ofgem
Making a positive difference
for energy consumers

Decision

Price Cap - Decision on credit SMNCC allowance

Publication date:	5 August 2021	**Contact:**	Karen Mayor, Deputy Director Retail Monitoring, Compliance and Price Cap Policy (interim)
		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) for credit meters in the default tariff cap in time for winter 2021-22. It sets out the 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. This decision is on our annual review of the Smart Metering Net Cost Change (SMNCC) allowance in the cap for credit meters. This allowance reflects the change in smart metering costs since 2017.

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. Given this extension, we are only setting the SMNCC allowance for cap period seven (1 October 2021 to 31 March 2022) at this point (a contingency allowance). As we have sufficient confidence in the updated SMNCC model, in principle we would use it as a starting point to set this contingency allowance. However, as this would deliver a lower SMNCC value than the value presented in the April 2021 consultation, **we have decided to maintain the April 2021 consultation value – £13.59 per typical dual fuel customer**. We will take any difference between the contingency SMNCC allowance for cap period seven and the modelled costs into account through advanced payments in later cap periods.

This decision is our approach for cap period seven. However, where an issue discussed in this decision would also apply to future cap periods, our current intention is that we would maintain the same approach. We will issue a short consultation on cap period eight (1 April to 31 August 2022) in the autumn, which will run for at least four weeks.

As cap period seven overlaps two calendar years, the SMNCC allowance for cap period seven is impacted by the net costs of smart metering in both 2021 and 2022. This includes both the end of 'all reasonable steps' and the start of the new framework. In looking at the new framework we consider how to take it into account until the end of 2023.

Rollout

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

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

rollout by the end of 2025 (a 'target' approach), or in line with their minimum installation requirements (a 'tolerance' approach).

On balance, we have decided to use a market leader tolerance approach. This is to ensure adequate funding to support all efficient suppliers to deliver their rollout obligations, while maintaining the cost-effectiveness of the rollout as far as possible. We have decided to use a tolerance approach to set the rollout profile. This reflects that suppliers are legally required to meet the tolerances, which increases our confidence that suppliers would spend the revenue available through the SMNCC on smart metering.

Since the April 2021 consultation, we have adapted our approach to estimating rollout in the second half of 2021. This is to ensure we are estimating rollout in the second half of 2021 based on the obligations that will be in force during that period (ie 'all reasonable steps', given its extension).

COVID-19 and installation costs

COVID-19 affected suppliers' ability to install smart meters and may have led to them incurring costs which did not result in installations (sunk installation costs). We included an estimate of sunk installation costs in our August 2020 decision. We have now been able to gather data on installation costs in 2020, including sunk installation costs. We have decided to use an average of two methods to estimate sunk installation costs in 2020. We consider that the average will be a better reflection of suppliers' aggregate costs than either of the two methods. This is a change to our April 2021 consultation proposal, following stakeholder feedback and clarification questions to suppliers.

COVID-19 has also had some impact on suppliers in 2021, and suppliers may again incur sunk installation costs. We have decided to estimate sunk installation costs in 2021 using a modelled approach. This is a change to our April 2021 consultation proposal, which is a consequence of our change to estimating 2020 sunk installation costs.

Advanced payments

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

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.[1] 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).[2] 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 which affects the cap level for customers with credit meters** (which we refer to as '**the SMNCC**' for the remainder of this document).[3]

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

1.4. We have published a separate decision on the non-pass-through SMNCC allowance which affects the cap level for customers with prepayment (PPM) meters.[4] For the elements discussed in this decision, we set out the similarities and differences between the credit SMNCC and the PPM SMNCC in Appendix 4.

Scope of this decision

Contingency allowance for cap period seven

1.5. This decision follows our final consultation in April 2021 ('April 2021 consultation').[5] Following BEIS's decision on its new smart meter rollout framework ('framework'), we published an addendum to the April 2021 consultation ('addendum').[6] 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.

1.6. After considering responses to the April 2021 consultation, we are confirming the proposal to adopt a contingency allowance for cap period seven.

1.7. We have sufficient confidence in the updated SMNCC model to use it to set the contingency allowance. However, using the model (including the changes following the April 2021 consultation) would give an SMNCC allowance of £12.22 per dual fuel customer,[7] which is lower (on a dual fuel basis) than the allowances we presented in the consultation (£13.59 per dual fuel customer). We have not previously suggested that the contingency allowance could be below the value included in our consultation. **We have therefore decided to set the contingency allowance at the values we presented in the consultation for cap period seven: £13.59 on a dual fuel basis (£10.26 for electricity and £3.33 for gas).**

[4] Published on the same date as this decision, and available on our website.
[5] Ofgem (2021), Price Cap - final consultation on updating the credit SMNCC allowance. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf
[6] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances. https://www.ofgem.gov.uk/sites/default/files/docs/2021/06/price_cap_-_addendum_to_consultations_on_reviewing_the_credit_and_ppm_smncc_allowances.pdf
[7] Due to rounding, this does not equal the sum of the electricity and gas values we show in Chapter 4.

This is a summary of our decision – we provide our detailed considerations on the contingency allowance in Chapter 4.

1.8. We will take any difference between the contingency SMNCC allowance for cap period seven and the modelled costs into account through advanced payments[8] in later cap periods.

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 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.

1.10. We need to take these decisions regardless of the fact that our final step is to use the SMNCC values we presented in the consultation. We only do this because the modelled SMNCC is lower than the values we presented in the consultation – we still need to calculate the modelled SMNCC first.

Cap period eight and beyond

1.11. 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.

1.12. However, as set out in the addendum, we will issue a short[9] consultation document on cap period eight in the autumn to seek stakeholder views on this before confirming decisions for cap period eight onwards.[10]

[8] See Chapter 4 for an explanation of advanced payments.
[9] By "short consultation", we mean that we intend that this will be a short document. The consultation will still last at least four weeks.
[10] Appendix 2 covers feedback on the consultation process.

Context

Previous process

1.13. We have consulted on the SMNCC allowance multiple times, and published a decision in August 2020 ('August 2020 decision').[11] At a high level, the August 2020 decision covered our approaches to: setting the rollout profile, calculating the SMNCC allowance, and carrying out future reviews. As this was an in-depth review, we also considered a large number of individual issues.

1.14. This decision is part of our annual review of the SMNCC. 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. We do not discuss the full methodology for setting the SMNCC allowance in this decision, as there are large elements where we are maintaining the methodology set out in our August 2020 decision and where we did not receive comments from stakeholders.

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.[12]

1.16. In November 2020, BEIS consulted on the annual tolerances associated with this framework.[13]

[11] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision. https://www.ofgem.gov.uk/publications-and-updates/decision-reviewing-smart-metering-costs-default-tariff-cap
This August 2020 decision document contains links to preceding consultations.
[12] BEIS (2020), Delivering a Smart System Response to a Consultation on Smart Meter Policy Framework Post-2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/893124/delivering-smart-system-post-2020-govt-response-consultation.pdf
[13] 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

1.17. BEIS published its decision (the government response to its consultation on the annual tolerances) in June 2021.[14] It decided to extend the current 'all reasonable steps' rollout obligation for six months to account for disruption caused by COVID-19. This means that the new rollout framework will take effect from 1 January 2022, rather than 1 July 2021.

1.18. Key other 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).[15]
- 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).[16,17]
- Each supplier's rollout target is based on a profile to market-wide rollout by the end of 2025.[18] As each supplier will have a different rollout position at the start of the framework, suppliers will have different 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

[14] 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
[15] 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://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf
[16] 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://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf
[17] 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 credit SMNCC allowance, paragraph 2.13. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf).
[18] 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 and 103. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf

minimum installation requirement.[19,20] Suppliers therefore have different legally binding annual installation requirements.

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.[21]

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.[22]

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 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

[19] 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.
[20] BEIS (2020), Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers, paragraph 65.
https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers
[21] 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://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990526/Annex_C_Analytical_Evidence_-publication.pdf
[22] 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://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf

customers who pay standard variable and default rates.[23] 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
- 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.[24] 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 SMNCC. It indicates how the issues we discuss in this decision fit into this overall structure.

[23] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 1(6). http://www.legislation.gov.uk/ukpga/2018/21/section/1/enacted
[24] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 2(2). http://www.legislation.gov.uk/ukpga/2018/21/section/2/enacted

Table 1.1 – High-level 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 2 (all), Appendix 10 (Minor updates)
Costs	Uses rollout and cost inputs to calculate different costs	In-premises costs	Chapter 3 (all), Appendix 9 (Installer productivity, Smart meter asset and installation costs), Appendix 10 (Smart Meters Annual Information Request data, Minor updates)
		IT costs	-
		Other costs	Appendix 9 (Marketing costs)
Benefits	Uses rollout and benefit inputs to calculate different benefits	Avoided site visits	Appendix 10 (Smart Meters Annual Information Request data)
		Customer switching	Appendix 10 (Smart Meters Annual Information Request data)
		Inbound customer calls	Appendix 10 (Smart Meters Annual Information Request data)
		Debt handling	Appendix 10 (Smart Meters Annual Information Request data)
		Remote change of tariff	Appendix 10 (Smart Meters Annual Information Request data)
Calculating SMNCC	Uses cost and benefit calculations to calculate change in net costs since 2017 baseline	Baseline adjustment	-
		Calculating net costs	-
		Calculating SMNCC	-
		Uncertainty	Appendix 11 (all)
		Advanced payments	Chapter 4 (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. Rollout

We set out our principles for considering different rollout profiles when setting the SMNCC for credit meters. We discuss the options for setting the rollout profile in future, as well as the options for setting rollout in the first half of 2021. We briefly discuss the concept of having a separate mechanism alongside the cap. We summarise all these decisions at the start of the chapter, and then discuss them in detail, with stakeholder comments and our considerations.

Summary

2.1. Although we have decided to adopt a contingency approach for cap period seven, we are using the SMNCC model to inform how we set the contingency allowance. We are therefore taking decisions on rollout to provide inputs to the SMNCC model.

2.2. We have decided to maintain the same principles for assessing different rollout profile options as proposed previously.

2.3. We have decided to use a market leader tolerance rollout profile in line with our proposal in the April 2021 consultation.

2.4. We have decided to estimate rollout in the first half of 2021 by using actual data for Q1 2021 and suppliers' updated projections for Q2 2021. This is the approach we proposed in the April 2021 consultation.

2.5. We have decided to estimate rollout in the second half of 2021 by using suppliers' projections for Q2 2021 for each of the remaining quarters of 2021. This is in line with the approach we set out in the addendum, following BEIS's decision to extend the 'all reasonable steps' obligation.

2.6. We have decided to apply different rollout profiles for each fuel. This is a change to our April 2021 consultation position.

2.7. We have decided not to consider further at this stage a separate mechanism to the cap,, which would provide different funding to individual suppliers to reflect their different levels of rollout. This position is unchanged from our April 2021 consultation proposal.

2.8. 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.

Principles for considering different rollout profiles

Context

2.9. In the February 2021 second credit SMNCC working paper ('SMNCC WP2'), we set out four principles that we intended to use to help us choose between rollout profiles. These were:

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

2.10. We noted that there would be clear trade-offs between these principles, so there would need to be a judgement about which rollout profile option to select.[25]

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

Decision

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

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

Overview of responses

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

Considerations

2.14. We do not repeat our discussion of the principles from SMNCC WP2. Please see Appendix 5 for our responses to the feedback from stakeholders.

Discussing the rollout profile options

Context

Background on rollout

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

- Smart meters in credit mode are a net ongoing cost to a supplier (during the life of the cap).[26] The number of smart meters that a supplier has installed (ie the stock) therefore affects its costs. Suppliers pay for the cumulative costs of smart meter assets and installations. They pay for these costs through meter rental charges.

- Suppliers pay for some costs in the year of an installation. The number of smart meters installed in-year (ie the flow) therefore also affects a supplier's costs.

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

Suppliers pay for the remaining costs of traditional meters which are replaced early (through Premature Replacement Charges), and the costs of In-Home Displays (IHDs).[27]

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

Description of rollout profile options

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

- Whether we use an **average** or a **market leader** supplier rollout.
- The rate of rollout during the framework – whether the supplier rolls out smart meters in line with BEIS's policy ambition of market-wide rollout (a '**target**' approach), or in line with their obligations, ie minimum installation requirements (a '**tolerance**' approach).[28]

2.18. These combine to give four rollout profile options, as shown in Table 2.1 below.

Table 2.1 – Rollout profile options

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

2.19. In SMNCC WP2, we also discussed how we could estimate rollout in the first half of 2021 – the period between the historical rollout data and the start of BEIS's new framework

[27] In-Home Displays are devices which show information to customers about their energy use.
[28] We provided further detail on these options in SMNCC WP2.
Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.1 to 2.13. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

(as intended at that point).[29] In the April 2021 consultation, we proposed to estimate rollout using the new framework from July 2021 (its intended start date).

2.20. In the SMNCC model we used for April 2021 consultation, we included the same rollout profile for both electricity and gas.

