have lower efficient costs than we allow for, unless they still need to install new traditional PPMs to replace expired traditional meters (i.e. they do not replace expired traditional meters with cheaper smart meter). This is an unavoidable consequence of setting a single allowance that protects customers, in accordance with Section 1(6) of the Act.

6.5. Below, we:

- consider the relationship between suppliers' rollout progress and its impact on suppliers' efficient net costs (including costs and benefits per installations; lags in performance; potentially sunk costs in light of COVID-19; and variation in performance);
- set out our proposals for setting the average rollout profile in the SMNCC model; and
- consider the impact of the efficient costs on suppliers with an above average rollout profile.

[44] Note that the current PPM cap contains no SMNCC, so it has no downward adjustment to reflect the impact of the smart meter rollout with or without sunk costs. On that basis suppliers are able to charge their customers more than the cost they incur, including sunk costs. However, we would not make any adjustment reflecting an overstatement in the current PPM cap, only to the PPM cap level in the default tariff cap, effective from 1 October 2020.

Suppliers' rollout and efficient costs

The relationship between rollout and costs

6.6. Suppliers incur costs and benefits when replacing traditional PPMs with smart meters. The total net impact on a supplier's efficient net operating costs depends on its rollout profile (i.e. the number of smart meters it has installed and when it installed them as a proportion of mandated meters). This profile acts as a multiplier, increasing certain costs and benefits in line with the number of meters installed up to that point in time. Other costs and benefits do not depend on a supplier's rollout profile.

6.7. As discussed in Chapter 5, the net cost of replacing traditional PPMs with smart meters depends on:

- The asset and installation cost of smart meters. These costs scale with the rollout profile. They include (a) the costs expensed in the year of installation (b) ongoing costs of smart meters installed in prior years (i.e. rental payments) and (c) the net impact of premature replacement charges (PRCs), which compensate Meter Asset Providers (MAPs) for the foregone rental payments of the traditional meters being replaced, and thereafter a supplier incurs no rental charge for meters it has removed.

- The operational benefits of installing a smart meters. These benefits scale with the smart meter rollout.

- The avoided costs of installing new traditional PPM meters. These are benefits and do not scale with the smart meter rollout. Each year a portion of a supplier's traditional meters would have expired. Due to the rollout, a supplier no longer incurs the costs of installing a certain number of new traditional PPMs. Except in a few rare cases, suppliers do not have to install these meters and therefore, they do not incur those costs, because they have installed a smart meter instead.

6.8. The relationship between the smart meter rollout and its net impact on operating costs is more complicated when replacing traditional PPMs than it is when replacing credit meters.

- For the first smart meter installations up to the volume of expired traditional meters that otherwise would have been replaced by an expensive new traditional

PPM, each smart meter installed is a net benefit (because that smart meter is cheaper than the expensive new traditional PPM meter that the supplier would have otherwise installed).

- Above that threshold, each additional smart meter installed is an ongoing net cost, because it replaces a traditional PPM not at the end of life, and therefore (a) is not in lieu of other activity in that year and (b) incurs a PRC.

6.9. The historical rollout profiles in the SMNCC model for PPM are above the threshold of traditional meter replacements, as are each of the rollout profile forecasts we consider below. Therefore the average profiles we consider all contain a combination of smart PPMs which represent net benefit (those that replace expired traditional PPMs) and smart PPMs which represent a net cost (those that replace traditional PPMs prematurely). Each supplier will have its own rollout profile.

6.10. That relationship creates four challenges when selecting the single rollout profile we use to assess the net impact of the smart meter rollout on suppliers' efficient costs:

- delays against rollout expectations;
- potentially sunk installation costs;
- variation in suppliers' progress; and
- variation between the rollout for credit and PPM customers.

Delays against rollout expectations

6.11. On average, suppliers have installed smart meters at a slower rate than expected. Government placed an obligation on suppliers to take all reasonable steps to complete the rollout by the end of 2020.[45] The EU set a target that suppliers install smart meters

[45] Suppliers must take all reasonable steps to ensure that a Smart Metering System is installed on or before 31 December 2020 at each Domestic Premises or Designated Premises in respect of which it is the Relevant Electricity Supplier. The current licence obligation is set out in SLC 33 of the gas and SLC 39 of the electricity standard supply licence.

in 80% of electricity consumers' homes by the end of 2020. Neither expectation will be met.

6.12. Delays against expectations are a challenge when forecasting the net impact that replacing traditional PPMs with smart meters will have on operating costs in the future. If we set the allowance in line with expectations that are not met, then suppliers will charge customers for the net impact of smart meters they have not yet installed. In Chapter 7, we propose to adjust the SMNCC allowance in future cap periods to correct for this risk, but in principle we would prefer to avoid overcharging (or undercharging) in the first place.

6.13. If we set more realistic forecasts for the installations suppliers' are likely to achieve (given historical performance), then we should better protect customers, ensuring they are charged a realistic amount. However, suppliers have argued that this approach might restrict their ability to install meters at a faster rate, unless they can improve their productivity.

Sunk installation costs

6.14. When suppliers install fewer smart meters than expected it affects the costs and benefits they incur. For some costs and benefit categories, they will not incur the costs and benefits they would have incurred had they installed more meters. For instance, Premature Replacement Charges (paid for terminating rental contracts early) cannot be incurred on traditional meters that have not been replaced. In most cases, suppliers will not pay for the asset costs of smart meters and in-home displays they have not installed.

6.15. In the short term, suppliers' installation costs are not necessarily variable. A supplier may incur unproductive sunk installation costs if it installs fewer smart meters than it expected to. For example, if a supplier employs its own installers, it may carry the financial risk of lags in performance. It may have built capacity (i.e. employed enough installers) for a certain number of installations in the coming year. If it then failed to meet those installation plans, it may still incur the cost of employing installers in full, rather than the amount it needed with the benefit of hindsight.

6.16. In response to our October 2019 consultation, suppliers were concerned that we did not account for sunk costs when reviewing the costs in previous periods where rollout was slower than expected. We allow suppliers to recover only their efficiently incurred

costs. For example, we would not increase the allowance if a supplier installs fewer meters than it expects to due to poor operational decisions, or if it failed to appropriately manage foreseeable risks.

6.17. Exposure to sunk installation costs will differ between suppliers, depending on their operating structure and commercial arrangements. Some suppliers outsource volume risk, employing third party installers, only paying for installations that are completed. Others employ their own installers. Most suppliers, as shown in ASR data, have a mix of both approaches.

6.18. Exposure to sunk costs also depends on whether suppliers can anticipate, avoid, or mitigate the impact of delays. Suppliers' progress has lagged behind expectations for a variety of reasons, from variation in their productivity and low customer take-up, to technical difficulties and global pandemics. Crucially, the likelihood and impact of these delays are not equally easy for suppliers to control, anticipate, or mitigate.

6.19. Up to the end of 2019, an efficient supplier should have been able to anticipate and manage the installation resources it required. In normal circumstances, suppliers have installed smart meters at a stable rate between 2017 and 2019. A supplier should expect a degree of volume risk (that it might install fewer smart meters than expected), have experience of mitigating the impact of delays and barriers (either outsourcing that risk, or planning for it), and good estimates of the resources and flexibility it will likely require. Sunk costs should be low or avoidable in normal circumstances.

