ofgem
Making a positive difference
for energy consumers

Decision

Price Cap - Decision on PPM SMNCC allowance

Publication date: 5 August 2021

Contact: Leonardo Costa, Head of Price Cap Policy, Retail

Team: Retail Price Regulation

Tel: 020 7901 7000

Email: RetailPriceRegulation@ofgem.gov.uk

This is our decision on updating the smart metering allowance (the Smart Metering Net Cost Change or SMNCC allowance) in the prepayment meter (PPM) level of the default tariff cap in time for winter 2021-22. It sets out the PPM SMNCC allowance that will apply during cap period seven (October 2021 to March 2022).

Contents

Executive summary

The default tariff cap ('cap') protects domestic customers on default tariffs, ensuring that they pay a fair price for their energy, reflecting its underlying costs. There has been a cap level for prepayment meter (PPM) customers on default tariffs since January 2021.[1]

This decision sets the value of the Smart Metering Net Cost Change (SMNCC) allowance in the PPM cap level. This allowance reflects the change in smart metering costs since the baseline year of 2017.

The Department for Business, Energy and Industrial Strategy (BEIS) has introduced a new smart meter policy framework. It has extended the current 'all reasonable steps' rollout obligation for six months, so the new framework will now be implemented on 1 January 2022. Our April 2021 consultation proposals were based on the new BEIS framework starting in July 2021. Given this, we are only setting the PPM SMNCC allowance for cap period seven at this point (a contingency allowance). We use our updated SMNCC model as a starting point to set this allowance. This results in an SMNCC value of –£6.08 per typical dual fuel customer. This is higher than the -£6.86 value we consulted on in April 2021.[2]

This decision is based on an assumed rollout profile for PPM and a PPM-specific methodology for calculating the cost of rollout. As cap period seven overlaps two calendar years, the PPM SMNCC allowance for cap period seven is impacted by both the end of 'all reasonable steps' and the start of the new framework. Therefore we have had to make decisions on how to best reflect the new BEIS framework. Where an issue is discussed in this decision that could also apply to future cap periods, our current intention is that we would maintain the same approach. We will issue a short consultation on the allowance for cap period eight in the autumn ahead of making our final decision for that cap period.[3]

Setting the PPM-specific rollout profile

We have decided to use a single PPM-specific rollout profile to set the contingency. This enables us to represent the market costs of rolling out smart meters for PPM customers and continue to make the model available to suppliers in future disclosure processes.

[1] This replaced the Competition and Markets Authority's prepayment charge restriction ('the CMA PPM cap') that expired at that time.
[2] Appendix 1 shows the detail on the SMNCC values for individual fuels.

The rollout profile is a key input to the calculation of the SMNCC. It has two components. The first is the level of smart meter rollout achieved at the start of the new framework – this could be an average supplier or the supplier whose rollout profile generates the highest SMNCC. The second is the rate of rollout during the new framework – whether suppliers roll out smart meters in line with BEIS's policy ambition of market-wide rollout by the end of 2025 (a 'target' approach), or in line with their minimum installation requirements (a 'tolerance' approach).

We have decided to set the level of smart meter rollout achieved from January 2022 to the end of 2023 based on the weighted market average PPM rollout. This is different from the approach for the credit SMNCC. We have decided to set the rate of rollout over this period based on suppliers' rollout obligations ('tolerance' approach). If we were to fund suppliers based on a 'target' approach, we would not be able to ensure that they spend this funding on the smart meter rollout, as they are only legally obligated to meet their tolerance levels. This is the same decision and reasoning as for the credit SMNCC.

As the framework will now start in January 2022, we have estimated rollout in the second half of 2021 based on supplier projections. Following stakeholder feedback, we now estimate separate rollout profiles for each fuel, rather than using a single rollout profile.

Differing cost methodologies across credit and PPM

The methodology we use to calculate the SMNCC is predominantly the same for credit and PPM. This includes the same approach to the costs resulting from COVID-19 as set out in our credit SMNCC decision. However, we have decided to set certain elements specific to PPM. These are traditional meter asset life, premature replacement charges (PRCs) and the PPM cost to serve benefit. We have also decided to use a different method for assessing how the cap level should vary across consumption levels, as well as an approach to offsetting the possible under-recovery of efficient PPM costs. These reflect the areas where the costs to rollout smart meters to PPM customers differ from those on credit.

Advanced payments

Advanced payments reflect when suppliers have received payment in advance for smart metering costs they have not yet incurred. In line with our August 2020 decision we have taken advanced payments into account in this review. This covers cumulative revenues and costs since the middle of the fifth cap period and reduces the SMNCC.

1. Introduction

Subject of this decision

1.1. The default tariff cap ('cap') protects approximately 15 million domestic customers on standard variable and default tariffs (which we refer to collectively as 'default tariffs'), ensuring that they pay a fair price for their energy, reflecting its underlying costs. The cap is one of the key activities which fall within the outcome "consumers pay a fair price for energy and benefit from rights and protections" within our Forward Work Programme for 2021-22.[4] We set the cap by considering the different costs suppliers face. The cap is made up of a number of allowances which reflect these different costs.

1.2. One cost to suppliers is the net cost of installing and operating smart meters. We reflect this in the cap through two allowances. The operating cost allowance includes the cost of smart metering in the 2017 baseline year (alongside other operating costs).[5] The SMNCC allowance reflects the change in smart metering costs since 2017.

1.3. The Smart Metering Net Cost Change (SMNCC) allowance comprises a 'pass-through' element covering industry charges relating to smart metering and a 'non-pass-through' element covering suppliers' smart metering costs:

- we update the pass-through element as part of the six-monthly cap updates. This element is not the focus of this decision;

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

1.4. In August 2020, we decided to introduce a PPM level in the cap to protect default tariff PPM consumers beyond the expiry of the Competition and Markets Authority's prepayment charge restriction ('the CMA PPM cap'). As part of our decision, we decided to include a PPM SMNCC allowance in the PPM level of the cap. However, we opted to use our

[4] Ofgem (2021), Forward work programme 2021/22 https://www.ofgem.gov.uk/publications-and-updates/forward-work-programme-202122
[5] We index this allowance with inflation as part of the six-monthly cap update.

contingency option and set the value at zero. We said that we would introduce a specific PPM SMNCC methodology for cap period seven (starting on 1 October 2021).

1.5. We have published a separate decision on the non-pass-through SMNCC allowance for customers with credit meters.[6] For the elements discussed in this decision, we set out the similarities and differences between the credit SMNCC and the PPM SMNCC in Chapters 2 and 3.

Scope of this decision

Contingency allowance for cap period seven

1.6. This decision follows our final consultation in April 2021 ('April 2021 consultation').[7] Following BEIS's decision on its new smart meter rollout framework ('framework'), we published an addendum to the April 2021 consultation ('addendum').[8] We explained that we now intended to adopt a contingency allowance for cap period seven. We said that we still proposed to use the SMNCC model as the starting point for setting the contingency allowance. We explained how we proposed to adapt the rollout profile in the SMNCC model to reflect the extension to the 'all reasonable steps' obligation.

1.7. After considering responses to the April 2021 consultation, we are confirming the proposal to adopt a contingency allowance for cap period seven. **We have therefore decided to set the contingency allowance at -£6.08 (£0 for electricity and -£6.08 for gas).**

1.8. However, we will take any difference between the contingency allowance for cap period seven and the modelled costs into account through advanced payments in later cap periods.[9]

1.9. This decision only determines our approach for cap period seven. However, we still need to make decisions on a number of elements in order to update the SMNCC model for cap period seven. Cap period seven is a winter cap period, which includes parts of two

[6] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance
[7] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[8] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances
[9] See Chapter 6 for an explanation of advanced payments.

calendar years. The SMNCC for cap period seven is therefore the average of the annual SMNCC values for 2021 and 2022. This means that we need to take decisions on all elements which impact the SMNCC up to and including 2022, insofar as they affect cap period seven.

Cap period eight and beyond

1.10. Our current view is that most of the decisions we discuss in this document for cap period seven will remain appropriate for cap period eight (and beyond). This is because our decisions for cap period seven already represent what we consider is the best approach for taking into account the revised start date for the new BEIS rollout framework. Therefore, we have explained in this document how our decisions would be applied both in cap period seven and future cap periods.

1.11. However, as set out in the addendum, we will issue a short consultation document on cap period eight in the autumn to seek stakeholder views on this before confirming decisions for cap period eight onwards. [10,11]

Context

Previous process

1.12. We have carried out three consultations leading to this decision for setting the PPM SMNCC from 1 October 2021. In November 2020 we published our first working paper of this series on certain areas related to the methodology and assumptions of prepayment meter (PPM) specific costs. This covered areas where our methodology or assumptions related to costs that differed from the credit SMNCC.[12] Our second working paper in February 2021 focused on issues relating to the smart meter rollout (separate papers were published for issues relating to the rollout of smart meters for PPM customers and credit customers).[13]

[10] By "short consultation", we mean that we intend that this will be a short document. The consultation will still last at least four weeks.
[11] Appendix 2 covers feedback on the consultation process.
[12] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[13] Ofgem (2020), Setting the level of rollout for the PPM smart meter cost allowance: working paper. https://www.ofgem.gov.uk/publications/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper

1.13. We also consulted on the PPM SMNCC allowance in May 2020, and we published our decision in August 2020 to continue protection for default tariff PPM customers via the default tariff cap, once the CMA PPM cap expired at the end of December 2020. This decision discussed how we planned to design the PPM level of the default tariff cap in the future. We decided to set it at the level of the existing PPM cap for the upcoming cap periods (cap periods 5 and 6). We decided to include a PPM SMNCC in the PPM cap level, but set it to zero for that cap period.

1.14. This decision is part of our annual review of the SMNCC. It follows on in particular from our April 2021 consultation and addendum.[14,15] We have reviewed whether there are any changes we need to make when setting the SMNCC allowance from October 2021, particularly in light of updated information on the impact of COVID-19 and on BEIS's rollout policy.

The new rollout framework

1.15. In June 2020, BEIS published a new smart meter rollout framework ('framework') which was scheduled to start on 1 July 2021. In this new framework, suppliers will be set individual installation targets subject to an annual tolerance level.[16]

1.16. In November 2020, BEIS consulted on the annual tolerances associated with this framework.[17]

1.17. BEIS published its decision (the government response to its consultation on the annual tolerances) in June 2021.[18] It decided to extend the current 'all reasonable steps' rollout obligation for six months to account for disruption caused by COVID-19. This means

[14] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[15] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances
[16] BEIS (2020), Delivering a Smart System Response to a Consultation on Smart Meter Policy Framework Post-2020. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020
[17] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[18] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

that the new rollout framework will take effect from 1 January 2022, rather than 1 July 2021.

1.18. Other key elements of BEIS's decision were as follows:

- BEIS published tolerances for the first two years of its new framework (January 2022 to December 2023);[19]

- These tolerances are the same for all suppliers in relation to their domestic rollouts: 3.5% for year one of the framework (1 January 2022 to 31 December 2022), and 5.1% for year two of the framework (1 January 2023 to 31 December 2023);[20,21]

- Each supplier's rollout target is based on a profile to market-wide rollout by the end of 2025.[22] As each supplier will have a different rollout position at the start of the framework, suppliers will have different yearly targets in the years before 2025;

- The tolerances are applied to the targets to calculate the minimum annual installation requirements. Suppliers have a legal obligation to meet their minimum installation requirement.[23,24] Suppliers therefore have different legally binding annual installation requirements.

[19] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, paragraph 81. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[20] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, Table 3. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[21] These were minor changes to the tolerance values BEIS proposed in its consultation. As proposed in our April 2021 consultation, we have incorporated the final tolerance values in our updated SMNCC model for the decision. Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, 2.15. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[22] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, paragraphs 102 - 103. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[23] Technically the obligation is to install a certain number of smart meters in a given year (rather than to reach a certain rollout percentage at the end of the year). This is to cover the case where a supplier installs a smart meter and then the customer switches away. This distinction is not significant for our comparison of rollout profile options in this decision.
[24] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting

1.19. BEIS calculated its tolerances by modelling an achievable level of rollout. It took into account customers' attitudes towards smart meters, suppliers' operational performance in rolling out smart meters, and the industry capacity to roll out smart meters.[25]

1.20. BEIS then applied an Installation Calibration Mechanism to ensure that the model did not project meter installations at a rate above levels that the market has demonstrated it can successfully complete, currently and historically.[26]

1.21. The framework applies to both domestic and non-domestic rollout (but with different tolerances). The cap only applies to domestic customers, so in this decision we only consider the framework as it relates to domestic customers. In relation to the domestic rollout, the framework applies without distinction between credit and PPM rollout.

The statutory framework

1.22. We set the cap in accordance with the Domestic Gas and Electricity (Tariff Cap) Act 2018 ('the Act'). Section 1(6) states that we must protect existing and future domestic customers who pay standard variable and default rates.[27] In doing so, we must have regard to the following matters:

- the need to create incentives for holders of supply licences to improve their efficiency;
- the need to set the cap at a level that enables holders of supply licences to compete effectively for domestic supply contracts;
- the need to maintain incentives for domestic customers to switch to different domestic supply contracts; and

thresholds for energy suppliers, paragraph 65.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[25] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers. Annex C: analytical evidence, paragraph 1.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[26] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, paragraph 44.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[27] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 1(6).
http://www.legislation.gov.uk/ukpga/2018/21/section/1/enacted

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

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

1.24. In setting the cap, we may not make different provisions for different holders of supply licences.[28] This means that we must set one cap level for all suppliers.

Overview of issues covered in this decision

1.25. Table 1.1 below provides a high-level view of the main elements which make up the calculation of the PPM SMNCC. It indicates how the issues we discuss in this decision fit into this overall structure. This is the starting point of our contingency allowance.

Table 1.1 – High-level PPM SMNCC structure and issues covered in this decision

High-level category	Overview of how categories interact	Sub-category	Main discussion in this document
Rollout	Feeds into cost and benefit calculations		Chapter 4 (all), Chapter 5 (all)
Costs	Uses rollout and cost inputs to calculate different costs	In-premises costs	Chapter 2 (In-premises costs)
		IT costs	Chapter 2 (IT costs)
		Other costs	Chapter 2 (Operating and maintenance costs), Chapter 2 (Cross-referenced costs across credit and PPM), Chapter 3 (Meter asset life and premature replacement charge age)

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

Benefits	Uses rollout and benefit inputs to calculate different benefits	PPM cost to serve (CTS) benefit	Chapter 3 (PPM cost to serve benefit)
Calculating SMNCC	Uses cost and benefit calculations to calculate change in net costs since 2017 baseline	Baseline adjustment	Chapter 2 (Setting the allowance to account for efficient net costs)
		Calculating net costs	Chapter 2 (Setting the allowance to account for efficient net costs)
		Calculating SMNCC	Chapter 2 (Setting the allowance to account for efficient net costs), Chapter 3 (Setting the SMNCC at nil consumption, Offsetting additional PPM costs)
		Uncertainty	Chapter 6 (Review of uncertainty), Appendix 3 (all)
		Advanced payments	Chapter 6 (Advanced payments)

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

2. Common costs methodologies across credit and PPM

Section summary

This chapter sets out our cost methodologies for the PPM SMNCC that are the same as those for the credit SMNCC. We discuss in-premises costs, IT costs, net reduction in energy theft, organisational costs, COVID-19 and installation costs, and the implications of our rollout profile choice on costs.

2.1. Some aspects of the smart meter rollout are the same or similar across payment types, so our proposed approaches to these are the same or similar when setting both the credit and PPM SMNCCs.

2.2. We did not discuss the cost methodologies listed in this chapter in our PPM working papers, but they were included in our April 2021 consultation.

2.3. Our current view is that the decisions we have made in this chapter for cap period seven will remain appropriate for any decisions for cap period eight (and beyond). We, therefore, discuss aspects beyond cap period seven (such as the approach for 2023). However, we will consult in the autumn before confirming decisions for cap period eight onwards.

In-premises costs

2.4. The majority of suppliers' costs relate to the net impact on operating costs of replacing traditional PPMs with smart meters (in-premises costs).

Net installation costs

Context

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

2.6. Smart meter installation costs are the costs of paying staff to install smart meters in customers' homes, providing installers with the equipment they need, and organising back-office support. These costs largely increase in proportion to suppliers' cumulative progress

installing smart meters. This is because the costs are capitalised and amortised over time through meter rental payments. The smart meter installation unit costs are similar to the costs of installing smart meters in credit customers' homes. As the allowance is a weighted average, efficient costs are recovered at an industry level.

2.7. Secondly, suppliers may still have to replace an expired traditional meter with another traditional meter in some cases, which involves an installation cost. However, due to the smart meter rollout, suppliers do not need to install as many new traditional meters. Suppliers avoid the cost of replacing expired traditional meters with new traditional meters, because they install smart meters instead. This is a benefit of the smart meter rollout. The avoided cost builds up over time in line with the cumulative number of traditional meters that suppliers would have needed to install.[29]

2.8. There are also premature replacement charges (PRCs) associated with installation costs. We discuss these later in this chapter and in Chapter 3 with our assumptions on the meter asset life.

2.9. We discuss our approach to installation costs under COVID-19 later in this chapter.

Decision

2.10. Smart meter installation costs: we have decided to use the same cost per smart PPM installation and smart meter rental uplifts (MRUs) as the credit SMNCC. The MRUs account for the difference between commercial costs of meter rental and the economic (amortised) costs of the installation. They reflect that the rental payments suppliers pay to Meter Asset Providers (MAPs) may not correspond to the way we model the costs of smart meter assets and installations.[30]

2.11. Traditional meter installation costs: the Smart Meters Annual Information Request (SMAIR) data separates the costs of installing a traditional meter by both meter type and fuel type.[31] As such, and consistent with the BEIS 2019 Cost-Benefit Analysis (CBA), we

[29] We discuss the effect of replacing traditional meters with new traditional meters in Chapter 3 - Meter asset life and premature replacement charge age
[30] We discussed the MRUs in our previous documents. See for example Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 3.29-3.42. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[31] Suppliers submit Smart Meters Annual Information Request (SMAIR) data to BEIS each year. BEIS previously collected this information through a request known as the Annual Supplier Return (ASR). We use the term SMAIR throughout this consultation, whether referring to the SMAIR or its

have decided to use the PPM-specific SMAIR values for traditional meter installation costs.[32] In practice, the individual installation cost is similar for PPM and credit traditional meters. We have also decided to use a PPM-specific MRU for both gas and electricity traditional meters.

2.12. These decisions are unchanged from the proposals in our April 2021 consultation.

Overview of responses

2.13. We received no comments on our April 2021 proposal.

Considerations

2.14. These are the same as our May 2020 proposals. For more detail, please see Chapter 5 of our May 2020 consultation.[33]

Net asset costs

Context

2.15. Net asset costs consist of four cost categories: smart meter asset costs, communications hub costs, in-home display (IHD) costs, the cost of new traditional meters and the avoided cost of traditional meters.

2.16. Smart meter asset costs are the costs of the physical smart meter. These are amortised over time and recovered through the meter rental payments. Therefore, these costs also largely increase in proportion to suppliers' cumulative progress installing smart meters.

2.17. Communications hub costs are the costs of hubs installed in homes to connect Smart DCC's secure network to smart meters, and their costs are also amortised. The hubs

predecessor.

[32] BEIS (2019), Smart meter roll-out: cost-benefit analysis 2019, pg 83. https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019

[33] In the May 2020 consultation it was incorrectly stated that we use PPM-specific MRUs for both gas and electricity SMETS1 meters. We use the same MRUs for smart meters across both credit and PPM, which we made clear in our April 2021 consultation. As our August 2020 decision was to set the PPM SMNCC to £0 according to our contingency approach, the error had no impact on that value. Ofgem (2020), Statutory consultation for protecting energy consumers with prepayment meters, paragraphs 5.61-5.66. https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

also allow smart meters and IHDs to connect to each other. Suppliers offer IHDs alongside smart meters, and they are a portable display that shows information such as energy use. IHD costs are expensed in-year.