Decisions

2.21. We have decided to use a market leader tolerance rollout profile, in line with our proposal in the April 2021 consultation. This would allow an efficient[30] supplier with a market leader rollout profile to meet its obligations under the new framework, while maintaining the cost-effectiveness of the rollout as far as possible. Most other suppliers will be able to collect more revenue than they require to meet their obligations – if they spent this on rolling out more smart meters, then this would help to increase the benefits from smart metering. A market leader tolerance rollout profile would mean higher costs to customers than an average tolerance rollout profile, but we consider that this is justified by supporting all efficient suppliers to deliver their obligations.

2.22. We have decided to estimate rollout in the first half of 2021 by using actual data for Q1 2021 and suppliers' updated projections for Q2 2021. This is the approach we proposed in the April 2021 consultation. We have decided to estimate rollout in the second half of 2021 by using suppliers' projections for Q2 2021 for each of the remaining quarters of 2021. This is in line with the approach we set out in the addendum, following BEIS's decision to extend the 'all reasonable steps' obligation. Please see Appendix 8 for information on how we calculate the rollout profile.

2.23. We have decided to apply different rollout profiles for each fuel. We estimate these by looking at historical data for rollout across large energy suppliers. We use this data to calculate the ratio between the rollout achieved for a given fuel and the combined dual fuel rollout. We then apply this ratio to the rollout profiles in the SMNCC model. (Please see the considerations section on rollout and customer base differences between fuels for further

[29] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.14 to 2.20. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[30] We define efficient costs using an average efficiency standard for the purpose of the SMNCC review.

explanation of this). This is a change from our April 2021 consultation, where we proposed to set the same rollout profile for each fuel.

Overview of responses

2.24. In response to SMNCC WP2, suppliers generally supported using higher rollout profiles, based on a target and/or a market leader approach. However, one stakeholder said that it had a strong preference for average tolerance. In response to the April 2021 consultation, several suppliers and one supplier's legal adviser said that they supported a market leader approach.

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

- providing low funding will have a self-fulfilling impact on rollout;
- providing high funding would support the benefits of smart metering;
- providing high funding would be a no regrets strategy as we could recover any excess funding through advanced payments;
- the tolerances provide a safety margin which suppliers are entitled to; and
- suppliers have to aim above the tolerances in order to be confident of meeting them.

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

2.27. For estimating rollout in the first half of 2021, suppliers suggested an alternative approach in response to SMNCC WP2 to make some use of actual data.

Considerations: target options

2.28. We set out our overall view on target rollout profile options in this section. We discuss the main points raised by stakeholders in support of target options in Appendix 6.

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

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

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

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

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

- At present, we do not have sufficient confidence that suppliers (in aggregate) would likely spend additional revenue on smart metering, so as to ensure cost-effectiveness. Smart meters in credit mode are a net cost to suppliers (during the

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

life of the cap),[32] and so there is little incentive on suppliers to roll out smart meters above[33] their obligations.

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

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

2.35. We have decided to set the SMNCC on a forward-looking basis using a tolerance rather than a target approach. However, we will still update the SMNCC using actual rollout data when it becomes available, and therefore recognise if rollout is above the tolerance. Under our market leader tolerance rollout profile, if the market leader rolls out more smart meters than it is legally required to roll out, we would include the actual data in the SMNCC model during our next annual review, and recognise the impact through our calculation of advanced payments (see Chapter 4). This would provide revenue (in arrears) to reflect the rollout achieved by the market leader.

2.36. In correspondence with one supplier during the April 2021 consultation, we confirmed that suppliers' legal obligations reflect the tolerances, and that we cannot hold suppliers to account for not spending additional revenue on smart metering above these legal obligations. The supplier referred to this correspondence in its response – it said that it was important that BEIS understood the implications of our position on funding, particularly that market leading suppliers would not be funded to exceed the minimum obligations. It also said that we should confirm with BEIS that the licence obligations reflect BEIS's policy intention.

[32] Ie during the period covered by the SMNCC model.
[33] See the section on overshooting in Appendix 6.

2.37. We have worked closely with BEIS during this review. BEIS was therefore fully aware of our proposals. In relation to the licence conditions, BEIS recently published its decision on the annual tolerance levels for the first two years of the framework. BEIS did not amend the licence conditions relating to rollout as part of this decision.[34] It had previously introduced these licence conditions as part of its June 2020 decision.[35] These licence conditions therefore reflect how BEIS intends the new framework to operate.

Considerations: comparing average tolerance and market leader tolerance

2.38. Appendix 7 considers the points in favour of an average tolerance rollout profile, and those points in favour of a market leader tolerance rollout profile. In this section, we report our conclusion on which option to use.

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

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

[34] Standard licence conditions 39A of the electricity supply licence and 33A of the gas supply licence.
[35] BEIS (2020), Delivering a smart system: response to a consultation on a smart meter policy framework post 2020. Annex D: standard conditions 33A (gas) and 39A (electricity). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892973/delivering-smart-system-post-2020-annex-d.pdf
[36] The average tolerance rollout profile would not allow suppliers on average to collect revenue above the efficient costs of meeting their obligations. However, some suppliers would still be able to collect more revenue than the efficient costs of meeting their own obligations. This means that even an average tolerance rollout profile cannot fully ensure cost-effectiveness.

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

Considerations: rollout in the first half of 2021

Stakeholder comments

2.42. In response to SMNCC WP2, one supplier supported the third option we proposed (using suppliers' rollout plans), as it said this would be the most realistic option. However, two suppliers said that actual data on rollout in Q1 2021 would be available before we consulted, and we should make use of this.

- One of these suppliers said that suppliers would also provide projections at this point, which we could also use for Q2 2021.
- The other supplier said that we could estimate Q2 2021 rollout based on performance between 2017 and 2019, on the assumption that Q2 2021 would not be significantly impacted by COVID-19 restrictions.

2.43. No stakeholders commented on our proposed approach (using actual data for Q1 2021 and supplier forecasts for Q2 2021) in response to the April 2021 consultation.

Q1 2021

2.44. BEIS published Official Statistics showing the actual rollout for Q1 2021 on 27 May 2021. We therefore could not incorporate this data into the April 2021 consultation. However, we set out our intention to use the actual data for the decision.[37]

2.45. We have decided to maintain this proposal. We consider that using actual data is preferable. This is because the rollout profile under our market leader tolerance approach will be dependent on the progress of one supplier, so we would like to include accurate

[37] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraphs 3.60 and 3.61.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf

information on this supplier's progress in Q1 2021. This will contribute to developing a reliable estimate of rollout at the start of the new framework.

Q2 2021

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

Considerations: rollout in the second half of 2021

2.47. Given the extension to the 'all reasonable steps' rollout obligation, in the addendum we proposed to assume that rollout in Q3 and Q4 2021 would be the same as the supplier projections for Q2.[38]

2.48. One supplier said that it believed its installation levels for 2021 would not depend on which obligations it was subject to. It therefore said that we should maintain our April 2021 consultation proposal for calculating rollout.

2.49. We consider that it is best to use an estimate of rollout at a given point in time based on the obligation that suppliers face at that point. Applying the new rollout framework early would mean that we would be applying the wrong annual tolerance values for part of each year, given that the annual tolerance values vary over time.[39] In any event, we would not expect there to be a significant difference between the approaches, given that the new rollout

[38] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/06/price_cap_-_addendum_to_consultations_on_reviewing_the_credit_and_ppm_smncc_allowances.pdf

[39] As the annual tolerance values vary over time, the number of smart meters rolled out under a tolerance profile varies between framework years. If we assumed the new framework applied from the original start date (1 July 2021) rather than the revised start date (1 January 2021), then we would be applying the wrong annual tolerance values for part of each of the following years. The number of smart meters rolled out would therefore also be incorrect.

framework does not require suppliers as a group to roll out more smart meters than historically.

2.50. Several suppliers considered that using Q2 2021 rollout to estimate rollout in Q3 and Q4 2021 is likely to be an underestimate.

- Two suppliers said that rollout in Q2 2021 will still partly be impacted by COVID-19. They suggested that we should amend our approach, including considering gathering data. One supplier said that we should project Q3 and Q4 2021 rollout forward using the trend of growth in rollout over Q2 2021. Another supplier said that we should explore asking suppliers for expected 2021 installation levels.

- One supplier said that some suppliers may have been looking to accelerate their rollout in Q3 and Q4 2021.

2.51. We do not consider that gathering rollout data was feasible in the time available for our decision-making process ahead of cap period seven.[40] Even if we had asked suppliers for their expectations for rollout in the second half of 2021, we do not consider that this would have significantly increased accuracy relative to using their projections for Q2 2021, given the continued uncertainty around COVID-19.

2.52. 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. This is for three reasons.

2.53. 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 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.

[40] We separately requested projections from large suppliers on their rollout in Q3 and Q4 2021, for the purpose of providing regulatory oversight of suppliers' rollout. We received this information on 31 July 2021. We would not have been able to integrate this information into the SMNCC model in time for our decision-making process for cap period seven. We also consider that using the Q2 2021 projections is appropriate, for the reasons set out in this section.

2.54. 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.[41]

2.55. Third, the market leader's annualised rollout based on its Q2 2021 forecast was reasonably close to the rollout it achieved historically.[42]

2.56. We have therefore decided to maintain our addendum proposal of estimating rollout in Q3 and Q4 2021 by using suppliers' forecasts for Q2 2021. This decision only has a temporary impact – we will receive actual rollout data for 2021 in arrears, and will be able to incorporate it as part of a future annual review. We will take any difference into account through advanced payments.[43]

Considerations: calculation approach for our rollout profile

2.57. Please see Appendix 8 for information on how we calculate and update the rollout profile.

Considerations: rollout and customer base differences between fuels

Whether to include fuel-specific rollout profiles

2.58. For our May 2020 consultation, we used separate rollout profiles for each fuel.[44] In our 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 Smart Meters Annual Information Request

[41] 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).
[42] This is based on a comparison against the rollout it reported in the Smart Meters Annual Installation Request data.
[43] For an explanation of advanced payments, see Chapter 4.
[44] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 4.2.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf

(SMAIR) data.[45,46] This data was not split by fuel, so we did not calculate separate rollout profiles for each fuel.[47] We maintained the same approach in our April 2021 consultation.

2.59. 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 why we had changed our approach.

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

- 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).

2.61. Our approach in the 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

[45] 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/sites/default/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[46] Suppliers submit Smart Meters Annual Information Request (SMAIR) data to BEIS each year. BEIS previously collected this information through a request known as the Annual Supplier Return (ASR). We use the term SMAIR throughout this decision, whether referring to the SMAIR or its predecessor.

[47] We did not state that we were using the same rollout profiles for each fuel in our August 2020 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.

also have some impact on costs through the number of dual fuel and single fuel installations.[48] We therefore agree that setting fuel-specific rollout profiles is preferable.

How to include fuel-specific rollout profiles

2.62. One supplier's economic adviser said that a sensible approach would be to use the fuel split from the market average rollout profile. It said that we could request data on rollout split by fuel and payment method if we did not already have this. It said that BEIS's most recent template is proposing to request this data.

2.63. In principle, there are two options for including fuel-specific rollout profiles.

- Option 1 would be to use data from suppliers on their rollout split by fuel and payment method (ie credit and PPM). We do not currently have such data.

- Option 2 would be to apply an adjustment based on market-level data. BEIS publishes data on the number of smart meters split by fuel, but not split by payment method. We could use this data to look at the ratios between each of the fuel-specific rollout profiles and the combined dual fuel profile. We could then apply the same ratios to the rollout profiles in the SMNCC model. This would require us to assume that the same ratios applied to both credit and PPM. For credit, it would also require us to assume that the breakdown of rollout between fuels for the market leader is similar to the breakdown at market level.

2.64. It was not feasible to gather data ahead of cap period seven given our decision-making timescales (option 1). We do not consider that it would be proportionate to gather data in this area at any point in the future, and therefore do not intend to do so.[49] The difference between using option 2 and option 1 is likely to be small. The difference between using a fuel-specific rollout profile rather than a single rollout profile is small – one supplier's economic adviser estimated the impact on the dual fuel SMNCC as an increase of £0.40 per customer in cap

[48] 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).
[49] BEIS also does not currently gather rollout split by payment type and fuel as part of its SMAIR data, so we would not be able to use this as a source.

period seven. Given that the issue is small, the difference in impact from selecting one option (for setting a fuel-specific rollout profile) over another would therefore likely be even smaller.

2.65. We have decided to use option 2. It can be implemented in time for cap period seven, and does not require further data gathering. While option 2 requires assumptions, we consider that these are still more likely to be accurate than assuming the same rollout progress across fuels (ie our April 2021 consultation approach) – option 2 at least uses observable market data as a starting point. Appendix 8 describes the steps that we carried out to apply the adjustment.

2.66. We use the same methodology to adjust the rollout profile for each year. One supplier's economic adviser said that we should use data already included in the SMNCC model (but currently unused) which shows the market average rollout for each fuel in the 2017 baseline year. We have not done this, because this data is split by fuel but not by payment method. Using this data directly in the rollout profile would therefore mean losing the existing information about how rollout varies between payment methods and would be inconsistent with our use of separate rollout profiles for each payment method in future years. This would distort the SMNCC allowances, which are the change since the baseline year.