6.20. Unlike other sources of delay, COVID-19 is a uniquely unanticipated, large, and sudden constraint. Due to social distancing, suppliers have stopped the rollout, for all but emergency cases. Consequently, some suppliers may have incurred costs efficiently preparing for rollout activities that are no longer possible, due to events beyond their control. Those costs may be sunk to some extent, but not inefficient.

6.21. No supplier anticipated COVID-19, and their ability to mitigate the impact of it on their operating costs varies. We know that some suppliers have reduced their costs by redeploying or furloughing staff, but experiences will vary for reasons that may not relate to efficiency. For that reason, we propose to account for sunk costs in 2020, and we consider various options for doing so below.

The significance of different rollout profiles between suppliers

6.22. Each supplier has a different rollout profile. By necessity, we use a single rollout profile[46] in the SMNCC model to assess suppliers' costs; some suppliers will be ahead of this profile (i.e. they have installed more smart meters in a higher proportion of their customers' homes than other suppliers at this point in time), and others are behind.

6.23. Depending on its rollout profile, each supplier will have different efficient costs.

- Suppliers whose smart PPM installations are above the average number of installations we include in the SMNCC model will have higher-than average costs (and they will under-recover).

- Suppliers whose smart PPM installations are less that average, but enough to replace expired traditional meters will have lower-than-average costs (and will be able to over-recover).

- Suppliers who continue to replace (a significant proportion of) expired traditional PPMs with new expensive traditional PPMs – because their smart PPM rollout does not yet cover all traditional PPM end-of-life replacements – will have higher-than-average efficient costs (and they will under-recover).

6.24. The variation around average progress is large for replacing traditional PPMs. Some suppliers have made relatively limited progress. Others have installed smart meters in nearly all of their PPM customers' homes. Wherever we set the single rollout profile, the impact on suppliers will vary substantially. This is an inevitable consequence of recovering through a single allowance (or competitively set tariff) the costs of an activity where suppliers influence the timing of the associated costs.

6.25. All suppliers must install smart meters, so in principle, timing differences between when suppliers incur costs and when they collect payment should not matter significantly. However, timing differences will not net out across the lifetime of the cap,

[46] There are four domestic rollout profiles in the SMNCC model – a single rollout profile is used for each fuel and meter-type.

as (among other reasons) the rollout started before we introduced the cap, and will continue after it. Suppliers will make different levels of progress during the cap periods and incur different efficient costs.

6.26. This difficulty is not unique to the cap. In a competitive environment, a supplier with above average rollout would only be able to recover cost reflected in competitively set prices. Those should reflect the costs of suppliers with average or even below average progress and costs.

Variation between the rollout for credit and PPM customers

6.27. The rollout obligation considers smart meters in general; it makes no distinction between the types of traditional meter that a supplier replaces. That is for suppliers themselves to manage.

6.28. On average, the rollout of smart meters for PPM customers and the rollout for credit customers appear to be at similar stages. BEIS's smart meters quarterly report for Q4 2019 shows that, by the end of 2019, a greater proportion of domestic smart meters were operating in prepayment mode than the proportion of domestic meters that are prepayment.[47] This suggests that, on average, the smart meter rollout for PPM customers is slightly ahead of the progress for customers with credit meters.

6.29. Even though the average progress with the credit and PPM rollouts are similar, individual suppliers have not necessarily made the same progress with the rollout for their PPM customers as they have for their credit customers. For example, some suppliers have chosen to prioritise the rollout for one group of customers.

Stakeholders' views

6.30. In response to our March 2020 consultation, suppliers raised several points regarding rollout.

[47] We consider this is a sufficient proxy, although an imperfect one. A smart meter operating in prepayment mode did not necessarily replace a traditional prepayment meter. Similarly a customer who used to have a traditional prepayment meter may have switched to credit after the smart meter was installed. https://www.gov.uk/government/statistics/statistical-release-and-data-smart-meters-great-britain-quarter-4-2019

6.31. Two stakeholders asserted that the deployment of smart meters to PPM customers has lagged behind that of the rollout to credit customers. As noted above, we recognise that this may be the case for some suppliers individually. However, data suggest that, on average, the smart meter rollout for PPM customers is slightly ahead of the progress for customers with credit meters.

6.32. Two stakeholders noted that the 2019 CBA profile was not suitable as a basis for determining the SMNCC. We assess the suitability of different rollout profiles below. We conclude that the 2019 CBA was likely to overstate suppliers' performance, and in any event has been superseded by the advent of COVID-19. We propose not to use the BEIS 2019 CBA profile, for the reasons set out below.

6.33. One stakeholder noted the significant uncertainty that COVID-19 brings to the rollout profile. We assess the suitability of different rollout profiles below, in the light on uncertainty created by COVID-19, including its impact on costs.

6.34. Several stakeholders noted the uncertainly that the current absence of a BEIS post-2020 rollout policy brings to the rollout profile. We assess the suitability of different rollout profiles below, in the light on uncertainty regarding the policy framework after 2020. We must make assumptions about progress, taking that uncertainty into account, and will consider corrective adjustments in future cap periods if those assumptions turn about to be inaccurate (see Chapter 7).

Considering how to set an average rollout profile

6.35. In this section, we consider how to set the average rollout profile for our assessment of efficient net costs of the smart meter rollout.

6.36. COVID-19 makes forecasting accurately the average rollout profile in 2020 and 2021 and any associated sunk installation costs difficult. We seek to approximate rollout and costs as accurately as possible, but acknowledge this is a developing and uncertain situation. In Chapter 7 we explain that we will review the accuracy of our approximation when data is available and consider making retrospective corrective adjustments in future cap periods to account for any inaccuracy in the assumptions.

6.37. We have considered whether the best approximation of suppliers' net costs in 2020 and 2021 may not require us to use an accurate rollout profile at all. If for example, suppliers' costs are largely sunk, then an estimate of the costs they would have

incurred in the absence of COVID-19 may be preferable to a rollout profile that accounts for the reduction in installations. We conclude such an approach would provide a less realistic assessment of costs for a supplier with an average rollout profile that accounting for COVID-19 directly.

Our proposal for previous years

6.38. We must include a rollout profile for each year as suppliers costs depend on (a) the smart meter they install in-year and (b) the smart meters they have installed in previous years for which they pay ongoing rental charges, and incur ongoing benefits.

6.39. For previous years, we propose to include suppliers' historical rollout progress for the years we have data (up to the end of 2019). We receive data updates around April each year. Our proposals therefore include an additional year of rollout data (2019) compared with the proposals we presented in our October 2019 consultation.

6.40. We propose to use the rollout profile for smart meters in general, not smart meters that replace traditional PPMs specifically. As discussed above, the average rollout profile for PPM appears to be similar to the average profile for credit meters, if slightly ahead. We consider using a general rollout profile is sufficient close and more practical given data limitation and that suppliers' specific PPM rollout profiles vary around the average considerably.

Options for subsequent years

6.41. For subsequent years, we have considered the following options:

- **Option 1: An 'adjusted 2019 CBA' profile, <u>not</u> accounting for COVID-19.** This maintains the rollout profile and productivity assumptions from the 2019 CBA, except that (a) we replace the expectation for 2019 with data on suppliers' actual progress and (b) we include an adjustment so that the profile "catches-up" with the policy proposal, achieving market-wide rollout by the end of 2024 (and the same interim milestone for 2023 as included in the 2019 CBA). We adjust productivity in 2019 by using actual data, but otherwise maintain the productivity assumptions from the 2019 CBA.

