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Consultation

Setting the PPM smart meter cost allowance in the default tariff cap – working paper

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Response deadline:	21 December 2020		
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We are consulting on setting the smart metering allowance for prepayment (PPM) customers in the default tariff cap. We would like views from people with an interest in the level of the default tariff cap. We particularly welcome responses from domestic energy suppliers and consumer groups. 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

This working paper is the first step towards setting the prepayment meter (PPM) level of the allowance for smart metering costs in the default tariff cap for the winter 2021-22 cap level. This allowance is the Smart Metering Net Cost Change (SMNCC) allowance.

In August 2020, we published our decision to continue protection for default tariff PPM customers via the default tariff cap, once the Competition and Markets Authority's existing PPM cap expires at the end of December 2020. We discussed how we planned to design the PPM level of the default tariff cap in the future, but decided to set it at the level of the existing PPM cap for the upcoming cap period (cap period 5). We decided to include a non-pass-through (NPT) SMNCC in the PPM cap level, but set it to zero for that cap period.

We are now designing the methodology for setting the NPT SMNCC for PPM. We discussed a full list of positions for setting the NPT SMNCC in our May 2020 consultation.

We will publish two working papers – this first paper focusses on areas where we might need to collect more data, and areas where we seek early feedback. This working paper focuses on areas where we particularly seek comments as part of this initial stage of the consultation process. We cover:

- the traditional meter age assumption;
- the PPM cost to serve benefit;
- setting the SMNCC at nil consumption; and
- carry forward.

The second working paper will focus on issues relating to the smart meter rollout. We will publish it early next year, after the Department for Business, Energy and Industrial Strategy (BEIS) publishes its consultation on setting the tolerances, which will apply as part of its smart meter policy framework post-2020.

We are requesting responses by **21 December 2020**. Following our two working papers, we intend to issue a consultation in late spring 2021 followed by a decision in the summer setting the PPM SMNCC from 1 October 2021.

1. Introduction

What are we consulting on?

1.1. This working paper sets out our initial thoughts, proposals and rationale for setting the non-pass-through (NPT) component of the Smart Metering Net Cost Change (SMNCC) for the prepayment meter (PPM) level of default tariff cap ("cap") for cap period seven onwards. It introduces areas we propose to consider or review following our August 2020 decision on protecting energy consumers with PPMs. It is the first of two working papers on this subject – we will publish the second paper in January 2021.

1.2. In August 2020, we decided to introduce a PPM level in the cap to protect default tariff PPM consumers beyond the expiry of the existing PPM cap. As part of our decision, we decided to include the NPT SMNCC in the PPM level of the cap, but to use our contingency option and set the value at zero. We said we would introduce a PPM-specific NPT SMNCC methodology for cap period seven (starting on 1 October 2021).

1.3. We said that we would consider the following areas in our subsequent consultation:

- the Department for Business, Energy and Industrial Strategy's (BEIS) decision on its new smart metering framework;
- the latest data on costs, benefits and suppliers' progress as set out in the Annual Supplier Returns (ASRs), including the net impact of COVID-19 on the smart meter rollout;
- the effects on rollout performance of basing the SMNCC on an average rollout profile and the impact on consumers if some suppliers reduced their rollout as a result of the SMNCC level.

1.4. This working paper focuses on areas of the NPT SMNCC (we refer to this as the SMNCC for the rest of this paper) for PPM customers we consider we should review because either the methodology or key assumptions should differ from the SMNCC for customers with credit meters ("credit SMNCC"). We consulted on some of these areas in our May 2020 consultation but did not explore them further in our August 2020 decision because we adopted our contingency position. In this paper we consider:

- the traditional PPM asset life and the age at which traditional Premature Replacement Charges (PRCs, the cost incurred for replacing a meter while it is still in contract) no longer apply – these are key assumptions for PPM that drive the in-year rollout costs and avoided costs of the rollout (Chapter 2);

- the PPM cost to serve benefit – this is one of the main benefits in the PPM SMNCC and was subject to stakeholder comments in our May 2020 consultation (Chapter 2);

- other costs – other elements of the PPM SMNCC that stakeholders raised in their responses to our May 2020 consultation (Chapter 2); and

- other considerations – calculating the PPM SMNCC at nil consumption and carry forward (Chapter 3).

1.5. We do not cover setting the PPM rollout profile or the relationship between rollout and costs in this working paper. We will discuss these issues in our working paper early next year on rollout, which we will publish following BEIS' consultation on annual tolerances associated with the smart metering rollout framework. The rollout working paper will consider the interaction between BEIS' policy and the rollout profile we use in the SMNCC.

1.6. In this paper, we discuss the methodologies used to calculate different SMNCC components. While these methodologies are (or will be) contained in the SMNCC model, we do not consider that stakeholders require the SMNCC model to provide views on the proposals presented in this paper or to suggest additional areas to consider for our 2021 consultation. We will consult on our proposals and the SMNCC model with values in our 2021 consultation.

1.7. Our initial views and considerations presented in this working paper take into account stakeholder comments received in response to previous related consultations, including our May 2020 consultation.

1.8. We seek stakeholders' views on:

- if there are additional SMNCC components we should review that are not covered by the above;

- what, if any, pieces of information we should collect by means of a Request for Information (RFI). We request stakeholders to be specific to facilitate a meaningful data collection exercise; and

- our views and positions set out in this working paper.