Suppliers' individual rollout and customer bases by fuel

2.67. Even after implementing a change to fuel-specific rollout profiles, one supplier's economic adviser also said that we should check that each supplier has its efficient costs covered given its own fuel-specific rollout profiles and its number of customers on each fuel. It said that our approach to calculating the market leader is not currently guaranteed to deliver this. It said that if we found that a supplier's efficient costs were not covered, then we would need to make a further adjustment to the SMNCC. The supplier's legal adviser said that it was essential that we ensured that all efficient suppliers are able to recover sufficient revenue to fund their rollout obligations, and that not doing so would mean that we were not giving effect to our stated policy intentions.

2.68. As set out in SMNCC WP2, we select the market leader based on the large supplier with the largest forecast cumulative SMNCC over the full potential life of the cap (January 2019 to

December 2023).[50] This means that we already ensure that the SMNCC covers the efficient costs of each large supplier when measured on a dual fuel basis. The issue raised by the supplier's economic adviser relates to whether we should go beyond this.

2.69. With respect to checking each suppliers' efficient rollout costs are covered – we first consider the rollout profile. The SMNCC model is not intended to reflect the market leader's own costs – but is intended to reflect the market leader's rollout profile. As we have decided that the rollout profile should vary by fuel (see above), then a supplier's rollout by fuel could be seen as relevant in principle to ensuring that its efficient costs are covered.

2.70. However, checking each supplier's rollout by fuel would require further data gathering. As set out above (in relation to including fuel-specific rollout profiles), this is infeasible for cap period seven. We also do not consider this would be proportionate, as we do not expect there to be substantial differences in suppliers' rollout breakdowns between fuels. This reflects that suppliers install most smart meters on a dual fuel basis, so their rollout percentages for each fuel should broadly grow together. We must have regard to the need to ensure that suppliers can finance their licensed activities – but we do not consider that this requires us to carry out all possible analysis to verify that suppliers' costs are covered.

2.71. We have customer account data for each supplier, so we could check the customer base (ie looking at a supplier's split of customers between fuels) without gathering new data.

2.72. We consider that it is desirable for the SMNCC to cover each large supplier's efficient costs after taking into account how its customer base is divided between fuels. Generally, in the cap we set separate cost-reflective allowances for each fuel – by definition this means that a supplier's customer base split between fuels does not affect whether it recovers its costs.

2.73. We therefore checked the customer bases of five suppliers, as described in Appendix 8. This showed that no supplier would have a shortfall between the revenue that it could recover through the SMNCC (given its customer base) and the efficient costs of delivering its smart

[50] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 2.6. https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

meter rollout (based on a combined dual fuel rollout profile). This means that there is no case for a further adjustment at present.[51]

2.74. For the avoidance of doubt, even if we had found a shortfall, we would not be compelled to make an adjustment. In that circumstance, we would need to make a judgement, considering the impacts on financeability and customer protection. Although the trade-off is conceptually similar to the decision whether to select an average or a market leader rollout profile, we would not be constrained to take the same approach (of supporting all efficient suppliers to deliver their obligations). We would need to consider the decision on its own merits. This would include bearing in mind that any adjustment would increase the extent to which most suppliers would be able to recover revenue in excess of their efficient costs (in addition to the extent to which they can already do so due to our decision to adopt a market leader rollout profile).

Separate mechanism

Context

2.75. In SMNCC WP2, we noted that there is a risk that the amount customers pay may not be commensurate with the rollout suppliers achieve in practice, and that this risk is higher when we set a higher allowance. We said that we had received a suggestion that there should be a separate mechanism (parallel to the cap) to adjust suppliers' revenues based on their actual rollout performance. We noted that the intention would be to align the revenues suppliers can recover under the cap and the efficient costs of the rollout they deliver. However, we also noted that there would be a number of challenges to developing and implementing this mechanism.[52]

Decision

2.76. We have decided not to consider a separate mechanism further at this stage. This position is unchanged from our April 2021 consultation proposal.

[51] As with the selection of the market leader, we will repeat this check at each annual review of the SMNCC.
[52] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 2.59 and 2.60. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

Overview of responses

2.77. In response to SMNCC WP2, some stakeholders supported a separate mechanism. One supplier said that a separate levelisation mechanism could redistribute unspent allowances to market leading suppliers, ensuring that allowances intended to support rollout were used for that purpose. Another stakeholder said that we would need to consider a separate mechanism if we did not provide sufficient revenue through the cap for suppliers with above average profiles. It said that any such mechanism would need to provide suppliers with budgetary certainty given their planning lead times.

2.78. In response to SMNCC WP2, other suppliers raised concerns about a separate mechanism. One supplier said that it would add complexity and risk to suppliers for no obvious customer benefit. Another supplier questioned the legal basis for any separate mechanism.

2.79. We did not receive any comments on this issue in response to our April 2021 consultation.

Considerations

2.80. While we recognise that there are risks associated with setting the SMNCC based on a higher rollout assumption, there are significant challenges associated with trying to align the amount that customers pay under the cap and the efficient costs of delivering the rollout that each supplier achieves.

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

3. COVID-19 and installation costs

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

Summary of main decisions

3.1. 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. As these decisions are inter-related, we summarise them at the start of this chapter. This provides context for the detailed discussions on each issue that follows.

3.2. We have decided to calculate sunk installation costs in 2020 using the average of the two methods we set out in our April 2021 consultation. This is a change to our April 2021 consultation, where we proposed to use one of the methods. Our estimate of sunk installation costs in 2020 is now higher than in our April 2021 consultation.

3.3. We have decided to calculate sunk installation costs in 2021 using a bottom-up approach. This is a change to our April 2021 consultation, where we proposed to cap sunk installation costs at the same level as 2020. This change is a consequence of our change to 2020 sunk installation costs – as the sunk installation cost for 2020 is now above the value calculated using a bottom-up approach for 2021, capping sunk installation costs for 2021 at the 2020 level no longer has any impact. Our estimate of sunk installation costs in 2021 is now slightly higher than in our April 2021 consultation.

3.4. We have decided to calculate the cost per installation in 2020 using an average of the costs per installation achieved associated with each of the two methods we use to estimate sunk installation costs in 2020. This is a change to our April 2021 consultation, where we proposed to use the cost per installation based on suppliers' data. This change is a consequence of our change to 2020 sunk installation costs – we use the same data source (as for sunk installation costs) to ensure that our approach is coherent. Our estimate of the cost per installation in 2020 is now lower than in our April 2021 consultation.

3.5. We have decided to calculate the cost per installation in 2021 using the same cost per installation that we use as part of our bottom-up calculation of sunk installation costs in 2021. This is a change to our April 2021 consultation, where we proposed to use the same cost per installation as in 2020. This change is a consequence of our change to 2021 sunk installation costs – we use the same data source (as for sunk installation costs) to ensure that our approach is coherent. Our estimate of the cost per installation in 2021 is now lower than in our April 2021 consultation.

3.6. 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.

Background on installation costs and sunk installation costs

Normal approach to installation costs

3.7. As set out in the November 2020 first credit SMNCC working paper ('SMNCC WP1'),[53] 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 meter rental uplift. The meter rental uplift reflects that the rental payments suppliers pay to Meter Asset Providers (MAPs) may not correspond to the way we model the costs of smart meter assets and installations.[54] We use this uplifted cost per installation in the SMNCC model. The total installation costs then depend on rollout in that year.

[53] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[54] We discussed the meter rental uplift in our previous documents. See for example Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 3.29 to 3.42.
https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

3.8. 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.[55] We then amortise this value and apply the meter rental uplift. 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).[56]

Assessing the impact of COVID-19 on installation costs

3.9. As set out in SMNCC WP1, where suppliers were unable to install as many smart meters as expected due to COVID-19, they may have been unable to scale down their cost bases accordingly. Costs incurred in relation to meters which could not be installed would be an immediate (sunk) cost to suppliers.[57]

3.10. In our August 2020 decision, we included an estimate of sunk installation costs for 2020. One key assumption was that installation numbers in 2020 would be 30% of the level previously expected (absent COVID-19). We therefore assumed that suppliers incurred sunk costs in relation to the remaining 70% of expected installations. Another key assumption was that, where a meter could not be installed, nearly all installation costs would be sunk.[58] These were conservative assumptions (ie leading to a higher SMNCC), given the uncertainty about the impacts of COVID-19 at the time.[59]

[55] In our August 2020 decision, we maintained a level of productivity which reflected historical levels. However, we said that we would consider productivity in our next review, taking into account the new BEIS framework.
Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.28 and 2.29.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[56] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.1 and 3.2.
https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[57] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.3 and 3.4.
https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[58] We provided a more extensive description of this methodology in SMNCC WP1. Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.5.
https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[59] We said that we would adopt a conservative interim approach to sunk installation costs and consider making a retrospective corrective adjustment in future cap periods. Ofgem (2020), Reviewing smart metering costs in the default tariff cap – August 2020 decision, paragraphs 3.117 and 3.118.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

Assessing 2020 sunk installation costs

Context

3.11. In SMNCC WP1, we explained why we could not simply update 2020 installation costs using our normal approach (ie without sunk installation costs).[60]

3.12. We had set out three options for estimating sunk installation costs in 2020.[61] 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[62] for their business purposes.

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

3.13. After considering comments in response to SMNCC WP1, we decided to gather data on sunk installation costs. This was to investigate the feasibility of method one. We issued a Request For Information (RFI) in February 2021.[63]

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

3.14. In our April 2021 consultation, we proposed to estimate sunk installation costs in 2020 using the sunk installation cost data that suppliers provided following our recent RFI (ie using method one).

Decision

3.15. 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.

3.16. This decision is a change to the proposal in our April 2021 consultation.

Overview of responses

3.17. In response to SMNCC WP1, suppliers supported us recognising a proportion of installation costs as sunk, rather than using our normal approach.

3.18. In response to SMNCC WP1, suppliers had mixed views on how to estimate sunk installation costs.

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

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

3.19. In response to the April 2021 consultation, one supplier supported our use of data from suppliers to estimate sunk installation costs (ie method one). However, two suppliers raised concerns about our evidence 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 of evidence on the proportion of costs that had been amortised – method two would better reflect the commercial reality.

Considerations

3.20. We have decided to set sunk installation costs using the average of the two methods. However, it is important to understand the individual methods first in order to understand the rationale for our decision. Below we therefore review the results of the two methods and then discuss how we reached our decision.

Results of the two methods

3.21. Table 3.1 below shows the total sunk installation costs under each method and compares these against the estimate from August 2020.

Table 3.1: Sunk installation costs in 2020

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

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

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

- The main reason is that suppliers rolled out more smart meters than under our August 2020 assumption – in fact the number of smart meters suppliers installed in 2020 was 70% of the number installed in 2019.[64] In rough terms,[65] this implies

[64] Calculated using information from: BEIS (2021), Smart meters in Great Britain, quarterly update December 2020, Data Table 6.
https://www.gov.uk/government/statistics/smart-meters-in-great-britain-quarterly-update-december-2020

[65] This is a rough illustration because the number of installations expected in 2020 (which could affect the resources suppliers had committed) is not necessarily the same as the installations achieved in 2019.

that suppliers incurred sunk installation costs in relation to just 30% of meters, rather than 70% as we assumed in August 2020.[66]

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

- In addition, the RFI shows that some medium suppliers incur few or no sunk installation costs. This is because they outsource their installations, and do not face any contractual exposure to any sunk installation costs incurred by their installer.

3.23. Table 3.1 also shows that method two has a significantly higher sunk installation cost than method one. The main reason is that the cost per installation for the meters that were installed was higher than in previous years, pushing up overall installation costs. As the indirect approach under method two holds the costs per installation constant from 2019,[67] it classifies the remainder of the overall installation costs as sunk installation costs. In other words, any increase in the cost per installation results in sunk installation costs under method two. (Whether this is appropriate depends on whether suppliers are able to amortise their costs per installation – we discuss this in the next section).

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

[66] We made the 70% estimate in the first half of 2020, ahead of the May 2020 consultation. We therefore made the estimate during the first phase of COVID-19 restrictions. Once these restrictions were relaxed, suppliers were able to roll out more smart meters.
[67] In real terms.

installation costs is therefore more important. The cost to suppliers (and therefore customers) during the cap will consequently be lower under method one.

Selected methodology

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

3.26. 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 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.[68]

3.27. The SMNCC model amortises the cost per installation, spreading this over the life of the smart meter. Under method one, any increase in the cost per installation is also amortised. This implies that in 2020 suppliers received a larger payment from MAPs than previously to cover their increased installation costs,[69] and that suppliers would then pay higher rental charges over time. If suppliers' contractual arrangements were inflexible (eg if the payment per installation and meter rental charges were fixed), then suppliers would have needed to expense more costs in 2020. This would mean that although suppliers classified

[68] 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.
[69] The supplier would incur installation costs if it carried out the installation itself, or arranged the installation by a third party installer. In this situation, the MAP would make a payment to the supplier towards its installation costs. The MAP owns the meter, and charges suppliers over time for the costs of the meter asset and its installation through meter rental payments.

some costs as productive, these costs would actually represent an increase in immediate (ie sunk) installation costs if they could not be amortised.