- **Option 2: An 'all reasonable steps' profile, <u>not</u> accounting for COVID-19.** This approach assumes suppliers maintain their 'business as usual' installation rate and productivity under the current rollout obligation. We use actual progress

up to 2019, and assume that the rollout in 2020-2023 continues at the same average rate as 2017-2019. The model assumes that all installations occur and that associated costs and benefits are productive. In practice, this is not the case, but we assess whether it calculates a level of net costs that approximates the combination of actual productive costs and sunk costs.

- **Option 3: A 'delayed' profile ('all reasonable steps', accounting for COVID-19).** This approach seeks to approximate a more plausible rollout profile than the options above, given the impact of COVID-19 on installations. (We recognise that any attempt to forecast the impact at this stage is subject to a wide range of uncertainty). We assume that the installation rate in 2020 reduces to 30% of the average rate, per annum, between 2017 and 2019, and then continues in 2021 at the average rate between 2017 and 2019. We assume that productivity for meters installed in 2020 and thereafter is the same as the average productivity in 2017-2019. We include a separate estimate of the sunk installation costs suppliers could incur.

6.42. Tables 6.1 and 6.2 show the net costs per account using the different rollout profiles considered above.

Table 6.1: The PPM SMNCC for electricity customers with different rollout profiles

	Cap 5	Cap 6	Cap 7	Cap 8	Cap 9	Cap 10	Cap 11
	Oct 20 - March 21	April 21 - Sept 21	Oct 21 - March 22	April 22 - Sept 22	Oct 22 - March 23	April 23 - Sept 23	Oct 23 - Dec 23
2019 CBA	-3.09	-5.50	-6.99	-8.49	-9.87	-11.24	-11.24
All Reasonable Steps, absent COVID-19	-4.57	-6.17	-7.02	-7.87	-8.43	-8.98	-8.98
Delayed rollout	-2.34	-6.47	-7.32	-8.18	-8.71	-9.24	-9.24

Notes:

All figures £/ customer, nominal

Table 6.2: The PPM SMNCC for gas customers with different rollout profiles

	Cap 5	Cap 6	Cap 7	Cap 8	Cap 9	Cap 10	Cap 11
	Oct 20 - March 21	April 21 - Sept 21	Oct 21 - March 22	April 22 - Sept 22	Oct 22 - March 23	April 23 - Sept 23	Oct 23 - Dec 23
2019 CBA	-16.31	-20.77	-23.81	-26.84	-29.55	-32.25	-32.25
All Reasonable Steps, absent COVID-19	-18.90	-22.03	-23.43	-24.84	-26.02	-27.20	-27.20
Delayed rollout	-17.29	-21.47	-22.88	-24.30	-25.48	-26.65	-26.65

Notes:

All figures £/ customer, nominal

Our proposal for subsequent periods

6.43. We propose to set the average rollout profile using the delayed profile, accounting for COVID-19 including sunk costs (i.e. option 3).

6.44. An accurate forecast is impossible, given the ongoing and developing uncertainty caused by COVID-19. However, we consider this approach to represent the most plausible approximation of the net impact of the rollout on efficient operating costs in 2020 and 2021 of a supplier with an average rollout profile. In any event we propose to assess the impact of COVID-19 in arrears, when ASR data for 2020 is available, making retrospective corrective adjustments in future cap periods for any error in our assumptions.

Rationale

6.45. We discount using an adjusted 2019 CBA profile to approximate the net costs of a supplier with an average rollout profile (i.e. option 1). Even before COVID-19, the 2019 CBA profile overstated the amount of smart meters that suppliers were likely to roll out in 2020. As such, we do not consider it a good approximation of either the installations supplier will achieve, nor a good indication of the installation costs they have been committed and could be sunk. Using this profile would significantly overstate the net cost of replacing traditional meters with smart meters.

6.46. We consider that the installation rates that suppliers achieved between 2017 and 2019 are a good indication of what they would have achieved under the current policy framework and rollout obligations, absent COVID-19. Clearly, COVID-19 means that suppliers will install fewer meters, so option 2 ('all reasonable steps', absent COVID-19) would not be a good indicator of the number of installations that will occur in 2020.

However, we do consider it a useful indicator of the maximum installation costs that could have been committed and sunk to some extent. We use this rollout profile in our estimate of potentially sunk costs.

6.47. We consider option 3, the 'delayed' profile, including sunk installation costs, the best approximation of the impact the smart meter rollout could have on the operating costs of a supplier with an average rollout profile.

Considering rollout projections

The 2019 CBA profile

6.48. The 2019 CBA profile was in line with the proposals set out in BEIS's consultation on its post-2020 policy framework. At present, no decision has been made on the post-2020 policy framework. Rather than anticipate whether a new policy framework will be in place in 2021, requiring and supporting suppliers to increase their installation rates, we consider it better protects customers to update our estimates when those arrangements are confirmed.

6.49. In response to our 2019 October consultation, before the impact of COVID-19, suppliers considered that the profile in the 2019 CBA was unachievable. In particular, suppliers argued that the profile assumed they could improve substantially the *conversion rate* of customers who do not yet have a smart meter. Without additional policy tools suppliers expected the opposite to be true; that the conversion rate would reduce, as the remaining customers would be more resistant to receiving a smart meter and the policy tools for conversion remained the same.

6.50. The 2019 CBA assumed that suppliers would increase their domestic installation rates by 31% in 2019 (on 2018 installs) and again by 21% in 2020 (on 2019 installs). In practice, suppliers installed around 27% fewer domestic smart meters in 2019 than the 2019 CBA profile assumed, which (before we consider COVID-19) makes the 2020 CBA forecast even less likely to be achieved. Suppliers' responses to the October 2019 consultation suggest they were not committing resources that would improve their performance to the extent required to do this.

6.51. Using the CBA profile in our costs assessment, whether directly or to estimate sunk costs as a result of COVID-19, would significantly overestimate suppliers' efficient costs.

All reasonable steps

6.52. We consider that using an 'all reasonable steps' profile (based on the average rollout achieved in 2017-2019) provides a good approximation of the installations that suppliers on average would have achieved in 2020, in the absence of COVID-19. We have a good understanding of the installation rates that suppliers have achieved under the current policy framework and rollout obligations. In addition, suppliers responded to our October 2019 consultation by providing estimates and explanations of what they could achieve, which is consistent with their performance to date.

6.53. Given COVID-19, it is clear that supplier will install fewer meters. We consider that an 'all reasonable steps' profile is still useful to estimate the sunk installation costs that could be sunk as a result of COVID-19, but as the scenario itself is unsuitable as the basis for the SMNCC. As many other cost and benefit categories would not be sunk, to a material extent, this scenario would overstate net costs.

A 'delayed profile'

6.54. This approach seeks to estimate efficient costs by setting a rollout profile as close to what may occur under COVID-19 conditions as possible for the average supplier, given the high degree of uncertainty.

6.55. For 2020, we assume that suppliers will install 30% of the smart meters they installed annually, on average from 2017 to 2019. This is an approximation. Suppliers installed smart meters in January and February 2020. At different points in March, suppliers reduced their rollout, only installing meters in emergency cases. In the first few months of the year, suppliers would have installed 15-20% of the smart meters they intended to install in 2020, based on historical trends.

6.56. We do not know when the rollout will restart, or what constraints may apply when it does restart. Installation rates, at least initially, may be less than in previous years if precautions are in place, or if consumer willingness to accept a smart meter is temporarily reduced.