Context and related publications

Protection for PPM customers

1.9. The Competition and Markets Authority (CMA) designed and introduced the PPM cap as part of the package of remedies resulting from the energy market investigation.[1] The PPM cap has been in place since April 2017 and will expire in December 2020. The PPM cap protects all PPM consumers without an interoperable smart meter – approximately four million customers at the time of introduction.

1.10. In August 2020, we published our decision to protect default tariff PPM customers beyond the expiry of the PPM cap in December 2020 using the default tariff cap.

1.11. We noted that the majority of cost components in the cap do not differ by payment method. We flagged two areas where the costs will differ:

- payment method specific costs; and

- NPT smart metering costs.

Related publications

1.12. Alongside this publication, we are also consulting on a first working paper on updating the credit SMNCC.[2] This is available on our website.

1.13. The related publications are:

[1] CMA (2016), Energy market investigation
https://www.gov.uk/cma-cases/energy-market-investigation
[2] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper.

- Ofgem (2020), Decision on protecting energy consumers with prepayment meters. https://www.ofgem.gov.uk/publications-and-updates/decision-protecting-energy-consumers-prepayment-meters

- Ofgem (2020), Decision on reviewing smart metering costs in the default tariff cap. https://www.ofgem.gov.uk/publications-and-updates/decision-reviewing-smart-metering-costs-default-tariff-cap

- Ofgem (2020), Statutory consultation on protecting energy consumers with prepayment meters. https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-protecting-energy-consumers-prepayment-meters

Consultation stages

1.14. This is the first of two working papers. As discussed above, we will publish a second working paper focussing on issues related to rollout. We will do this after BEIS has published its consultation on the tolerances for its smart metering policy framework post-2020. This is scheduled in autumn 2020. This will enable us to take into account BEIS's consultation position in our second working paper.[3]

1.15. We intend to issue a consultation in late spring 2021. This will allow us to take into account feedback on the two working papers, any subsequent data gathering (if required), and the updated ASR input data.

1.16. Alongside our 2021 consultation, we expect to carry out a similar disclosure process as for our May 2020 consultation. This would enable stakeholders to inspect the SMNCC model and for their advisers to inspect certain other pieces of analysis, in each case subject to confidentiality restrictions.

1.17. Subject to the 2021 consultation, we intend to announce our PPM SMNCC allowance values at the start of August 2021. This aligns with our six-monthly updates to the cap. These

[3] The reason for publishing a first working paper now is so that we have time to carry out any further data gathering following supplier feedback, if required.

PPM SMNCC allowance values would take effect from cap period seven (beginning in October 2021).

How to respond

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

1.19. We ask stakeholders provide any quantitative and qualitative evidence they think will assist our consideration of any issues raised in representations.

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

Your response, data and confidentiality

1.21. 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.

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

1.23. 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 3.

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

General feedback

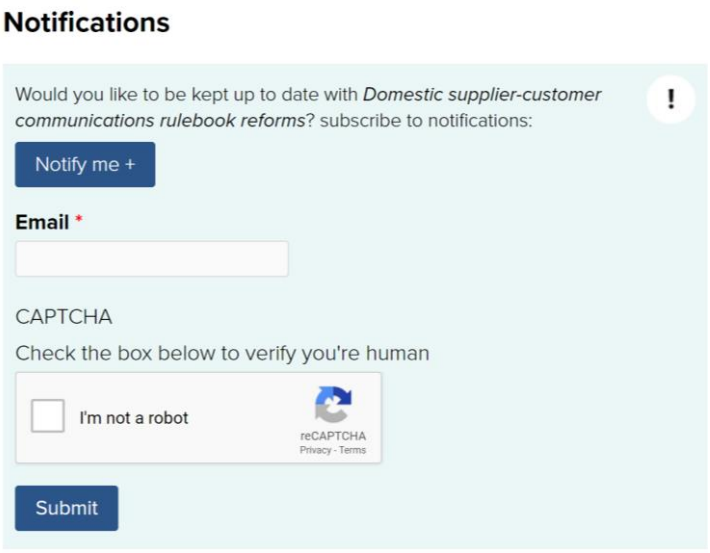
1.25. We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

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?

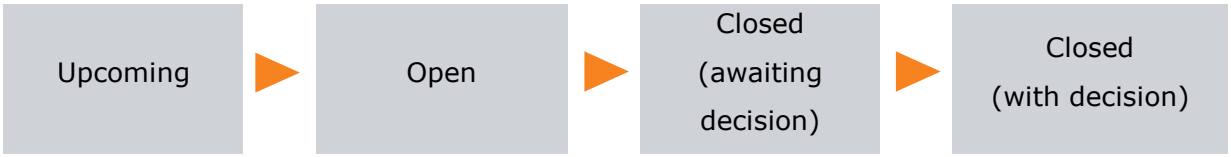
Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. Ofgem.gov.uk/consultations.



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



2. Allowance for PPM smart meter related costs

In this chapter, we provide an overview of the PPM SMNCC and identify areas of focus for setting the level. We request stakeholders' views on our positions, whether there are other components we should consider in further detail and if there is any evidence we should gather.

Context

August 2020 decision

2.1. In our August 2020 decision on protecting PPM consumers, we decided to set a PPM-specific SMNCC allowance in the PPM level of the cap.

2.2. However, we decided to implement our contingency option for this allowance. We set the PPM SMNCC to zero for cap periods five and six to ensure consistency with the existing PPM cap. We took this decision because we thought it prudent to undertake further consultation on further methodological changes related to the ongoing smart meter rollout and its impact on setting the PPM SMNCC.