2.18. The costs of new traditional meters are the physical costs of the few traditional meters that are still being installed to replace expired traditional meters. The avoided costs are the physical costs of traditional meters that suppliers avoid having to pay when they replace expired traditional meters with smart meters instead.

Decision

2.19. Smart meter asset costs: as the smart meter asset is identical for PPM and credit, we have decided to use the same smart meter asset unit cost as in the credit SMNCC. This is consistent with the BEIS 2019 CBA. We have also decided to use supplier data from the SMAIR. We amortise these over the average smart meter rental period, as in credit. We use the same MRUs for SMETS1 meters as in credit, to account for the difference between commercial costs of meter rental and the economic (amortised) costs of the installation.[34]

2.20. Communications hubs cost: the cost of communications hubs for SMETS2 meters is recovered through the Data Communications Company (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 SMAIR (because they have not been enrolled onto the DCC network), and amortise the costs over their lifetimes. As the communications hub is identical for a PPM or credit meter customer, we have decided to use the same communications hub unit cost as for the credit SMNCC.

2.21. IHDs: We have decided to base the cost calculation on supplier data from the SMAIRs, and include a downward adjustment to reflect that several suppliers have purchased IHDs with enhanced functionality above the SMETS requirements at an additional cost. The costs of IHDs are expensed in-year (rather than being amortised).

2.22. The SMAIR 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, so we use the same IHD unit cost as for the credit SMNCC.

[34] SMETS is the acronym for 'Smart Metering Equipment Technical Specifications'.

2.23. New traditional meters and avoided traditional meters: The BEIS 2019 CBA separates asset costs by meter type, and we have decided to use the PPM-specific traditional meter asset costs, including a PPM-specific MRU. This is because the asset costs for traditional PPMs, particularly gas, are much higher than for credit.

2.24. As stated in paragraph 2.7, suppliers avoid having to pay for new traditional meters that they would have needed in the absence of a smart meter rollout programme. 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. However, suppliers still need to pay for the relatively small volume of new traditional meters they install as part of the rollout.

2.25. These decisions are unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.26. One supplier commented that our assumed replacement rate for expiring IHDs is unjustified.

Considerations

2.27. The SMNCC model follows the BEIS 2019 CBA model in assuming that when IHDs come to the end of their lives (after seven years), 33% of these are replaced by a new IHD. One supplier and its economic adviser said that the assumption for the proportion of replacement IHDs was too low. The supplier's economic adviser said that this should be 100%, based on its understanding that BEIS research suggests that IHDs are more effective than app-based alternatives, and given that suppliers are still required to offer IHDs.[35]

2.28. We should only include replacement IHDs in the SMNCC model where they are actually replaced and where the supplier bears the cost of the replacement.

2.29. Whether an IHD is replaced at the end of its life will depend on whether customers request a replacement IHD – suppliers are not required to proactively replace IHDs. Some

[35] BEIS (September 2019), Energy suppliers' trials of alternatives to In-Home Displays: policy conclusions, p. 8. https://www.gov.uk/government/publications/smart-meters-derogation-guidance-supporting-energy-supplier-applications-for-trials-of-in-home-display-alternatives.

customers may not request a replacement IHD – for example, if they use an alternative tool for engaging with their smart meter energy data, such as an app.

2.30. Whether a supplier bears the costs of a replacement IHD depends on its obligations and its own decisions. Suppliers are only required to provide a replacement IHD free of charge within 12 months of the installation.[36] This, therefore, does not apply to end-of-life replacements. A supplier is able to charge a customer for an end-of-life replacement IHD – if it does so, we would not need to provide an allowance through the cap. Even if a particular supplier chooses to provide replacement IHDs for free, we would not provide an allowance for all suppliers to do this if we were not confident that they would all do so.[37]

2.31. We, therefore, do not consider there is a case to increase the assumption for the proportion of replacement IHDs in the SMNCC model. Given that suppliers do not have an obligation to provide an end-of-life replacement IHD for free, it is even possible that the current assumption is too high – we note this possibility in our review of uncertainty in Appendix 3.

Premature replacement charges

Context

2.32. Suppliers incur a charge for replacing a meter before the end of its rental period – a PRC. There are no structural differences between PRCs for credit and PPMs, but the values of the calculation inputs are different.

2.33. The level of the PRC depends on a number of factors including the contract with the MAP and (in particular) the age of the prepayment customer's meter. Generally, the PRC decreases as the meter ages. We do not amortise the PRC – it is an in-year cost to suppliers.

2.34. The credit SMNCC models 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

[36] Standard licence conditions 40.16 of the electricity supply licence and 34.16 of the gas supply licence.
[37] At least to a sufficient extent that the aggregate benefits to customers from suppliers going beyond their obligations were greater than the aggregate costs to customers from an increase in the SMNCC allowance.

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 for credit.

Decision

2.35. We have decided to use the same calculation approach for PPM as for credit.

2.36. However, the inputs for PPM are different. As set out in paragraphs 2.8, 2.11 and 2.23, we use PPM-specific asset costs, installation costs, MRUs and asset lifetimes.[38] We also use a different rollout profile – which we use in this calculation to calculate early replacement volumes.[39]

2.37. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.38. One supplier commented that we overestimate the level of PRCs for traditional gas PPMs, meaning that they consider we have set the efficient level of them too high.

Considerations

2.39. One supplier concluded, from its economic adviser's analysis of the supplier data on PRCs, that the average PRC for traditional gas PPMs at age zero is significantly lower than the level we assumed. The supplier stated that the problem is that we did not use the supplier data on PRCs to calculate the initial value of PRCs. Instead, we combined asset and installation costs for a new meter, derived from the BEIS CBA, with an assumed MRU. The supplier stated that, for electricity, our approach results in assumed PRC values that are close to the actual PRC values, but for gas, the results are substantially different. Given the availability of supplier data on PRC payments, it stated that our approach adds unnecessary complexity to the SMNCC calculation.

[38] We discuss the age at which PRCs no longer apply for PPM in Chapter 3 –see 'Meter asset life and premature replacement charge age'.
[39] We discuss the rollout profile in Chapters 4 and 5.

2.40. We consider that the supplier data on PRCs may not be a reliable guide for the PRC values in our model. This is because of:

- internal charges: Some suppliers own their traditional meters and do not charge an internal PRC. This approach ignores the real economic cost to the different sections of the business, one of which is the supply company. Therefore, the supplier data would not include these costs, which would result in an average PRC below what it should be.

- future cap periods: We are reviewing costs for all future cap periods, so even if we were to use 2017/2018 charges as a base, we would need to make assumptions about how traditional meters will age to calculate PRCs in future years. This would lead us to an approach similar to our current bottom-up modelled approach.

Avoided costs of rental payments of prematurely replaced meters

Context

2.41. 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.

Decision

2.42. For both traditional and SMETS1 meters, we have decided to include the 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, an MRU).

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

2.44. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.45. We received no comments on the proposal in our April 2021 consultation.

IT costs

Context

2.46. We expect suppliers to incur additional IT costs related to the smart meter rollout. These are set out in detail in our August 2020 decision on the SMNCC allowance for credit meters.[40]

2.47. These costs are supplier overheads relating to the smart meter rollout. IT costs are equally relevant for the PPM and credit SMNCCs, and are not disaggregated based on payment method.

Decision

2.48. We have decided to assume that suppliers do not identify IT costs based on payment method. As such, we 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 Chapter 3).

2.49. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.50. We received no comments on our April 2021 proposal.

[40] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.38-4.46. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

Operating and maintenance costs

Context

2.51. Operating and maintenance (O&M) costs are incurred over the lifetime of the smart meter, largely reflecting costs associated with replacing faulty 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.

2.52. 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 O&M cost compared to the meter type and fuel it is replacing. We also collected PPM-specific O&M information in the RFI.

Decision

2.53. The RFI showed that O&M costs of traditional PPMs meters differ from those of credit traditional meters. We have therefore decided to use these PPM-specific values for the net O&M costs of smart meter rollout. This decision is unchanged from the proposal in our April 2021 consultation.

2.54. We have also decided to not apply an "optimism bias" adjustment to the changes in O&M costs resulting from switching to a smart meter from a gas traditional meter. This is in response to a supplier comment to our April 2021 consultation.

Overview of responses

2.55. We received no comments on our proposal to use the PPM-specific values from the RFI for the additional O&M costs of smart meter rollout.

2.56. One supplier commented that, when calculating the difference between traditional and smart O&M costs, we apply a 10 per cent "optimism bias" adjustment in the wrong direction, suggesting that suppliers can save 10 per cent more rather than less than they forecast.

Considerations

2.57. In general, adjustments for optimism bias are applied to cost and benefit estimates to reflect that cost projections may turn out to be underestimates.

2.58. Our model was based on the BEIS CBA, and we therefore apply the adjustment for optimism bias to all the cost areas that it was applied to in the BEIS CBA. This includes the net O&M costs resulting from switching to a smart meter from a traditional meter. For credit meters and for electricity PPM, these net costs are positive. Applying an adjustment for optimism bias to these costs increases them, reflecting that they may turn out to be underestimates.

2.59. For gas PPM however, the value of the net O&M costs is negative which means it is a benefit. We acknowledge that it would not be appropriate to use an optimism bias to scale up a benefit. Therefore, we have decided to remove it for this cost item in response to the supplier comment.

2.60. We have decided to not use the adjustment to scale down the benefit, as this approach would be inconsistent with the rest of the SMNCC model and the BEIS CBA. BEIS used sensitivity analysis to take into account optimism bias in benefits, rather than applying an adjustment. This approach is in line with Green Book guidance.[41]

2.61. The change has low materiality, causing an increase in the PPM SMNCC of 4p.

Setting the allowance to account for efficient net costs

Context

2.62. We proposed in our May 2020 consultation to use the same approach for PPM as for credit to reflect the change in efficient operating costs relative to 2017 for a supplier with an average smart meter rollout profile.[42]

[41] HM Treasury (2013), Green Book supplementary guidance: optimism bias, paragraph 4.1. https://www.gov.uk/government/publications/green-book-supplementary-guidance-optimism-bias
[42] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.105-5.107. https://www.ofgem.gov.uk/publications/reviewing-smart-metering-costs-default-tariff-cap-may-2020-statutory-consultation

2.63. 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.

2.64. To set the SMNCC, we proposed 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 (including an adjustment for the different 'efficient' benchmark definitions used to assess total operating costs in 2017 and the SMNCC, 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

2.65. 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 account for the difference.

Decision

2.66. We have decided to use the same approach for PPM as in credit. We have decided to correct for the differing efficiency benchmark definitions used for the operating cost allowance and the SMNCC by subtracting the lower quartile 2017 baseline costs from the relevant year's average efficient costs. This means that the SMNCC allowance includes both the allowance for costs changing over time and for the move to a different definition of efficiency.

2.67. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.68. One supplier commented that we calculate a change in smart meter costs relative to an operating cost benchmark level which we do not use to set the default tariff cap. They considered that while each of these efficiency benchmarks may be appropriate on their own, they cannot be consistently combined. This comment was for both the credit and PPM SMNCC, with a focus on PPM.

Considerations

2.69. The supplier stated that we had overestimated the level of smart meter costs embedded in the operating cost allowance. This is because we assume that the costs are equal to the net costs in 2017 of a notional "lower quartile" supplier. As this supplier does not exist in reality, they would not affect the operating cost allowance in subsequent years, so the supplier reasoned that we should consider the actual lower quartile supplier's 2017 rollout to calculate the level of embedded costs in the operating cost allowance.

2.70. While we set the operational cost baseline (implicitly including the 2017 costs of smart metering) using a notional "lower quartile" supplier, we set the SMNCC based on an average smart metering cost benchmark. We adjust for the different benchmarks based on assessing major cost items (ie cost of asset, installation, communications hub and IHD).

2.71. As we already make an adjustment to move from a lower quartile 2017 baseline to an average approach, if we were to use the rollout profile of the supplier closest to the lower quartile, we would be making a second adjustment. This would increase the allowance so that it reflects above average costs. We are already being conservative in adopting an average efficiency approach, so we do not consider it appropriate to apply a further conservative adjustment.

Adjusting for the difference between portfolio-wide costs and costs for replacing PPMs in isolation

2.72. The efficient net costs of the smart meter rollout in 2017 are included in the operating cost allowance, and the SMNCC accounts for the change in efficient costs since 2017. However, the smart meter element of the operating cost allowance is not payment type-specific, so it includes the weighted average cost of replacing all traditional meters,

including PPM. This means that, when calculating a payment type specific SMNCC, we need to adjust the 2017 benchmark we use in the SMNCC model.

2.73. 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. 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).

2.74. We included an adjustment for this for our August 2020 decision on the credit SMNCC. For the adjustment, we calculate the 2017 baseline using a weighted average rollout profile.

2.75. To assess the proportion of smart metering costs included in the operating cost allowance, we look at the lower quartile cost per credit meter and per PPM. For each fuel, we then take the difference between each meter type-specific figure and the weighted average.

Decision

2.76. In line with our August 2020 decision for credit, we have decided to exclude the one supplier which was not included in our operating cost benchmarking analysis and had high smart metering costs relating to PPM from our calculation of the 2017 benchmark.[43] This is done by excluding it from the weighted average PPM rollout profile used for the calculation.

2.77. In line with our August 2020 decision for credit, we have decided to apply a downward adjustment to the PPM SMNCC of £9.23 in the model for every cap period (ie from cap period 1, starting 1 January 2019, onwards). The upward adjustment to the credit SMNCC is £1.77. This means 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 reduces the SMNCC (dual fuel) by £9.23 for the PPM default tariff cap. We adjust this figure for inflation in each period.

[43] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.79. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

2.78. The decision on the method for removing the impact of weighted average smart meter costs in the operating cost allowance is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.79. We received no comments on the proposal in our April 2021 consultation.

Considerations

2.80. We have considered whether we should exclude all suppliers who were not included in our operating cost benchmarking from our calculation of the 2017 benchmark, but do not consider that this is necessary given that it would have no significant impact on the rollout values used for this adjustment.

2.81. 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 £11.11 for electricity and £11.92 for gas (excluding IT). Dual fuel, these costs are £1.77 too low for credit, and £9.23 too high for PPM, which is why these are the values of our adjustment.

2.82. Our estimates of the weighted average efficient costs included in the 2017 baseline are different from those in our April 2021 consultation. This is due to our updates to the SMNCC model set out in this document. We apply changes to our SMNCC model in all years where they apply, including 2017, meaning we have updated our assessment of the smart metering costs in the operating costs benchmark. Future updates of our SMNCC model may also change our estimates of the weighted average efficient costs included in the 2017 baseline if the model changes affect this calculation.

Adjusting for the sunk costs incurred as a result of COVID-19

<u>Normal approach to modelling installation costs</u>

2.83. As set out earlier in the chapter, data on installation costs is available in arrears through the SMAIR. For the years where we have actual data, our normal approach is to calculate the average cost per smart meter installation using this data. We divide the total installation costs by the total number of installations. We then amortise the average cost (to spread it over a number of years) and apply the MRU. We use this uplifted cost per

installation in the SMNCC model. The total installation costs then depend on rollout in that year.

2.84. For future periods, we estimate the installation cost by taking the latest historical average installation cost and adjusting it based on expected future changes in productivity.[44] We then amortise this value and apply the MRU. The total installation costs are the uplifted average cost multiplied by the number of smart meters that we expect will be rolled out in that year (according to the rollout profile used).[45]

Impact of COVID-19 on installation costs

2.85. As set out in our November 2020 first credit SMNCC working paper (SMNCC WP1), where suppliers were unable to install as many smart meters as expected due to COVID-19, they may have been unable to scale down their cost bases accordingly. Costs incurred in relation to meters which could not be installed would be an immediate (sunk) cost to suppliers.[46]

2.86. In our August 2020 credit decision, we included an estimate of sunk installation costs for 2020. One key assumption was that installation numbers in 2020 would be 30% of the level previously expected (absent COVID-19). We therefore assumed that suppliers incurred sunk costs in relation to the remaining 70% of expected installations. Another key assumption was that, where a meter could not be installed, nearly all installation costs would be sunk.[47]

[44] In our August 2020 credit decision, we maintained a level of productivity which reflected historical levels. However, we said that we would consider productivity in our next review, taking into account the new BEIS framework.
Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.28-2.29. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[45] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.1-3.2. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
[46] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.3-3.4. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
[47] We provided a more extensive description of this methodology in SMNCC WP1. Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.5. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

Decisions

2.87. Our approach to considering the impact of COVID-19 on installation costs involves four main decisions on sunk installation costs and cost per installation for 2020 and 2021. These decisions are inter-related, and are the same as our decisions for credit meters.

2.88. Below we set out each decision in turn, and then provide the responses and summarised considerations for each. Please see Chapter 3 of our August 2021 decision on the credit SMNCC for the detailed considerations.[48]

Assessing 2020 sunk installation costs

2.89. In SMNCC WP1, we explained why we could not simply update 2020 installation costs using our normal approach (ie without sunk installation costs).[49]

2.90. We set out three options for estimating sunk installation costs in 2020. We indicated that one of these options was not likely to be suitable, leaving two remaining options.

- Method one was to gather information directly on sunk installation costs. We noted that suppliers might not be able to provide this data with any degree of precision, given that they would be unlikely to allocate their installation costs between sunk and productive costs for their business purposes.[50]

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

2.91. We subsequently issued a Request For Information (RFI) in February 2021 to gather data on sunk installation costs.[51] In our April 2021 consultation, we proposed to estimate sunk installation costs in 2020 using this RFI data (ie using method one).

[48] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance
[49] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.16 to 3.24. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
[50] Productive installation costs are those which relate to installations which are achieved.
[51] We issued the RFI to suppliers with at least a 1% domestic supply market share.

2.92. We have decided to estimate sunk installation costs in 2020 by using an average of the values calculated using methods one and two. We consider that the average will be a better reflection of suppliers' aggregate costs than either of the two methods.

2.93. This decision is a change to the proposal in our April 2021 consultation, which was to use method 1.

Projecting sunk installation costs in 2021

2.94. We have decided to include sunk installation costs for 2021. This reflects that COVID-19 has affected smart meter installations for at least the first quarter of the year. This decision is unchanged from our April 2021 consultation proposal.

2.95. We have decided to estimate sunk installation costs in 2021 using a bottom-up approach. In April 2021, the bottom-up estimate for 2021 was higher than the figures for 2020, and so we proposed to cap the 2021 sunk installation cost at the same level as 2020.[52] This was to avoid implying that COVID-19 would have a larger impact on rollout in 2021 than in 2020, which seemed unlikely. The 2020 sunk installation cost has now increased, and is now above the value calculated using a bottom-up approach for 2021. We can therefore use the bottom-up approach for 2021, without concerns that this would imply a larger impact of COVID-19 on rollout in 2021 than in 2020.

Sunk installation costs beyond 2021

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

2.97. This decision is unchanged from our April 2021 consultation proposal.

Assessing 2020 costs per installation

[52] In real terms.

2.98. We have decided to estimate the cost per installation achieved (ie where suppliers were able to install smart meters) for 2020 using an average of the costs per installation associated with the two methods that we use for calculating sunk installation costs in 2020. This is to ensure that our approach is coherent, by using the same data source as for sunk installation costs.

2.99. This is a change from our April 2021 consultation proposal, as a consequence of the change to how we calculate sunk installation costs in 2020.

Projecting costs per installation in 2021

2.100. We have decided to use the same cost per installation as we use in our bottom-up approach to projecting sunk installation costs for 2021.[53] This is to ensure that we are being coherent in using the same data source for sunk and productive installation costs in 2021. This is a change to the approach we proposed in our April 2021 consultation, where we proposed to use the same cost per installation for 2021 as for 2020.