6.57. On that basis, we approximate total smart installations in 2020 to be at 30% of 2017-2019 levels. This is, of necessity, an approximate projection. As part of the consultation response, suppliers should set out their specific circumstances with

respect to likely installation volumes in 2020, in light of COVID-19. We will consider the aggregate impact across all suppliers in our decision.

6.58. For 2021, we assume that suppliers will install smart meters at the same rate they achieved between 2017 and 2019 under 'all reasonable steps'. Currently, no rollout obligation has been announced for the post-2020 period.

6.59. For 2020 and subsequent years we assume that suppliers achieve the productivity (installs per installer per day) that they did on average across 2017-2019. This figure (3.1) replaces the CBA estimate for 2020 (5.0).

Considering net costs

Considering productive cost and benefits

6.60. Even accounting for COVID-19, suppliers will still incur productive costs and benefits for the meters they install. The delayed profile will account for these productive costs and benefits more accurately, as it the SMNCC model only accounts for installations that are likely to occur. The 'all reasonable steps' absent COVID-19 scenario (option 2) accounts for the those costs and benefits, and also accounts for the costs and benefits of installation that are unlikely to happen (by our approximation, 70% of the installations that would have happened absent COVID-19).

6.61. We have considered the impact of the two rollout profiles in each category.

- **Installation costs.** Using a delayed profile, the SMNCC model reduces installation costs in proportion to the rollout, assuming suppliers avoid all costs of installation for meters they do not install as a result of COVID-19. In practice this is incorrect as (in addition to the installation costs for meters they install in 2020), suppliers will also incur sunk costs for installation staff who are not installing meters. The 'all reasonable steps', absent COVID-19 scenario provides a maximum estimate of the installation costs that could be incurred (productively and sunk). However, it does not recognise them in the right time period, spreading sunk costs over the life of smart meters that will not be installed rather than incurring the costs in 2020. Below we estimate sunk cost in year, to better account for these costs.

- **Asset costs.** Using a delayed profile, the SMNCC model assumes suppliers avoid all costs of smart meter assets, communication hubs, and In-Home Displays they do not install as a result of COVID-19. Suppliers will eventually install these assets, at which point we would recognise the costs. Some suppliers may incur costs prior to point of installation, so this approach will slightly understate the average case. The 'all reasonable steps', absent COVID-19 scenario will recognise the costs of all assets, even though we expect 70% of those assets will not be installed.

- **PRCs**. Using a delayed profile, the SMNCC model only recognises the PRCs of traditional meters replaced by smart meters. This is as it should be. Suppliers would not incur PRCs for traditional PPMs that remain in place. The 'all reasonable steps', absent COVID-19 scenario accounts for PRCs that will not be incurred.

- **Operational benefits:** The SMNCC model includes operating benefits for the smart meters suppliers install. Using a delayed profile, the SMNCC model does not include benefits for smart meters that suppliers are unlikely to install.

- **The avoided costs of installing new traditional PPMs**. These avoided costs are the biggest source of savings to supplier, and they do not scale with the rollout. Under our 'delayed rollout' scenario, these avoided costs are larger than under the 'all reasonable steps', absent COVID-19 scenario. That is because suppliers have stopped all non-emergency installations, including the installation of traditional meters. On that basis, suppliers' operating costs still decrease when old meters expire, but they avoid the costs of replacing them with a meter of any type (smart or traditional).

Considering sunk installation costs, due to COVID-19

6.62. Suppliers, in aggregate, would have installed a given number of smart meters in 2020, absent COVID-19; we have assumed this to be equal to the number of meters installed per annum on average in 2017-2019. In practice, suppliers will install fewer meters than this. We have assumed they will install 30% of the 2017-2019 annual average, for reasons outlined above. Suppliers will incur the costs (and benefits) of installing those meters, and will incur additional costs of staff who have been hired to complete installations at the planned rate, but who are no longer able to do so. These costs are "sunk" – i.e. they are incurred, but there is no associated meter installation as a result.

6.63. As discussed above, suppliers' exposure to sunk costs will vary, depending on their operating structure and commercial arrangements. They will also have varying abilities to avoid sunk installation costs through a combination of furlough, redeployment of staff, commercial arrangements with MOPs, and other means.

6.64. Some suppliers have been able to redeploy or furlough staff, reducing their installation costs. For some suppliers, a significant proportion of installation costs could be sunk – i.e. suppliers still incur costs for meters they were planning to install, related to installer wages, leases on vehicles, completed recruitment and training activities, logistics, field management, and appointment setting. These costs would likely not reduce in proportion to installation performance.

6.65. We have examined three scenarios for suppliers' ability to avoid each of the sub-categories of installation costs (on average). Scenario A assumes that suppliers are exposed to sunk installation costs and unable to mitigate them (except for the costs of tools and materials). Scenario B assumes suppliers are able to avoid a proportion of some elements of installation cost (through flexible operating structures, or taking mitigating actions such as redeploying staff). Scenario C assumes suppliers have outsourced installations, and therefore any sunk cost risk does not sit with the supplier. These are illustrated in Table 6.3.

6.66. We recognise that the situation of individual suppliers will be more complex than our scenarios. We are considering the aggregate effect of COVID-19 on sunk costs; as part of their consultation responses, suppliers should set out their specific circumstances with respect to likely sunk installation costs in 2020. We will consider the aggregate impact across all suppliers in our decision.

6.67. We have applied Scenario A in our proposals. First, we are aware from discussions with suppliers that many suppliers have been able to mitigate and avoid sunk in-house installation costs by redeploying or furloughing staff, but we are not able to make a firm and reliable estimate for sunk costs across the board at this stage. In addition, for suppliers that do incur substantial sunk costs, that will not (or may not) be a mark of any inefficiency. On that basis, we consider the best approach is to adopt a conservative interim assumption that all costs (save those for tools and materials) will be sunk and to consider making a retrospective corrective adjustment in future cap periods to account for any inaccuracy in the assumption.

6.68. The above analysis demonstrates the estimated proportion of planned but not executed installation cost that we assume will be sunk, and incurred in 2020. We apply this proportion of installation costs to the number of meters that COVID-19 has caused not to be installed in 2020, with reference to the 'all reasonable steps' profile above. This results in sunk costs of 97% of installation costs for 70% of the 2017-2019 annual installation volume, to be incurred in 2020 (and not annualised through the MAP charge).

Table 6.3: proportions of sunk cost by category for different supplier scenarios

Installation cost sub-category	% of total installation cost	Scenario A: High average sunk costs	Scenario B: Low average sunk costs	Scenario C: Outsourced risk
Installer wages	41.4%	100%	30%	0%
Vans (fuel, maintenance)	11.5%	100%	80%	0%
Tools and materials	7.0%	0%	0%	0%
Recruitment and training	1.8%	100%	30%	0%
Logistics	7.2%	100%	30%	0%
Field management	8.0%	100%	30%	0%
Appointment setting	8.4%	100%	30%	0%
Other	14.6%	100%	100%	0%
Total of installation costs that are sunk		**93%**	**44%**	**0%**
Sunk costs per electricity account		£7.54	£3.47	£0.00
Sunk costs per gas account		£6.80	£3.08	£0.00

Notes:

All figures in nominal terms

Considering efficient suppliers with an above average rollout profile

Our approach

6.69. As discussed above, suppliers have different rollout profiles, and therefore different efficient costs. We must set a single allowance which applies to each supplier.

6.70. In response to our March 2020 consultation, some suppliers considered that using an average rollout profile would not allow suppliers to recover their efficient costs, if they

had made less progress than average. They considered this would be exacerbated if we overstated the average profile.