2.3. We plan to implement the new PPM SMNCC following this review, in time for cap period seven.

Cost components

2.4. While the SMNCC includes numerous costs and benefits such as in-premises costs, supplier IT costs, smart meter operation and maintenance costs, and direct operational benefits, the largest cost drivers are the:

- smart meter asset and installation costs; and
- cost of prematurely replacing traditional meters

and the main benefits are the:

- avoided costs of not replacing expiring traditional meters with new traditional meters;
- benefit of avoided rental charges for meters that are replaced early; and
- direct operational benefits of smart meters.

2.5. We have grouped these costs and benefits into three categories based on the differences between the credit and PPM payment methods:[4]

- those that have a common methodology and level between payment methods;
- those that have a common methodology between payment methods but differing levels; and
- those that have a differing methodology and level between payment methods.

2.6. Below, we briefly discuss the first two categories with common methodologies. We then focus on the discussion of differing methodologies.

Common cost methodologies

2.7. **Common methodology and level** - When calculating the level of these components, we calculate a per meter cost that does not differentiate between PPM and credit and allocates costs equally. An example of this is supplier IT costs.

2.8. **Common methodology but different levels** - For these components, we use the same underlying methodology between payment methods but use PPM specific volumes (e.g. the number of PPMs replaced). An example of this is in year traditional PRCs.

[4] The credit payment methods are direct debit and standard credit. For the comparison with the PPM payment method, we consider them together.

2.9. In our May 2020 consultation, we identified the costs and benefits where we proposed that the PPM SMNCC methodology was the same as the credit SMNCC (both with the same, or different levels). We summarise these in Appendix 1, but please refer to the May 2020 consultation for additional detail.[5]

2.10. We discussed the details of the credit SMNCC methodology by cost/benefit component in the August 2020 decision on reviewing smart metering costs in the cap and the accompanying technical annex.[6]

2.11. Alongside this consultation, we have published a working paper on updating the credit SMNCC. Among other areas, this includes how we propose to update the SMNCC with the latest data from the ASRs collected by BEIS. The areas we are proposing to update are common to credit and PPM (e.g. smart meter asset and installation costs).

Different cost methodologies

2.12. Some elements of the SMNCC are specific to PPM and differ from credit. In this section, we explain the two areas we propose to review based on stakeholders' views to our May 2020 consultation and the data we have available.

Meter asset life and premature replacement charge age

Summary

2.13. The traditional meter asset life assumption is a key driver of both costs and benefits in the SMNCC. It has a direct impact on the in-premises net costs (including the avoided traditional meter installations).

2.14. The traditional meter life assumption determines the rate at which traditional meters expire and should be replaced. This determines the number of meters needing replacement in

[5] Ofgem (2020), Statutory consultation for protecting energy consumers with prepayment meters https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-protecting-energy-consumers-prepayment-meters

[6] Ofgem (2020), Decision on reviewing smart metering costs in the default tariff cap https://www.ofgem.gov.uk/publications-and-updates/decision-reviewing-smart-metering-costs-default-tariff-cap

each year. In the absence of the smart meter rollout, these meters would be replaced by new traditional meters. Therefore, for the SMNCC, this is a benefit (an avoided cost).

2.15. PRCs are costs incurred when a supplier replaces a meter while it is still in contract. These costs are proportional to the age of the meter being replaced (i.e. younger meters have higher PRCs) and stop being applicable after the contract expires. The age after which PRCs no longer apply determines what proportion of traditional meters replaced incur PRCs because they are replaced early.

2.16. Both the PPM traditional meter asset life and the age after which traditional PRCs no longer apply are currently 10 years in the PPM SMNCC model. We provide our considerations below on whether these assumptions should change.

Initial proposal

2.17. We propose to increase the meter asset life to 14 years for electricity and 12 years for gas. All else being equal, we expect this to increase the PPM SMNCC as the number of avoided traditional meter installations will decrease and therefore reduce the benefit of installing smart meters.

2.18. We propose to maintain the 10 year amortisation period for traditional PPMs. This is intended to be a proxy for meter rental contract lengths. We have not received evidence to suggest that 10 years is an incorrect assumption.

2.19. We propose to maintain the 10 year assumption for the age after which PRCs no longer apply. We consider the current assumption captures the majority of PRCs.

Considerations

2.20. To test the assumptions on meter life and the age after which PRCs no longer apply, we analysed data collected through the September 2019 RFI. This included data on meter distribution by age, meters replaced in 2018 and PRCs incurred in 2018.

2.21. Our analysis of meter age suggests that there are traditional PPMs that are above 10 years in age for both gas and electricity. We consider 12 years for gas and 14 years for electricity to be a reasonable estimate of when the average meter expires.

2.22. For the age after which PRCs no longer apply, our analysis of PRC data yielded no reason to move away from the 10 year assumption we proposed in our May 2020 consultation.

2.23. We provide details of our analysis in Appendix 2.

PPM cost to serve benefit

Summary

2.24. In our May 2020 consultation, we proposed to account for the benefits of reduced customer calls, changing tariffs remotely and reduced cost of a change of supplier meter reading. We proposed to do this by using the PPM specific cost to serve metric captured in the ASR data from suppliers.[7]

2.25. This benefit reflects the operational cost saving to suppliers of replacing a traditional PPM with a smart meter (excluding differences in meter asset and installation costs).

2.26. We proposed to use the ASR data to calculate the difference between the traditional PPM cost to serve and the smart PPM cost to serve for each supplier. We then proposed to benchmark those differences using the weighted average.