3.28. We therefore sought clarification from suppliers[70] about the relationship between their cost per installation and their contractual arrangements with MAPs.

3.29. Our analysis showed that method one would deliver an appropriate result for the majority of suppliers (as a group). These were the cases where a supplier's increase in the cost per installation was reflected by an increase in its meter rental charges, where the supplier's cost per installation did not increase in 2020, or where a supplier does not face sunk cost risk due to its contractual arrangements. Suppliers' individual circumstances will vary, but we must set a single sunk installation cost value across suppliers. This means that even where it would be appropriate to use a given supplier's data as an input to method one, the single sunk installation cost value we calculate could underfund or overfund that supplier.[71]

3.30. 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).[72] While the number of suppliers in this situation was low, these suppliers represented roughly half of the customer accounts covered by suppliers in our sample.[73] This illustrates that method one would not deliver an appropriate result for a significant proportion of the market.[74] Method one is therefore likely to underestimate costs in aggregate.[75]

3.31. We want to set a suitable sunk installation cost for suppliers in aggregate. This does not need to match any individual supplier's circumstances. Regardless of which approach we

[70] 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.
[71] This would still be true even if method one was appropriate for all suppliers as a group.
[72] 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.
[73] In each case, we calculate this based on the suppliers in our sample under method one. These figures are based on suppliers' total numbers of domestic customer accounts.
[74] The customer base proportions are only an illustration of the impact, because suppliers' circumstances vary. For example, a supplier's meter rental charges may have increased to some extent, but not sufficiently to reflect the increase in the cost per installation.
[75] As noted above, suppliers will have varying circumstances – the value calculated using method one would still overstate costs for some individual suppliers.

used to setting a single value for sunk installation costs, some suppliers would have higher costs and other suppliers would have lower costs.

3.32. 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.

3.33. 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. The use of this intermediate value reflects that suppliers have different contractual situations, meaning that different methods would be suitable for different suppliers. We consider that the average will be a better reflection of suppliers' aggregate costs than either of the two methods. We consider that taking the average is a reasonable approximation, especially given that each method would be appropriate for roughly half the customer accounts in our sample.[76] We also do not consider that using the average is biased by which suppliers were suited to each method.[77]

3.34. Our decision results in a sunk installation cost of £107.5m in 2020. Appendix 8 provides notes on how we calculate sunk installation costs in 2020.

Projecting sunk installation costs in 2021

Context

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

[76] We do not consider that it would be feasible to calculate a more precise weighting between the two methods, given that a supplier's individual circumstances may not perfectly align to one method or the other.
[77] If the suppliers who were not suited to method one were those who reported low sunk installation costs under method one, then including method one within our analysis (even as an input to the average) could lead to us understating sunk installation costs. This is not the case based on the data and suppliers' clarification responses.

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

- **Whether to include sunk installation costs in 2021:** We said in SMNCC WP1 that the COVID-19 situation was very uncertain, but that we would have some more information by the time of our 2021 consultation.[78] We also said that an efficient supplier would make significant efforts to avoid incurring unproductive costs, given it would be aware of the uncertainty caused by COVID-19. However, we noted that suppliers may have contractual limitations on being able to make significant changes to their rollout programmes in the middle of the rollout.[79]

- **How to estimate sunk installation costs in 2021:** We said in SMNCC WP1 that we expected to follow a similar approach to the way we estimated sunk installation costs in 2020.[80]

3.37. In the April 2021 consultation, we proposed to include sunk installation costs in 2021. and to cap these at the same level as 2020.

Decisions

3.38. 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 position is unchanged from the proposal in our April 2021 consultation.

3.39. 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.[81]

[78] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.28 and 3.29. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[79] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraphs 3.31 and 3.32. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[80] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.34. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf
[81] In real terms.

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.

Overview of responses

3.40. In response to SMNCC WP1, one supplier said that it was possible that there would be sunk costs in 2021 but agreed that suppliers should be able to take action to avoid some costs. It supported using our previous approach to estimating sunk installation costs. Another supplier said that long planning lead times placed limitations on the extent to which suppliers could adjust their rollout plans.

3.41. In response to the April 2021 consultation, 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.

Considerations: whether suppliers will incur sunk installation costs in 2021

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

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

3.44. These impacts have affected a non-trivial proportion of the year. This means that suppliers are likely to install fewer smart meters in 2021 than in a normal year. We would otherwise need to assume that suppliers would be able to roll out smart meters more quickly in the remainder of 2021 than in a normal year, in order to catch up. Based on industry data for electricity, we have not seen evidence of faster than normal rollout in Q2 2021.

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

Considerations: how to estimate sunk installation costs for 2021

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

Bottom-up approach

3.47. This approach would involve 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.

  In the April 2021 consultation, we said that we would be able to use actual data on rollout in Q1 2021 in time for our decision.[82] For the purpose of presenting figures in the consultation, we assumed that rollout over 2021 was at 80% of

[82] Ofgem (2021), Price Cap - final consultation on updating the credit SMNCC allowance, paragraph 4.31.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf

normal levels, considering the case where a supplier only carried out emergency installations in Q1 2021.

As set out in Chapter 2, we now have the actual data on rollout in Q1 2021. We still need an assumption for the normal level of rollout in that quarter – we use the Q2 2021 rollout projections for this, in line with our approach to estimating rollout for the remainder of the year.[83] Under this approach, rollout in 2021 would be around 93% of the normal level for credit.[84]

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

- **Cost per installation in a normal year:** We would use the same projected cost (in real terms) as we used for 2020 in our August 2020 decision (ie what we 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.[85]

3.48. 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

[83] As set out in the addendum, we consider that this is the best available information on the progress that suppliers can achieve under 'all reasonable steps'. (Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, p3. https://www.ofgem.gov.uk/sites/default/files/docs/2021/06/price_cap_-_addendum_to_consultations_on_reviewing_the_credit_and_ppm_smncc_allowances.pdf). In the April 2021 consultation, we said that we would estimate normal rollout using the incremental rollout in 2021 under our proposed market leader tolerance rollout profile. (Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, footnote 63. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf). Using the Q2 2021 projection to estimate normal rollout is therefore aligned with this.

[84] The equivalent figure is 89% for PPM.

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

costs in 2021, which is lower than the £120.5m estimate we presented in the April 2021 consultation.[86]

Top-down approach and conclusion

3.49. In the April 2021 consultation, we said that the bottom-up approach gave a higher estimate than the data we had on sunk installation costs in 2020. We said that this would imply that COVID-19 would have a greater impact on rollout in 2021 than in 2020, but that is appeared unlikely, given the expected reduction in societal restrictions in response to the COVID-19 pandemic. We therefore proposed to cap sunk installation costs in 2021 at the same level as 2020 (in real terms).[87]

3.50. Given that our updated figures show that 2020 sunk installation costs are larger than our revised bottom-up estimate above for 2021, this is no longer relevant. We have therefore decided to adopt the bottom-up approach.

3.51. Our estimate for sunk installation costs in 2021 is now slightly higher than the value we proposed in our April 2021 consultation (£47.5m as opposed to £38.5m).[88] However, by adopting the bottom-up approach, there is a consequential reduction in the cost per installation for 2021 (see below). We therefore consider that this slight increase in 2021 sunk installation costs is appropriate when viewed as part of our changes in the round. It does not mean that we consider it more likely that suppliers will incur sunk installation costs in 2021 than we did previously.

3.52. We will update this figure with actual data in our next annual review, by gathering data on sunk installation costs in 2021. We will take any difference into account through advanced payments.[89]

[86] 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.
[87] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraphs 4.33 and 4.34. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf
[88] Both in 2020 prices, for comparability with the 2020 figures for sunk installation costs.
[89] This is similar to taking into account updated rollout data in our next review, which we discuss in Chapter 3.

Sunk installation costs beyond 2021

Context

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

3.54. In SMNCC WP1, our initial view was that we would not include sunk installation costs for 2022 as part of this review, and that we would consider these instead as part of any future review.[90]

Decision

3.55. 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.

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

Overview of responses

3.57. In response to SMNCC WP1, one supplier agreed that it would be premature to include sunk installation costs for 2022 as part of this review and that these should be part of a future review.

3.58. In response to the April 2021 consultation, 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.

[90] Ofgem (2020), Updating allowance for smart metering costs in the default tariff cap: working paper, paragraph 3.41. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

Considerations

3.59. 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.[91]

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

3.61. Furthermore, to the extent that suppliers are able to include more flexibility in their plans when they have more time to do so, this would apply to a greater extent by 2022. This could also reduce the likelihood of suppliers incurring sunk installation costs.[92]

3.62. 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

Context

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

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

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

3.64. In our April 2021 consultation, we proposed to use data from suppliers on their productive installation costs in 2020 to estimate the cost per installation.

Decision

3.65. 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.

3.66. This approach has changed from our April 2021 consultation, as a consequence of the change to how we calculate sunk installation costs in 2020.

Overview of responses

3.67. 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.

Considerations

Data source

3.68. As set out in the April 2021 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.[93]

3.69. 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.[94] We gathered data from suppliers on both sunk and productive installation costs,

[93] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraph 4.47. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf

[94] The cost per installation achieved is the productive installation cost divided by the number of actual installations.

with the sum of the two representing suppliers' overall installation costs. We can therefore calculate the cost per installation achieved as the productive installation cost divided by the number of actual installations. This is as shown in Table 3.2 below. For method two, this is the cost per installation from 2019 (adjusted for inflation), which we use to estimate sunk installation costs.

Table 3.2: Breakdown of total installation costs

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

3.70. Our average approach results in a higher cost per installation than 2019 (the last year pre-COVID-19), but lower than the value in our April 2021 consultation.

- It is reasonable that there would be some increase in installation costs in 2020 as a result of COVID-19 – for example due to precautions such as Personal Protective Equipment (PPE). Part of the increase may also reflect natural variation in costs between years for other (non-COVID-19) reasons.

- The reduction relative to our April 2021 consultation reflects that we have increased our estimate of sunk installation costs in 2020. This means that a greater proportion of total installation costs in 2020 are expensed in-year (ie sunk), rather than being amortised (through the cost per installation achieved).

3.71. One supplier's economic adviser said that we had not provided the data to show how we had calculated 2020 (and 2021) productive installation costs. This is incorrect – we disclosed this information on our proposed approach as part of our sunk installation cost analysis.

3.72. Appendix 8 provides notes on how we calculate the cost per installation achieved in 2020.

Projecting costs per installation in 2021

Context

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

3.74. In our April 2021 consultation, we proposed to use the same cost per installation for 2021 as for 2020.[95]

Decisions

3.75. 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.[96] This is a change to the approach we proposed in our April 2021 consultation. This is to ensure that we are being coherent by using the same data source for both.

3.76. We have decided not to use the cost per installation for 2021 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 position is unchanged from the proposal in our April 2021 consultation.

Overview of responses

3.77. We did not discuss this issue in SMNCC WP1.[97]

3.78. 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.

[95] In real terms.
[96] This is the same projected cost per installation as we used for 2020 in our August 2020 decision.
[97] We discussed the approach to projecting installer productivity (which affects installation costs in future years) in SMNCC WP2. We cover this issue in Appendix 9.

Considerations

Value for 2021

3.79. 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.

3.80. 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.

3.81. The resulting cost per installation is lower than the value from our April 2021 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).

3.82. We will update the cost per installation with actual data for 2021 in a future review, and take any difference into account through advanced payments. This will allow us to take into account, for example, any changes to the cost per installation as a result of ongoing precautions linked to COVID-19 (eg PPE).

Starting point for projecting installation costs in future years

3.83. 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.

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

3.85. The costs per installation in 2022 and 2023 are based on our installation cost model. The last year of actual data included in this model is for 2019 – years after this point are projections.

4. Other areas

We discuss the issue of advanced payments from previous cap periods. We set out the contingency approach that we have adopted for this review.

Summary of main areas

4.1. The main areas covered in this chapter are advanced payments and the contingency allowance.

4.2. In line with our August 2020 decision we remain of the view that it is appropriate to include advanced payments in this review.

4.3. We have decided to set the contingency allowance for cap period seven at the values we presented in the consultation: £10.26 for electricity and £3.33 for gas.

4.4. 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.

Implications of rollout profile

4.5. In Appendix 9, we provide our decisions for other issues that could be affected by the rollout profile chosen (beyond installation costs in 2020 and 2021, which we cover in Chapter 3). We set out our decisions for installer productivity, which will affect installation costs in 2022 and 2023. We have decided not to allow for additional marketing costs, beyond those which we include in the cap already. We also discuss the impact of our rollout profile proposal on the unit costs of smart meter assets and installations.

Data updates

4.6. In Appendix 10, we explain which inputs we have decided to update using data that suppliers provide to BEIS. We set out minor updates that we have decided to carry out in other areas. We also note that we have simplified the SMNCC model. Appendix 10 sets out our decisions for these areas.

Review of uncertainty

4.7. In Appendix 11, we set out our view that we should continue to assess the uncertainty around our calculated SMNCC values qualitatively. We explain our view that the net effect of the uncertainty is roughly neutral, and that we therefore have decided not to make a numerical uncertainty adjustment.