Considerations

The Act

6.71. We must protect default tariff customers and set a single allowance for all suppliers. In doing so, we must have regard to the costs of an efficient supplier. This is a challenge when suppliers' efficient (total) costs vary. In this situation, we propose to have regard to suppliers' average costs – otherwise customers would pay more in aggregate that the total underlying costs.

6.72. If we set the allowance at the level of the supplier with the highest efficient costs then all other suppliers could over-recover their lower efficient costs from customers, and customers as a whole would pay more than the efficient aggregate costs of the rollout.

6.73. If we set the allowance at the lowest level of efficient costs (in this case, the suppliers installing smart PPMs only when traditional PPMs expire), then all other suppliers would under-recover their costs, and customers as a whole would pay less than the aggregate efficient costs of the rollout. We do not consider that would protect customers or have regard to suppliers' efficient costs.

6.74. On that basis, in accordance with Section 1(6) of the Act, we consider it protects customers and has regard to efficient costs to set the allowance considering an average rollout profile. That ensures that customers as whole pay allowances that align with the aggregate net costs of the rollout.

7. Future reviews of the SMNCC

In this chapter, we consider the timing of transitioning to the new cap, and the associated contingency option for the cap level.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our provisional proposals set out in this chapter.

Summary of our proposals

7.1. We propose to review the SMNCC for PPM customers every 12 months, updating the SMNCC model with latest data. We propose to conduct and consult on our first review in time to update the SMNCC for the seventh cap period, effective 1 October 2021, using the next ASRs to update on suppliers' costs, benefits, and progress in 2020.

7.2. The progress of the rollout and its impact on suppliers' efficient operating costs remains uncertain. Reviews should reduce the risk that customers are overcharged if the net impact of the rollout on operating costs deviates from expectations. However, there is also a substantial risk that reviews of the SMNCC for PPM customers will double count the costs and benefits of smart meters that suppliers were expected to install in previous periods, but will install at a later point in time due to delays. That would be a clear, material, and systemic error, which would fail to protect customers.

7.3. When reviewing the SMNCC for PPM customers, we propose to reassess past cap periods, starting from 1 October 2020 (when we introduce a cap level for PPM customers in the default tariff cap), considering the latest data on rollout progress and its net impact on operating costs. We would then ensure that in future cap periods we do not double count the costs and benefits that have already been accounted for in past cap periods, deducting advanced payments in previous periods from the allowance in future periods. If suppliers' costs have been higher than the allowances since 1 October 2020, we would add that lagged payment to the allowances in future periods.

7.4. We propose no adjustment for any difference between suppliers' efficient operating costs prior to October 2020 and the allowance for the impact of the rollout on their

costs in that period (i.e. the cap assumed no impact). Before 1 October 2020, the PPM cap was not part of the default tariff cap, and was not intended to account for the impact of the smart meter rollout.

Reviews and correcting forecast errors in general

Our November 2018 decision

7.5. In our November 2018 decision[48] we stated that:

- we would not have a specific review of the cap level or methodology (apart from a review of smart metering costs); and
- we would review the cap level, or aspects of the methodology, if specific systematic errors were unforeseen, clear, material, and necessitated changes.

7.6. In addition, we decided not to correct forecast errors, on the basis that:

- long-run, non-systematic forecast errors should net out; and
- suppliers already, before the introduction of the cap, managed short term forecast risks, and even with default tariffs rarely adjusted their prices more than twice a year.

7.7. We did not specify, in general or in the context of smart meters, that we might correct forecast errors, even where deviation from expectations was partly, or wholly, in suppliers' control.

Our April 2019 consultation on reviewing the SMNCC for customers with credit meters

7.8. In our April 2019 consultation[49] we:

[48] Para 3.6 to 3.17 https://www.ofgem.gov.uk/system/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf
[49] Ofgem (2019), Reviewing smart metering costs in the default tariff cap: April consultation.

- explained that in our 2018 decision we had set the allowance in line with suppliers' rollout targets,[50] but that the number of smart meters installed in 2019 was likely to be lower than those expectations;

- stated that we viewed any excess in the allowances (i.e. customers paying more that suppliers' efficient costs) as paying suppliers in advance for installations that suppliers would achieve at a later point in time (either in a subsequent cap period, or after the cap expires); and

- we proposed to set the SMNCC in the fourth cap period and beyond having regard to any substantial advance payment (or lagged payment) in first three cap periods, reducing future allowances to remove advanced payments and increasing them to include lagged payments.

7.9. We developed these proposals in a working paper and presented them in our October 2019 consultation.[51]

Suppliers' views

7.10. In response to our consultations discussing advanced payments in the SMNCC for credit customers, suppliers have argued that either:

- we should not include any kind of correction mechanism for smart meters, as we ruled it out in our 2018 decision; or

- if we correct allowances for smart meters we should also make corrections in other areas.

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https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap

[50] In this case, we set the profile for both fuels in line with the EU target for installing smart meters in 80% of electricity customers' homes by the end of 2020.

[51] Ofgem (2019), Response paper #3: reviewing smart metering costs in the default tariff cap – having regard for carry forward balances. https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-response-paper-3
https://www.ofgem.gov.uk/system/files/docs/2019/08/response_paper_3_-_carry_forward_balances.pdf
Ofgem (2019), Reviewing smart metering costs in the default tariff cap, chapter 4, p91 onwards.
https://www.ofgem.gov.uk/system/files/docs/2019/10/smart_metering_review_in_the_default_tariff_cap_-_october_consultation.pdf

7.11. Some suppliers argued that they had a legitimate expectation that we would not correct forecast errors. In particular that, relating to smart meters, we would both: (a) not consider or 'claw back' any money they had charged customers for in previous cap periods that related to the impact of smart meters they were yet to install, and (b) assess the efficient costs of the smart meter rollout going forward, including the net costs of meters they had not yet installed but had received payment for (in part).

Our considerations

Clear systematic material errors

7.12. In our November 2018 decision, we did not rule out the possibility of carrying out reviews or making corrective adjustments. We indicated that we would not usually make corrective adjustments for ordinary forecast error. This did not preclude us from making adjustments for serious and systemic errors, as we made clear. Furthermore, we did not exclude the option to identify specific types of errors in future and give notice that they might be subject to review.

Delays rolling out smart meters

7.13. We stated in our November 2018 decision that we did not intend to review the cap, but would do so if there were specific systematic errors that were unforeseen, clear, and material, and that necessitated changes.[52] We explain below that if the smart meter rollout continues to lag behind expectations (due to delays of the scale we have seen between 2017 and 2019, or due to COVID-19) then we would risk systematically misstating the allowance in a clear and material way that we consider necessitates a change in approach to protect customers. The risk of overcharging customers could be exacerbated by reviews unless we avoid the risk of double-counting net costs that we included in the allowance for previous periods, but we now expect to be delivered in the future periods due to delays. Given that the point of a review would be to improve the accuracy of the allowances it would be counter-productive if, in practice, we introduced a mechanism that systematically double counted the impact of delayed installations.

[52] Ofgem (2018), Decision – Default tariff cap – Overview document, paragraphs 3.16 to 3.18. https://www.ofgem.gov.uk/system/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf

7.14. As we explain below, forecast errors due to lags in performance will not net out over time; performance has consistently been below expectations, it does not vary around an average expectation. Neither can we set more plausible forecasts, based on suppliers' likely performance and not their targeted performance, without risk. That approach could make those targets may be harder to achieve, as suppliers have argued.