2.27. A few stakeholders raised concerns over our proposals and raised issues with:

- the timing of benefits;
- consistency with the CMA's findings; and
- consistency with operating costs in the default tariff cap.

[7] We also proposed to capture benefits from a reduction in energy theft but proposed to capture that using a consistent methodology to the credit SMNCC. However, we decided to remove this benefit in our August 2020 decision.

Initial proposal

2.28. We propose to include operational benefits in the PPM SMNCC as we consider there to be operational benefits to replacing traditional PPMs with smart meters. This component is one of the main benefits in the PPM SMNCC. However, we intend to consider whether there are any potential overlaps between the cost to serve benefit and other PPM operational benefits in the SMNCC (such as those mentioned in paragraph 2.24)

2.29. We propose to retain our methodology of calculating individual supplier savings then calculating a weighted average of those savings. We propose to update the input data using the 2020 ASR submissions so we use the latest available information where appropriate. There is a risk that the 2020 ASR data also captures impacts of COVID-19 for the PPM cost to serve benefit. If we think this is the case once we receive the data, we will consider whether it is appropriate to use the 2020 data or revert to using the 2019 data.

2.30. We propose to apply a 12% reduction to the cost to serve benefit to address concerns of inconsistency between the benefit and the 2017 operating cost benchmark. This is in line with the methodology we used in our August 2020 decision for the credit SMNCC for calculating benefits.

Considerations

2.31. We provide our initial thoughts on each category of stakeholder responses to the cost to serve benefit in turn below.

Timing of benefits

2.32. Two suppliers mentioned that once a smart meter is installed for PPM customers, the cost to serve remains unchanged or increases for a period so that there is a lag before the benefits are realised.

2.33. We agree that there could be a lag between a supplier installing a smart meter and realising the operational benefit of doing so (e.g. customers may call the supplier more frequently when the smart meter is newly installed). However, using the weighted average of our sample means we will capture a range of suppliers at different stages in their rollout and a mix of customers within suppliers, some of whom will have had a smart meter installed more recently than others.

Consistency with the CMA's findings

2.34. One supplier commented on the difference between fuels in our estimate of the PPM cost to serve benefit and the CMA's analysis of the PPM cost differential compared to direct debit.

2.35. The CMA found that the incremental cost of a traditional PPM gas customer (relative to direct debit) is higher than that of a traditional PPM electricity customer. In our May 2020 consultation, our initial figures suggested that the PPM cost to serve benefit of installing a smart meter is larger for electricity than it is for gas.

2.36. We are not concerned that the relative position for fuels in the benefit of a smart meter is opposite to that for the additional costs of traditional PPMs set by the CMA. These metrics are measuring two different things; one measures the cost difference between smart and traditional PPM and the other measures the cost difference between traditional direct debit and PPM.

2.37. Furthermore, the cost to serve benefit excludes meter and installation costs. This is a large driver in the traditional PPM cost differential for gas meters. Without the inclusion of metering costs, it is plausible that the benefit for electricity could be higher than gas. For example, the remote change of tariff benefit only applies to electricity meters.

Consistency with operating costs

2.38. One stakeholder stated that the SMNCC, which is intended to track how efficient operating costs change as a result of the smart meter rollout, is inconsistent with the operating cost allowance in the default tariff cap.

2.39. In our 2018 decision, we used a weighted average to calculate the difference in operational costs between traditional and smart meters. Using the weighted average assumes a less stringent definition of efficiency than say, our calculation of the operating cost allowance in the 2018 decision, which used £5 below the lower quartile. We propose to address any inconsistencies by applying a 12% reduction in the cost to serve benefit in line with our treatment of benefits in the credit SMNCC. In our August 2020 decision for setting the credit SMNCC, we decided to reduce the size of benefits by 12%, so that we are assessing these benefits at an approximately the same level of stringency as our 2017 operating cost

benchmark. We explain this approach in Chapter 4 of the technical annex to our August 2020 decision on reviewing smart metering costs in the default tariff cap.[8]

Other costs

2.40. A few stakeholders raised concerns about other PPM aspects of SMNCC components that we have not covered in the sections above. We provide our initial thoughts below.

- Overestimation of customer contact reduction from smart meters – in our May 2020 consultation we proposed to remove the PPM element from the customer contact benefit in the SMNCC. We expected to capture any changes in customer contact costs through the PPM cost to serve component. We intend to consider the extent to which the PPM cost to serve benefit reflects changes in customer contact after the installation of a smart meter.

- Remote mode changes remain costly – in our May 2020 consultation, we expected the PPM cost to serve benefit to cover any cost trends for remote mode changes. The data is based on suppliers' costs so should reflect any differences in remote change costs from installing a smart meter. We intend to consider the extent to which the cost to serve benefit reflects remote mode changes.

- Enrolment and adoption costs – currently, we capture enrolment and adoption costs in the IT cost component, which is common to the credit and PPM levels of the SMNCC.

- Underestimation of traditional meter installations – we consider the number of traditional meter installations driven by customers refusing a smart meter to be limited, as opposed to other factors such as delays in the availability of SMETS2 PPM functionality for some suppliers and areas.

[8] Ofgem (2020), Reviewing smart metering costs in the default tariff cap – Technical Annex, Chapter 4 https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

3. Other considerations

In this chapter, we provide an overview of the interaction between the PPM payment method uplift and the SMNCC from our August 2020 decision. We are seeking further views on our proposals for setting the PPM SMNCC at nil consumption and our proposals for carry forward.