Advanced payments

Context

4.8. Advanced payments reflect when suppliers have received payment in advance for smart metering costs they have not yet incurred. The opposite case could also occur, where suppliers have incurred costs in advance of payment through the allowance.[98,99]

4.9. In our decision in August 2020 we said that we would include advanced payments when we updated the SMNCC in our next review. In our decision in August 2020 we also said that we would not include advanced payments for the first two cap periods in any calculation. For cap periods three, four and five, we said that we would consider advanced payments based on a market-leading rollout profile only.[100]

4.10. In SMNCC WP1, we confirmed to stakeholders that advanced payments would be included in the next cap review following our August 2020 decision. We noted that we had consulted several times on the issue of advanced payments, but gave stakeholders an opportunity to provide any further comments.[101]

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

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

[100] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.47 and 2.48. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[101] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraphs 4.10 and 4.12. https://www.ofgem.gov.uk/system/files/docs/2020/11/updating_allowance_for_smart_metering_costs_in_the_default_tariff_cap_working_paper.pdf

Approach

4.11. In line with our August 2020 decision we remain of the view that it is appropriate to include advanced payments in this review. This ensures that we take into account the allowances collected and costs incurred in previous cap periods, to reach an appropriate cumulative position. Table 4.1 below shows the impact of including advanced payments on the resulting SMNCC (for electricity and gas respectively). We only present values for cap period seven, given our decisions to only set the allowance for cap period seven at this stage (a contingency allowance) and to issue a short consultation in early autumn 2021 in relation to the SMNCC allowances for cap period eight.

4.12. This approach is unchanged from our April 2021 consultation.

Table 4.1: Impact of including advanced payments – cap period seven

	Electricity	Gas
SMNCC	9.79	3.55
Advanced payments adjustment	-0.74	1.86
Final SMNCC	**10.52**	**1.69**

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

Overview of responses

4.13. In response to SMNCC WP1, the main comments in relation to advanced payments were: that this constituted a retrospective "clawback", that funds have already been invested, the impact on certainty for suppliers, and the impact on the smart meter rollout. Many of the points made in response to the April 2021 consultation were similar.

Considerations

4.14. Please see Appendix 12 for our consideration of stakeholder feedback on advanced payments.

Contingency allowance

4.15. 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.[102]

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

4.17. In principle, we would follow our proposal and calculate the contingency allowance using our updated SMNCC model, including the changes we have made following the April 2021 consultation. As described in the April 2021 consultation, we would use the SMNCC model (rather than alternative approach) to calculate the contingency allowance because it would take into account the most recent data available.[103] However, this would give an SMNCC allowance of £12.22 per dual fuel customer, which is lower (on a dual fuel basis)[104] than the allowance we presented in the consultation (£13.59 per dual fuel customer).

4.18. In the circumstances, we do not consider that it is possible to set the contingency allowance below the values we presented in the consultation.[105] In the April 2021 consultation, we did not suggest that the contingency allowance could be below the value

[102] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, p1.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/06/price_cap_-_addendum_to_consultations_on_reviewing_the_credit_and_ppm_smncc_allowances.pdf
[103] Ofgem (2021), Price Cap – final consultation on updating the credit SMNCC allowance, paragraphs 6.19 and 6.20.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf
[104] We compare the allowances on a dual fuel basis. This reflects the amount that suppliers could recover from most default tariff customers, given that most customers are dual fuel. We do not compare the allowances separately for each fuel and select the highest value in each case. This would increase the total amount that suppliers could recover through the SMNCC (relative to the values presented in our April 2021 consultation) – we do not consider that this would protect customers. We recognise that the amounts individual suppliers recover will depend on their own split of default tariff customers between fuels. However, we do not consider that our decision will harm a supplier's ability to finance its licensed activities. First, this decision only relates to one cap period, and any discrepancies will be addressed through advanced payments in later cap periods. Second, we have set the SMNCC at a higher level on a dual fuel basis than calculated by the SMNCC model, meaning that even if a supplier under-recovers for its customers on one fuel (electricity), it will over-recover for its customers on the other fuel (gas), and the latter effect should be more significant in most cases.
[105] This relates specifically to the case where we are using a contingency allowance. For a normal (non-contingency) review, the SMNCC allowance in our decision could be higher or lower than the allowance we consulted on, depending on any changes following the consultation.

included in our consultation – we only discussed the possibility of making an upward adjustment to the values from the SMNCC model.[106]

4.19. We have therefore decided to set the contingency allowance at the values we presented in the consultation for cap period seven: £10.26 for electricity and £3.33 for gas.

4.20. However, 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.

[106] Ofgem (2021), Price Cap - final consultation on updating the credit SMNCC allowance, paragraph 6.18.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf

Appendices

Index

Appendix	Name of appendix
1	Final SMNCC values
2	Consultation process
3	Average tolerance SMNCC values
4	Similarities and differences between the credit SMNCC and PPM SMNCC
5	Principles for considering different rollout profiles
6	Consideration of stakeholder comments on a target approach
7	Average tolerance and market leader tolerance
8	Calculation notes
9	Implications of rollout profile
10	Data updates
11	Review of uncertainty
12	Consideration of stakeholder comments on advanced payments

Appendix 1 – Final SMNCC values

1.1. We have decided to make the changes to the SMNCC 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 O7:O8. (Given our decision to adopt a contingency allowance, we are only changing the values for cap period seven).

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

	Cap period seven
Electricity	10.26
Gas	3.33

Notes: All values are £/customer, nominal.

Appendix 2 – Consultation process

1.1. This appendix covers feedback on the consultation process.

1.2. In the addendum, we said that we intend to issue a short consultation 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.[107]

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 (or the issues which form part of that decision). 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 Appendix 10. 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. The operating cost allowance reflects efficient operating costs in 2017 – this includes the costs of regulatory activities, such as responding to consultations, in that year. We do not consider that the costs

[107] Ofgem (2021), Price Cap – addendum to consultations on reviewing the credit and PPM SMNCC allowances, p5.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/06/price_cap_-_addendum_to_consultations_on_reviewing_the_credit_and_ppm_smncc_allowances.pdf

of responding to our consultations on the SMNCC are likely to be significant at an 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. In addition, including additional information in our consultation documents would make them longer, and therefore potentially less accessible for a range of stakeholders. Our consultation documents already include our policy intentions.

Appendix 3 – Average tolerance SMNCC values

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

Table A3.1: SMNCC calculated using an average tolerance rollout profile – cap period seven

	Electricity	Gas
SMNCC	9.29	3.39
Advanced payments adjustment	0.36	3.30
Final SMNCC	**8.93**	**0.09**

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

Appendix 4 – Similarities and differences between the credit SMNCC and the PPM SMNCC

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

Table A4.1: Similarities and differences between the credit SMNCC and the PPM SMNCC

Subject in this decision	Approach for the PPM SMNCC
Rollout (Chapter 2)	Different approach for the PPM SMNCC
Sunk installation costs (Chapter 3)	Same methodology used to set the PPM SMNCC – but different values as uses PPM-specific data
Costs per installation achieved (Chapter 3)	Same methodology and values
Installer productivity (Appendix 9)	Same methodology and values
Marketing costs (Appendix 9)	Same methodology and values
Smart meter asset and installation costs (Appendix 9)	Same methodology and values
Advanced payments (Chapter 4)	Different approach for the PPM SMNCC
Contingency allowance (Chapter 4)	Different approach for the PPM SMNCC
Smart Meters Annual Information Request data (Appendix 10)	Costs have same methodology and values. Benefits not used to set the PPM SMNCC
Other data gathering (Appendix 10)	Applies to the PPM SMNCC
Minor updates (Appendix 10)	Same methodology and values – except for the meter rental uplift, which has PPM-specific values for traditional meters
Model simplification (Appendix 10)	Applies to the PPM SMNCC
Review of uncertainty (Appendix 11)	PPM SMNCC consultation has a review of uncertainty which cross-refers where relevant

Appendix 5 – Principles for considering different rollout profiles

1.1. This appendix sets out our responses to stakeholders' comments on our principles for considering different rollout profiles.

General comments

1.2. In response to SMNCC WP2, one stakeholder said that while it agreed with all four principles, we would need to have a level of prioritisation between them for our decision.

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

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

Reducing costs to default tariff customers

1.5. In response to SMNCC WP2, one supplier said it did not consider that the customer protection objective of the cap could properly be equated with reducing costs to default tariff customers, if this was at the expense of the other principles. It said that our guiding aim should be to support government policy objectives which are intended to deliver consumer benefits.

1.6. In our 2018 decision, we said that we: "consider customer protection to be related to the extent to which the customers will pay a price that fairly reflects efficient underlying costs."[108] This remains our general view on what the customer protection objective means.

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

1.7. We acknowledge that the smart meter rollout is likely to involve an increase in net costs for smart meters in credit mode (during the life of the cap).[109] However, we are seeking to ensure that the allowances we make available through the cap are used in a cost-effective way.

1.8. In response to SMNCC WP2, one supplier said that it accepted the need for us to consider the cost impact on customers. However, it said that we should consider the cost of different rollout options over the life of the rollout, not just over the life of the cap.

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

Increasing the benefits from smart metering

1.10. In response to SMNCC WP2, two stakeholders commented on the interaction between smart meter benefits and protecting customers. One stakeholder said it recognised that we must set the cap at a level to protect customers. However, it said we must ensure that our decision does not restrict suppliers' ability to fund their rollouts and therefore realise longer-term customer benefits. One supplier said that, should our approach hinder rollout, a delay in smart meter benefits would be counter to protecting customers. The supplier's legal adviser repeated this point in response to the April 2021 consultation.

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

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

1.12. In response to SMNCC WP2, one supplier said that a delay in the benefits set out in BEIS's Cost-Benefit Analysis (CBA) could lead to higher overall costs to customers.

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

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

Supporting suppliers to deliver their obligations

1.15. In response to SMNCC WP1, one supplier said that funding was a constraint on rollout, however the rollout obligations were framed. It therefore said that our ability to enforce the rollout obligations (ie the tolerances) would be compromised if we did not provide sufficient funding. In response to the April 2021 consultation, the supplier's legal adviser said that there were a number of legal reasons why we may only enforce rollout obligations to the extent that we had allowed suppliers to recover sufficient revenue to fund them.

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

1.17. In response to the April 2021 consultation, one supplier's legal adviser said that the financeability need in the Act means that we must provide suppliers with sufficient revenue to meet their rollout obligations.

1.18. Our decision on the rollout profile means that the SMNCC allowance will reflect the efficient costs of a supplier with a market leader rollout profile. We consider that this provides

suppliers with sufficient revenue to meet their rollout obligations. Moreover, the Act requires us to "have regard to" the financeability need – we are not obliged to achieve it.[110]

1.19. In response to the April 2021 consultation, one supplier said that the risks were asymmetric. It said that if we overestimated the SMNCC, a market leader might be able to meet its minimum obligations. However, if we underestimated the SMNCC, these obligations were unlikely to be achievable, which would affect BEIS's policy intention.

1.20. We do not agree with this characterisation. In line with the Act, we must protect default tariff customers. Setting a higher SMNCC allowance increases the costs to these customers. We therefore do not consider that overstating the SMNCC is preferable to understating it.

Ensuring cost-effectiveness

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

[110] We responded to a similar point in our April 2021 consultation. Ofgem (2021), Price Cap - final consultation on updating the credit SMNCC allowance, paragraph 3.52. https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf

Appendix 6 – Consideration of stakeholder comments on a target approach

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

Self-fulfilling

1.2. In response to SMNCC WP2, one supplier said that we had suggested suppliers could not be trusted to use funds to achieve the target (rather than the tolerance). It said that only funding to the tolerance would make this a "self-fulfilling prophecy".[111] Similarly, another supplier said that if we do not provide funding to the target "there is no prospect whatever of targets being achieved". In response to the April 2021 consultation, one supplier said that a tolerance approach would provide no incentive or allowance for suppliers to go beyond their obligations.

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

1.4. A target approach would enable suppliers to collect further revenue beyond that needed to meet their obligations. A supplier may spend this money on rolling out smart meters. However, as discussed in Chapter 2, we do not have sufficient confidence that suppliers (in aggregate) would spend additional revenue on smart metering. We therefore do not consider that our rollout profile will have a significant impact on the rollout that suppliers achieve in practice.

Smart meter benefits

1.5. In response to SMNCC WP2, several stakeholders said that a lower SMNCC could delay the realisation of smart meter benefits for customers.

[111] Another supplier also used the same phrase in response to the April 2021 consultation.

1.6. The SMNCC only affects smart meter benefits insofar as it affects the number of smart meters that suppliers roll out. As set out in Chapter 2, the key driver of the number of smart meters that suppliers roll out will be their obligations. We therefore do not consider that the SMNCC will have a significant impact on the timing of smart meter benefits.

1.7. Even if the SMNCC did affect some suppliers' decisions about how many smart meters to roll out, we cannot consider the benefits of smart metering in isolation – we also need to consider the costs to customers of providing a higher SMNCC. These costs to customers (through the cap) would be immediate and highly likely.