7.15. On that basis we propose to adjust the SMNCC allowance to remove advanced payment made in previous periods, protecting customers from double counting costs, and ensuring that we set the cumulative allowances in line with suppliers' cumulative efficient costs.

Considering other costs categories

7.16. Considering the potential for corrections in other cost categories, we maintain the principles that we set out in our November 2018 decision as explained and elaborated in this chapter. We do not consider that correcting forecast errors that relate to smart meters means that we must correct all other errors, regardless of their circumstances. We would consider each issue in context and only seek to make corrections where to do otherwise would clearly materially and systemically misstate the cap, failing to protection customers.

7.17. In our 2018 decision we considered that scheduled reviews could undermine suppliers' incentives to improve their efficiency. We still consider this to be the case. The net impact of changes to individual line items within suppliers' operating costs and the long-run impact of non-systemic volatility (such as wholesale demand forecasting) are judgemental, uncertain, and/or non-systemic. Detailed and frequent corrections could undermine incentives to improve efficiency and fail to protect consumers.

7.18. In our 2018 decision we considered that we would not review or correct forecast errors. We considered these were uncertain, judgemental, and would net out in the long-run where error was non-systemic. We still consider this to be the case, but recognise that not all forecast errors have impact of that kind. We still consider that clear, material, unforeseen errors that necessitate changes to protect customers should be corrected, including retrospective corrections.

7.19. It is possible that, applying those principles, other costs categories would warrant review and adjustment in future. For example:

- **Impact of COVID-19 on other costs**. Suppliers have likely incurred additional costs due to COVID-19. This is an unforeseen event that may have clear material net costs that necessitate changes. Suppliers have already requested that we ensure the price cap reflects those costs (such as higher bad debt costs), some of which will be in past cap periods by the time we introduced any adjustment. At the moment, data on the scale of the net impact is too uncertain. However, when and if data shows a clear material increase in efficient net costs, we would consider a correction in arrears.

- **The net impact of delayed ECO installations**: The allowance for ECO (a programme requiring suppliers to install insulation in certain customers' homes) works in the same way as smart meters. Suppliers receive an allowance to install insulation in a certain number of properties. We base the allowance on the latest government assessment of expected installations and their associated costs. Government's assessment of the total lifetime costs has not changed considerably. However, its assessment of the costs in each remaining period has increased substantially, because suppliers' installations were fewer than expected in the first ECO3 phase, so they did not incur those costs. The cap now reflects the increased costs in each remaining phase, but not the fact that customers have paid for those a portion of those costs already. This is a clear and systemic error. It is less material than that for smart meters. If the issue becomes more material, as the advanced payments accumulate over time, we may need to address it to protect customers, particularly in light of COVID-19 further delaying installations. We would reduce the allowance to account for advanced payments made since 1 October 2020.

Suppliers' arguments on legitimate expectations

7.20. This issue applies to our proposals for the SMNCC for credit meters, not PPM. We address those views in our consultation on updating the SMNCC allowance for credit customers.

7.21. In our April 2019 consultation, we explicitly stated that we would review and account for the impact of advanced payments when setting the SMNCC for credit meters in

future periods. We set out the impact of those proposals in our October 2019 consultation.[53] On that basis, suppliers could have no legitimate expectation that we would leave overpayment to suppliers unaddressed in subsequent periods.

7.22. We propose to apply the same approach to the SMNCC for PPM customers, in order to avoid material errors in the cap level.

Future reviews of the SMNCC

Options

7.23. We have considered setting the SMNCC allowance for the remaining cap periods with and without subsequent reviews.

7.24. In our October 2019 consultation we proposed allowances for the remainder of the potential lifetime of the cap (up to the end of 2023) and sought not to review them. We recognised that the pace and costs of the rollout were uncertain, and so we could not rule out further reviews.

7.25. We noted that uncertainty worked in both directions. Suppliers may incur lower costs than we anticipate, in particular if they continue to install fewer smart meters than expected and than we allow for in the allowances. Alternatively (or in addition), costs per installation may increase. For example, if customers towards the end of the rollout profile may be less likely to book an installation, then suppliers may incur greater costs to encourage take-up.

Our proposal

Reviewing progress and net costs

7.26. We propose to review the SMNCC allowance every 12 months. We propose to conduct and consult on our first review to update the seventh cap period, effective from 1 October 2021. That review will be informed by the latest ASR data on suppliers' costs and benefits in 2020, which should make the impact of COVID-19 on suppliers' net

[53] Ofgem (2019), Reviewing smart metering costs in the default tariff cap. Chapter 4. https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap

smart metering costs clearer. In that review we will consider updates relating to the post-2020 policy framework.

7.27. In the review we propose to update the SMNCC model with latest data on:

- the rollout profile, using data published by BEIS;
- the costs of smart meters, communications hubs, and In-Home Displays (IHDs), using the latest ASRs from suppliers;
- smart meter installation costs, using the latest ASRs from suppliers; and the number and cost of avoided site visits, using the latest ASRs from suppliers.

Adjusting for lags between when suppliers incur net costs and when they charge customers

7.28. We propose to calculate the value of advanced (or lagged) payments since 1 October 2020, and deduct advanced payments from the SMNCC in future allowances (or add lagged payments). In doing so, we propose to ensure that cumulative allowances between 1 October 2020 and 31 December 2023 reflect the cumulative comparable net costs in that period for a supplier with an average rollout profile (or, in other words, suppliers as a whole).

7.29. To not do so would double count the costs and benefits of installations that suppliers are expected to achieve in a specific period, but do not install until a later period. That would allow a systemic, material, and clear error that would misstate the SMNCC allowance. This would fail to protect customers.

Overview of suppliers' views

7.30. In response to our October 2019 consultation, suppliers considered that we must have reviews in future, due to uncertainty about the cost and pace of the rollout, and specifically because the post-2020 policy framework was unknown.

7.31. In January 2019, we agreed with suppliers that further review(s) of the SMNCC allowance for credit customers are inevitable and that they offer a preferable and practical approach to dealing with ongoing uncertainty. We noted that reviews may be necessary at times when we could consider the impact of major policy decisions (including, but not limited to the post-2020 policy framework for rolling our smart

meters). Periodic reviews may also be necessary to consider the inherent uncertainty of the cost and pace of the rollout in the medium to long term.

7.32. Suppliers disagreed that we should adjust the SMNCC allowance in future periods to remove costs that they had already charged customers in advance for. This was because they considered that customers had not been charged in advance, we had decided not to correct errors in the cap, or it would reduce investment in future periods.

Our considerations

Framework for reviews

7.33. We have considered a high-level framework for future reviews. We intend to provide a further update on our thinking alongside our decision.

- **Timing:** We expect reviews to be carried out every 12 months, in line with the availability of official data updates (primarily ASRs each year in April). This means that we would intend for reviews to take effect (subject to consultation) in the winter cap update, which we announce in early August each year.

- **Scope:** We do not expect to carry out future reviews with the same level of detail as this consultation. We consider that this would be disproportionate, because the potential gains in accuracy would not justify the significant amount of resources required (both from Ofgem and industry). Rather, our current view is that we would update significant parameters based on the ASRs. This would allow us to take into account new data, and therefore improve the accuracy of the cap.

7.34. We expect that we would update the following parameters:

- the rollout profile. We would set the rollout using weighted average installations for the years published data is available from BEIS. For future years, we would set the profile consistently with suppliers' performance to date and their expected performance in light of rollout obligations.