Cost differential

August 2020 decision

3.1. Customers with traditional PPMs have higher costs to serve than direct debt customers with traditional meters. As part of setting a PPM level of the default tariff cap, we decided in our August 2020 decision to reflect this difference through a PPM-specific payment method uplift (PMU).

3.2. We decided to adopt the CMA's PPM cost differential for our PPM PMU. We considered that the efficient cost to serve was uncertain, and that it could be higher than the CMA's value if we used a different judgement of efficiency. We decided to use the CMA's value (a) to protect PPM customers from an increase in prices and thereby a reduction in their protection (before considering the net impact of the smart meter rollout), and (b) because any additional PPM costs above the CMA's differential are included in the existing operating cost allowance and are therefore recovered across all customers.[9,10]

3.3. Using the CMA's differential means that we have 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 ensures that, before considering the net

[9] This is because we used the CMA's original PPM differential when setting the operating cost allowance, as part of moving from data on suppliers' total operating costs to a benchmark specific to direct debit customers. Therefore, any costs above the CMA's PPM differential have not been removed from the direct debt operating cost allowance and are included in the cap level for all payment types.
[10] The amount recovered over all customers is approximate £4 (dual fuel, 2017 prices) using our upper bound estimate. When recovered over only PPM customers it is approximately £17. This reflects cost recovery over a smaller set of customers.

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.

3.4. Under our decision, suppliers with an average mix of customers across payment methods would recover enough from all default tariff customers through the operating cost allowance to recover any additional PPM costs not included in the PPM PMU.

3.5. We acknowledged that suppliers with a higher than average proportion of PPM customers may under-recover their efficient costs to an extent. We stated that we would seek to mitigate this effect over time, alleviating its impact on PPM specialists, while also avoiding price increases for PPM customers. We would do this by recognising that the impact on suppliers with a higher than average proportion of PPM customers would be reduced as the smart meter rollout decreased the cost to serve PPM customers. Our May 2020 version of the PPM SMNCC model showed the SMNCC to be negative, meaning the smart meter rollout for PPM should decrease prices for PPM customers. Therefore, we decided, as the cost to serve PPM customers falls because of the smart meter rollout, a greater share of the additional PPM costs should be recovered from PPM customers.

3.6. In our decision, we stated that we would not reduce the PPM SMNCC (and therefore not recognise the savings from smart meters) until the additional PPM costs were fully recovered from PPM customers. However, we also said that we would only allow suppliers to recover the additional PPM costs up to the point that it did not increase prices for PPM customers (i.e. we would not set an SMNCC above zero when offsetting the additional PPM costs). We refer to this as offsetting the tariff differential approach.

3.7. In practice, we would add the additional PPM costs (using a conservative estimate this would be £17) to the negative SMNCC until the result was zero or all of the costs had been included.[11] This means suppliers would recover those additional costs directly from PPM customers through the higher than otherwise PPM SMNCC. We provide an illustrative example of these calculations below.

3.8. Our decision means that suppliers no longer need to recover the additional PPM costs over all default tariff customers via the operating cost allowance. We decided not to change the operating cost allowance and tread this additional amount as headroom. This is consistent

[11] Note the SMNCC and level of offset can, and are, likely to be different between the fuels.

with our decision in 2018, since we would have considered these costs in our assessment of uncertainty when setting headroom.

Illustrative example

3.9. We provide an illustrative example below of how offsetting the effects of the tariff differential approach works. For a negative SMNCC, we add the amount to offset to the SMNCC and constrain that calculation to zero. We explain this in more detail below.

3.10. Table 3.1 shows a modelled electricity SMNCC of -£2.34 and a gas SMNCC of -£17.29 (these numbers are our May 2020 consultation estimates of the PPM SMNCC). The tariff differential to offset is the amount of PPM costs that are currently recovered from all customers through the operating cost allowance, which we intend to offset using the SMNCC.

3.11. The additional PPM cost to offset for electricity is higher than the modelled SMNCC, so we would set the net SMNCC to zero – offsetting the maximum possible amount without increasing prices for PPM customers.

3.12. The modelled gas SMNCC on the other hand is much more negative and allows us to offset the entire differential. We would set the gas SMNCC at -£8.32 (the net SMNCC calculated by adding the additional PPM cost to offset to the NPT SMNCC) instead of the full SMNCC (-£17.29). This means that suppliers recover an additional £8.97 directly from PPM customers and the additional PPM cost for gas is offset in full in this example.

Table 3.1: Illustrative example of offsetting the cost differential

	Cap period x (£)
NPT SMNCC - electricity	-2.34
NPT SMNCC - gas	-17.29
Additional PPM costs to offset - electricity	7.95
Additional PPM costs to offset- gas	8.97
Net NPT SMNCC - electricity	0.00
Net NPT SMNCC - gas	-8.32
Remaining costs - electricity	5.61
Remaining costs - gas	0.00

3.13. We proposed to implement the offset by amending the model 'Annex 5 – smart metering net cost change' referred to in standard condition 28AD of the gas and electricity supply licences ("the Annex 5 model").

Setting the SMNCC at nil consumption

Issue

3.14. We usually discuss and express the SMNCC at typical consumption level (TDCV).[12] However, the nil consumption level of the SMNCC is different to that at typical consumption. In our 2018 decision, we set the SMNCC at nil consumption as 69% of the SMNCC at typical consumption.

3.15. While we consider this appropriate for credit customers where the SMNCC is a net cost, it causes two issues for PPM where the SMNCC is a net benefit:

- In our 2018 decision, we set the value at nil consumption using a scalar (69%) which is intended to protect low consumption users. However, for PPM this would reduce the benefit, and hence increase the cost at nil consumption relative to the cost at TDCV, which is contrary to our policy intent.