2.101. We have decided not to use this cost per installation as the starting point for projecting installation costs in future years (ie 2022 and 2023). This is because we are not including sunk installation costs for future years, so the same issue of coherence does not apply. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.102. Three suppliers commented on our April 2021 proposal, for both credit and PPM. Please see Chapter 3 of our August 2021 decision on the credit SMNCC for the detailed overview of responses.[54]

Assessing 2020 sunk installation costs

2.103. One supplier supported our use of data from suppliers to estimate sunk installation costs (ie method one). However, two suppliers raised concerns about the evidence we had for the assumption that suppliers would be able to reflect higher costs per installation (ie productive installation costs) in their meter rental charges – ie that they would be able to amortise these additional costs. One supplier's economic adviser said that – in the absence

[53] This is the same projected cost per installation as we used for 2020 in our August 2020 decision.
[54] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

of evidence on the proportion of costs that had been amortised – method two would better reflect the commercial reality.

Projecting sunk installation costs in 2021

2.104. We did not receive any stakeholder comments on whether suppliers will incur sunk installation costs in 2021. On the issue of how to estimate sunk installation costs in 2021, one supplier agreed with our proposal to flatline 2020 sunk installation costs. Another supplier's economic adviser said that if we corrected our approach to 2020 sunk installation costs, this would be above our estimate of 2021 sunk installation costs. We would therefore be able to use our 2021 estimate, rather than capping this at the 2020 level.

Sunk installation costs beyond 2021

2.105. Two suppliers said that we should keep sunk installation costs beyond 2021 under review, given the uncertain nature of the pandemic and the potential for further restrictions, respectively.

Assessing 2020 costs per installation

2.106. We did not discuss the interaction between productive and sunk installation costs in SMNCC WP1. We received comments on this interaction in response to the April 2021 consultation – we have covered these in the section on sunk installation costs in 2020 above.

Projecting costs per installation in 2021

2.107. We did not receive any stakeholder comments on the starting point for projecting installation costs in future years in response to the April 2021 consultation.

Considerations

2.108. Our considerations on the impacts of COVID-19 on the PPM SMNCC are the same as those on the credit SMNCC. They are summarised below, but please see Chapter 3 of our

August 2021 decision on the credit SMNCC for a detailed discussion of the considerations for each of the decisions above.[55]

Assessing 2020 sunk installation costs

2.109. Method one is the simplest and most direct way of estimating sunk installation costs, as it uses the data provided by suppliers. However, method one implies that there was an increase in the cost per installation (ie productive installation costs) in 2020. Given the feedback in response to the April 2021 credit consultation, there was a question whether suppliers bore the impact of this cost increase immediately, or whether they were able to pay for the increased costs over time, through their rental payments to MAPs.[56]

2.110. We therefore sought clarification from suppliers about the relationship between their cost per installation and their contractual arrangements with MAPs.[57]

2.111. Our analysis showed that method one would deliver an appropriate result for the majority of suppliers (as a group). However, there were exceptions. Method one would not be appropriate where the supplier's cost per installation increased, but its meter rental charges did not increase accordingly (ie to reflect an increase in the payment per installation by MAPs to suppliers).[58]

2.112. Based on suppliers' clarification responses, we would not use method two alone to calculate sunk installation costs. This would overestimate suppliers' sunk installation costs in aggregate and would therefore not protect customers.

2.113. We have therefore decided to respond to the feedback following the April 2021 consultation by using a value between the two methods we consulted on – calculated by averaging them. Our decision results in a sunk installation cost of £107.5m in 2020.

[55] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance
[56] The RFI defined productive installation costs as those which relate to actual installations. We said we would expect the total productive installation costs to be broadly similar to the payments suppliers receive from MAPs to cover installation costs. However, we recognised that those payments are likely to be defined contractually and could differ from productive installation costs.
[57] We sought clarification from the suppliers included in our analysis, with the exception of those who had already confirmed to us that they did not face the risk of sunk installation costs due to their contractual arrangements. We noted that suppliers only needed to respond where their cost per installation increased in 2020.
[58] This would not necessarily mean that the supplier would face a shortfall between its cost per installation and the installation payment from its MAP. However, it would reduce the average increase in meter rental charges across suppliers.

Projecting sunk installation costs in 2021

2.114. The bottom-up approach involves us selecting values for three parameters: the proportion of normal rollout which is not achieved, the proportion of costs which are sunk when an installation does not occur, and the cost per installation in a normal year.

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

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

- **Cost per installation in a normal year:** We would use the same projected cost (in real terms) as we used for 2020 in our August 2020 credit decision (ie what we expected installation costs to be in 2020 absent COVID-19). As noted in SMNCC WP1, we cannot use actual installation costs in 2020 as a baseline to project costs, as these values are affected by COVID-19.[59]

2.115. Using these assumptions, we have updated our estimate of the implied sunk installation costs under a bottom-up approach. This gives around £47.5m of sunk installation costs in 2021.[60]

[59] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.38. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

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

Sunk installation costs beyond 2021

2.116. As set out in SMNCC WP1, the impacts of COVID-19 are uncertain, meaning that we would have no confidence that making a sunk installation cost adjustment for 2022 would increase the accuracy of our SMNCC allowance.[61]

2.117. Since we published SMNCC WP1 in November 2020, expectations around the removal of societal restrictions in response to COVID-19 have improved, especially given the rollout of vaccines. Furthermore, to the extent that suppliers are able to include more flexibility in their plans when they have more time to do so, this would apply to a greater extent by 2022.

2.118. We therefore do not consider that we should include sunk installation costs for 2022 as part of this review – or that sunk installation costs are currently likely in 2022. However, given the uncertainty around COVID-19, we cannot rule out the possibility that we might need to revisit our position and include sunk installation costs for 2022 as part of a future review.

Assessing 2020 costs per installation

2.119. As set out in the April 2021 credit consultation, we should estimate the cost per installation achieved in 2020 using the same data source as for sunk installation costs. This is to ensure that our approach is coherent to these related items, which together make up installation costs.[62]

2.120. Given our decision above to estimate sunk installation costs in 2020 using an average of two methods, we should similarly use an average of the costs per installation achieved associated with each method. For method one, this is based on data gathered from suppliers.[63] We gathered data from suppliers on both sunk and productive installation costs, with the sum of the two representing suppliers' overall installation costs. We can therefore calculate the cost per installation achieved as the productive installation cost

[61] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.39. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper
[62] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraph 4.47. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance
[63] The cost per installation achieved is the productive installation cost divided by the number of actual installations.

divided by the number of actual installations. For method two, this is the cost per installation from 2019 (adjusted for inflation), which we use to estimate sunk installation costs.

2.121. Under this approach, the cost per installation is higher than for 2019 (the last year pre-COVID-19), but lower than the value in our April 2021 credit consultation.

Projecting costs per installation in 2021

Value for 2021

2.122. As in 2020, we should ensure that our approach to the cost per installation in 2021 is coherent with our approach to calculating sunk installation costs in that year.

2.123. We have now decided to use a bottom-up approach to calculate sunk installation costs in 2021. We should therefore use the same cost per installation that we use as part of our bottom-up calculation.

2.124. The resulting cost per installation is lower than the value from our April 2021 credit consultation. This is as a consequence of our changes in approach in other areas (our change to sunk installation costs in 2020 and our consequential change to sunk installation costs in 2021).

Starting point for projecting installation costs in future years

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

Converting from annual allowances to six-month cap periods

Decision

2.126. We have decided to use the same methodology as the credit SMNCC. Each six 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 cap period.

2.127. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.128. We received no comments on our April 2021 proposal.

Considerations

2.129. This is the same as our May 2020 consultation proposal, as well as the August 2020 decision on the credit SMNCC allowance. For more detail on our considerations, please see Chapter 4 of our August 2020 credit decision.[64]

Costs based on the rollout profile

2.130. We have decided to use a weighted average tolerance rollout profile. We discuss this further in Chapter 5. This section covers other issues that could be affected by the rollout profile chosen (beyond installation costs in 2020 and 2021, which we cover earlier in the chapter). The issues are:

- installer productivity;

- marketing costs; and

- smart meter asset and installation costs.

[64] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.91-4.97. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

2.131. These issues are the same for credit and PPM (although the inputs are different). We have summarised the issues, decisions, responses and considerations below. For more detail, please see Appendix 9 of our August 2021 decision on the credit SMNCC.[65]

Installer productivity

Context

2.132. Installer productivity ('productivity') is the number of smart meters that a supplier can install a day per installer. We use productivity when estimating the cost per installation in future years. Specifically, we use productivity to model the change in in-house installation costs (excluding training costs).[66] If productivity improves, then the cost per installation falls. This reduces the SMNCC.

2.133. BEIS has developed expectations for how suppliers' operational fulfilment will improve in future.[67] BEIS assumes that suppliers will improve their operational fulfilment gradually between the second half of 2021 and the second half of 2022, and that this will increase average market conversion rates by 7% by the second half of 2022.[68] This is based on discussions with suppliers, as well as improvements already delivered by some suppliers.[69] Improvement in operational fulfilment would mean higher productivity.[70]

2.134. In our February 2021 second credit SMNCC working paper (SMNCC WP2), our initial view was that it would be appropriate to apply BEIS's expected improvements in

[65] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance
[66] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.81. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[67] Operational fulfilment is about the effectiveness of suppliers' processes to carry out smart meter installations, once a customer is eligible for a smart meter and willing to accept one. BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 43(ii) and figure 1. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[68] Conversion refers to going from customers who are willing to accept a smart meter to those who have one installed.
[69] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 54. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[70] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 89. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

operational fulfilment if we were using a tolerance rollout profile. This was to reflect an achievable level of productivity improvement in future cap periods.[71]

2.135. We noted that BEIS had only set out expectations for improvements in operational fulfilment. Its modelling of meter installations does not make assumptions about the level of installer productivity. We would therefore need to be able to apply the improvements in operational fulfilment to a base level of productivity. Our initial view was that this base level of productivity could be the level we currently use in the SMNCC model, based on the average productivity between 2017 and 2019.[72] We said that we would not use productivity data from 2020 to project future productivity, given that this data would be affected by COVID-19.[73]

Decision

2.136. We have decided to incorporate BEIS's assumed improvement in operational fulfilment. This reflects that BEIS's work is the best analysis we are aware of for whether there will be an improvement in operational fulfilment. Given our decision earlier in this chapter to project installation costs in 2021 based on the same assumption that we use to estimate sunk installation costs in 2021, the operational fulfilment assumption only affects installation costs in 2022 and 2023.

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

2.138. These decisions are unchanged from the proposal in our April 2021 consultation.

Overview of responses and considerations

2.139. One supplier commented on our April 2021 proposal. It stated that, despite consistently worsening smart meter installation productivity between 2017 and 2019, we assume this trend reversed from 2020, and productivity will exceed 2019 levels once the

[71] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.6. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper
[72] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.63. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[73] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.7. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper

short-term effects of COVID-19 disappear. It stated that this is unlikely to occur in practice, and that we provide no justification for it. It stated that our assumption on the trajectory of installation productivity is derived from bilateral conversations between BEIS and suppliers, but we did not provide any detail on those conversations and how an assumption derives from them.

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

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

- BEIS's analysis has been subject to consultation. BEIS is best-placed to consider stakeholders' comments on its analysis. In the April 2021 credit consultation, we said that BEIS's decision on tolerances would be available by the time of our decision, so we would be able to take BEIS's conclusion on the operational fulfilment assumption into account.[74] BEIS has set out its rationale in its recent decision on the annual tolerance values, including additional explanations and descriptions of its evidence base. Its main point was that there is currently a wide range of performance between suppliers, leaving room for improvements.[75] There was very little engagement by stakeholders with BEIS's decision in their responses to our April 2021 consultation.

2.141. Given the points above, we consider that it is proportionate to rely on BEIS's assessment (as set out in its decision) rather than attempting to estimate improvements in operational fulfilment separately. Suppliers have not demonstrated why BEIS's position is incorrect.

[74] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraph 5.11.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance
[75] BEIS (2021), Smart Meter Policy Framework Post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers. Annex C: Analytical Evidence, paragraphs 55 - 59.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

Marketing costs

Context

2.142. Suppliers may incur marketing costs to encourage customers to take up smart meters.[76] We include marketing costs as a category in the SMNCC model. Higher marketing costs therefore increase the SMNCC.

2.143. In SMNCC WP2, we noted previous feedback that we should consider how higher rollout obligations could increase marketing costs.[77] Under a tolerance rollout profile, our initial view was that no additional allowance for marketing was required. This reflected that the tolerances do not require suppliers to roll out more smart meters than they currently do, removing one reason why suppliers might incur increased marketing costs. It also reflected that BEIS is not assuming that suppliers persuade customers to develop more positive attitudes to smart meters at a greater rate than previously.[78]

Decision

2.144. We have decided to maintain the current approach to calculating marketing costs.[79] Under a weighted average tolerance rollout profile, we do not consider that suppliers will incur higher total marketing costs than historically.

2.145. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses and considerations

2.146. One supplier commented on our April 2021 proposal. It stated that our view that suppliers will not, under a framework of mandated targets, incur higher marketing costs than historically does not reflect operational reality.

[76] In this consultation, we use the term 'marketing costs' for consistency with our previous publications on the SMNCC. This does not indicate that we consider that offering smart meters to customers constitutes marketing from a data privacy perspective.
[77] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.14. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper
[78] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.15 - 3.18. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper
[79] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.316. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

2.147. Under a tolerance profile, suppliers (as a group) would not need to roll out more smart meters than they have done historically.[80] BEIS's modelling also only assumes that customers' attitudes towards smart meters evolve over time in line with historical experience.[81] We therefore do not consider that suppliers will have to spend more on marketing as a result of the new rollout framework.

Smart meter asset and installation costs

Context

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

2.149. In SMNCC WP2, we said that increasing the number of smart meters rolled out could, in some circumstances, create pressure on unit costs. We noted that the tolerances do not require suppliers to increase their rollout, so the risk of increased unit costs therefore only applies in the case of a target rollout profile. We also said that we had not identified a reason why there would be increased unit costs, even if rollout increased.[82]

Decision

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

2.151. This decision is unchanged from the proposal in our April 2021 consultation.

[80] Individual suppliers will have different obligations under the new rollout framework, and in some cases they may have to roll out more smart meters than they have done historically. However, we must set a single allowance across suppliers, and we consider the average cost in order to do this.
[81] Further information on these points is available in SMNCC WP2. Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.15 - 3.16. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper
[82] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.26 to 3.27. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper

Overview of responses

2.152. We received no comments on our April 2021 proposal.

Cross-referenced costs across credit and PPM

2.153. There are other cost categories for which we proposed the same approach as credit in April 2021. We cover our decisions on these categories at a high-level here, but please see our August 2021 decision on the credit SMNCC for more detailed discussions.[83]

Organisational costs

Context

2.154. Organisational costs include the legal, institutional and organisational set-up costs for the smart meter rollout.

Decision

2.155. Organisational 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 have decided to use the same organisational costs as for credit meters (on a per meter basis). Please see Appendix 11 of our August 2021 decision on the credit SMNCC for more detail.[84]

2.156. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.157. We received no comments on our April 2021 proposal.

[83] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance
[84] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

Data updates

2.158. As we use the SMNCC model to set both the credit SMNCC and PPM SMNCC, there are some decisions on data updates that apply to both, detailed below.

2.159. For more detail on our considerations on these issues, please see Appendix 10 of our August 2021 decision on the credit SMNCC. They are the same for both credit and PPM.

SMAIR data

Context

2.160. We discussed SMAIR data in SMNCC WP1.[85] We said that we intended to update the SMNCC model using the data in certain areas. We did not intend to update the other areas included in the SMAIR.

Decision

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

2.162. We have decided not to use SMAIR data to update smart meter installation costs, as we have gathered our own data (as detailed earlier in this chapter).

2.163. We have decided to make some consequential edits as a result of using the SMAIR data, to reflect the fact that this data is now actual rather than forecast. These are: removing optimism bias from the 2020 values, starting any assumed cost erosion from after the last actual data, and updating the baseline adjustment for payment methods.[86]

2.164. These decisions are unchanged from the proposals in our April 2021 consultation.

[85] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 2.1 - 2.5. https://www.ofgem.gov.uk/publications/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

[86] The SMNCC model assumes that the costs of smart meter assets and SMETS1 communications hubs decline slightly over time, for years where data is forecast. The SMNCC model refers to this as cost erosion.

Overview of responses

2.165. We received no comments on our April 2021 proposal.

Other data gathering

Context

2.166. In SMNCC WP1, we said that we did not intend to carry out any further data gathering. We encouraged any stakeholders who disagreed to explain their rationale.[87]

Decision

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

2.168. This decision is unchanged from the proposal in our April 2021 consultation.[88]

Overview of responses

2.169. We received no comments on our April 2021 proposal.

Minor updates

Context

2.170. We discuss the rollout profile in Chapters 4 and 5 of this consultation. This section discusses some more minor issues which relate to, or are affected by, rollout.

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

[88] Following consideration of stakeholder responses to the April 2021 consultation on our analysis of sunk installation costs, we did seek clarification from suppliers about the data they had provided previously. However, we did not gather new data in this area.

Decision

2.171. We have decided to update the following inputs to the SMNCC model:

- the profile for the proportion of SMETS1 meters enrolled with the DCC
- the date at which SMETS1 meters are treated as enrolled
- the proportion of SMETS1 meters expiring early
- the scaling factors for the proportion of SMETS1 meters losing smart functionality
- the proportion of installations which are SMETS1 or SMETS2 for 2020 and 2021.

2.172. These updates are to better reflect the current situation, given the impact of COVID-19 on installations and the enrolment of SMETS1 meters.

2.173. We have decided to turn off the bottleneck uplifts in the SMNCC model (which increase costs in years when a large number of smart meters are installed), as otherwise these would be triggered by our decision to apply a market leader tolerance rollout profile, to set the credit SMNCC, from 2018.[89] This change has no impact on PPM.

2.174. We have decided to update the meter rental uplift values, taking into account the revised rollout in our proposal.

2.175. These decisions are unchanged from the proposal in our April 2021 consultation.

Overview of responses

2.176. We received no comments on our April 2021 proposal.

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

Other input issues

Context

2.177. This section covers stakeholder comments on other aspects of our analysis in response to our April 2021 consultation.

Decision

2.178. We have decided to maintain the assumed reduction in training costs when projecting installation costs at the time of our April 2021 consultation. However, in our review of uncertainty, we note that our approach to training for existing installers may be slightly less conservative.[90]

Overview of responses and considerations

2.179. Our analysis follows BEIS's 2019 CBA in projecting a reduction in installer training costs between 2019 and 2020. One supplier's economic adviser considered that training costs will not fall. It said that there will be ongoing training requirements as a result of installer churn and ongoing training for existing installers (due to installation process changes and technology updates). It also raised concerns about the source of the projections.

2.180. BEIS has confirmed that the 2020 projections for the number of installers in training were provided by suppliers. These should therefore be a reliable reflection of their own expectations in early 2020.

2.181. Actual data would now be available for the number of installers in training in 2020. However, as set out in our August 2020 credit decision, we do not intend to carry out future reviews with same level of detail as in 2020, as this would be disproportionate. [91]

[90] Our review of uncertainty is in Appendix 3, where we cross-refer to our August 2021 decision on the credit SMNCC. We review uncertainty around our assumption on installer training in Appendix 11 of the credit decision document. Ofgem (2021), Price Cap - Decision on credit SMNCC allowance, Appendix 11, paragraph 1.61. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

[91] Ofgem (2020), Decision on reviewing smart metering costs in the default tariff cap, paragraph 5.39. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

Actual 2020 data may also have been affected by COVID-19, so may not be representative of underlying trends for the numbers of installers in training.

2.182. In relation to installer churn (ie replacing installers who leave) – we would expect suppliers' projections for the number of installers in training to reflect this. Suppliers should be able to produce reasonable projections, taking into account their knowledge of their own businesses.