- the costs of smart meters, communications hubs and In-Home Displays (IHDs). We would take the latest data from suppliers, in their ASRs. We would maintain the methodology proposed in this consultation to model these costs.

- smart meter installation costs. We would take the latest data from suppliers, in their ASRs. We would maintain the methodology proposed in this consultation to model these costs.

- the number and cost of avoided site visits. We would maintain the methodology proposed in this consultation to model these benefits.

Uncertain pace and impact of the rollout

7.35. In their response to our October 2019 consultation suppliers noted that the pace and costs of the rollout were uncertain. They considered that future reviews would be necessary to ensure that the SMNCC allowance tracked the change in their efficient costs accurately.

7.36. The pace of the smart meter rollout is uncertain, as is its net impact on suppliers' efficient operating costs. This uncertainty substantially increases the risk that the SMNCC allowance misstates the net impact of the rollout on an efficient supplier's operating costs. For example, if suppliers install fewer smart meters than we account for in the SMNCC allowance, then the allowance will overcharge customers. If suppliers' costs per installation increase above the level we assume in the allowance, then all else being equal, the allowance will be too low.

Risk of systemic errors in future reviews

7.37. We agree that reviews are inevitable and a potentially useful way to address uncertainty. However, future reviews could increase the risk of misstatement, rather than reduce it as intended.

7.38. In each cap period, we could set the expected rollout profile in line with: (a) the expectations and obligations placed on suppliers, or (b) a central forecast of the installations suppliers will likely achieve. Ideally, suppliers would likely install smart meters in line with expectations and obligations placed on them. To date, that has not been that case. It is possible that suppliers' installations, on average, may continue to lag behind expectations.

7.39. Under-performance would mean that we would materially misstate the allowances. Suppliers would charge customers for the costs and benefits of installing a certain

number of smart meters in one period, but would not actually incur those costs and benefits in that period if their performance lagged expectations.

7.40. In future reviews, if we then considered suppliers' updated position at that point, we would assess the costs and benefits of installing the smart meters they were now expected to install. Those net costs would include the impact of smart meters they were expected to install in previous periods, and had charged customers for already. Including those costs and benefits a second time would double count a proportion of suppliers' efficient costs and benefits.

Double counting costs and benefits

7.41. The key issues regarding double counting costs and benefits are:

- Costs expensed in the year a meter is installed, such as In-Home Displays and Premature Replacement Charges (see Chapter 5). It is straight-forward that these costs would be double-counted in future periods. When we set the allowance we would set the rollout profile in line with expectations and obligations. For example, it might assume that suppliers will install 500,000 smart meters in the next year and set the allowance accordingly. Suppliers would charge customers for 500,000 IHDs and the PRCs for replacing 500,000 traditional meters. If suppliers only installed 300,000 smart meters, they would not incur those costs. In the next cap period, suppliers would still be obliged to install smart meters, so we would include in future periods the delayed 200,000 installations from the last period. Customers would have already paid the IHD and PRC costs for those installations, and would now be charged a second time.

- Costs that are spread over time, such as rental payments for smart meters. Suppliers pay rent on the smart meters they install. If suppliers' performance lagged, they would charge customers for the rent due in that year for smart meters they had not actually installed. In reviewing the SMNCC allowance and the installations that remained, we would then include the costs of that rental period a second time. In effect, customers would pay two years' rent for meters in place for a fraction of that time (for example).

- Benefits. In setting the SMNCC we would account for benefits suppliers incur. If we set the rollout in line with suppliers' expectations and suppliers underperformed against those expectations, then the SMNCC would reduce faster

than the operating costs of an efficient supplier with an average rollout profile would actually reduce. Upon review, we would then account for those benefits again, double counting them (analogously to in-year expense or rental payment, depending on the benefit).

7.42. The issues above are clear and systemic misstatements. The bias works in the same direction at each review. So far, installations have fallen short of expectations each year, they have not exceeded them. So, the error of double counting the net costs would not net out over time. The errors would accumulate.

7.43. Once a supplier installs more smart meters in a year than it would have installed traditional meters to replace expired meters, then installing smart meters increases a supplier's costs by more than it reduces them. The benefit of avoiding new traditional prepayment meters is not sensitive to changes in the smart meter rollout, so long as suppliers do more than replace expired meters. If we left the systemic risk of error unaddressed, the allowances would fail to reflect suppliers' efficient costs, and fail to protect customers.

Avoiding error

7.44. The problem of double counting, caused by delays, requires adjustment.

7.45. Firstly, we do not consider that the impact of forecast errors net out in the case of delays to the smart meter rollout. Continued underperformance in the rollout is a systemic error, the impact of which will not net out in the long-run. Unlike when suppliers forecast demand for energy, we have no reason to believe that forecast errors for smart meters would vary around a central expectation. In fact, experience suggests the opposite. So far, suppliers' rollout has not varied around expectations. It has fallen below expectations each year.

7.46. Secondly, we cannot set more plausible forecasts without risk. We must have regard to the legal obligations and expectations placed on suppliers. In the consultation process preceding our November 2018 decision, suppliers argued that we must align the allowances for net smart metering costs with their rollout obligations or we might prevent suppliers from meeting those expectations. That is reasonable and we give it consideration. However, it does not guarantee that suppliers meet those expectations. It also does not justify double counting costs and benefits in a manner that fails to

protect customers and does not reflect efficient costs for a supplier with an average rollout profile.

Adjusting for advanced or lagged payments

7.47. We can address this risk of misstatement in a straightforward way. In our April 2019 consultation we first proposed to adjust the allowances in future cap periods to account for advanced payments (or lagged payments) in previous periods. In doing so, we would seek to align the allowances over the lifetime of the cap with the comparable efficient costs of a supplier with an average rollout profile. We developed those proposals in a working paper before including the adjustment in our October 2019 consultation.

7.48. That approach would:

- assess the total amount that suppliers have charged customers since 1 October 2019, through the SMNCC allowance. Suppliers charge at the level of the cap, so customers pay the SMNCC allowance in full.

- assess the net impact on the efficient operating costs of a supplier with an average profile in the same cap periods, based on the latest data regarding what suppliers actually delivered, not what they were expected to. We would also reassess their efficient unit costs, based on the latest ASR submissions, as lags in performance can also increase efficient costs *per installation*.

- calculate the difference between the amount suppliers charged (for what they were expected to deliver) and the efficient costs of what they actually delivered; and

- adjust future allowances to remove advanced payments or add lagged payments.

7.49. If suppliers' costs were less than the allowances, customers would have paid in advance for the net impact of smart meters suppliers will install at a later point in time (either a subsequent cap period, or after the cap expires). We would deduct that advanced payment from future periods to avoid double counting.

7.50. If the cumulative costs were higher than the cumulative allowances, then customers would have either (a) received a benefit in advance of when suppliers actually incur it,

or (b) not yet paid for the net impact of smart meters that a supplier had installed, but we had not accounted for in the allowance (i.e. average performance exceeded expectations). We would increase future allowances to deduct that advanced benefit or include that lagged payment.

Obligation to set the cap and protect customers

7.51. In their responses to our October 2019 consultation, some suppliers stated that we could not, or in any case should not, take a decision on the SMNCC allowance in circumstances where the underlying rollout obligations are uncertain. In particular, they felt we must, or should, wait for a decision by BEIS on the post-2020 rollout obligation, and adopt a contingency allowance in the meantime.