- The approach to offsetting the additional PPM costs that we discuss above becomes more complex because we need to decide how to offset at both nil consumption and TDCV.

Initial proposal

3.16. If, following our consultation and any policy updates, the SMNCC for PPM customers is negative, we propose to remove the nil consumption scalar for PPM and set both the TDCV and nil value of the SMNCC to the same value in the PPM cap level. In other words, we propose to allocate the PPM SMNCC entirely to the standing charge, not the unit rate.

[12] Where we discuss the Typical Domestic Consumption Level (TDCV), we are referring to the TDCV values used to set the cap rather than the latest values set by Ofgem. The cap values are 3,100kWh for electricity and 12,000 kWh for gas.

3.17. We propose to amend the Annex 5 model and the default tariff cap overview model to remove the nil consumption scalar. We will provide the amended Annex 5 model alongside our 2021 consultation, and describe the proposed amendments to the default tariff cap overview model.

Considerations

Customer protection

3.18. In our 2018 decision, we decided to protect low consumption customers with credit meters from increasing standing charges by setting the cap level at nil consumption in line with the average standing charge in the market (i.e. with reference to market prices in 2017).

3.19. In principle, the SMNCC should not vary with consumption because the net cost drivers of the SMNCC do not differ by consumption (e.g. smart meter asset and installation costs are the same for a customer regardless of how much energy they consume). For credit, where the SMNCC is a net cost, recognising only 69% of these costs at nil consumption reduces the SMNCC at that level and protects customers with low consumption (as per our 2018 policy decision). However, for PPM, where the SMNCC is a net benefit (negative), applying the 69% scaling factor would reduce the benefit for low consumption users, undermining protection for these customers. This is the opposite effect of what we intended in our 2018 decision.

Complexity

3.20. Using a 69% scalar at nil consumption makes offsetting the additional PPM costs more complex. In effect, this means we would be offsetting different values at nil consumption and TDCV.

3.21. There are several options to address this issue, which have different outcomes. We are proposing the least complex method that retains protection for low consumption users.

3.22. Removing the nil consumption scalar for PPM customers means we set the same level of offset at nil and typical consumption. We consider this would help make our methodology easier to understand and more transparent for stakeholders.

Carry forward

Issue

3.23. In our August 2020 decision, we said that we would apply carry forward from January 2021, the date at which PPM customers are protected by the default tariff cap.

3.24. We intended to apply carry forward for the PPM SMNCC in the same way as for the credit SMNCC. To put it simply, carry forward is where we calculate the SMNCC allowance in a given historical cap period using the latest version of the SMNCC model, and compare it against the SMNCC allowance we provided in that cap period. We will consider carry forward from the point at which PPM customers are protected under the default tariff cap (January 2021) and will include the difference in future SMNCC allowances.

3.25. However, PPM has an added complication because we will use the SMNCC to offset the additional PPM costs Therefore, we have to consider the interaction between carry forward and the amount we offset.

Initial proposal

3.26. We propose to consider carry forward on the net SMNCC for PPM (i.e. after we have applied the offset).

Considerations

3.27. As explained earlier in this chapter, where the SMNCC is negative, we propose to use the SMNCC to offset the additional PPM costs. If the SMNCC is not negative enough to offset the entire amount, we will set the net SMNCC to zero to avoid increasing prices for PPM customers.

3.28. When considering the PPM SMNCC in carry forward, our initial thinking is that we should consider the net SMNCC (i.e. after offsetting the additional PPM costs) rather than the SMNCC determined by the model. We should then compare the original allowance for a given period to the updated SMNCC figure for that same period after applying the tariff differential offset (as if we had set that value initially).

3.29. For cases where there is either full or no offset in both the initial SMNCC and updated SMNCC, it does not matter whether we consider the SMNCC or net SMNCC for carry forward. However, we think it makes a difference:

- when there is a partial offset in either the initial or updated SMNCC for a given period; or

- where the ability to offset the additional PPM costs changes between the initial and updated SMNCC values for a given period. For example if we initially set a negative SMNCC that fully offsets the additional costs then revise it to a positive SMNCC that allows no offset.

3.30. In these two cases, if we did not use the net PPM SMNCC to calculate carry forward, there is a risk we would either consider funding that suppliers had used to offset the additional PPM costs or provide an additional allowance that we would have not done otherwise. We illustrate this in two simple scenarios below.

3.31. For both scenarios, the amount we are offsetting is £10 for simplicity. In scenario 1, there is full offset in cap X but only partial offset in the updated view of cap X. This means there is a positive carry forward that increases the allowance in a later cap period. However, without considering the offset, we would overestimate of the amount to carry forward (£8 rather than £5).

Table 3.2: Illustrative scenario 1: an increase in the SMNCC value for cap X

	Cap X	Cap X (updated)	Carry forward amount
SMNCC	-£15	-£7	£8
Offset	£10	£10	
Net SMNCC	-£5	£0	£5

3.32. In scenario 2, there is no offset in the initial SMNCC but there is full offset in the updated SMNCC. If we did not consider the net SMNCC, we would underestimate the amount to consider for carry forward (-£35 rather than -£25).

Table 3.3: Illustrative scenario 2: A decrease in the SMNCC value for cap X

	Cap X	Cap X (updated)	Carry forward amount
SMNCC	£20	-£15	-£35
Offset	£10	£10	
Net SMNCC	£20	-£5	-£25

3.33. We propose to consider the carry forward amount after offsetting the additional PPM costs (i.e. based on the net SMNCC). This will give what the difference in what the outcome would have been had we used the updated SMNCC value originally.