No regrets

1.8. In response to SMNCC WP2, one supplier said that setting a high SMNCC allowance would be a no regrets strategy, as we could use annual reviews and advanced payments to make a downward correction if necessary. It said that a high SMNCC allowance would remove barriers to rollout. Similarly, in response to the April 2021 consultation, one supplier said that we could correct for any over-recovery once we had incorporated actual rollout data.

1.9. A high SMNCC allowance has an immediate cost to customers. As set out in our decision on the COVID-19 float for cap periods four to six, suppliers are better placed to manage cash flow risk than default tariff customers are. They typically have better access to capital and at a lower cost.[112] We would therefore be concerned about customers paying more than suppliers are likely to require, even if it was temporary.

1.10. The advanced payments[113] point is also applicable in the opposite situation. If suppliers[114] roll out more smart meters than expected, then advanced payments would provide additional revenue to suppliers in later periods. We therefore do not need to provide suppliers with a large upfront allowance to cover any potential overperformance. (Two stakeholders made a related point in response to SMNCC WP2 and the second PPM working

[112] Ofgem (2021), Decision on the potential impact of COVID-19 on the default tariff cap, paragraph 3.18. https://www.ofgem.gov.uk/system/files/docs/2021/02/decision_on_the_potential_impact_of_covid-19_on_the_default_tariff_cap.pdf
[113] We cover advanced payments in Chapter 4.
[114] Under our decision to use a market leader tolerance rollout profile, this would depend on the performance of the market leader only.

paper.[115] One stakeholder said that it would be fairer to set a less generous allowance immediately and then correct ex post, while the other stakeholder said that an annual review could allow for the possibility of suppliers exceeding their obligations).

Safety margin

1.11. In response to SMNCC WP2, several stakeholders referred to the intended role within the framework of the annual tolerance levels. One supplier said that the purpose of the tolerances is to allow a contingency margin ('safety margin') before suppliers become exposed to penalties for non-compliance. Two stakeholders said that failing to fund to the target makes the concept of tolerance levels meaningless. In response to the April 2021 consultation, one supplier said that the annual tolerance levels were provided to allow flexibility in a complex programme.

1.12. The tolerance profiles are suppliers' legal obligations. There is no legal requirement on suppliers to roll out more smart meters than this.[116] Using a higher rollout profile would increase costs to customers, with a significant risk that it would not be a cost-effective way of increasing rollout.

Overshooting

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

1.14. Several suppliers said that suppliers would aim to roll out more smart meters than the tolerance. One supplier said that prudent suppliers would aim to overshoot the tolerance, given the penalties for non-compliance. In response to a clarification question, one supplier

[115] Ofgem (2021), Setting the level of rollout for the PPM smart meter cost allowance – working paper. https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/setting_the_level_of_rollout_for_the_ppm_smart_meter_cost_allowance.pdf

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

set out several reasons why suppliers would need to aim above the tolerance. In summary, it said:

- customer demand is unpredictable, so suppliers have to maximise activities to generate demand;
- whether a booking results in a successful installation is not wholly within suppliers' control, given factors such as physical and technical limitations and customers not being present at the time of the appointment;
- when a customer with a smart meter switches away, the supplier's obligation will be higher in future years, so it is prudent to mitigate this risk by rolling out as many smart meters as possible;[117] and
- the new framework places fixed requirements on suppliers, so suppliers need a cushion to account for the above.

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

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

[117] Since the supplier provided this comment, BEIS has published its decision on the annual tolerance values. As part of this, BEIS confirmed that it will consult later in 2021 on a modification in the calculation of targets for Year 2 of the new rollout framework (ie 2023), to mitigate the impact of churn in smart meter customers.
BEIS (2021), Smart meter policy framework post 2020: Government response to a consultation on minimum annual targets and reporting thresholds for energy suppliers, paragraph 9(vi).
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf

1.17. Smart meters in credit mode are a net cost to suppliers (during the life of the cap),[118] so a supplier would have little incentive to roll out smart meters beyond its obligations. However, there is not a precise relationship between the resources suppliers commit to their rollout programmes and the rollout they achieve, given that rollout can also be affected by factors outside suppliers' control. This limits the extent to which suppliers can precisely calibrate their resources to exactly deliver their obligations, while still remaining confident of meeting their obligations in most years.

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

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

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

- If suppliers[119] plan installations above their obligations, but external factors mean that their outturn rollout is only in line with their obligations, then this would result in a higher cost per installation. The SMAIR data from BEIS includes the cost per successful installation. We would be able to take this into account in our next annual review.

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

[118] Ie during the period covered by the SMNCC model.
[119] We calculate costs based on data across suppliers, so this would not solely be driven by the market leader.

Other point

1.20. One supplier said that there was a precedent for a target approach, referring back to our use of an EU target when setting the rollout profile for our 2018 decision.[120]

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

[120] In our 2018 decision, we used a rollout profile based on the EU target for installing electricity smart meters by the end of 2020.
Ofgem (2018), Default Tariff Cap: Decision. Appendix 7 – Smart metering costs, paragraph 1.13.
https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_7_-_smart_metering_costs.pdf

Appendix 7 – Average tolerance and market leader tolerance

1.1. This appendix contains our consideration of stakeholders' comments on the average tolerance and market leader tolerance approaches to calculating the rollout profile.

Use of average tolerance

1.2. In SMNCC WP2, we said that average tolerance is the lowest rollout profile option and would therefore deliver the lowest SMNCC. By limiting the revenue that suppliers would be able to collect, this option would deliver the lowest immediate costs to default tariff customers. We also said that average tolerance would give an average supplier sufficient revenue to reflect the efficient costs of meeting its obligations, but would avoid the risk of customers overpaying (on average) if suppliers did not roll out any smart meters beyond their obligations.[121]

1.3. In response to SMNCC WP2, one stakeholder said that the average supplier was more likely to be representative of the market as a whole than suppliers at an extreme. It said that the cap was meant to be challenging. It said that it was not credible to base costs on the highest levels in the market, and that this would not protect customers, particularly during the recovery from COVID-19.

1.4. We agree that an average supplier is more likely to represent the market as a whole. We are also very conscious of the importance of protecting customers, especially in the context of the economic difficulties caused by COVID-19. However, suppliers have made different progress on their smart meter rollouts to date, and will have individual rollout obligations going forward. These rollout differences mean that some suppliers will have above average costs – but we do not consider that this is an indication of inefficiency. We therefore consider that there is a distinction between setting the SMNCC in line with the costs of an inefficient supplier (which we agree would not protect customers) and using a market leader rollout profile as an input to the SMNCC calculation.

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

1.5. In response to SMNCC WP2, one stakeholder said that smart meter rollout is more advanced among large suppliers than smaller suppliers, despite them having more default tariff customers subject to the cap. It said that this suggested that the cap is not restricting rollout.

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

1.7. In response to SMNCC WP2, one stakeholder said that we had failed to recognise that there were advantages to suppliers to rolling out smart meters more quickly, including: customer service (and associated branding advantages), efficiencies in billing and meter reading, and early growth in smart markets.

1.8. As part of estimating the net costs to suppliers, the SMNCC model takes into account the direct benefits from smart meters for suppliers' operations, including cost savings for inbound enquiries and meter reading. We agree that suppliers may invest in smart meters to achieve wider benefits – for example by building a positive brand image or supporting growth in related products. However, these are inherently difficult to quantify. We do not consider that we could rely on such wider benefits to eliminate any shortfall between the efficient costs of delivering individual suppliers' rollout obligations and the revenue available with an average tolerance SMNCC. We do however note this point within our review of uncertainty (see Appendix 11).

Use of market leader tolerance

1.9. In SMNCC WP2, we said that market leader tolerance would mean that each supplier (including the market leader) could recover sufficient revenue to reflect the efficient costs of meeting its obligations. A market leader tolerance rollout profile could therefore contribute to ensuring that efficient suppliers are able to finance their licensed activities.

1.10. We also said that suppliers other than the market leader would require a smaller amount of revenue (than available through a market leader tolerance SMNCC) to reflect the efficient costs of meeting their obligations. Other suppliers would be able to collect the revenue permitted through the SMNCC and could choose to use this to roll out more smart

meters than their obligations. This could help to deliver the benefits of smart metering sooner.[122]

1.11. In response to SMNCC WP2, some stakeholders said that a market leader profile would allow all suppliers – including those with above average rollout – to recover their efficient costs.

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

1.13. In response to SMNCC WP2, two suppliers said that there was an interaction between the rollout profile and the overall modelling approach. One of these suppliers said that what mattered was the level of the SMNCC allowance. Another of these suppliers said that setting a market leader rollout profile could minimise the risk of suppliers being unable to recover costs due to the estimates of smart metering costs in our modelling. It repeated this point in response to the April 2021 consultation.

1.14. We consider that our modelling approach is appropriate. We therefore do not consider that a higher rollout profile is required to mitigate the risk of modelling issues. While there will inevitably be some uncertainty, we do not consider that we must set a deliberately high rollout profile so that the revenue available exceeds costs in all circumstances.

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

Appendix 8 – Calculation notes

1.1. This chapter includes detail on how we carry out calculations for our decisions on rollout and installation costs.

Calculation notes relating to rollout

Rollout profile

Calculation steps for rollout profile

1.2. We have taken the following calculation steps for our rollout profile.

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

- We have set the rollout for the years between 2018 and 2020 using the market leader's historical (actual) rollout. We have selected the market leader using the process set out in SMNCC WP2.[123,124]

- We have set the rollout for the first half of 2021 using actual data for the market leader for Q1 2021 and its updated projection for Q2 2021. We have set rollout for each quarter in the second half of 2021 using the market leader's updated projection for Q2 2021. When added to the historical rollout, this gives the starting point for the new framework – ie estimated cumulative rollout at the end of 2021.

[123] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 2.6. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf

[124] As set out in SMNCC WP2, we select the market leader from the large legacy suppliers. Where the large legacy suppliers have been subject to significant mergers over time, we look at the rollout profiles based on the current structure of these suppliers (ie as if these suppliers had been combined over the entire period).

- For the remaining years of the cap, we calculate the obligation for a supplier with this starting point. We use the annual tolerance values for 2022 and 2023 from BEIS's decision.[125]

Annual reviews

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

- We will update the rollout percentage for the previous year (eg 2021) with actual data, once this is available. Under our proposal to use a market leader tolerance rollout profile, we will use the actual data for the market leader.[126]

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

- As the new framework will now start at the beginning of a calendar year, this will align with the point up to which actual rollout data will be available. The actual rollout data will therefore form the starting point for estimating rollout for the next calendar year.

Rollout for baseline adjustment

1.4. As in our August 2020 decision, we have included an adjustment to reflect that our operating cost allowance will include smart metering costs relating to both credit and PPM

[125] 3.5% for 2022 and 5.1% for 2023. These are the values for domestic suppliers. 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://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf

[126] We will select the market leader each time using the same process used in this review. This means that the identity of the market leader could possibly change between reviews.

meters, whereas we calculate separate SMNCC values for credit and PPM.[127] Given this relates to the baseline year, we continue to use a weighted average rollout profile for this.

1.5. In line with our August 2020 decision, we have excluded one supplier which was not included in our operating cost benchmarking analysis and had high smart metering costs relating to PPM.[128] We have excluded this supplier from the weighted average PPM rollout profile.[129] We have considered whether we should exclude all suppliers who were not included in our operating cost benchmarking, but do not consider that this is necessary given that it would have no significant impact on the rollout values used for this adjustment.

Fuel-specific rollout

1.6. For each full year where BEIS data is available (2012-2020), we calculate the rollout percentages[130] for electricity, gas, and combined dual fuel. We do this using data from the Large Energy Suppliers[131] only. This is consistent with our August 2020 decision to calculate rollout profiles using data from these suppliers only.[132] These rollout percentages include both credit and PPM meters.

1.7. For each year, we calculate the ratio between a fuel-specific rollout profile and the combined dual fuel rollout profile. This gives us a scaling factor for each fuel and year.[133] For the years where no BEIS data is available (before 2012 and after 2020), we use the scaling factor from the nearest available year.

1.8. We then apply the scaling factor to the combined rollout profile in the SMNCC model. In most years, this means increasing the electricity rollout percentage slightly and decreasing

[127] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.78. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[128] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.79. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[129] This is in line with the approach we took when calculating the SMNCC for our August 2020 decision.
[130] The rollout percentage is the number of smart meters (including both those in smart mode and traditional mode) divided by the total number of meters.
[131] As defined for smart meter reporting.
[132] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.15. https://www.ofgem.gov.uk/sites/default/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[133] Scaling factor = Fuel-specific rollout / Combined dual fuel rollout.

the gas rollout percentage slightly. We apply the same scaling factors to both the credit and PPM rollout profiles in the SMNCC model.

Customer base check

1.9. We used information from the rollout model that we used to select the market leader.[134]

- We took the cumulative SMNCC for each fuel over the cap based on the market leader's rollout profile.
- We also took each supplier's cumulative costs over the cap for each fuel,[135] based on their own rollout profiles.
- For each supplier, we calculated its fuel split (ie the proportion of customers on each fuel) for credit customers on default tariffs.[136]
- For each supplier, we used this fuel split to weight both the SMNCC and its cumulative costs, to give a value per customer account.
- For each supplier, we then took the difference between the revenue and cost per customer account.