7.52. This is not a practical suggestion. Despite uncertainty, we have a continuing obligation to set the cap, and in doing so, to protect default tariff customers as well as having regard to the matters in section 1(6) of the Act. It would also be inappropriate to set an SMNCC allowance at a level that substantially differed from our current understanding of suppliers' efficient costs (in either direction), to the detriment of consumers.

7.53. The relevant question is therefore at what level we should decide to set the allowance, acknowledging that suppliers' future costs are uncertain. Most suppliers acknowledged this, noting that future reviews were likely and would prevent the money provided by the SMNCC allowance deviating significantly from suppliers' efficient costs.

8. Timing for introducing the cap

In this chapter, we consider the timing of transitioning to the new cap, and the associated contingency option for the cap level.

Input requested from stakeholders

We seek stakeholders' view on the issues, options, and our provisional proposals set out in this chapter.

Introduction of the PPM level in the default tariff cap

Options:

8.1. The current PPM cap is due to expire on 31 December 2020. In our March 2020 consultation, we considered two ways we might time the transition from the CMA's PPM cap to the default tariff cap.

1. Introduce changes to the default tariff cap with effect from 1 October 2020. In effect, we would introduce the PPM cap level in the default tariff cap before the PPM cap expires.

2. Introduce changes to the default tariff cap with effect from 1 January 2021. These changes would introduce the allowances that apply to PPM customers, and/or the levels for those allowances when the CMA's PPM cap expires. The cap levels for other payment methods would be unaffected.

8.2. In either case, we could choose whether to set the cap level in line with the proposed methodology set out in this consultation, or use our contingency position (if we judge it is required). If we used our contingency position for cap period 5 we would introduce the new methodology from 1 April 2021 (following consultation).

Our proposal

Preferred approach

8.3. We propose to introduce changes to the default tariff cap with effect from 1 October 2020 and request that the CMA issue a direction to suppliers, effectively ending the PPM cap from 1 October 2020. PPM customers on fixed term tariffs would remain on the current PPM cap, at a higher level until the PPM cap ends at the end of this year. Suppliers could chose to charge all PPM customers at the PPM default tariff cap level if they wished (if the default tariff cap level is lower).

Contingency arrangements

8.4. It is possible that we may revise the proposals in this consultation, or for other reasons we may not be able to implement our proposed methodology with effect from 1 October 2020.

8.5. In that case, we propose to introduce the PPM cap level in the default tariff cap with effect from 1 October 2020 using the current methodology for the CMA's PPM cap between 1 January and 31 March 2021 (except that we would include a non-pass-through SMNCC allowance set at £0). This would ensure the same level of protection for customers and continuity for suppliers between 1 October 2020 and 31 March 2021.

8.6. We would set the PPM cap level in the default tariff cap using a new methodology from 1 April 2021, potentially preceded by a consultation on revised proposals in autumn 2020.

Our considerations

Contingency and uncertainty

8.7. Most suppliers agreed with our contingency option to set the PPM cap level in the default tariff cap level using this the current methodology for the PPM cap. In fact, they considered that this should be our preferred option.

8.8. Several suppliers and an industry body either directly suggested that the contingency option, with zero non-pass through SMNCC, should be put in place for 1 October 2020,

or suggested it would be necessary if time and circumstances do not permit appropriate scrutiny of our proposals and calculations.

8.9. The main reasons cited for insufficient scrutiny by 1 October 2020 were the need for stakeholders to focus on the impacts of COVID-19, and the need for detailed scrutiny of the complex SMNCC modelling which suppliers are seeing (aspects of) for the first time.

8.10. We recognise that there is considerable uncertainty in the current environment, that many stakeholders are re-prioritising to focus on maintaining essential services and supporting customers, and that our statutory consultation is the first opportunity to see some of the details of our proposals and associated modelling. As such we retain a contingency option whereby we would maintain the current PPM cap methodology until 31 March 2021 (except that we would include a non-pass-through SMNCC allowance set at £0).

Continuity in prices

8.11. All stakeholders who commented on this point preferred not to make any updates to the cap level mid-period (1 January 2021). Both consumer groups and suppliers stated a mid-period update would be disruptive and risk causing confusion for customers. Suppliers also highlighted the additional administrative costs associated with a mid-period update, such as changes to systems and increased communications with customers.

8.12. Consumer groups who commented were supportive of ending the prepayment cap early and implementing the new default tariff cap for 1 October 2020. Suppliers were also supportive of implementing the new cap for 1 October 2020, though most proposed that an interim cap level is applied at this point until 1 April 2021.

8.13. If the PPM cap level changed, then an extraordinary update in the middle of winter may not be preferable to either suppliers or consumers.[54] Suppliers would have an additional price update process and must notify their customers of any changes.

[54] This assumes that the Secretary of State chooses to extend the default tariff cap, which we have not pre-judged.

Customers would be disrupted with additional price changes on top of what they are used to (that update may reduce prices, rather than increase them).

8.14. If we can implement our proposals in October 2020, then we propose to seek a direction from the CMA to end the PPM cap early for PPM customers on default tariffs, avoiding a mid-cap period change to prices.

8.15. The direction process in SLC28A applies only to PPM customers that will be appropriately protected by another charge restriction imposed by Ofgem. As such, the PPM cap will remain in place for PPM customers on fixed term tariffs until 31 December 2020. As discussed in Chapter 2, price protection for customers on fixed term tariffs will then cease, as they do not require ongoing price protection.

8.16. If we decide not to implement our revised methodology on 1 October 2020 then we propose to ensure price continuity until 31 March 2021. We would set the cap level between 1 January 2021 and 31 March using the same methodology (except that we would include a non-pass-through SMNCC allowance set at £0). We do not propose to implement any new methodology with effect from 1 January 2021.

Consider the level of interim arrangement

8.17. One supplier linked the need for the contingency option to the impact of COVID-19 on smart meter rollout and the subsequent uncertainty for the SMNCC. One supplier agreed with the contingency approach for 1 October 2020, but stated that the non-pass through SMNCC should be set equal to the credit non-pass through SMNCC, not zero. The supplier also proposed an alternative option whereby we apply the CMA's methodology until 1 April 2021.

8.18. As we discuss in Chapters 5 and 6, we consider that replacing expensive traditional PPMs with cheaper smart meters should reduce suppliers' operations costs. This is not the case for credit meters. The gross costs of installing smart meters is likely similar for PPM and credit customers, but the net impact on operating costs of replacing traditional meters (which the SMNCC must reflect) is very different. The credit SMNCC would be an entirely inappropriate contingency.

8.19. The current PPM cap methodology sets a higher allowance than our current proposals, mainly due to the impact of the smart meter rollout on suppliers' operating costs, which the current PPM cap does not consider.

8.20. It is possible that we may need to revise our proposals after suppliers have scrutinised our assessment of the impact replacing rational PPM with smart meters had on their efficient costs. If that is case, it is possible that efficient costs may be higher than we currently estimate.

8.21. Continuity with the PPM cap is a prudent alternative.

Appendix 1 – Privacy notice on consultations

Personal data

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

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

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

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

2. Why we are collecting your personal data

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

3. Our legal basis for processing your personal data

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

3. With whom we will be sharing your personal data

We may share consultation responses with the CMA and BEIS.

4. 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.

5. 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.

6. Your personal data will not be sent overseas

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

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

9. More information For more information on how Ofgem processes your data, click on the link to our "Ofgem privacy promise".