Appendices

Index

Appendix 1 – List of positions by SMNCC component

1.1. Table A1.1 summarises the positions for each cost component from our May 2020 consultation. Please refer to that consultation for additional detail and descriptions of each component.

1.2. We cover some of these positions as part of this working paper. We will consider whether the remaining positions are still appropriate in our 2021 consultation.

Table A1.1 – List of PPM SMNCC positions from the May 2020 consultation

SMNCC component	Detailed component	May 2020 position
In-premises costs	Smart installation	• Same value as credit SMNCC for cost per smart meter installation.
	Traditional installation	• PPM specific ASR values for cost per traditional meter installation.
	Smart meter asset, IHD and Comms Hub	• Same value as credit SMNCC for smart meter asset, In Home Display (IHD) and Comms Hub.
	Traditional meter asset	• PPM specific traditional meter asset cost, including a PPM specific meter rental uplift.
	Premature replacement charge (PRC)	• Same methodology as the credit SMNCC. • PPM specific meter stock age data. • PPM specific assumption on age after which PRCs no longer apply.
	Avoided traditional installations	• PPM specific traditional installation and asset costs. • PPM specific assumption on traditional meter life (drives the replacement rate).
IT costs	Supplier IT costs	• Same supplier IT costs as for credit meters (on a per meter basis). Includes enrolment and adoption.
Operations and maintenance	Operation and maintenance (O&M)	• PPM specific values for the additional O&M costs of smart meters.
Other costs	Organisational costs	• Same organisational costs as for credit meters (on a per meter basis).
	Advertising costs	• Same advertising costs as for credit meters (on a per meter basis).
Operational benefits	Debt handling	• Excluded this benefit for PPM
	Meter read visit efficiency	• Exclude this benefit for PPM.
	PPM cost to serve	• PPM specific data from the ASRs. • We proposed to account for reduced customer calls, customer switching benefits, changing tariffs remotely and reduced costs of change of supplier meter readings.

Appendix 2 – Meter age and PRC analysis

Analysis of meter asset life

3.35. To test our assumption of a 10 year traditional meter asset life, we analysed two pieces of data gathered through an RFI we sent to suppliers in September 2019: the distribution of traditional PPMs in 2018 by meter age and the distribution of meter replacements in 2018 by meter age.

3.36. Our analysis of meter age suggests that there are traditional PPMs that are above 10 years in age for both gas and electricity.

3.37. The distribution of electricity meters (Figure A2.1) is relatively stable up until 13 years then drops sharply between 13 and 15 years.[13] From age 15, there are a small proportion of meters in each year up to around 25 years. From the analysis of meter ages, we consider the midpoint of the drop, 14 years, to be an appropriate approximation of the traditional meter life for PPM.

3.38. The gas distribution (shown in Figure A2.2) differs compared to electricity. The initial stable part of the distribution is shorter in age, up to around seven years. The distribution starts to decrease from eight years onwards but does so at a slower rate than electricity. The data shows the traditional gas meter age is around 12 years. We calculate this by taking the midpoint of the decline in the distribution.

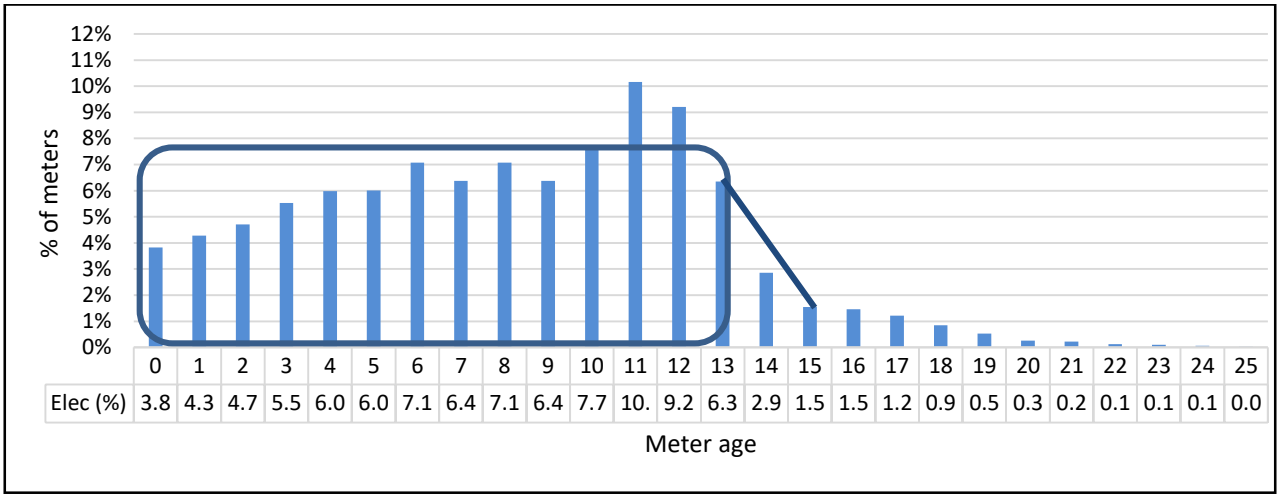
3.39. We use the midpoints of the decreasing distribution because the smart meter rollout affects the age distribution for traditional meters. The distribution shows a lower percentage of young traditional meters. This is because suppliers replace traditional meters with smart meters rather than new traditional meters during the rollout. Simply taking an average would overweight older meters and would not account for what the distribution would look like in absence of smart meters. Taking the midpoint of the decline allows us focus on the meters

[13] The meter distribution actually starts declining after 12 years of age but we observe an out of trend increase in meters of ages 11 and 12. We assume this is likely to reflect more traditional PPMs were installed in certain years. To account for this erroneous increase, we measure the decrease in meters starting from age 13.

coming to the end of their life, without being affected by the number of traditional PPMs in earlier years.