Calculation notes relating to installation costs in 2020

Sunk installation costs for 2020

1.10. To calculate the average, we first calculated method one, starting with the total sunk installation cost for the suppliers where we had usable data. We scaled this up to represent the whole domestic supply market. We did this by assuming that the suppliers outside our data had the same per customer sunk installation costs as those included.

[134] This covers the largest suppliers. As explained in SMNCC WP2, these suppliers have the largest number of default tariff customers.
[135] Ie what the SMNCC would have been based on that supplier's rollout profile.
[136] Using data from the customer account RFI.

1.11. We then calculated the sunk installation cost as a residual (method two) and scaled up the result up in the same way as for method one (based on the suppliers included in our analysis for method two).[137]

1.12. We then averaged the sunk installation costs values calculated under method one and method two.

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

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

Costs per installation for 2020

1.15. The SMNCC model does not differentiate between credit and PPM installation costs – there is a combined input for the cost per installation. When applying the cost per installation related to method one, we therefore calculate a combined cost per installation using the credit and PPM data we gathered from suppliers, rather than calculating separate credit and PPM installation costs. We then calculate the average of this (method one) and the cost per installation related to method two. This is the cost per installation for 2019 (adjusted for inflation), which is already presented as a combined input.

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

[137] Our samples for method one and method two are slightly different – in each case there was one medium supplier included in one method but not the other. We do not consider that this degree of difference is a problem when averaging the results of the two methods. We consider that it is best to use all the available data, rather than only using the suppliers which were in the samples for both methods.

Appendix 9 – Implications of rollout profile

1.1. This appendix covers decisions on other issues that could be affected by the rollout profile chosen (beyond installation costs in 2020 and 2021, which we cover in Chapter 3). We previously included these issues in Chapter 5 of the April 2021 consultation.

1.2. Our current view is that the decisions we have made in this appendix 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.

Installer productivity

Context

1.3. 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).[138] If productivity improves, then the cost per installation falls. This reduces the SMNCC.

1.4. BEIS has developed expectations for how suppliers' operational fulfilment[139] will improve in future. BEIS assumes that suppliers will improve their operational fulfilment gradually between the second half of 2021 and the second half of 2022, and that this will increase average market conversion rates[140] by 7% by the second half of 2022. This is based on

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

discussions with suppliers, as well as improvements already delivered by some suppliers.[141] Improvement in operational fulfilment would mean higher productivity.[142]

1.5. In SMNCC WP2, our initial view was that it would be appropriate to apply BEIS's expected improvements in operational fulfilment if we were using a tolerance rollout profile. This was to reflect an achievable level of productivity improvement in future cap periods.[143]

1.6. 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.[144] 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.[145]

Decision

1.7. 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 in Chapter 3 to project installation costs in 2021 based on the same assumption that we use to estimate sunk installation costs

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

in 2021, the operational fulfilment assumption only affects installation costs in 2022 and 2023.[146]

1.8. We have decided to apply this improvement in operational fulfilment to a base level of productivity which is the average productivity between 2017 and 2019. We continue to use actual data for 2019 productivity.

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

Overview of responses

1.10. In response to SMNCC WP2, suppliers who commented either said that productivity would not improve as assumed by BEIS, or that it would decrease. They commented on the operational fulfilment assumption, 'hard to reach' customers, and COVID-19 impacts. Suppliers also raised concerns about the operational fulfilment assumption in response to the April 2021 consultation.

1.11. In response to SMNCC WP1, one supplier also commented on the year we were using for our base productivity assumption. Stakeholders commented further on this in response to the April 2021 consultation.

Considerations

Operational fulfilment

1.12. In response to SMNCC WP2, two suppliers raised concerns about BEIS's assumed improvement in operational fulfilment. Both suppliers said that it had not been possible to identify this in supplier data. In response to the April 2021 consultation, suppliers raised concerns that the operational fulfilment assumption was unrealistic and unevidenced.

1.13. If we considered that there was sufficient evidence of an expected improvement in operational fulfilment, we should incorporate this in our analysis. This would mean that our

[146] Cap period seven is a winter cap period, which overlaps two calendar years (2021 and 2022). The SMNCC calculated in the SMNCC model is therefore the average of the annual SMNCC values for these calendar years.

estimated cost per installation in 2022 and 2023 would be a better reflection of efficient costs in those years, improving the accuracy of our SMNCC calculation.

1.14. 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 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.[147] 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.[148] There was very little engagement by stakeholders with BEIS's decision in their responses to our April 2021 consultation.

1.15. 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 that BEIS's position is incorrect.

[147] Ofgem (2021), Price Cap: final consultation on updating the credit SMNCC allowance, paragraph 5.11.
https://www.ofgem.gov.uk/sites/default/files/docs/2021/04/price_cap_-_final_consultation_on_updating_the_credit_smncc_allowance.pdf
[148] 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 to 59.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990526/Annex_C_Analytical_Evidence_-publication.pdf

1.16. We have therefore decided to incorporate BEIS's expected improvement in productivity when calculating the SMNCC.[149]

1.17. In response to the April 2021 consultation, one supplier's economic adviser said that assuming productivity improvements for smart metering was inconsistent with our assumptions for traditional meters. We do not agree. Installing traditional meters is an established process, whereas installing smart meters is a newer process, for which BEIS's analysis shows that suppliers have a wide range of performance. It is therefore reasonable to assume that suppliers can make productivity improvements for installing smart meters but not for traditional meters.

'Hard to reach' customers

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

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

COVID-19 impacts

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

1.21. We recognise that COVID-19 may have some impact on suppliers' installation activities. We expect this to be less relevant from 2022. As discussed in Chapter 3, it is possible that there are persistent impacts of COVID-19 on installation costs in future years, but this is

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

uncertain. BEIS has been able to take COVID-19 into account when determining what an appropriate operational fulfilment assumption is.

Base productivity assumption

1.22. In response to SMNCC WP1, one supplier considered that we should have used productivity data from 2019, as this would be the same as the starting installation costs. In response to the April 2021 consultation, one supplier supported our base productivity level. However, one supplier's economic adviser said that productivity had declined in the years to 2019, and it would be reasonable to assume a continuation of this trend (or at least to remove the assumed productivity improvement relative to 2019).

1.23. In August 2020, we decided to use average productivity between 2017 and 2019 to project installation costs in future years. This was to reflect historical levels.[150] For this productivity assumption, we consider that it is more appropriate to use data from several years rather than relying on a single historical year. Productivity may have been temporarily affected in 2019 by the transition from primarily rolling out SMETS1 meters to primarily rolling out SMETS2 meters.[151] We have not received new evidence to justify a change to our proposal.

1.24. 2019 productivity was 2.8 meters installed per installer per day, and the average productivity between 2017 and 2019 was 3.1 meters installed per installer per day.[152] The difference is therefore small.

[150] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 2.23 and 2.29.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[151] SMETS stands for Smart Metering Equipment Technical Specifications.
[152] 2019 productivity: Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, table 5.6.
https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf
2017-2019 average productivity: Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 4.48.
https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf

Marketing costs

Context

1.25. Suppliers may incur marketing costs[153] to encourage customers to take up smart meters. We include marketing costs as a category in the SMNCC model. Higher marketing costs therefore increase the SMNCC.

1.26. In SMNCC WP2, we noted previous feedback that we should consider how higher rollout obligations could increase marketing costs.[154] Under a tolerance rollout profile, our initial view was that no additional allowance for marketing was required. This reflected that the tolerances do not require suppliers to roll out more smart meters than they currently do, removing one reason why suppliers might incur increased marketing costs. It also reflected that BEIS is not assuming that suppliers manage to persuade customers to develop more positive attitudes to smart meters at a greater rate than previously.[155]

Decision

1.27. We have decided to maintain the current approach to calculating marketing costs.[156] Under a market leader tolerance rollout profile, we do not consider that suppliers will incur higher total marketing costs than historically.

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

[153] In this decision, 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.
[154] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraph 3.14. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[155] Ofgem (2021), Smart meter rollout and the default tariff cap: working paper, paragraphs 3.15 to 3.18. https://www.ofgem.gov.uk/system/files/docs/2021/02/smart_meter_rollout_and_the_default_tariff_cap_-_working_paper.pdf
[156] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.316. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

Overview of responses

1.29. In response to SMNCC WP2 and the April 2021 consultation, two suppliers encouraged us to gather data on marketing costs.

1.30. Several suppliers commented on trends in marketing costs.

- In response to SMNCC WP2 and the April 2021 consultation, two suppliers said that marketing costs would increase as the rollout progressed, given that willing customers would already have received a smart meter. Both suppliers noted the cost of providing attractive tariffs linked to smart meters. One of these suppliers also referred to the cost of incentives to encourage consumers to accept a smart meter, and of additional customer service support.

- In response to SMNCC WP2, one supplier said that, under the new rollout framework, suppliers would look to adopt additional measures to address customer engagement challenges. In response to a follow-up question, the supplier said that these additional measures could include financial incentives, marketing campaigns (eg TV), and area-specific campaigns.

Considerations

Data gathering on marketing costs

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

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

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

Trends in marketing costs

1.34. We include marketing costs in the SMNCC model, based on a 2019 RFI. We froze total marketing costs in real terms after the end of this data (after 2018). This reflects that although suppliers will need to engage fewer customers over time, those who remain without a smart meter may be harder to engage.[157] We are therefore already taking some account of changes in customers' willingness to accept a smart meter.

1.35. Under a tolerance profile, suppliers (as a group)[158] would not need to roll out more smart meters than they have done historically. BEIS's modelling also only assumes that customers' attitudes towards smart meters evolve over time in line with historical experience.[159] We therefore do not consider that suppliers will have to spend more on marketing as a result of the new rollout framework.

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

- We discussed discounted tariffs in SMNCC WP2. As part of this, we noted that it would be "practically difficult to distinguish discounts offered to encourage customers to select a smart meter from discounts offered for general customer acquisition purposes".[160] No supplier provided an explanation for how we could address this concern.

- Customer service costs relating to appointment setting are already included in the installation cost data suppliers provide to BEIS. We will take into account updated

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

[158] 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.

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

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

installation cost data annually in arrears, so suppliers would only see a temporary shortfall if appointment setting costs increased.

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

Other point – other policy initiatives

1.37. In response to the April 2021 consultation, one supplier said that it was unclear what central policy initiatives will be introduced to support consumer engagement.

1.38. BEIS's recent decision on the annual tolerance levels included an annex setting out which policy initiatives have been introduced so far, and which remain under consideration.[161]

Other point - central marketing costs

1.39. In response to SMNCC WP2 and the April 2021 consultation, one supplier said that it was unclear how much it would have to contribute to the costs of advertising through Smart Energy GB (SEGB).

1.40. This is not relevant to our review of the non-pass-through SMNCC. We take SEGB costs into account through the pass-through SMNCC.

1.41. In response to the April 2021 consultation, one supplier said that it was unrealistic to assume that SEGB advertising would convert all customers to smart meters.

[161] 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. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990525/smart-meter-policy-framework-post-2020-govt-response-minimum-annual-targets.pdf

1.42. We are making no such assumption. Suppliers already spend money on their own smart meter marketing, and we would expect this to continue, regardless of centrally organised marketing. As noted above, we include suppliers' marketing costs in the SMNCC model.

Smart meter asset and installation costs

Context

1.43. 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.

1.44. 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.[162]

Decision

1.45. 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.

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

Overview of responses

1.47. In response to SMNCC WP2, suppliers commented on potential developments affecting these costs, data gathering, and costs for suppliers who are further advanced in their rollout.

1.48. No stakeholders commented on this issue in response to the April 2021 consultation.

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

Considerations

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

Potential developments affecting these costs

1.50. In response to SMNCC WP2, one supplier said that: "it is challenging to fully crystallise the implications of the pandemic and Brexit on smart meter assets and installation costs".

1.51. For both asset and installation costs, we will receive actual data for 2021 in time for our next annual review (ie the review which will conclude in August 2022) and will include this in the SMNCC model. We would be able to take the impact of any discrepancies into account in arrears, through advanced payments. Should either cost increase, suppliers would therefore only see a temporary shortfall.

Data gathering

1.52. In response to SMNCC WP2, one supplier encouraged us to consider requesting information from suppliers on trends in smart meter asset and installation costs.

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

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

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

Suppliers who are further advanced with rollout

1.54. In response to SMNCC WP2, one supplier said that suppliers who are further advanced in their rollout would have higher costs. It said that installation costs would be higher due to factors such as greater travel between sites, and that it would be harder to contact customers

to accept an installation. It said that these suppliers would be underfunded, and that this would not meet our duty to ensure that suppliers can fund their regulated activities.

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

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

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

Appendix 10 – Data updates

1.1. This appendix contains our decisions to update certain inputs using data that suppliers provide to BEIS and to carry out minor updates in other areas.

1.2. Our current view is that the decisions we have made in this appendix 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.

Smart Meters Annual Information Request data

Context

1.3. Suppliers[163] submit SMAIR data to BEIS each year. This data provides information on costs related to smart and traditional metering that they have incurred in the previous year.