2.183. In relation to ongoing training for existing installers – 2019 installation costs should already include a base level of such training.[92] Suppliers have not provided evidence that the complexity of training required has grown since 2019. However, there could be a question whether training costs for existing installers could grow over time, as the installer base reaches a steady state. This would reflect that more installers may need ongoing training on new processes or technology updates, rather than this being included in their initial training. While this is plausible, any effect should be small, as most installers had already been trained before 2019.

Model simplification

2.184. In our August 2020 credit decision, we decided to review the SMNCC every 12 months.[93] In light of this, in the April 2021 consultation we set out some changes to simplify the model, so that it is more user-friendly for a series of annual reviews.

2.185. The changes involved removing irrelevant material – particularly most of the non-domestic information, and information on advanced meters. We have also made structural changes to reduce the number of input sheets in the SMNCC model. These changes were presentational – they did not affect the modelling results.[94]

Overview of responses

2.186. We received no comments on these changes in response to our April 2021 consultation.

[92] Through wages paid to installers, including when they are unavailable due to training.
[93] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 2.44. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[94] We have retained a small amount of non-domestic information, where this affects the calculated SMNCC values.

3. Differing cost methodologies across credit and PPM

Section summary

This chapter sets out our decisions relating to certain aspects of the SMNCC methodology which differ between the credit and PPM allowance. These are on meter asset life and premature replacement charges, the PPM cost to serve benefit, setting the SMNCC at nil consumption, offsetting additional PPM costs

3.1. In setting an appropriate PPM-specific SMNCC allowance, there are certain assumptions and approaches that we consider should differ from the SMNCC methodology for customers with credit meters. We summarise each below and explain them in more detail later in this chapter.

3.2. In the SMNCC model, we set the traditional meter asset life, the amortisation period for how asset and installation costs spread over time and the age after which PRCs for traditional meters expire. These are payment method specific. The traditional meter asset life is a key driver of both costs and benefits in the SMNCC model, whilst the age after which PRCs for traditional meters expire drives the costs incurred when replacing these meters early. We have decided to set the PPM traditional meter asset life to 12 years for electricity and 10 years for gas; maintain our proposal of having a 10-year amortisation period for traditional PPMs; and maintain our 10-year assumption for the age after which PRCs no longer apply.

3.3. The PPM cost to serve (CTS) reflects the operational cost savings of replacing a traditional PPM with a smart meter operating in PPM mode. It covers all the operational benefits for the PPM rollout. We have decided to update our approach compared to our April 2021 consultation proposals, after considering that some suppliers have outlier costs that affect their PPM CTS benefit.[95]

3.4. To ensure the default tariff cap varies with consumption, we set the cap at the typical consumption level and at nil consumption. The trajectory between these points

[95] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.28 – 4.33. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

defines the cap level for all consumption levels. In our April 2021 consultation, we proposed to remove the nil consumption scalar for PPM, setting both typical consumption level and nil consumption level of the SMNCC to the same value in the PPM cap level. [96] We have decided to maintain this approach.

3.5. The PPM cost offset is a mitigation step to account for the possible under-recovery of efficient PPM costs by PPM specialists. In our August 2020 decision, we stated that we would not reduce the PPM SMNCC until the potential additional PPM costs were fully recovered from PPM customers. However, we also said that we would only allow suppliers to recover the potential additional PPM costs up to the point that it did not increase prices for PPM customers. [97] We have decided to implement the PPM cost offset on a per cap period basis rather than cumulatively. We have reflected this decision by changing the relevant calculation in the Annex 5 – Methodology for determining the Smart Metering Net Cost Change model (Annex 5 model).

3.6. Our current view is that the decisions we have made in this chapter for cap period seven will remain appropriate for any decisions for cap period eight (or beyond). We therefore discuss aspects beyond cap period seven (such as the approach for 2023). However, we will consult in the autumn before making decisions for cap period eight onwards.

Meter asset life and premature replacement charge age

Context

3.7. PPM and credit traditional meters are different. Therefore when setting the SMNCC, we have to account for the different underlying costs as well as make different assumptions. We deem this is the case for assumptions on the traditional meter asset life, the amortisation period for spreading traditional meters asset and installations costs over time, and the age at which PRCs no longer apply.

3.8. The traditional meter asset life determines the rate at which traditional meters expire and should be replaced. For the SMNCC, this affects the benefits arising from the

[96] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.57. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

[97] Ofgem (2020), Protecting energy consumers with prepayment meters: August 2020 decision, paragraph 4.31 – 4.34. https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters

avoided costs of replacing expiring traditional meters with new traditional meters (as a smart meter is installed instead). In our November 2020 first PPM SMNCC working paper ('PPM SMNCC WP1'), we proposed to increase the traditional meter asset life from 10 years to 14 years for electricity and 12 years for gas, based on September 2019 RFI data.[98] In our April 2021 consultation, we maintained this position.[99] We expected this to increase the PPM SMNCC given it would reduce the number of avoided traditional meter installations, hence reducing the benefit of installing smart meters.

3.9. In PPM SMNCC WP1, we proposed to maintain the 10-year amortisation period for traditional PPMs. In our April 2021 consultation, we maintained this position. This is intended to be a proxy for meter rental contract lengths in our model. [100,101]

3.10. PRCs reduce in proportion to the age of the meter being replaced (ie newer meters have higher PRCs). They stop being applicable after a specified period of time; near the end of the meter rental contract between the supplier and Meter Asset Provider (MAP), or after the meter rental contract expires. The age after which PRCs no longer apply determines what proportion of replaced traditional meters incur PRCs due to being replaced early. In PPM SMNCC WP1, we proposed to maintain the 10-year assumption for the age after which PRCs no longer apply, considering that this captures the majority of PRCs in our 2019 RFI data. [102,103] In our April 2021 consultation, we maintained this position.

Decision

3.11. We have decided to set the traditional PPM asset life to 12 years for electricity and 10 years for gas. This differs from our April 2021 proposal.

3.12. We have decided to maintain the 10-year amortisation period for traditional PPMs. This decision is unchanged from the proposal in our April 2021 consultation.

[98] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 2.17. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[99] For credit meters, we assume the traditional meter asset life for electricity and gas is 20 years.
[100] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 2.13-2.23. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[101] For credit meters, we assume a 20 year amortisation period.
[102] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 2.19. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[103] For the credit SMNCC, we assume the age after which PRCs no longer apply is 15 years for electricity and 20 years for gas.

3.13. We have decided to maintain the 10-year assumption for the age after which PRCs no longer apply. This decision is unchanged from the proposal in our April 2021 consultation.

Overview of responses

3.14. In response to the April 2021 consultation, two suppliers' economic advisors disagreed with our proposed assumptions for traditional meter asset lives and the methodology we had used to determine them.

3.15. Furthermore, one supplier and another supplier's economic advisor stated that the ages after which PRCs no longer apply is closer to 15 years rather than our 10-year proposal.

Considerations

Traditional meter asset life

3.16. Two suppliers' economic advisers disagreed with our proposals for the traditional meter asset lives, stating that our proposed approach for selecting the meter asset age was too simplistic. In particular, both economic advisers disagreed with our proposed approach for gas, as the traditional meter asset age data collected by our previous September 2019 RFI showed that the distribution for gas has a long tail. [104] They suggested different approaches to select the traditional meter asset life assumptions.

3.17. We acknowledge that our proposed approach was too simplistic but we disagree with several elements of the approaches the economic advisers raised to address this.

3.18. One of the economic advisers suggested that for gas, we should either model a range of traditional meter asset life assumptions and take an average of the final SMNCC outputs, or use an assumption of 14 years for gas as it would most closely replicate this averaging approach.

[104] See Appendix 2 of the November 2020 PPM consultation for further explanation of our RFI data and previous approach.
Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper

3.19. We do not consider that a longer tail in the gas distribution is a strong enough reason to model a range of asset lives across this tail. We set the traditional meter asset life assumptions to represent the average life of a meter, and circumstances will differ for individual suppliers. This is to approximate the MAP rental charges a supplier typically pays over the life of that meter and to determine when that meter would typically be replaced. Modelling a range of asset lives would include meters near the maximum observed age. This would set an average meter life that is too high and would increase the allowance available to all suppliers, when it would only be required for a small number of meters that are not representative of traditional PPM. On average, this could lead to customers overpaying if supplier's traditional meters are more likely to expire before the ages we assume in the model.

3.20. The other adviser stated that rather than looking at the proportion of meters at a given age, we should cumulatively look at the proportion of meters at or below a given age instead. It stated that a reasonable traditional meter asset age assumption resulting from such a cumulative method would be 15 years for both fuels.

3.21. We acknowledge that cumulatively looking at the proportion of meters at or below a given age is a better approach than the one we proposed. This approach is easier to apply consistently across fuels regardless of how long the distribution tail is. Our initial method instead looked at the proportion of meters *at a given age* and graphically identified the midpoint of the decline, which is affected more by the length of the distribution tail.

3.22. However, we disagree that a reasonable traditional meter asset age assumption resulting from a cumulative method would be 15 years for both fuels. This would include meters near the maximum observed age, which as stated above, would set a traditional meter asset life that is too high compared to the average traditional meter. This could again mean customers on average overpaying if supplier's traditional meters are more likely to expire before the ages we assume in the model.

3.23. We have assessed how to appropriately set the traditional meter asset life using the cumulative method. We still consider that identifying the midpoint of the part of the distribution where the number of meters is declining will minimise the risk of consumers, on average, paying more than the efficient amount for replacing traditional PPMs. The cumulative approach would allow us to precisely calculate this midpoint as the median. We use the median as it will be less affected by extreme values than other metrics (eg the mean), but a longer tail in the distribution can still put upward pressure on it. Therefore, we take the longer tail into account as well with this approach.

3.24. Assessing the midpoint of the decline, rather than the whole distribution, allows us to focus on the meters coming to the end of their life. The September 2019 RFI data we used to model the distribution of meter ages is likely to be skewed towards higher meter asset life, because the smart meter rollout affects the age distribution of traditional meters. Our distribution data shows a lower percentage of recently installed traditional meters. This is because suppliers replace traditional meters with smart meters rather than new traditional meters during the rollout. If the majority of suppliers' traditional meters expire before the ages we assume, we effectively allow suppliers to benefit from a higher avoided cost than included in the SMNCC model.

3.25. We have plotted the number of traditional meters at each age (for each fuel) and identified the age at which this number starts to decline.[105] We then calculated the cumulative distribution only from this point to the last age in the data for each fuel. We set the meter asset life values at the median of this cumulative distribution.

3.26. Our new approach results in traditional PPM asset life assumptions of 12 years for electricity and 10 years for gas.

Modelling considerations

3.27. The assumptions on traditional PPM asset life affect the number of traditional PPM that expire each year in the SMNCC model. Therefore, our reduction in assumed traditional PPM asset life described above increases the number of traditional PPM that need to be replaced over the life of the cap. Within the model, smart PPM replace some of the expired traditional PPM, but as the smart meter rollout is not progressing quickly enough to replace all of them, the model assumes that the rest are replaced by traditional PPM.

3.28. Smart meter rollout in 2020 was low as COVID-19 created limitations on visiting consumer homes. These same limitations would have meant that suppliers would have found it difficult to install traditional PPM instead of smart PPM. Therefore, it is not realistic to increase traditional PPM installations in 2020 in our model to replace decreased smart installations. Moreover, it is possible that a supplier may choose to keep a traditional PPM on the wall for longer than our assumed ages.

3.29. Furthermore, due to our meter age assumption, the model assumes that some of the traditional PPM installed in earlier years (2011 is the starting year in the model) will

[105] We specified this decline as the first traditional meter age in the distribution where the number of meters decrease. This is 11 years for electricity and six years for gas.

expire by the end of the current price cap. The model assumes that traditional PPM that expire in 2022 and 2023 are replaced by traditional PPM, when in reality we expect that they would be replaced by smart PPM (except in specific circumstances). Moreover, under the New and Replacement Obligation, energy suppliers are required to install a smart meter when a traditional meter reaches the end of its life or is defective, unless there is good reason.[106]

3.30. We therefore consider that the model needs to be corrected, to ensure that it reflects what will happen in practice when a traditional PPM reaches the end of its life. However, we recognise that we have not consulted on making such a change to the model.

3.31. We will therefore consult on the required changes as part of our PPM SMNCC consultation for cap period eight. We will take into account any impacts on the PPM SMNCC for cap period seven caused by these changes, in the advanced payments we calculate in later cap periods.[107]

Premature replacement charges

3.32. Two suppliers stated that the ages after which PRCs no longer apply is closer to 15 years. For one supplier, this was based on its own experience, and for the other, based on supplier data we disclosed to their economic adviser (it did not provide details on how it had calculated this). One of the suppliers asked us to issue a further RFI to collect more detail on these charges.

3.33. PRCs will only be incurred during the contract period between MAPs and suppliers. In the SMNCC, we use the amortisation period to proxy the typical length of contracts, which we set at 10 years.[108] Therefore, we do not consider it appropriate for PRCs to apply for longer than 10 years, as by this point in time the cost of the traditional meters are typically paid off following 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. As a further check, our

[106] BEIS (2021), Smart Meter Policy Framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, Annex B, 14. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[107] See Chapter 6 for an explanation of advanced payments.
[108] We have not received any stakeholder comments on the 10 year amortisation period assumption, and have decided to maintain it. We note that while increasing the amortisation period would increase the period over which PRCs would be incurred, it would reduce the amount suppliers are funded for each year to cover the amortised cost (as a proxy for rental charges).

analysis of the value of PRCs incurred in 2018 suggests that over 90% of the total value of PRCs is represented at 10 years, which we consider covers the majority of PRCs.

3.34. Suppliers incur charges when they replace traditional PPMs prematurely. In the year of replacement they pay the remaining cost of the prematurely replaced PPM (the PRC). They then have the benefit of no longer paying rental charges for the remaining life of the meter. As a further check, our analysis of the value of PRCs incurred in 2018 suggests that less than 1% of the total value of PRCs is represented at 15 years. We therefore do not deem that the age at which PRCs no longer apply being 15 years is representative of the average meter. We consider that choosing an age assumption lower than 15 years to be more appropriate.

PPM cost to serve benefit

Context

3.35. The PPM CTS benefit reflects the operational cost savings of replacing a traditional PPM with a smart meter operating in PPM mode (excluding differences in meter asset and installation costs, which are accounted for separately in the SMNCC model). It covers all operational benefits for the PPM smart rollout.

3.36. In our May 2020 consultation, we set out that we intended to use the calculated PPM CTS benefit to account for certain benefits after installing a smart meter. These were the benefits associated with reduced customer calls, customer switching, changing tariffs remotely, and reduced costs of a meter reading when a customer changes supplier.[109]

3.37. We proposed to use data collected by BEIS through SMAIR to calculate the PPM CTS benefit.[110] We also proposed to calculate the difference between the traditional PPM CTS and the smart PPM CTS for each supplier, and benchmark these differences using the weighted average.

[109] Ofgem (2020), Statutory consultation for protecting energy consumers with prepayment meters, paragraphs 5.95 -5.96 https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

[110] Ofgem (2020), Statutory consultation for protecting energy consumers with prepayment meters, paragraph 5.100 https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

3.38. In PPM SMNCC WP1, we proposed to maintain the same methodology and data source used in our May 2020 consultation, updating the calculation with 2020 SMAIR data.[111] This was provided that the 2020 data was not materially affected by COVID-19. If it was, we stated that we would decide whether to exclude the 2020 data and continue to base the calculation on 2019 data only.

3.39. We also stated in PPM SMNCC WP1 that we would consider whether the previous PPM CTS benefit calculation overlapped with other PPM operational benefits in the SMNCC model. The SMAIR data does not provide a breakdown of the cost items that make up the total cost to serve traditional PPM customers and the total cost to serve smart PPM customers. This makes it difficult to determine which PPM CTS benefits overlap with other PPM operational benefits considered in the SMNCC model.

3.40. Therefore, we issued a February 2021 RFI to collect more granular data from a wider supplier pool than suppliers that complete the SMAIR. We requested that suppliers reconcile their RFI submission with their SMAIR submission, but also gave them the opportunity to explain any additional and relevant cost items affecting the PPM CTS benefit that are not recorded in their SMAIR submission.

3.41. In our April 2021 consultation, we calculated a new PPM CTS benefit using the data we collected in the February 2021 RFI. This was based on the 2019 data we had collected from all suppliers that responded to the RFI.[112]

3.42. In PPM SMNCC WP1 we also proposed to apply a 12% reduction to the final PPM CTS benefit to address concerns of inconsistency in the way the efficiency benchmark is defined in the SMNCC methodology compared to the 2017 operating cost benchmark.[113] We maintained this in our April 2021 consultation.

[111] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 2.28-2.30. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper

[112] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.28 – 4.52. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

[113] This is in line with the methodology we used for the credit SMNCC for calculating benefits, from our August 2020 decision paper for credit:
Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

Decision

3.43. We have decided to account for PPM operational benefits using the PPM CTS benefit calculation in the SMNCC model. These are the benefits associated with reduced customer calls, customer switching, changing tariffs remotely, and reduced costs of a meter reading when a customer changes supplier.

3.44. We have decided to use our February 2021 RFI data to calculate the PPM CTS benefit. We have decided to exclude three suppliers from our RFI sample, either because they had outlier costs that affect their PPM CTS benefit or their qualitative RFI response suggested that their current PPM CTS benefit would be materially different to what it will be in the future.[114]

3.45. We have decided to retain our methodology of calculating the operational cost savings of replacing a traditional PPM with a smart PPM across individual suppliers and then calculating a weighted average of those savings. We have set weightings according to each supplier's total number of PPMs.

3.46. We have decided not to use the 2020 data we collected as part of the February 2021 RFI since it would be impacted by Covid-19. We therefore only use the 2019 data we collected.

3.47. We have decided to apply a 12% reduction to the final PPM CTS benefit to address concerns of inconsistency between the benefit and the 2017 operating cost benchmark. This is in line with the methodology we used for the credit SMNCC for calculating benefits, from our August 2020 decision paper.[115]

3.48. Our above decisions are unchanged from the proposals in our April 2021 consultation, except for our decision to exclude outliers from the RFI data.

Overview of responses

3.49. In response to the April 2021 consultation, two suppliers' economic advisors did not support our methodology for calculating the PPM CTS benefit. They stated that it places too much weight on the costs of certain suppliers with small traditional or smart customer

[114] We still include all other suppliers who have over 1% PPM market share.
[115] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.49. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

bases. Secondly, in relation to including fixed costs, they stated that we incorrectly treat them as avoidable when a traditional PPM customer has a smart meter installed.

3.50. One supplier's economic adviser stated that their supplier should be excluded for multiple reasons. Another supplier's economic advisors questioned how comparable the PPM CTS data is given the wide variation in CTS data between suppliers.

3.51. In response to PPM SMNCC WP1, four suppliers commented on the PPM CTS benefit. Two suppliers noted broad agreement with our proposal to apply a 12% reduction to the PPM CTS benefit, though one supplier stated it would consider this proposal fully when the model became available.

3.52. Two suppliers also asked for further information, with one stating a need for data transparency. Another supplier commented on the potential sample bias impacts of using SMAIR data given this would exclude suppliers with fewer than 10,000 smart PPM customers. Another supplier questioned comments we made that it is plausible for the electricity PPM CTS benefit to be higher than for gas PPM customers.

Considerations

Methodology

3.53. In our methodology we calculate the average CTS for traditional PPM customers and smart PPM customers for each supplier. We then calculate the difference between these values per supplier. We benchmark these supplier differences by using a weighted average, weighting by the total number of PPM customers a supplier has.

3.54. Two suppliers' economic advisers commented that our methodology overstates the PPM CTS benefit. They stated that our methodology places too much weight on the CTS of suppliers with either small traditional or small smart customer bases and will not reflect the average benefit to the industry when a traditional PPM customer moves to being a smart PPM customer. They stated that it is better to first calculate industry-level traditional CTS and smart CTS figures, then take the difference between these two values to estimate the PPM CTS benefit.