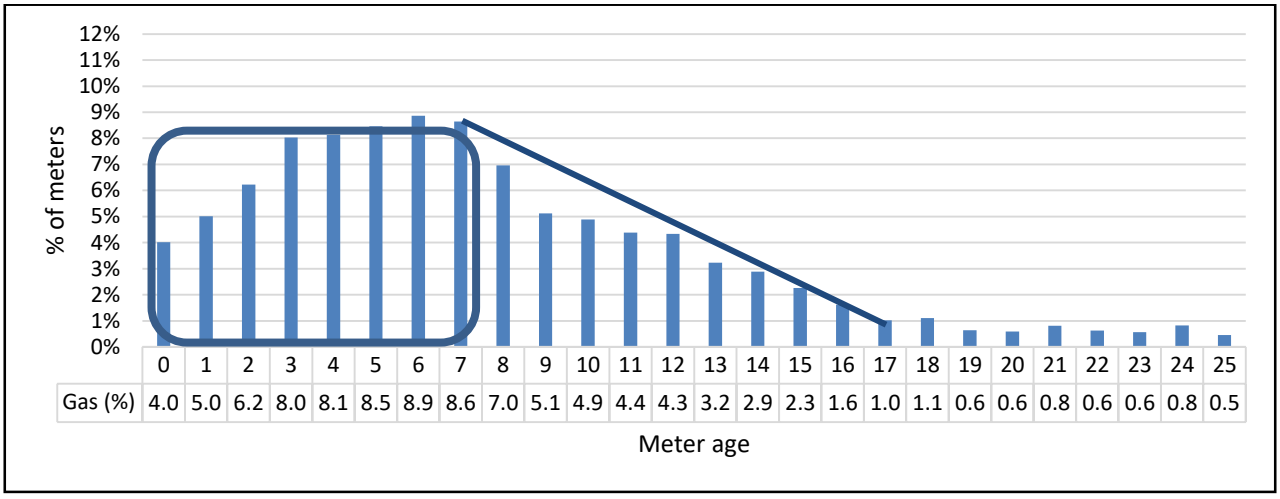
3.40. While both graphs show meters beyond the ages we consider to represent the life, we are setting the average life of a meter. It is reasonable to think that some meters will last longer and some will last shorter than the life.[14] It would not be appropriate to use the maximum observed age of the meter as the basis for our meter life assumption.

Figure A2.1: PPM traditional electricity meter distribution by meter age



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Elec (%)	3.8	4.3	4.7	5.5	6.0	6.0	7.1	6.4	7.1	6.4	7.7	10.	9.2	6.3	2.9	1.5	1.5	1.2	0.9	0.5	0.3	0.2	0.1	0.1	0.1	0.0

Figure A2.2: PPM traditional gas distribution by meter age



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Gas (%)	4.0	5.0	6.2	8.0	8.1	8.5	8.9	8.6	7.0	5.1	4.9	4.4	4.3	3.2	2.9	2.3	1.6	1.0	1.1	0.6	0.6	0.8	0.6	0.6	0.8	0.5

[14] It is possible re-certifications could extend the life of meters. We do not consider this explicitly. However, we expect meters which have been re-certified and had their life extended to be captured in the meter age data.

3.41. We also analysed the age distribution of meters replaced in 2018. Although we have some concerns about the quality of the data collected (e.g. the level of missing data and variation in total replacements between suppliers), we think the data will be sufficient to provide an indication.

3.42. Our analysis on the cumulative distribution of meters replaced by age showed that by meter age 12, we capture over 90% of the meters replaced in 2018. While the data quality is not ideal, this does provide an indication that our proposal of 14 years for electricity and 12 years for gas is a sensible estimate of the meter life.

Analysis of traditional PRC

3.43. We consider the length of the contract between Meter Asset Providers and suppliers should constrain the age until which PRCs are applicable. In the SMNCC, we use the amortisation period to proxy the typical length of contracts. We have not received any evidence to suggest a 10 year amortisation period is incorrect and it was not a point raised by suppliers. Given the amortisation period is a proxy for meter contract length, we do not think it would make sense for PRCs to apply for longer than the amortisation period. In other words, a supplier should not be paying PRCs when it has already paid for the full cost of the meter.

3.44. To test our 10 year assumption against data, we analysed the value of PRCs incurred in 2018 split by the age of the meter replaced. This data suffers the same quality issues as the distribution of meters replaced. However, we consider it provides an indication of whether our assumption of 10 years is reasonable.

3.45. Our analysis suggests that by age 10 of the meters replaced, around 91-93% of the total PRC value is covered. We consider the number of meters replaced above an age of 10 and incurring PRCs to be relatively small. We consider this a reasonable coverage of meters incurring PRCs given the variation in contracts within and between suppliers.

Appendix 3 – Privacy notice on consultations

Personal data

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

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

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

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

2. Why we are collecting your personal data

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

3. Our legal basis for processing your personal data

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

4. With whom we will be sharing your personal data

N/A

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

Your personal data will be held for 1 year.

6. Your rights

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

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data

- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas

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

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

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