3.55. We do not consider that this alternative approach would better reflect the average benefit of customers moving from a traditional PPM to a smart PPM. This alternative approach could be impacted by differences in how individual suppliers allocate costs across

traditional and smart PPM customers. These cost allocation differences would then skew the industry traditional and smart CTS benchmarks, resulting in a CTS benefit that would not represent the average benefit of customers moving from a traditional PPM to a smart PPM. In contrast, our approach of calculating the difference between each supplier's traditional CTS and smart CTS before benchmarking these differences controls for these supplier-specific factors. This is because our approach compares the traditional and smart CTS within the context of the same cost allocation practises of a given supplier.

Fixed cost inclusion

3.56. Two suppliers' economic advisors also stated that by including fixed costs we incorrectly assume that when a PPM customer moves from traditional to smart, a supplier can reduce their average fixed costs of serving traditional customers. They stated that these fixed costs for traditional customers are likely to remain, especially for marginal changes in customer numbers between a supplier's traditional and smart customer base.

3.57. The PPM CTS benefit represents the *average* benefit across smart PPM customers in the SMNCC model, rather than a marginal one. We consider that where a sufficiently large enough number of customers move from traditional to smart, suppliers will realise average fixed cost savings. We therefore deem it appropriate to include fixed costs, to reflect how they change over time due to customers moving to smart.

3.58. Furthermore, one economic adviser's analysis of excluding fixed costs showed that the materiality of the impact on the PPM SMNCC would be low.

Sample size

3.59. One supplier's economic adviser disagreed with us including the supplier in the PPM CTS benefit sample. It stated that we had excluded the supplier from the sample we used to estimate the rollout profile in the SMNCC model, and therefore, with the same reasoning we should exclude them from the sample used to calculate the PPM CTS benefit. The economic adviser also stated that the supplier has a traditional CTS that is not representative of the industry. The economic adviser stated that this would warrant excluding the supplier from the sample.

3.60. We stated in our April 2021 consultation that our criteria for rollout exclusion involved a combination of two reasons:

- if a supplier is sufficiently far ahead of all other suppliers in terms of smart PPM rollout such that it skews our calculations of the PPM SMNCC so that it is no longer representative of the market as a whole; and

- if the supplier is excluded from the 2017 operating cost benchmark such that we would not be comparing its smart meter rollout costs since 2017 to its own costs in 2017.[116]

3.61. This is specific to our considerations on the rollout profile, as it is not necessarily the case that a supplier's above average rollout would skew its smart and traditional CTS.

3.62. However, we acknowledge that some suppliers have outlier costs that affect their PPM CTS benefit. This could make their CTS benefits unrepresentative of an average efficient supplier. For a given supplier, we have used the following criteria to consider whether to exclude it from the sample used to calculate the PPM CTS benefit:

- the extent to which any of its costs making up traditional or smart CTS is an outlier;

- whether the outlier cost(s) significantly affect the supplier's PPM CTS benefit;

- whether its qualitative RFI response suggests that its current PPM CTS benefit may be materially different to what it could be in the future, due to it being in a transitional phase of rollout.

3.63. This led to us excluding three suppliers, leaving six suppliers in the sample. The remaining six suppliers represent 63% of the PPM market, which we consider sufficient for the CTS calculation.

Data variability

3.64. One supplier's economic adviser stated that the significant variation in supplier data, at the individual cost level and the overall PPM CTS benefit level, raises questions about the comparability of the data and the reliability of the conclusions drawn.

[116] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, Appendix 4, paragraphs 1.4 – 1.5.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

3.65. We have scrutinised the data and asked for further supplier clarifications where needed to ensure that there are no data errors or incorrect cost allocations. Moreover, after excluding the three suppliers, we consider that there is sufficient comparability between suppliers on both an individual cost item level and overall PPM CTS benefit level.

Difference between electricity and gas

3.66. One supplier questioned our statement in PPM SMNCC WP1 that it is plausible for the PPM CTS benefit to be higher for electricity than for gas without offering quantitative analysis to support this.

3.67. We observed in the RFI data that there is no consistent trend across suppliers in terms of whether the PPM gas CTS benefit or the PPM electricity CTS benefit is greater. Although this supplier commented that the PPM CTS benefit for gas is greater than electricity in their experience, this is not the case for all suppliers.

3.68. The supplier also 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.

3.69. 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. We do not consider this a cause for concern, and discussed the reasons for this in PPM SMNCC WP1.[117] This includes the fact that the CMA's analysis involves a different measurement to our analysis. The CMA's analysis measures the cost difference between traditional direct debit and PPM whereas our analysis measures the cost difference between smart and traditional PPM.

Quantitative impact of decision

3.70. Our dual fuel PPM CTS benefit calculated from the February 2021 RFI, excluding three suppliers from our sample and weighting by total PPM, is £34.41 (£16.42 for

[117] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 2.34-2.37.https://www.ofgem.gov.uk/publications-and-updates/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper

electricity, £17.99 for gas). This differs from the £36.64 dual fuel PPM CTS benefit (£15.43 for electricity, £21.22 for gas) in our April 2021 consultation.[118]

3.71. Table 3.1 shows the PPM SMNCC allowance from using the PPM CTS benefit in our April 2021 consultation and the one from using the new PPM CTS benefit.

Table 3.1 - Impact of updated PPM CTS benefit on PPM SMNCC

		PPM SMNCC (£/customer)				
		Cap period seven	Cap period eight	Cap period nine	Cap period ten	Cap period eleven
April 2021 proposals	Electricity	-2.36	-3.44	-4.03	-4.63	-4.63
	Gas	-16.78	-17.80	-19.46	-21.12	-21.12
August 2021 decision	Electricity	-2.61	-3.75	-4.43	-5.10	-5.10
	Gas	-15.86	-16.69	-18.11	-19.53	-19.53
Difference	Electricity	0.25	0.31	0.4	0.47	0.47
	Gas	-0.92	-1.11	-1.35	-1.59	-1.59

Notes:

All values are £/customer, nominal. These SMNCC values are before the PPM cost offset has been applied, so they are different from the final SMNCC figures in Chapter 6.

Setting the SMNCC at nil consumption

Context

3.72. We usually discuss and express the SMNCC at Typical Domestic Consumption Value (TDCV).[119] However, to ensure the default tariff cap varies with consumption, we set the

[118] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.51. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

[119] Where we discuss the Typical Domestic Consumption Value (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.

cap at typical consumption and at nil consumption. The cap for all other consumption levels is defined by a straight line between these two points.[120]

3.73. In our 2018 decision, we set the credit SMNCC at nil consumption as 69% of the credit SMNCC at TDCV, to protect low consumption consumers.[121] The means the credit SMNCC is split over the standing charge and unit rate, in part varying with the amount of energy a customer uses. While we consider this appropriate for credit customers where the SMNCC is a net cost, it is not appropriate for PPM where the SMNCC is a net benefit.

3.74. In PPM SMNCC WP1, we stated that if the SMNCC for PPM customers is negative representing a new benefit, following our consultation and any policy updates, we would propose to allocate the PPM SMNCC entirely to the standing charge rather than the unit rate.[122] In our April 2021 consultation, we maintained this position.[123] This is equivalent to setting the same PPM SMNCC value at both TDCV consumption and nil consumption.

3.75. The nil consumption scalar approach would make offsetting the potential additional PPM costs more complex, as the amount we could offset at both nil consumption and TDCV could vary. In our April 2021 consultation, we stated that removing the nil consumption scalar is the least complex method that retains protection for low consumption users.

Decision

3.76. We have decided to remove the nil consumption scalar for the PPM SMNCC. This means that the PPM SMNCC does not vary with the amount of energy a customer uses.[124] This decision is unchanged from the proposal in our April 2021 consultation.

[120] Ofgem (2018), Decision – Default tariff cap – Overview document, paragraph 2.91 – 2.100. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview
[121] We used the scalar to set the cap at nil consumption in line with market prices in our baseline year, 2017. This was to ensure that the default tariff cap would not significantly increase prices for low consumption customers from the standing charges the market was already offering them.
[122] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 3.16. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[123] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.57. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[124] In practice, this means that the PPM SMNCC is the same in the cap at nil consumption and at TDCV.

3.77. Applying the PPM SMNCC to the standing charge will reduce the complexity of the method we use to set the PPM cap level. This will increase transparency to our stakeholders.

Overview of responses

3.78. No stakeholders commented on this aspect of our April 2021 consultation.

3.79. In response to PPM SMNCC WP1, two suppliers commented on this. One supplier was generally supportive of our approach though the other supplier disagreed, questioning whether our proposal had sufficient regard for all vulnerable consumers.

Considerations

3.80. For PPM, reducing the SMNCC by a scalar at nil consumption would reduce the benefit, and hence increase the cap at nil consumption relative to the cap at TDCV. This would be contrary to the policy intent of our 2018 decision to protect low consumption consumers. Therefore, consistency with the credit decision is maintained by removing the nil consumption scalar for PPM.

3.81. Please see Chapter 4 of our April 2021 consultation for more details of our considerations.[125]

Offsetting additional PPM costs

Context

3.82. Customers with traditional PPMs have higher costs to serve than direct debit (DD) 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.[126,127]

3.83. In our May 2020 consultation, we estimated that the cost to serve PPM customers compared to DD customers (when both have traditional meters) could be up to £17 (£7.95

[125] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, 4.62 – 4.66. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[126] Ofgem (2020), Protecting energy consumers with prepayment meters: August 2020 decision, paragraph 4.1, 4.6. https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters
[127] From now on we will refer to the PPM-specific payment method uplift as the PPM uplift.

electricity, £8.97 gas) higher than the CMA's PPM uplift. This was an upper bound. This estimation was based on supplier data used by the CMA, but using a less aggressive definition of efficiency. We used these figures as the maximum amount to offset – noting they represent only a *possible* under-recovery of efficient PPM costs.[128] We refer to the £17 difference between the CMA level and our upper bound estimate as the potential additional PPM costs.

3.84. We decided in our August 2020 decision to adopt the CMA's PPM cost differential between PPM customers and DD customers for our PPM uplift. We called this a tariff differential approach. Our rationale was:

- 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

- because, for suppliers with an average mix of customers across payment methods, any potential additional PPM costs above the CMA's differential are included in the existing operating cost allowance and are therefore recovered across all customers.

3.85. We acknowledged that PPM specialists may under-recover their efficient costs through the existing operating cost allowance.[129]

3.86. As the smart meter rollout continues, the PPM SMNCC allowance determined by our model will grow increasingly negative. However, we decided we would not use this allowance to reduce the PPM cap level until the potential additional PPM costs were fully recovered from PPM customers.[130] We termed this the PPM cost offset.

3.87. By including the offset, we no longer need to recover the potential additional PPM costs over all default tariff customers through the operating cost allowance. However, the

[128] Ofgem (2020), Protecting energy consumers with prepayment meters: May 2020 consultation, paragraph 4.15 – 4.19. https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters
[129] The CMA PPM cap was in place prior to Ofgem introducing a PPM level in the default tariff cap in January 2021.
[130] The May 2020 version of the SMNCC model already showed negative PPM SMNCC allowances, meaning that the smart meter rollout for PPM would decrease prices for PPM customers. It was expected that prices would continue to decrease as smart meter rollout progresses.

August 2020 decision was to maintain the existing operating cost allowance, treating the additional amount as headroom.[131,132]

3.88. In PPM SMNCC WP1, we proposed to implement the offset by amending the Annex 5 model.[133] In our April 2021 consultation, we maintained this position.[134]

Decision

3.89. We have decided to use a PPM cost offset that works on a cap period basis rather than cumulatively. This means that for a given cap period, any remaining under-recovered PPM costs that cannot be offset by the current PPM SMNCC will not be carried over to the next cap period.

3.90. We have decided to implement the PPM cost offset in the Annex 5 model.

3.91. This is unchanged from the proposal in our April 2021 consultation.

Overview of responses

3.92. In response to the April 2021 consultation, one supplier supported our proposals, stating that it limits the impact on PPM customers of unwinding under-recovered PPM costs.

3.93. Two other suppliers disagreed with our proposals, with one stating we are selective towards downwards adjustments given our approach with advanced payments. The other supplier stated that it is unjustified and arbitrary to have the SMNCC capped at £0 when offsetting additional efficiently incurred costs. They also raised that the amount to be offset is more a central estimate rather than an upper bound.

3.94. In response to PPM SMNCC WP1, one supplier showed broad agreement with our approach of offsetting the under-recovered PPM costs.

[131] Ofgem (2020), Protecting energy consumers with prepayment meters: August 2020 decision, paragraph 4.77. https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters
[132] This is deemed consistent with our 2018 default tariff cap decision, since we would have considered these costs in our assessment of uncertainty when setting headroom.
Ofgem (2018), Decision – Default tariff cap – Overview document, paragraph 2.77 – 2.81. https://www.ofgem.gov.uk/publications/default-tariff-cap-decision-overview
[133] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, paragraph 3.13. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper
[134] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, paragraph 4.74. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

Considerations

Tariff differential approach

3.95. One supplier's economic adviser stated that we have made an arbitrary decision to impose a £0 ceiling on the PPM SMNCC to maintain the cost differential between cap levels for PPM and DD customers. This supplier also stated that we fail to maintain this differential by arbitrarily ensuring that the PPM SMNCC is always negative (or zero). This comment misunderstands both the rationale for deciding a tariff differential approach, as set out in our March 2020 policy consultation and August 2020 decision, and how we intend to apply the PPM cost offset as proposed in our April 2021 consultation.[135, 136, 137]

3.96. We considered two options for assessing and setting the PPM uplift:

- a cost reflective approach; or
- a tariff differential approach.

3.97. We considered that, given PPM customers are more likely to be vulnerable than direct debit customers, it was not desirable to significantly increase the tariffs for PPM customers compared to the current tariff differential they already pay.[138] A tariff differential approach achieves this, whereas a cost reflective approach would increase the PPM cap level and therefore reduce the overall level of protection for PPM customers with traditional meters. As a result, our decision for a tariff differential approach constrained the maximum value of the newly assessed PPM uplift, so that PPM customers did not experience a sudden and sharp increase in prices (relative to customers on other payment methods). We do not

[135] Ofgem (2020), Protecting energy consumers with prepayment meters, paragraph 4.15 - 4.31, https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters
[136] Ofgem (2020), Protecting energy consumers with prepayment meters: August 2020 decision, paragraph 4.5 - 4.70, https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters
[137] Ofgem (2020), Price Cap: final consultation on updating the prepayment SMNCC allowance, paragraph 4.77 – 4.83 https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[138] In line with the CMA's findings, PPM customers also face additional barriers to switching. Citizens Advice found 41% of all PPM customers reported health issues, including 15% reporting mental health issues. Citizens Advice (2018) Switched On – Improving support for prepayment consumers who've self-disconnected. https://www.citizensadvice.org.uk/about-us/our-work/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/improving-support-for-prepay-customers-self-disconnecting/
In England for both gas and electricity, a household is more likely to be fuel poor if paying via prepayment compared to direct debit or standard credit, with around 23% of households paying via PPM in fuel poverty in 2016. BEIS (2018) Annual Fuel Poverty Statistics Report. https://www.gov.uk/government/statistics/annual-fuel-poverty-statistics-report-2018

consider that this was an arbitrary decision since it aligns to consumer protection, which is our primary objective under the Act.

3.98. We acknowledged that restricting the PPM uplift under the tariff differential approach meant that PPM specialists may under-recover their efficient costs. The PPM cost offset is applied as a mitigation step for this.

3.99. We use the PPM SMNCC generated from our model to apply the offset. The PPM SMNCC being negative represents a lowering in the cost to serve PPM customers due to moving from a traditional PPM to a smart PPM (relative to serving them in 2017). If the PPM SMNCC is negative, we will use the PPM SMNCC to offset as much of the positive £17 (£7.95 electricity, £8.97 gas) amount as possible.[139] This can lead to two possible outcomes after adding the negative PPM SMNCC to the positive amount to be offset. We call this resulting value the net PPM SMNCC:

- The resulting net PPM SMNCC value from applying the offset is negative. We use this as the PPM SMNCC allowance in the cap.
- The resulting net PPM SMNCC value after applying the offset is positive. We apply a £0 ceiling and set the PPM SMNCC allowance in the cap to zero. This aligns with our tariff differential approach to protect PPM customers.

3.100. If the PPM SMNCC generated from the model was positive in a future review, there would be no £0 ceiling applied. We would instead use that positive PPM SMNCC as the allowance in the cap. However, it does mean we would not offset any of the potential additional costs as that would result in an increase to the PPM cap level.

Value of under-recovered PPM costs

3.101. One supplier's economic adviser disagreed with our previous statements that the £17 (£7.95 for electricity, £8.97 for gas) by which PPM specialists may under-recover their efficient costs was an upper bound. They instead commented that this was more of a central estimate due to various methodological reasons arising from how the CMA calculated the original PPM uplift. (For example, that the CMA's top-down calculation approach is more likely be affected by varying supplier cost allocation practices because the CMA used a comparison of minimum cost to serve data across PPM and DD rather than

[139] The original £17 (£7.95 for electricity, £8.97 for gas) to be offset is in 2017 prices. We index this amount by CPIH when applying the offset in cap periods beyond 2017, including cap period seven.

average cost to serve data). They also stated this approach may double count smart metering benefits for the frontier firm in the CMA benchmark if this is already accounted for in the PPM uplift. Furthermore, they stated that the instability of the results to small changes in the sample highlights the sensitivity of the results to allocation decisions of specific companies.

3.102. We have previously explained why efficient PPM costs may exceed the PPM uplift by £0 to £17, with the £17 representing an upper bound of under-recovered efficient PPM costs.[140] To determine whether the PPM uplift understated efficient costs in 2017 (the first year the CMA's PPM cap was in place), we assessed the same supplier data that the CMA considered when it set the PPM uplift. This data consisted of suppliers' cost to serve PPM and direct debit customers in 2014. It is possible that suppliers were relatively more inefficient in 2014 compared to 2017, given that market concentrations were higher in 2014. This is why we consider that our £17 estimate is an upper bound. The additional conservatism allows for the possibility that true efficient costs changed between 2014 and 2017.

3.103. Furthermore, in assessing the same data as the CMA, we calculated this benchmark by taking the difference between:

- the weighted average costs to serve direct debit customers reported by the six largest legacy suppliers; and
- the weighted average costs to serve PPM customers.

3.104. Benchmarking costs requires a degree of judgement on what is efficient. Our upper bound judgement using the weighted average differs from the lower quartile approach we use elsewhere in the operating cost allowance, and does not imply that the CMA's judgement was inaccurate when setting their efficient benchmark. It is likely that the CMA set efficient costs close to the frontier level given it considered all suppliers to have inefficient operating costs due to their market power over less engaged and/or PPM customers. Therefore, the difference between the CMA's assessment of efficiency and ours is also a reason for considering the £17 to be an upper bound.

[140] Ofgem(2020), Protecting energy consumers with prepayment meters: May 2020 consultation, paragraphs 4.37 - 4.55
https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

3.105. Another supplier stated that the uncertainty around the value of the true PPM uplift should not prevent us from using a central estimate of potential excess efficient PPM costs to offset cumulatively, rather than using a cap period offset.[141]

3.106. Using a central value between the CMA's PPM uplift and the upper bound estimate to apply the offset, rather than the upper bound estimate, would result in a lower amount offset for each fuel. We consider that the upper bound is more appropriate to give sufficient regard to PPM specialists who may under-recover efficient costs due to our tariff differential approach.

3.107. When considering the current PPM SMNCC allowances for each fuel, using a cumulative approach would not allow a greater amount to be offset. Therefore, the impact of using a cumulative PPM cost offset instead of a per cap period offset would be limited.

3.108. For electricity, the initial PPM CTS difference to offset is £7.95. For the cumulative method to offset more than the per cap period method, the electricity PPM SMNCC would have to be considerably lower in all cap periods beyond cap period seven. It would have to be low enough to offset both the full £7.95 in each subsequent cap period and the portion of the £7.95 PPM CTS difference that was not recovered in cap period seven.

3.109. For gas, the initial PPM cost to serve difference to offset is £8.97. The PPM SMNCC is low enough to offset the full PPM cost to serve difference in one cap period. Therefore, a cumulative PPM cost offset is not necessary as there is unlikely to be any under-recovery to carry forward to future cap periods.

3.110. Table 3.2 and 3.3 below shows the PPM SMNCC before applying the offset and after applying the offset for cap period seven. We call the SMNCC after the offset is applied the net SMNCC. The gas PPM SMNCC is low enough to fully offset the required amount whilst the electricity PPM SMNCC allows us to offset part of the required amount.

[141] See paragraphs 4.77 – 4.83 for further explanation of using a cap period offset in our April 2021 consultation.
Ofgem (2021), Price Cap: final consultation on updating the prepayment SMNCC allowance, https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

Table 3.2 - Impact of the PPM cost offset on the electricity PPM SMNCC

	Cap period seven	Cap period eight	Cap period nine	Cap period ten	Cap period eleven
SMNCC: Electricity	-2.61	-3.75	-4.43	-5.10	-5.10
Advanced payments adjustment	0.00	0.00	0.00	0.00	0.00
SMNCC after advanced payments applied	-2.61	-3.75	-4.43	-5.10	-5.10
PPM cost offset	8.67	8.67	8.67	8.67	8.67
Net SMNCC = **Final SMNCC: Electricity**	0.00	0.00	0.00	0.00	0.00

Notes:

All values are £/customer, nominal. We discuss advanced payments in Chapter 6. We are using the CPIH indexed PPM cost offset value from cap period 7 for all cap periods. This is because this is the latest CPIH indexed PPM cost offset value that we have. CPIH is the Consumer Prices Index including owner occupiers' housing costs.

Table 3.3 - Impact of the PPM cost offset on the gas PPM SMNCC

	Cap period seven	Cap period eight	Cap period nine	Cap period ten	Cap period eleven
SMNCC: Gas	-14.54	-15.35	-16.76	-18.17	-18.17
Advanced payments adjustment	1.32	1.34	1.35	1.37	1.37
SMNCC after advanced payments applied	-15.86	-16.69	-18.11	-19.53	-19.53
PPM cost offset	9.78	9.78	9.78	9.78	9.78
Net SMNCC = **Final SMNCC: Gas**	-6.08	-6.91	-8.33	-9.75	-9.75

Notes:

All values are £/customer, nominal. We discuss advanced payments in Chapter 6. We are using the CPIH indexed PPM cost offset value from cap period 7 for all cap periods. This is because this is the latest CPIH indexed PPM cost offset value that we have. CPIH is the Consumer Prices Index including owner occupiers' housing costs

3.111. We have also previously stated why we consider a cumulative cap period offset would not be an appropriate approach.[142] In summary, £17 is a possible under-recovery, representing an upper bound. Given this uncertainty there is a risk that any offset could be too generous. A per cap period offset would be less risky on this basis. In deciding a cap period offset we err on the side of slightly greater risk of underfunding suppliers who serve less of the market rather than overfunding a majority, given we set one price cap and have an overriding need to protect consumers.

Annex 5 model and Default Tariff Model updates

3.112. We have published an updated Annex 5 model where we apply the PPM cost offset. The output of the Annex 5 model also acts as one of the inputs to the Default Tariff Cap model (Default tariff cap level v1.9). Our updates to Annex 5 have changed these input values to the Default Tariff Cap model. We have published an updated version of the Default Tariff Cap model to reflect these changes.

[142] Ofgem (2021), Price Cap: final consultation on updating the prepayment SMNCC allowance, paragraph 4.79 – 4.80.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

4. Setting the PPM-specific rollout profile

Section summary

In this chapter, we set out our decisions to have a separate rollout profile for the PPM SMNCC compared to credit. We have also decided to use a single rollout profile to set the PPM SMNCC.

4.1. The number of smart meter installations drives the majority of costs and benefits in the PPM SMNCC allowance. It affects the costs in that year and the costs in future years because we amortise certain costs over time (eg meter asset and installation costs).

4.2. We model the profile of installations over time – we refer to this as the rollout profile. We have decided to use a different rollout profile for PPM compared to credit.

4.3. We use a rollout profile to calculate a PPM SMNCC allowance that broadly reflects a given level of modelled costs (eg when we use the weighted average rollout profile, we expect to calculate a PPM SMNCC that broadly reflects the average cost of rolling out smart PPM). We have decided to use a single rollout profile for PPM to reflect a given level of modelled costs.

4.4. We have decided to use a single PPM-specific rollout profile to set the PPM SMNCC. We will use this as an input for the SMNCC model to calculate the PPM SMNCC.

Differentiating rollout between credit and PPM

Context

4.5. In our May 2020 consultation, we proposed to use the same rollout profile for the credit and PPM SMNCC.[143]

4.6. However, we found that setting a single weighted average rollout profile across both credit and PPM would set a PPM SMNCC below average costs. In our August 2020 decision,

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

we introduced a PPM-specific SMNCC for the PPM level of the cap but decided to implement our contingency position from our May 2020 consultation. Our contingency approach was to set the PPM SMNCC to £0.[144]

4.7. In our February 2021 second PPM SMNCC working paper ('PPM SMNCC WP2'), we maintained our proposal to set a PPM-specific rollout profile for the PPM SMNCC.[145] We acknowledged that while the new rollout framework does not differentiate between the credit and PPM rollout, the net costs of rolling out smart meters to PPM customers are different to those for credit customers. We considered that the rollout profile is likely to be different for PPM than for credit; maintaining the position stated in our August 2020 decision. This stated that despite rollout progress not significantly differing between PPM and credit in general, there is much greater variation in PPM rollout across suppliers, relative to average progress, compared to credit.[146]

Decision

4.8. We have decided to set a PPM-specific rollout profile for the PPM SMNCC, distinct from the one for credit.

4.9. This is unchanged from the proposal in our April 2021 consultation.

Overview of responses

4.10. No stakeholders commented on this aspect of our April 2021 consultation.

4.11. In response to PPM SMNCC WP2, three suppliers commented on this. Two suppliers were explicitly supportive of setting a separate PPM rollout profile, whilst one supplier accepted in principle the consideration of separate PPM rollout profile.

[144] Ofgem (2020), Decision on protecting energy consumers with prepayment meters, paragraphs 5.20- 5.40.
https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters
[145] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance: working paper.
https://www.ofgem.gov.uk/publications/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper
[146] This is consistent with our August 2020 decision for the credit SMNCC.
Ofgem (2020), Decision on protecting energy consumers with prepayment meters.
https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

Considerations

4.12. We do not consider that the PPM rollout is lagging substantially behind the credit meter rollout. The rollout out for smart PPM is in line with prepayment market share. At the end of 2020, 14% of all smart meters were in prepayment mode, in line with the levels of PPM in the market (also 14%).[147] However, there is greater variation between suppliers for the PPM rollout compared to credit, so we consider it appropriate to set a PPM-specific rollout profile.

4.13. Please see our April 2021 consultation for more detail on our considerations.[148]

Our analysis of rollout and costs

Context

4.14. In our April 2021 consultation (following criticisms of the model in response to PPM WP2), we proposed to continue using the SMNCC model to set the PPM SMNCC. We also proposed to amend our calculation of the weighted average rollout profile, by removing outliers from our sample of suppliers, to make it broadly reflective of the average cost of rolling out smart meters.

4.15. We also stated that we would continue to review the components and inputs of the model, based on updated data and stakeholder comments. This ensures that our model remains appropriate for our needs.

Decision

4.16. We have decided to continue using the SMNCC model to set the PPM SMNCC. This is unchanged from the proposal in our April 2021 consultation.

4.17. In line with our addendum, we have decided to adopt a contingency allowance for cap period seven.[149] We use the SMNCC model as the starting point for setting this contingency allowance.

[147] BEIS (2021), Smart meters in Great Britain, quarterly update December 2020, pg 5. https://www.gov.uk/government/statistics/smart-meters-in-great-britain-quarterly-update-december-2020
[148] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, 5.11 – 5.13. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[149] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC

Overview of responses

4.18. In response to the April 2021 consultation one supplier's economic adviser stated that the SMNCC model has an unnecessarily complex and opaque methodology that increases the risk of error.

4.19. In response to PPM SMNCC WP2, two stakeholders commented on the non-linear relationship between the rollout profiles and costs. One supplier commented on our presentation of the relationship.

Considerations

SMNCC model

4.20. One supplier's economic adviser said that the SMNCC model was unnecessarily complex. It said that the complexity led to concerns that it had not been able to identify all errors. It referred to its previous comments on the SMNCC model in response to the May 2020 consultation and said many of these had not been addressed. It said that: "The model as provided represents an unreliable basis for setting the SMNCC".

4.21. In the credit August 2020 decision we decided to review the SMNCC every 12 months.[150] In light of this, we have made some changes to simplify the model, so that it is more user-friendly for a series of annual reviews.[151] When making these changes, we considered points raised in response to the May 2020 consultation.[152] However, there are limits to the degree of simplification possible while retaining a detailed modelling approach, which is intended to support the accuracy of the SMNCC allowance.

4.22. Any model has a risk of error. However, we do not consider that there is a specific concern about the SMNCC model. We have not seen material evidence of errors in our

allowances.
https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances

[150] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 2.44.
https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

[151] These changes are detailed in Appendix 5 of the credit April 2021 consultation.
Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, Appendix 5 paragraphs 1.44 – 1.46.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance

[152] These changes are summarised in Appendix 5 of the Credit April 2021 consultation.
Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraph 1.44 - 1.46.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance

analysis, and we do not accept that a hypothetical risk of undetected errors is a sufficient reason to not use the SMNCC model.

Options and discussion for setting the PPM SMNCC

Context

4.23. In PPM SMNCC WP2, we stated that our analysis suggested that the PPM SMNCC allowance calculated using the weighted average rollout profile could be lower than the PPM SMNCC for a supplier who is significantly ahead of or behind the average. This analysis was based on the data we had in our model and using our assumptions at the time.

4.24. Our initial assessment suggested that the issue could be caused by the weighted average PPM rollout profile having a modelled lower cost increase/higher cost decrease over 2021-2023 relative to the 2017 benchmark compared to other rollout profiles. Our modelling suggested this was because of a decrease in traditional meter costs and an increase in operational benefits, which more than offset the continued increase in smart meter asset and installation costs.

4.25. Therefore, in PPM SMNCC WP2, we considered two options for setting the PPM SMNCC:

- using a single rollout profile; and
- taking the average of the PPM SMNCC allowances generated by using a sample of rollout profiles.[153]

4.26. Our preferred option was to use a single rollout profile to calculate the PPM SMNCC. This method was in line with our proposals for the SMNCC (both PPM and credit).

4.27. We stated that we would look to use a rollout profile that produces a PPM SMNCC level that broadly reflects the average cost of the smart meter rollout to PPM customers. To achieve this with the weighted average rollout profile, we stated that we would consider whether the current sample was the most appropriate and if the weighted average rollout

[153] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance: working paper, 4.15-4.26. https://www.ofgem.gov.uk/publications/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper
[153] These changes are summarised in Appendix 5 of the Credit April 2021 consultation. Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance

profile is the best statistical metric to model the average cost of the smart meter rollout to PPM customers.

Decision

4.28. We have decided to use a single rollout profile. This is unchanged from the proposal in our April 2021 consultation.

4.29. We have decided to remove outliers from our sample of suppliers used to calculate the weighted average rollout profile, to make it broadly reflective of the average cost of rolling out smart meters. This is unchanged from the proposal in our April 2021 consultation.

4.30. We have decided to apply different rollout profiles for each fuel. We estimate these by applying the ratio between the fuel-specific and combined dual fuel rollout profiles at market level. This is a change from our April 2021 consultation.

Overview of responses

4.31. In response to the April 2021 consultation, one supplier stated that we should use rollout profiles for individual fuels, rather than a single profile across fuels.

4.32. In response to PPM SMNCC WP2, two suppliers commented on using a single rollout profile. Both were supportive of this, though one supplier stated their support was providing we commit to excluding PPM-specialist outliers from the sample of suppliers used to generate the weighted average rollout profile.

Considerations

Supplier sample

4.33. We stated in our April 2021 consultation that our criteria for rollout exclusion involved a combination of two reasons, and we would not consider a supplier an outlier for one of these reasons alone:

- if a supplier is sufficiently far ahead of all other suppliers in terms of smart PPM rollout such that it skews our calculations of the PPM SMNCC so that it is no longer representative of the market as a whole; and

- if the supplier is excluded from the 2017 operating cost benchmark such that we would not be comparing its smart meter rollout costs since 2017 to its own costs in 2017.[154]

4.34. We consider that one supplier meets these criteria and is therefore an outlier. We have removed it from the sample of suppliers we used to calculate the rollout profile.

Fuel-specific rollout profiles

4.35. For our credit May 2020 consultation, we used separate rollout profiles for each fuel.[155] In our credit August 2020 decision, we adjusted our definition of the weighted average rollout profile by excluding small suppliers and by using separate rollout profiles for credit and PPM. We noted that this revised rollout profile was based on Annual Supplier Return (ASR) data.[156] This data was not split by fuel, so we did not calculate separate rollout profiles for each fuel.[157] We replicated this approach when estimating the PPM rollout profile.[158] We maintained the approach in our April 2021 consultation.

4.36. In response to the April 2021 consultation, one supplier said that we must return to our previous approach of separate rollout profiles for gas and electricity, rather than using a combined dual fuel profile as proposed. It said that we had not explained or justified our change in approach.

, paragraph 1.44 - 1.46.
https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance
[155] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 4.2.
https://www.ofgem.gov.uk/publications/reviewing-smart-metering-costs-default-tariff-cap-may-2020-statutory-consultation
[156] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.15 and footnote 41.
https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap
[157] We did not state that we were using the same rollout profiles for each fuel in our August 2020 credit decision. However, we specified the source for our rollout data and the Large Energy Suppliers who provided this data would have been aware that it was not split by fuel.
[158] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance – working paper, section 2.
https://www.ofgem.gov.uk/publications/decision-protecting-energy-consumers-prepayment-meters

4.37. The supplier's economic adviser said that setting different rollout profiles for gas and electricity was important for three reasons, it said that:

- gas and electricity smart meters have different costs, so the rollout for each fuel affects the total costs to industry;
- assuming the wrong split would underfund suppliers who do not have an equal split of customers on each fuel; and
- assuming equal rollout for gas and electricity would overstate the proportion of dual fuel installations, and understate the number of single fuel installations (which are more expensive than dual fuel installations on a per meter basis).

4.38. Our approach in the credit August 2020 decision was driven by the available data, rather than a preference in principle for a combined dual fuel rollout profile. We agree that gas and electricity smart meters have different costs, and therefore that the rollout profiles used for each fuel will affect the total costs. We also agree that the rollout profiles for each fuel will also impact on costs via the number of dual fuel and single fuel installations.[159] We therefore agree that setting fuel-specific rollout profiles is preferable.

4.39. Our decision to use fuel specific rollout profiles is the same for both the credit and PPM SMNCC. Therefore for more information on the options we considered for setting fuel-specific rollout profiles and the methodology we decided to calculate this, please see Chapter 2 of our August 2021 decision on the credit SMNCC.[160]

[159] This effect is relatively small, as a difference in rollout percentages between fuels is only one possible cause of single fuel installations. The SMNCC model already includes single fuel installations for other reasons. One reason is the fact that there are more electricity than gas meter points (meaning that a dual fuel installation is not physically possible in all cases). Another reason is that the SMNCC model assumes that single fuel installations occur for a proportion of premises which have both fuels (ie even where a dual fuel installation would be physically possible).
[160] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance, paragraphs 2.58 – 2.66. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

5. Calculating the PPM-specific rollout profile

Section summary

In this chapter, we set out how we calculate the PPM-specific rollout profile. We describe how we calculate the historical rollout, the rollout over the remaining period of the 'all reasonable steps' framework, and the rollout under the new BEIS framework.

5.1. We introduced the PPM level of the default tariff cap from 1 January 2021. Prior to this PPM customers were protected by the PPM cap, set by the CMA. In our analysis, we only consider the cost of rollout of smart meters to PPM customers from the point they were protected by the default tariff cap. This is the period 2021-2023 (the years covering the remaining cap periods from cap period seven onwards).[161]

5.2. In order to set the rollout profile for PPM, we need to take into account the historical rollout of smart PPM as well as a forecast of future rollout, taking into account the different BEIS frameworks. There are three time periods that we need to model:

- historical periods up to the end of 2020;
- January 2021 – December 2021 that is covered by the 'all reasonable steps' framework – the current framework for the smart meter rollout; and
- January 2022 – end-2023 that is covered by the new smart meter rollout framework, which begins on 1 January 2022. BEIS's policy ambition for the new framework is market wide rollout by end-2025.

5.3. For the new smart meter rollout framework, we have decided to reflect the average net cost of the smart meter rollout to PPM customers (using the weighted average rollout profile to reflect the market average of smart meters) rather than the highest net cost to PPM customers (the highest cost rollout profile for a supplier to meet the policy ambition).

5.4. For historical periods, we have decided to use the available supplier rollout data to construct the rollout profile, and use a modelled approach to fill in any missing data points. For the rest of the period covered by the 'all reasonable steps' framework, we have decided

[161] This is dependent on the Secretary of State's decision each year on whether to extend the cap.

to use actual Q1 2021 smart PPM rollout numbers for the Q1 2021 part of the profile, and to use suppliers' updated Q2 2021 rollout plans provided to BEIS as a basis for the remainder of 2021.

5.5. We have also decided to set the rollout profile in line with suppliers' minimum installation obligations (a 'tolerance' approach).

5.6. In SMNCC WP2, we set out four principles which we intended to use to help us choose between rollout profiles.[162] These were:

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

5.7. We noted that there would be clear trade-offs between these principles, so there would be judgement about which rollout profile option to select. We consider that these are also relevant for PPM.

5.8. Throughout this chapter, we discuss the net costs or PPM SMNCCs of individual suppliers. It is important to note that these are solely driven by differences in rollout profiles between suppliers rather than differences in unit costs (which we keep fixed in the model). Therefore, when we say the average rollout profile should broadly reflect the average PPM SMNCC, we mean the average of the modelled PPM SMNCCs generated by a sample of rollout profiles, all else being equal. Additionally, where we mention a rollout profile, we are referring to a PPM-specific rollout profile.

5.9. Our current view is that the decisions we have made in this chapter for cap period seven will remain appropriate for cap period eight and beyond. We therefore discuss aspects beyond cap period seven (such as the approach for 2023). However, we will consult in the autumn before making decisions for cap period eight onwards.

[162] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.22-2.26. https://www.ofgem.gov.uk/publications/smart-meter-rollout-and-default-tariff-cap-working-paper

Historical periods

Context

5.10. We need to include the historic rollout as the number of installations in a year does not just affect the costs in that year. It also affects the costs in future years because we amortise certain costs over time (eg meter asset and installation costs). Hence the SMNCC in any year includes amortised costs from previous years.

5.11. In PPM SMNCC WP2 we stated that, for past periods, we proposed to largely use supplier rollout data, and use a modelled approach to fill in any missing data points.[163]

5.12. In our April 2021 consultation, we proposed to use the available supplier rollout data, and use a modelled approach to fill in any missing data points. We proposed to use supplier rollout data over 2017-2020. The modelled approach would cover 2011-2016.

Decision

5.13. We have decided to use the available supplier rollout data, and use a modelled approach to fill in any missing data points.

5.14. We have decided to use supplier rollout data for the period 2017-2020. We use a modelled approach to set the profile for the period 2011-2016.

5.15. This is unchanged from the proposal in our April 2021 consultation.

Overview of responses

5.16. We received no comments on our April 2021 proposal.

5.17. In response to PPM SMNCC WP2, one supplier commented that there were ambiguities in our narrative relating to how we propose to calculate the profile for historical periods.

[163] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance: working paper. https://www.ofgem.gov.uk/publications/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper

Considerations

5.18. We calculate a weighted average rollout profile for historical periods:

- using supplier rollout data from the 2020 SMAIR for the years 2017-2020;
- using data collected by BEIS on the number of operating smart PPM for each supplier in 2016 as a proxy for the 2016 rollout;
- using BEIS data on the overall market rollout percentage in 2015 to model the average 2015 rollout; and
- setting the rollout from 2011-2014 to 0%.

5.19. Please see our April 2021 consultation for more detail on our considerations.[164]

'All reasonable steps' framework

Context

5.20. In PPM SMNCC WP2, we explained that we would only receive actual data on PPM rollout progress up to the end of 2020 in time for our decision on the PPM cap in August 2021.[165] We had therefore set out three options to estimate rollout in the first half (H1) of 2021.

5.21. Each option had the same starting point, the cumulative rollout at the end of 2020, with different ways of forecasting rollout over the subsequent six-month period:

- option 1 – use the average smart PPM rollout between 2017 and 2019;
- option 2 – roll forward suppliers' smart PPM rollout over 2020 (ie assume the rate of rollout in H1 2021 is the same as in 2020); and

[164] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, 6.13 – 6.15. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance
[165] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance: working paper, paragraphs 2.11-2.19. https://www.ofgem.gov.uk/publications/setting-level-rollout-ppm-smart-meter-cost-allowance-working-paper

- option 3 - use suppliers' rollout plans for the first half of 2021.

5.22. On option 1, we stated that there was a risk that historical performance over 2017-2019 could overstate what is achievable if the effects of COVID-19 extend into 2021. Conversely, this approach might understate the level of PPM rollout if suppliers had waited for SMETS2 meters before starting their PPM rollout.[166]

5.23. On option 2, we stated that the COVID-19 impacts over 2020 were not necessarily the same as those that suppliers will face during H1 2021.

5.24. For option 3, the rollout plans were not split by credit and PPM. This option assumed that the incremental rollout is the same in the first half of 2021 for credit and PPM. At the time of PPM SMNCC WP2, we did not have a clear reason to expect there to be a large discrepancy in rollout across the two in practice.

5.25. In our April 2021 consultation, we proposed to use actual Q1 2021 smart PPM rollout numbers to represent this quarter in the PPM-specific rollout profile.[167] This was in line with stakeholder responses to our working paper. As we still needed a way to model Q2 2021, we also proposed to use suppliers' updated rollout plans provided to BEIS for Q2 2021 to model rollout progress by the end of H1 2021. This is a variation on option 3 in the PPM SMNCC WP2.

5.26. As detailed in Chapter 1, BEIS decided to extend the 'all reasonable steps' rollout obligation for six months. This means that the new rollout framework will take effect from 1 January 2022, rather than 1 July 2021. As a result, we also need to estimate rollout over the second half of 2021. In our addendum, we proposed to assume that rollout in Q3 and Q4 2021 will be the same as the supplier forecasts for Q2 2021 provided to BEIS.[168]

Decision

5.27. We have decided to use actual Q1 2021 smart PPM rollout numbers to represent this quarter in the PPM-specific rollout profile.

[166] A PPM solution for SMETS2 meters was not available for the majority of the 2017-2019 period, but is now available at scale so we may expect higher levels of PPM rollout.
[167] Quarter here refers to a calendar quarter rather than the financial quarter of a company.
[168] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, pg 3. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances

5.28. We have decided to use suppliers' updated rollout plans provided to BEIS for Q2 2021 to model rollout progress by the end of H1 2021.

5.29. This decision is unchanged from the proposal in our April 2021 consultation.

5.30. In line with our addendum, we have decided to adopt a contingency allowance for cap period seven. To calculate this allowance, we have decided to assume that rollout in Q3 and Q4 2021 will be the same as the supplier forecasts for Q2 2021 provided to BEIS.[169] This is unchanged from our addendum proposal.

Overview of responses

5.31. We received no comments on our April 2021 proposal.

5.32. Two suppliers commented on our addendum. One supplier believed that using Q2 forecasts to estimate Q3 and Q4 2021 is likely to impact suppliers who were expecting to accelerate their rollouts. However, it agreed any contingency allowance should be based on the SMNCC model. Another agreed with the intention to adopt a contingency allowance for cap period seven but disagreed with the proposal to amend the rollout profile in the SMNCC model by flat-lining the rollout profile in Q2 2021 forecasts to estimate Q3 and Q4.

5.33. In response to PPM SMNCC WP2, three suppliers commented on our three options. One supplier supported a variation on option 1 and the other two preferred option 3.

Considerations

Q1 2021

5.34. Actual Q1 2021 data is now available, so we have been able to use that in our estimation.

[169] The rollout information that we have for 2021 is the numbers of meters installed. We therefore intend to make the following assumptions when calculating cumulative rollout percentages for 2021: that each supplier's customer numbers are unchanged since the end of 2020, and that the the only change in a supplier's smart meter customer numbers is due to new installations. We consider that these minor assumptions are appropriate over a short period of time.

Q2 2021

5.35. We consider that it is preferable to use supplier rollout estimates for Q2 2021. This is option 3, except that we are using this method to calculate only half of H1 2021.

5.36. Option 1 would not be appropriate as we do not consider that the rollout between 2017 and 2019 would be representative of the rollout in Q2 2021. This is because COVID-19 could still impact the number of smart meters that can be installed in Q2 2021. We also do not consider that it would be appropriate to estimate the rollout for Q2 based on 2020 data. Though there may still be an impact from COVID-19, this is likely reduced since 2020. Therefore, option 2 may understate the rollout that suppliers are able to achieve in Q2 2021.

5.37. Please see our April 2021 consultation for more detail on our considerations.[170]

Q3 - Q4 2021

5.38. One supplier acknowledged that using Q2 2021 forecasts is necessary, where there is no ready alternative. However, it believed that this is likely to impact suppliers who were expecting to accelerate their rollouts. Another supplier thought that we should analyse the rising trend in actual rollout volumes over Q2 and extrapolate that over Q3 and Q4 instead. It said that we should use the cap five/six PPM SMNCC to allow us time to gather data on the trend in rollout in Q2 2021.

5.39. We do not consider that gathering rollout data was feasible in the time available for our decision-making process ahead of cap period seven. Even if we had asked suppliers for their expectations for rollout in the second half of 2021, this might not have significantly increased accuracy (relative to using their projections for Q2 2021), given the continued uncertainty around COVID-19.

5.40. We also do not consider that projecting an increase in rollout in Q3 and Q4 2021 (relative to Q2 2021) is likely to improve accuracy.

5.41. First, it is not self-evident that rollout will be higher in Q3 and Q4 2021 than in Q2 2021. There were no restrictions on smart meter installations during Q2 2021 (except during April 2021 in Scotland). Rollout therefore would not increase significantly as a result

[170] Ofgem (2021), Price Cap - final consultation on updating the PPM SMNCC allowance, 6.26 – 6.38. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

of a removal of restrictions. The mechanism for an increase in rollout would therefore need to be through an improvement in customers' willingness to accept an installation, due to changes in the COVID-19 situation. This is harder to predict.

5.42. Second, the Q2 2021 rollout forecast across suppliers is already higher than rollout in most historical quarters. This is based on comparing suppliers' projections for Q2 2021 against historical rollout published by BEIS in its smart meter statistics.[171]

5.43. Moreover, any discrepancy between our estimated and actual Q3/Q4 rollout will be temporary, as we will correct for this in future cap periods through the advanced payments adjustment.

New framework: average or highest net cost rollout profile

Context

5.44. In PPM SMNCC WP2 we discussed whether to set the PPM SMNCC allowance based on the market average PPM rollout or the rollout of the supplier with the highest net cost rollout. Our analysis suggested that the supplier with the highest net cost rollout would be the supplier with the lowest smart PPM rollout.

5.45. We proposed to use the market average PPM rollout to reflect the average net costs incurred by PPM customers for the rollout of smart meters. We stated that the market average should reflect the aggregate cost of the rollout to PPM consumers for a given level of efficient costs.

5.46. In our April 2021 consultation, we maintained the proposed to set the PPM SMNCC allowance based on the market average PPM rollout.

5.47. As detailed in Chapter 1, BEIS decided to extend the 'all reasonable steps' rollout obligation for six months. This means that we have to estimate the new rollout framework from 1 January 2022, rather than 1 July 2021. In our addendum, we noted that we would not alter our proposals on estimating rollout during the new framework.[172] This was

[171] In each case, this data was for the Large Energy Suppliers (as defined for smart meter reporting) and included all domestic customers (credit and PPM).
[172] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, pg 4. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances

because the principles we intended to use to help us choose between rollout profiles had not changed.

Decision

5.48. We have decided to set the PPM SMNCC allowance based on the market average PPM rollout, split by fuel.

5.49. This is different from the proposal in our April 2021 consultation, where we proposed using one rollout profile across both fuels. Moreover, the extension of the 'all reasonable steps' framework means that we will only be estimating the rollout from 1 January 2022, rather than from 1 July 2021, based on the new framework.

Overview of responses

5.50. Six suppliers commented on our April 2021 proposal. Two broadly supported our use of the weighted average rollout profile with outliers removed.

5.51. One partly agreed, arguing for the use of fuel-split average rollout profiles from 2018 onwards. We discuss fuel-split rollout profiles in Chapter 4.

5.52. Two suppliers were not supportive of our proposal. One considered that we are justifying the proposal on the basis that suppliers can over-charge credit customers to recover the difference.

5.53. One supplier stated that it is inappropriate to exclude the rollout profile of a supplier where enforcement action is ongoing.

5.54. In response to PPM SMNCC WP2, two additional stakeholders commented on this issue. One suggested that we should consider the frontier of smart PPM rollout ie a market leader rollout profile, and the other stated that they would welcome clarification as to the rationale behind our different approach to the PPM SMNCC compared to credit.

Considerations

Under-recovery

5.55. One supplier had concerns that using a weighted average rather than market leader tolerance would result in an under-recovery for suppliers with an above average rollout profile.

5.56. Credit meters represent the vast majority of domestic meters, and the legal obligations on suppliers for the smart meter rollout are for domestic meters as a whole. Therefore, we have decided to use a market leader rollout profile for credit, to support all efficient suppliers to deliver their obligations – including those with above-average rollout.[173] A consequence of our decision to use the market leader rollout profile in credit is most suppliers being overfunded (most suppliers in credit have costs below the market leader). This means that using the highest net cost supplier's rollout profile in PPM would also lead to most suppliers being overfunded. This would be contrary to the objective of the Act to protect default tariff customers. Most of the suppliers who would be underfunded by a weighted average rollout profile in PPM would be overfunded in credit. Therefore, across both credit and PPM, most suppliers are likely to receive enough funding to cover the efficient costs of delivering their obligations.

5.57. We must set a single cap level, so there may be differences between the allowance we set and individual suppliers' efficient costs. This is an unavoidable consequence of setting a single allowance that protects customers, in accordance with Section 1(6) of the Act. In our April 2021 consultation we invited stakeholders to suggest alternative mechanisms or adjustments to the weighted average rollout profile that we had not considered, that might better match efficient costs. We did not receive any suggestions.

Impact on suppliers with few credit customers

5.58. One supplier stated that the proposal is especially discriminatory against those suppliers with a lower than average credit customer mix. It stated that we ignore the fact that not all PPM suppliers will over-recover on credit from the market leader rollout profile.

5.59. We acknowledged in our April 2021 consultation that suppliers with fewer credit customers would not benefit to the extent of suppliers with an average mix of credit and

[173] Ofgem (2021), Price Cap - Decision on credit SMNCC allowance, Chapter 2. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

PPM customers from the overfunding in credit. There is a risk that these suppliers would not recover their efficient costs of delivering their obligations. The extent that this would be the case would depend on their efficiency when compared to the modelled allowance.[174]

5.60. The supplier stated that we have taken deliberately anti-competitive decisions. It stated that we have minimised the potential for competition for PPM suppliers (particularly PPM specialists) but improved it for credit, because in credit there is headroom for that competition to take place for those with more efficient practices and costs (and/or with fewer than average PPM customers).

5.61. Our decision is not based on an intention to allow credit customers to be overcharged so that PPM customers can be undercharged. As stated earlier, we have concluded that the market leader rollout profile is the most appropriate decision for credit, to support efficient suppliers to deliver their obligations for domestic meters as a whole. A consequence of this would be most suppliers being overfunded in credit. Therefore, we have used this to balance the need to fund suppliers' efficient costs and protect customers in PPM, by considering that this overfunding can likely be used to cover the potential underfunding in PPM for most suppliers.

5.62. The supplier also stated that there is no incentive for domestic customers to switch to different domestic supply contracts in circumstances where the PPM cap does not allow an efficient supplier to recover its costs because all suppliers will supply at the level of the cap given this price is too low to recover costs. It stated that we are effectively sending exit signals to suppliers serving the PPM market.

5.63. As mentioned in paragraph 5.566, across credit and PPM most suppliers' efficient costs for the smart meter rollout will be funded by our decisions. Therefore, we do not consider that our decisions would cause supplier exits to such an extent that competition would be reduced. Moreover, as highlighted in our May 2020 consultation, there is low engagement among PPM customers. This means they are unable to take advantage of choice in the market even if this did increase.[175] Therefore, while setting the cap too low could reduce competition, we consider that setting it at a level at which most suppliers

[174] Our allowance assumes average efficiency and costs for suppliers. Therefore the impact on these suppliers would depend on their individual costs compared to the market information used to calculate the allowance.
[175] Ofgem (2020), Protecting energy consumers with prepayment meters: May 2020 consultation, 2.7. https://www.ofgem.gov.uk/publications/statutory-consultation-protecting-energy-consumers-prepayment-meters

would be materially overfunded would not produce commensurate benefits to PPM customers through increased competition.

Excluding suppliers based on enforcement action

5.64. One supplier stated that, where a supplier has an enforcement action ongoing, we should not presuppose guilt before concluding our investigation. It would welcome clarification on whether our proposal to exclude such a supplier relates only to the calculation of the highest net cost profile or whether it would also exclude such suppliers from the calculation of the market average.

5.65. We exclude suppliers with ongoing enforcement action from our sample when assessing for the supplier with the highest net cost rollout profile in PPM. This means their rollout profiles cannot be selected as the highest net cost rollout profile. This prevents the PPM SMNCC being set using the rollout profile of a supplier that may later be found to be in breach of rules around the smart meter rollout.

5.66. As we have decided to use the weighted average rollout profile, the calculation of the highest net cost rollout profile is not relevant for our decision. We acknowledge that it would not be appropriate to presuppose guilt, so we do not want to completely exclude suppliers with ongoing enforcement action from our calculations to set the PPM SMNCC. Therefore, we do not exclude them from the sample used to calculate the weighted average rollout profile for PPM. This is because multiple supplier rollout profiles influence the output of this calculation, reducing the impact of any single supplier.

New framework: target or tolerance rollout

Context

5.67. Under the new framework, BEIS will set individual targets for suppliers' rollout, which will be combined with a standard tolerance.

5.68. BEIS has decided on tolerance values for the first two years of its new framework.[176] These are the years ending in December 2022 and December 2023. The cap could run until the end of 2023.

[176] The tolerances are the same for all suppliers (domestic rollout: 3.5% in 2022; 5.1% in 2023, non-

5.69. In PPM SMNCC WP2, we discussed two options:

- set the PPM allowance based on suppliers' target rollout; or
- set the PPM allowance based on suppliers' tolerance rollout.

Decision

5.70. We have decided to set the PPM SMNCC based on the minimum installation obligation (tolerance).

5.71. This is unchanged from the proposal in our April 2021 consultation.

Overview of responses

5.72. One supplier commented on our April 2021 proposal. It did not explicitly disagree, but stated that the use of tolerance risks a self-fulfilling prophecy.

5.73. In response to PPM SMNCC WP2, seven stakeholders commented on this, all of whom were supportive of using the target level. Two suppliers stated it would minimise the risks of some suppliers experiencing a deficit in revenue to cover efficient costs, impacting their ability to deliver on their smart metering obligations.

Considerations

5.74. One supplier stated that, with our proposal, BEIS should not be under any misapprehension that market leaders are funded, obliged or incentivised to exceed the minimum obligations recently confirmed.

5.75. While we want suppliers to have ambitious rollout plans, we cannot hold them to account for not spending any additional revenue on smart metering (above their legal obligations). However, in our April 2021 consultation, we did mention that increases in rollout would be supported by suppliers improving their operational performance (we discuss this in Chapter 5 of our April 2021 consultation on the credit SMNCC).[177]

domestic rollout: 6.1% in 2022; 8.3% in 2023). BEIS (2021), Delivering a smart system: government response to a consultation on smart meter policy framework post-2020, Part 2 - Conclusion. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020

[177] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance.

5.76. In response to BEIS's 2019 consultation some suppliers said that they would only aim for the minimum legal obligation. BEIS has taken this into account when setting the tolerance.[178] Therefore, BEIS was aware of the possibility of suppliers only rolling out to their minimum legal obligation even before our decision. Please see our April 2021 consultation and our August 2021 decision on the credit SMNCC for further responses to stakeholder comments that funding to the tolerance levels would risk suppliers delivering their smart meter obligations.[179]

https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-credit-smncc-allowance

[178] BEIS (2020), Smart Meter Policy Framework Post 2020: Minimum Annual Targets and Reporting Thresholds for Energy Suppliers, paragraph 70. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers

[179] Ofgem (2021), Price Cap: final consultation on updating the prepayment SMNCC Allowance, 6.80 – 6.84. https://www.ofgem.gov.uk/publications/price-cap-final-consultation-updating-ppm-smncc-allowance

Ofgem (2021), Price Cap - Decision on credit SMNCC allowance, 2.28-2.37. https://www.ofgem.gov.uk/publications/price-cap-decision-credit-smncc-allowance

6. Other areas

Section summary

This chapter covers other areas of consideration for setting the PPM SMNCC. These are uncertainty, the advanced payments adjustment, and our contingency option.

6.1. Our current view is that the decisions we have made in this chapter for cap period seven will remain appropriate for cap period eight and beyond. We therefore discuss aspects beyond cap period seven (such as the approach for 2023). However, we will consult in the autumn before making decisions for cap period eight onwards.

Review of uncertainty

6.2. We have qualitatively assessed the uncertainty around our analysis to set the PPM SMNCC. This method is the same as we have used previously for the credit SMNCC. Our conclusion is that the net effect of the uncertainty is roughly neutral, and that we therefore have decided to not make a numerical uncertainty adjustment. We have provided a detailed explanation in Appendix 3.

Advanced payments

Context

6.3. Advanced payments reflect when suppliers have received payment in advance for smart metering costs they have not incurred, or when they have not received payment for efficient costs that they should have been funded for. 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.

6.4. In our August 2020 decision, we said that we would calculate advanced payments for the PPM SMNCC from 1 January 2021.[180] We intended to apply advanced payments for the PPM SMNCC in the same way as for the credit SMNCC. Different to credit, however, the PPM SMNCC also includes an offset for the potential additional PPM costs, as described in

[180] This is the date at which the CMA PPM cap expired and PPM customers became protected by the default tariff cap.

Chapter 3.[181] Therefore, we have to decide whether to calculate advanced payments before or after applying this offset.

6.5. In PPM SMNCC WP1, we proposed to consider advanced payments after applying the offset.[182] We call the SMNCC after the offset is applied the net SMNCC. We stated that to calculate advanced payments, we should compare the original net SMNCC allowance for a given period to the updated net SMNCC figure we reach with new data.

6.6. This proposal remained unchanged in our April 2021 consultation.

Decision

6.7. We have decided to calculate advanced payments using the net SMNCC for PPM (ie after we have applied the offset), rather than the SMNCC determined by the model.

6.8. This is unchanged from the proposal in our April 2021 consultation.

Overview of responses

6.9. Four suppliers commented on our April 2021 proposal.

6.10. One agreed with the need for ongoing reconciliation, but felt that greater visibility is needed on what is being reconciled and that this reconciliation should be extended to other aspects of the cap.

6.11. Two suppliers disagreed with advanced payments. One remained opposed to the policy of advanced payments due to the impact this may have on suppliers' ability to recover efficient costs in future cap periods. Another stated that advanced payments represent an artificial reduction of the SMNCC allowance that is improper and legally flawed.

6.12. One supplier stated that we apply an arbitrary cut-off date for the application of the SMNCC, meaning that it does not reflect the net costs of the smart meter rollout.

[181] See 'Offsetting additional PPM costs' for more detail on these potential additional costs.
[182] Ofgem (2020), Setting the PPM smart meter cost allowance in the default tariff cap – working paper, 3.26. https://www.ofgem.gov.uk/publications/setting-ppm-smart-meter-cost-allowance-default-tariff-cap-working-paper

6.13. In response to PPM SMNCC WP2, three suppliers commented on our proposal for advanced payments, all disagreeing with some aspect of it. However, to the extent we continue to pursue advanced payments, one supplier explicitly supported using the net SMNCC rather than the SMNCC determined by the model.

Considerations

Extending advanced payments to other areas of the cap

6.14. We set out the reasons the advanced payments adjustment is applied only to smart metering costs in our April 2021 consultation. One supplier stated that these reasons actually argue for wider reconciliation.

6.15. We described two main reasons:

- suppliers can exert some control over when they incur the costs of the smart meter rollout. They may choose to not spend the funding we provide for a certain cap period in that cap period. This means we need to be able to adapt the amount of funding provided once we know the actual percentage of smart PPM rolled out and level of efficient costs incurred in that cap period. This does not argue for wider reconciliation as it is more difficult for suppliers to shift costs in other areas (eg billing, customer service) into future cap periods; and

- we review smart metering costs annually, as the smart meter rollout is continually progressing. Moreover, we fund suppliers taking into consideration their smart meter rollout obligations. These obligations can change, such as the recent extension of the 'all reasonable steps' framework. We need to be able to adapt to these changes, including by reconciling the funding already provided to these changes. As this does not apply to other areas of the cap, this does not argue for wider reconciliation.

Uncertainty around values

6.16. One supplier stated that we should, as we have chosen to do for other adjustments such as for COVID-19 impacts, only seek to make an advanced payments adjustment where we can confidently identify material differences between the allowance provided and the efficient costs incurred.

6.17. We conduct annual reviews of our methodology, as part of which we collect stakeholders' comments and the latest data. Based on this, we determine which aspects of our method to calculate the PPM SMNCC are working appropriately and which should be amended, as we have done for this decision. We then make these changes, reducing uncertainty around our estimates of rollout and costs. As a result, with every review, our estimates become more robust. We can then confidently calculate the difference between our updated numbers and the previously set allowances. We consider it important that any over or underpayment is reflected as soon as possible, so we would apply our advanced payments adjustment after every review.

6.18. Moreover, we calculate advanced payments as part of our annual review of the SMNCC allowance. We do not consider that the standard for making changes to each individual element feeding into the SMNCC allowance is the same as for making changes to an entire allowance.[183]

Impact on suppliers' business planning

6.19. One supplier said that, by including an advanced payments adjustment, we are failing to meet the legitimate expectations of suppliers.

6.20. Our general policy on advanced payments in the SMNCC has been clear since cap period three. It is reasonable to assume that this clarity has informed suppliers' expectations on the PPM SMNCC. We also described advanced payments, in relation to the PPM SMNCC specifically, in our May 2020 consultation. As we will be applying the advanced payments adjustment for the first time in cap period seven, we consider that we have given adequate notice on including such an adjustment.

6.21. Two suppliers stated that advanced payments could lead to increased regulatory uncertainty for suppliers.

6.22. We considered similar points on certainty in our August 2020 decision on the credit SMNCC.[184] In summary, while we considered that stability for planning is beneficial, we

[183] In our 2018 credit decision, we said that we might make a change if the cap "systematically and materially departed from an efficient level of costs".
Ofgem (2018), Decision – Default tariff cap – Overview document, paragraph 3.14.
https://www.ofgem.gov.uk/sites/default/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf
[184] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.69-5.70. https://www.ofgem.gov.uk/publications/decision-reviewing-smart-metering-costs-default-tariff-cap

considered that avoiding the harm to customers or suppliers that would come from letting the allowances deviate substantially from suppliers' costs (in either direction) outweighs any incremental uncertainty from such an approach.

6.23. We recognise that a supplier will not have certainty on what advanced payment adjustments may later apply, and that the extent of advanced payments will depend on other suppliers' rollout. This could reduce a supplier's willingness to carry out discretionary spending on smart metering, beyond the amount required to meet its obligations. However, we generally expect that suppliers' smart metering obligations will be the main driver for their planning. The modelling outputs of this review can also be used by suppliers to guide their planning and budgeting in future periods.

Impact on suppliers who have fully invested funding into rollout

6.24. One supplier stated that the adjustment is clearly unreasonable where a supplier has fully invested the relevant funds to advance rollout, as it ultimately deprives suppliers who have diligently complied with their rollout obligations of future funding for ongoing smart rollout.

6.25. We reassess costs based on the impact on the efficient operating costs of a supplier with an average rollout profile. If the PPM SMNCC is higher than those costs, and invested fully, then the supplier has above average unit costs (inefficient costs), rollout progress that is different from the average (either below or above), or both. The former is not a relevant consideration to the adequacy of the PPM SMNCC. On the latter, rollout progress deviating from the average is not a problem specific to deducting advanced payments. It is a consequence of the need to set one allowance for all suppliers, even though suppliers' circumstances differ. We discuss this in Chapter 5.

Time period covered by advanced payments

6.26. One supplier would like us to include the period of time that PPM customers were protected by the CMA PPM cap in advanced payments, and stated that our proposals mean that we apply advanced payments only if it is a negative amount.

6.27. Our calculation of advanced payments covers the period from 1 January 2021 because this is the date that PPM default tariffs were included in the default tariff cap. We consider any discrepancies between the funding provided and suppliers' efficient costs during the CMA's PPM cap to be outside the scope of our considerations. The CMA decided

that reconciliation was not needed for the period covered by their PPM cap, and we do not consider it our role to reopen a decision that the CMA has made.

6.28. Moreover, the CMA noted that their PPM cap included headroom which, while designed for allowing competition under the cap, would have in practice offset under-estimations of costs in the cap methodology. The CMA also amended its methodology to correct for the underestimation of suppliers' efficient costs, and the new methodology was applied from October 2019.

6.29. It is not correct that we propose to only apply advanced payments if they are negative. We will apply the advanced payments adjustment irrespective of whether it is positive or negative. This means that we would increase the SMNCC if we calculated a positive advanced payments adjustment (technically a lagged payment rather than advanced). Currently the advanced payments adjustment is negative, but in future cap periods, if suppliers start to roll out smart PPM faster than we expect, we may find ourselves applying a positive advanced payments adjustment.

Compliance with 'all reasonable steps'

6.30. One supplier stated that, effectively, by applying advanced payments, we have assumed an efficient supplier would have put themselves in potential breach of their regulatory obligations by not taking all reasonable steps to roll out. They stated that no reasonable supplier could have taken that approach.

6.31. As set out in our May 2020 credit consultation, we do not agree that the SMNCC allowance defines all reasonable steps – ie that spending the SMNCC allowance constitutes taking all reasonable steps.[185] A supplier would have been able to take into account our intention to apply advanced payments when considering what rollout activities to carry out.[186]

6.32. The supplier stated that advanced payments cannot be used as a way to punish all suppliers on the basis that some suppliers have not properly spent past allowances or otherwise done enough to reasonably advance rollout. They stated that, to the extent

[185] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 7.52. https://www.ofgem.gov.uk/publications/reviewing-smart-metering-costs-default-tariff-cap-may-2020-statutory-consultation

[186] This applies to the extent (if any) that the revenue available to suppliers is relevant to assessing their compliance with the all reasonable steps obligation.

suppliers have not complied with their obligations, this should be dealt with through targeted enforcement.

6.33. Ofgem will assess all suppliers' compliance against their licence obligation, which is to take 'all reasonable steps' to complete the rollout by December 2021, in the round. Decisions on enforcement action, and any resulting penalty, will be taken in line with our enforcement guidelines. As well as recovering any supplier gain from noncompliance (including consideration of funding received via the cap), penalties include an additional penal element, meaning that the total penalty significantly exceeds the gains.

Quantitative impact of our decision

6.34. Tables 6.1 and 6.2 show the quantitative impacts on the electricity PPM SMNCC and gas PPM SMNCC, respectively, of our decision. These numbers are different from those in our April 2021 consultation, due to our updates to the SMNCC model set out in this document.

Table 6.1 - Impact of the advanced payments adjustment on the electricity PPM SMNCC

	Cap period seven	Cap period eight	Cap period nine	Cap period ten	Cap period eleven
SMNCC: Electricity	-2.61	-3.75	-4.43	-5.10	-5.10
Advanced payments adjustment	0.00	0.00	0.00	0.00	0.00
SMNCC after advanced payments applied	-2.61	-3.75	-4.43	-5.10	-5.10
PPM cost offset	8.67	8.67	8.67	8.67	8.67
Net SMNCC = **Final SMNCC: Electricity**	0.00	0.00	0.00	0.00	0.00

Notes: All values are £/customer, nominal. A positive advanced payments adjustment means that cumulative allowances have exceeded cumulative costs to date. We calculate the advanced payments adjustment using the net SMNCC and then add it to the SMNCC from the model. We are using the CPIH indexed PPM cost offset value from cap period 7 for all cap periods. This is because this is the latest CPIH indexed PPM cost offset value that we have. CPIH is the Consumer Prices Index including owner occupiers' housing costs.

Table 6.2 - Impact of the advanced payments adjustment on the gas PPM SMNCC

	Cap period seven	Cap period eight	Cap period nine	Cap period ten	Cap period eleven
SMNCC: Gas	-14.54	-15.35	-16.76	-18.17	-18.17
Advanced payments adjustment	1.32	1.34	1.35	1.37	1.37
SMNCC after advanced payments applied	-15.86	-16.69	-18.11	-19.53	-19.53
PPM cost offset	9.78	9.78	9.78	9.78	9.78
Net SMNCC = **Final SMNCC: Gas**	-6.08	-6.91	-8.33	-9.75	-9.75

Notes: All values are £/customer, nominal. A positive advanced payments adjustment means that cumulative allowances have exceeded cumulative costs to date. We calculate the advanced payments adjustment using the net SMNCC and then add it to the SMNCC from the model. We are using the CPIH indexed PPM cost offset value from cap period 7 for all cap periods. This is because this is the latest CPIH indexed PPM cost offset value that we have. CPIH is the Consumer Prices Index including owner occupiers' housing costs.

Contingency (amendments to methodology)

6.35. As set out in Chapter 1, following BEIS's decision to extend the 'all reasonable steps obligation, we published the addendum, where we proposed to adopt a contingency allowance based on the SMNCC model for cap period seven.[187]

6.36. In response to the April 2021 consultation and the addendum, suppliers supported our use of a contingency allowance. There was also broad support for our proposal to base the contingency allowance on the SMNCC model.

6.37. As a result, we have decided to use a contingency approach for cap period seven, as we consider that it is the most appropriate approach in light of BEIS's decision to extend the current 'all reasonable steps' rollout obligation for six months.

[187] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances

6.38. One supplier stated that if we are unable to fully assess the changes proposed in their response, no weight could be placed on the SMNCC model.

6.39. In this decision we have set out stakeholder responses to our consultations, including comments on the SMNCC model and the methodologies we use. We have made changes to our modelling where appropriate. Therefore, we have calculated the contingency allowance using our updated SMNCC model, reflecting the approach we proposed in the April 2021 consultation and the addendum.

6.40. We have set the contingency allowance at £0 for electricity and -£6.08 for gas.

6.41. In a future review (when we set the allowance for cap period eight), we will consider any difference between the allowance provided and our modelled assessment of the SMNCC for cap period seven. We will take this difference into account through advanced payments. This will ensure that we eventually recover the appropriate level of efficient costs.

Appendices

Index

Appendix 1 – PPM SMNCC values

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

1.2. Within that document, we have decided to make changes to sheet '2a Non pass-through costs', cells O9:S10 (given our decision to adopt a contingency allowance, we are only changing the values for cap period seven).

1.3. These values are not comparable to the ones in Table A1.1 of our August 2021 decision on the credit SMNCC, due to differences in modelling considerations. These numbers are also different from those in our April 2021 consultation, due to our updates to the SMNCC model set out in this document.

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

	Cap period seven
SMNCC: Electricity	-2.61
SMNCC: Gas	-15.86

Notes:

All values are £/customer, nominal. These SMNCC values are before the PPM cost offset has been applied, so they are different from the final SMNCC figures in Chapters 3 and 6. This is an updated version of the table clarifying that only the cap period 7 numbers have been changed as part of this decision. We present the indicative numbers for cap period 8 onwards in Chapters 3 and 6.

Appendix 2 - Consultation process

1.1. This appendix covers feedback on the consultation process.

1.2. In the addendum, we set out our intention to issue a short consultation document in early autumn 2021 in relation to the SMNCC allowances for cap period eight. We said that we did not intend to conduct a disclosure process alongside this consultation.[188]

1.3. Several suppliers commented on the process they considered we should follow for the cap period eight consultation, including what disclosure arrangements they considered we should put in place. We do not summarise or respond to these comments here, as they do not relate to the decision for cap period seven. We will respond to these comments in due course.

1.4. One supplier said that the consultation process had led to it incurring very substantial costs engaging specialist economic advisers. It said that this was necessary because our process did not allow suppliers to see the data and because the model was complex. It said that these costs should be recoverable through the cap.

1.5. When disclosing information, we need to protect the confidentiality of data which relates to individual suppliers. Suppliers would therefore always need to engage advisers to review this underlying data – it would not be appropriate for suppliers to review this data themselves.

1.6. We discuss comments about model complexity in Chapter 4. However, suppliers can choose whether to use internal staff or advisers to review the SMNCC model – there is no requirement to engage advisers to review the SMNCC model.

1.7. We do not consider that we need to make specific provision for suppliers' costs of responding to our consultations on the SMNCC, in the same way that we do not provide a specific allowance for suppliers to respond to other consultations. We do not consider that the costs of responding to our consultations on the SMNCC are likely to be significant at an

[188] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, p5. https://www.ofgem.gov.uk/publications/price-cap-addendum-consultations-reviewing-credit-and-ppm-smncc-allowances

aggregate level across suppliers, taking into account the levels of participation in the disclosure process.

1.8. One supplier said that it would be helpful if the consultation document included more detail on important non-confidential information (rather than relying on suppliers being able to navigate the SMNCC model). It said that this would help once suppliers had been required to delete the disclosed material.

1.9. We note this feedback. However, we need to take appropriate steps to safeguard information, and there is a distinction between disclosing information for a specific purpose subject to confidentiality arrangements and publishing it. Furthermore, including additional information in our consultation documents would make them longer, and therefore potentially less accessible for a range of stakeholders.

Appendix 3 - Detailed review of uncertainty

Context

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

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

Decision

1.3. We have decided to assess uncertainty qualitatively for the PPM SMNCC, as is done for the credit SMNCC. We consider that this is a straightforward and proportionate approach.

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

1.5. This decision and assessment are unchanged from the proposal in our April 2021 consultation.

Overview of responses

1.6. One supplier stated in response to our April 2021 consultation that we continue to double-count the savings on traditional meters which are first replaced with SMETS1 meters which in turn are replaced with SMETS2 meters.

Considerations

Differences to credit

1.7. Where a smart meter is replaced by another smart meter, we include the O&M costs for both smart meters in our assessment. This is the approach across both credit and PPM. For credit we stated that this is a conservative assumption in the April 2021 credit

consultation, and in the April 2021 PPM consultation we stated that this was the same for PPM.

1.8. However, while for credit the change in O&M costs, when a traditional meter is replaced with a smart meter, is positive for both fuels, for PPM the change in O&M costs when a gas traditional meter is replaced with a smart meter is negative. This means it is in fact a benefit. Therefore, when we include the change in O&M costs twice, due to a gas traditional meter being replaced by a SMETS1 meter that is then replaced by a SMETS2 meter, we are counting a benefit twice. We acknowledge that this assumption on O&M costs is actually a less conservative assumption for gas PPM.

1.9. Nevertheless, the impact of this assumption is very small, because of the small number of such replacements and the small scale of O&M costs. Therefore, the net effect of uncertainty is still roughly neutral.

Other uncertainties

Table A3.1: Our considerations for each assumption reviewed for uncertainty

Category of uncertainty	Description	Relevant paragraphs in Appendix 11 of August 2021 decision on the credit SMNCC
Methodological considerations	As in credit, we adopt a more conservative benchmark in our review of efficient costs than would normally be the case. This has regard to suppliers that have made above-average progress with their rollout. This will become even more conservative over time, as suppliers install more smart meters. However, PPM and credit differ in that we are proposing to use the weighted average rollout profile rather than the market leader rollout profile.	1.25-1.27

	Therefore, unlike in credit, our choice of efficient benchmark is not more conservative than previously.	
Conservative aspects of rollout profile	Same considerations as in credit.	1.28-1.33
Conservative aspects of smart metering in-premises costs	Same considerations as in credit.	1.34-1.39
Conservative aspects of smart metering IT cost assessment	Same considerations as in credit.	1.40-1.42
Other conservative costs	Same considerations as in credit, except for O&M costs (see above).	1.43-1.47
Conservative assessment of benefits	In the past suppliers have commented that PPM customers who are most likely to get a smart meter tend to also be the cheapest PPM customers to serve. A smart meter should make it easier for them to change to an alternative payment method from PPM. This means that over time, the costs to serve the PPM customer base may increase as the cheapest customers leave. We do not include any debt-related benefits for PPM in the SMNCC model. Even though this may have an impact on our outputs, we expect it to be small, as debt-related benefits are of low relevance to PPM. Otherwise, PPM has the same considerations as in credit.	1.48-1.53

Less conservative in-premises costs	Same considerations as in credit.	1.54-1.63
Less conservative smart metering IT costs	Same considerations as in credit.	1.64-1.66
Other less conservative costs	Same considerations as in credit.	1.67-1.68
Less conservative benefits	Benefits from electricity-only SMETS1 switches and those related to inbound customer calls and remote change of tariff are included in the PPM CTS benefit. The PPM CTS benefit is calculated using figures from our February 2021 RFI. This reduces uncertainty on these benefits for PPM, as we have more detailed and up-to-date data on them than the 2019 BEIS CBA. We do not include any debt-related benefits for PPM in the SMNCC model. We also therefore exclude the trends in the Long-Run Variable Cost (LRVC) profile for PPM, as it is only relevant for calculating the debt-related benefit. Even though this may have an impact on our outputs, we expect it to be small, as debt-related benefits are of low relevance to PPM.	1.69-1.73
Default tariff customers	Nearly all PPM customers are on default tariffs. Therefore, we consider that the number of PPM customers with smart meters and the number of PPM default tariff customers with smart meters should be approximately the same. Consequently, we do not think significant uncertainty arises from using data on all	1.74-1.77

	PPM customers to set the SMNCC for PPM default tariff customers.	
Impact of COVID-19	Same considerations as in credit.	1.78
IT amortisation period	Same considerations as in credit.	1.79
Quality of SMAIR data	Mostly the same considerations as in credit. We also have our 2021 RFI data that can be used to check SMAIR data on PPM costs-to-serve. This reduces uncertainty around our estimates.	1.80