1.4. We discussed this data in SMNCC WP1.[164] We said that we intended to update the SMNCC model using SMAIR data in certain areas. We did not intend to update the other areas included in the SMAIR.

Decision

1.5. In line with our August 2020 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.

1.6. We have decided not to use SMAIR data to update smart meter installation costs, as we have gathered our own data (see Chapter 3).

1.7. We have decided to update the remaining areas where we receive data through the SMAIR. This means updating four additional smart metering benefits: change of supplier,

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

inbound enquiries, debt, and remote change of tariff. We have decided to carry out these updates given that we have received this data from BEIS.

1.8. We have decided to make some consequential edits as a result of using the SMAIR data. These are: removing optimism bias from the 2020 values, starting any assumed cost erosion[165] from after the last actual data, and updating the baseline adjustment for payment methods.[166]

1.9. These positions are unchanged from the proposals in our April 2021 consultation.

Overview of responses

1.10. In response to SMNCC WP1, one supplier said that it broadly agreed that we should use SMAIR data to update the SMNCC model.

1.11. In response to SMNCC WP1, one supplier said that the assumed benefits of smart metering were too high. Another supplier disagreed that a general update using SMAIR data would be disproportionate, given that this data would be available to us. It said that any selective use of data would require careful consideration.

1.12. We did not receive any stakeholder comments on this area in response to our April 2021 consultation.

Considerations

Main areas to update

1.13. Our considerations for the main areas to update are unchanged since SMNCC WP1. This is with the exception of installation costs, where we have now decided to use the data we gathered (see Chapter 3), rather than the SMAIR data.

[165] 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.
[166] For the avoidance of doubt, the figures presented earlier in the document incorporate all the proposals in this appendix.

Additional benefits to update

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

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

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

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

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

1.17. We maintain the position from our August 2020 decision that we do not expect to carry out future reviews with the same level of detail as our May 2020 consultation, as we consider this would be disproportionate.[167]

[167] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 5.39. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

Consequential changes

1.18. As originally proposed in SMNCC WP1,[168] where we update input data, we also have decided to make consequential changes to the SMNCC model to reflect the fact that this data is now actual rather than forecast.

1.19. We have decided to no longer apply optimism bias[169] to the 2020 values which are now based on actual data. Optimism bias should only apply to the remaining years (2021 and beyond) where data is forecast.

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

1.21. We have an adjustment in 2017 to split the combined baseline net cost of smart metering (ie the amount reflected in the operating cost allowance) between credit and PPM. This adjustment accounts for the different costs across payment methods in that year.[170] The updated benefit input values affect the calculations for each year, including 2017, so have affected the size of this baseline adjustment slightly. We have therefore decided to update this adjustment in the SMNCC model.

[168] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 2.4. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

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

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

Other data gathering

Context

1.22. 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.[171]

Decision

1.23. 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.

1.24. This position is unchanged from the proposal in our April 2021 consultation.[172]

Overview of responses

1.25. In response to SMNCC WP1, one supplier said that it broadly agreed that extensive further data gathering was unlikely to be necessary.

1.26. Where stakeholders raised comments suggesting that we gather further data on specific points in response to the April 2021 consultation, we have summarised and considered these through the relevant sections in this decision. These are the sections relating to: rollout in the second half of 2021 (in Chapter 2), fuel-specific rollout profiles (in Chapter 2), and marketing costs (in Appendix 9).

Considerations

1.27. We maintain our previous considerations from SMNCC WP1.

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

[172] 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.

Minor updates

Context

1.28. We discuss the rollout profile in Chapter 2 of this decision. This section discusses some more minor issues which relate to, or are affected by, rollout. These are points which do not require RFIs.

Decision

1.29. 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, and the proportion of installations which are SMETS1 or SMETS2 for 2020 and 2021. These updates are to better reflect the current situation, given the impact of COVID-19 on installations and the enrolment of SMETS1 meters.

1.30. 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 from 2018. This would not reflect reality.

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

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

Overview of responses

1.33. We did not discuss these minor issues in our working papers. Stakeholders did not comment on these issues in response to our April 2021 consultation.

Considerations

SMETS1 enrolment

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

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

1.36. SMETS1 enrolment is ongoing. However, we recognise that the progress of enrolment is behind the expectations in our August 2020 decision.[173] We therefore consider that it is reasonable to update the assumptions in this area. These relate to the following points.

- **Profile for the proportion of SMETS1 meters enrolled with the DCC:** In our August 2020 decision, we used a profile provided by BEIS. We do not have an updated expectation for the rate of enrolment in future years. However, enrolment is behind previous expectations, but will continue progressing in future years. We have therefore decided to shift the August 2020 decision enrolment profile back one year for all the years that were forecasts (ie 2020 and subsequent years). This reflects later enrolment, while still using the best information available to us on how enrolment is likely to progress over time. We have decided to estimate enrolment in 2020 by averaging the enrolment profile values for 2019 and 2021. In our April 2021 consultation, we said that if more accurate information became available in time for the decision, then we intended to update this profile accordingly. We are not aware of a more accurate source, and no stakeholder suggested one to us.

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

- **Proportion of SMETS1 meters expiring early:** The SMNCC model includes an assumption for the proportion of SMETS1 meters expiring early for reasons unrelated to enrolment. We assumed that this would fall from a level based on historical data to a low enduring rate once enrolment was complete and assumed a straight-line decline between these points. Given the revised enrolment competition date, we now assume a more gradual decline.

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

Proportion of SMETS1 meters losing smart functionality in each year

1.37. Smart meters can lose smart functionality. In particular, if a customer switches supplier, and that customer has a SMETS1 meter which is not enrolled with the DCC, the gaining supplier may not be able to communicate with the meter.[174] In our August 2020 decision, we decided to amend the assumed number of SMETS1 meters losing smart functionality to align with the latest data.[175] We used a scalar to do this.

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

1.39. BEIS has published updated data on the number of smart meters operating in traditional mode.[176] We have therefore decided to use this data to calculate an updated scalar, so that the stock of smart meters in traditional mode at the end of 2020 reflects the BEIS smart metering statistics. This updated scalar would apply for 2020 (and beyond).

1.40. We maintain a separate scalar for 2019 (and previous years). However, we needed to edit the value of this scalar, as a consequence of changing the rollout profile. By using a higher rollout profile, there are more smart meters in total. However, the absolute number of smart meters in traditional mode in 2019 is still the same. We therefore needed to adjust the scalar so that it maintains the same absolute value for the number of smart meters in traditional mode in 2019.

[174] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.25 and 4.26. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[175] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 4.24. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[176] BEIS (2021), Smart Meter Statistics in Great Britain: Quarterly Report to end December 2020, Table 1. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968356/Q4_2020_Smart_Meters_Statistics_Reportv2.pdf

Proportion of SMETS1/SMETS2 installations

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

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

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

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

Bottleneck uplifts

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

1.46. These bottleneck uplifts are not ordinarily triggered by the annual rates of rollout in the SMNCC model. However, under our decision to use a market leader tolerance rollout profile, there is a significant jump in rollout in 2018. This reflects that we do not change the rollout figure in 2017 (or before), as we are calculating the change in smart metering costs relative to a fixed 2017 operating cost baseline.[177] There is therefore a jump between a weighted average rollout profile in 2017 and a market leader tolerance rollout profile in 2018. This

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

jump could be sufficient to trigger the bottleneck uplifts (dependent on which supplier was the market leader).

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

Meter rental uplifts

1.48. In our August 2020 decision, we applied a meter rental uplift in certain cases to reflect the difference between our bottom-up estimate in the SMNCC model of installation and asset costs, and the data we collected on suppliers' meter rental payments.[178]

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

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

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

1.50. We have therefore decided to update the rollout profile used when calculating the meter rental uplifts, to reflect the changes to the SMNCC model. This is a consequential amendment

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

following our change from an average to a market leader approach. This corresponds to the approach we took in our August 2020 decision, when the rollout profile changed between our May 2020 consultation and our August 2020 decision.[179]

Other input issues

Context

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

Decision

1.52. We have decided to maintain our approach from the April 2021 consultation for the issues raised.

Overview of responses

1.53. Stakeholders raised several issues, relating to:

- the proportion of IHDs replaced at the end of their life
- changes over time for the number of installers in training
- the expiry date for traditional meters
- the smart metering costs included in the operating cost allowance.

Considerations

Replacement In-Home Displays

1.54. 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.

[179] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 3.40. https://www.ofgem.gov.uk/system/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

1.55. 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[180] suggests that IHDs are more effective than app-based alternatives, and given that suppliers are still required to offer IHDs.

1.56. 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.

1.57. 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 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. BEIS's research compared the impact of IHDs and apps provided at the point a smart meter was first installed. This research will not necessarily reflect a customer's behaviour at the point when their IHD reaches the end of its life, when the customer would already be used to receiving real-time information on their energy consumption.

1.58. 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.[181] 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 do so.[182]

1.59. 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

[180] BEIS (2019), Smart Metering Implementation Programme: Policy conclusions following energy suppliers' trials of alternatives to In-Home Displays. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/830603/ihd-alternative-trials-policy-conclusions.pdf
[181] Standard licence conditions 40.16 of the electricity supply licence and 34.16 of the gas supply licence.
[182] 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.

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.

Installer training

1.60. Our analysis follows BEIS's 2019 CBA in projecting a reduction in installer training costs between 2019 and 2020. This is based on comparing the number of installers in training in 2019 against a projected figure for 2020. The reduction is a very small proportion of overall installation costs.

1.61. 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.

1.62. 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.

1.63. Actual data would now be available for the number of installers in training in 2020. However, as set out in our August 2020 decision,[183] we do not intend to carry out future reviews with same level of detail as in 2020, as this would be disproportionate. 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.

1.64. 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.

1.65. In relation to ongoing training for existing installers – 2019 installation costs should already include a base level of such training.[184] Suppliers have not provided evidence that the

[183] Ofgem (2020), Decision on reviewing smart metering costs in the default tariff cap, paragraph 5.39. https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[184] Through wages paid to installers, including when they are unavailable due to training.

complexity of training required has grown since 2019. However, there could be a question on 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.

1.66. We have therefore decided to maintain the assumed reduction in training costs when projecting installation costs. However, in our review of uncertainty, we note that our approach to training for existing installers may be slightly less-conservative.

Expiry date for traditional meters

1.67. One supplier said that BEIS's new rollout framework expects that there will be no traditional meters after 2025. It said that any remaining traditional assets at this date would be impaired (under audit guidance) and asked for this to be taken into account.

1.68. When a traditional meter is replaced before the end of its life, the SMNCC model already includes a Premature Replacement Charge (PRC). This PRC reflects the remaining costs of the meter that have not yet been paid off. The timing of PRCs will depend on when suppliers replace traditional meters. We consider that our current approach remains appropriate as a way of reflecting the costs of replacing traditional meters before the end of their lives.

Costs included in operating cost allowance

1.69. One supplier and its economic adviser said that we had overestimated the smart metering costs included in the operating cost allowance. They said that our approach of calculating this using a notional lower quartile supplier with an industry average rollout profile did not correspond to reality. The supplier's economic adviser said that we had not provided detail on the costs of the supplier closest to the operating cost benchmark.

1.70. We considered the amount included in the operating cost allowance that relates to smart metering in relation to credit meters extensively in our August 2020 decision.[185] We also redisclosed the related analysis alongside the April 2021 consultation.[186] The comments received in response to this consultation do not raise new issues that would change our previous decision.

Model simplification

1.71. In our August 2020 decision, we decided to review the SMNCC every 12 months.[187] In light of this, we have made some changes to simplify the model, so that it is more user-friendly for a series of annual reviews.

1.72. The changes have largely been to remove irrelevant material – particularly most of the non-domestic information,[188] and information on advanced meters. We have also made structural changes to reduce the number of input sheets in the SMNCC model. These changes were presentational – they did not affect the modelling results.

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

- We still model the change in the additional costs of smart metering (above a counterfactual without smart metering) since 2017. This is as opposed to

[185] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 4.73 to 4.77.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.2 to 5.51.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[186] The version of the analysis we disclosed alongside the April 2021 consultation was very slightly different to the version used to support our August 2020 decision. This reflected minor changes to the SMNCC model which affect the 2017 baseline year. The overall conclusions were unchanged.
[187] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraph 2.44.
https://www.ofgem.gov.uk/system/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[188] We have retained a small amount of non-domestic information, where this affects the calculated SMNCC values.

removing the counterfactual costs and solely looking at the change in the total costs of smart metering since 2017, as suggested by one stakeholder previously. We agree that the two approaches should generate similar SMNCC results. However, the current approach gives us the ability to look at the additional costs of smart metering, rather than solely the total costs. The total costs could give a misleading impression of the costs of the smart metering programme. Removing the counterfactual would also involve significant changes to the 2019 CBA modelling approach.

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

1.74. In response to the April 2021 consultation, 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".

1.75. As set out above, we have made changes to simplify the model to make it more user-friendly for a series of annual reviews. When making these changes, we considered points raised in response to the May 2020 consultation. 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.

1.76. Any model has a risk of error, and there could always be errors which remain undetected. However, we do not consider that there is a specific concern about the SMNCC model. We have not seen material evidence of errors that have been identified in our analysis, and we do not accept that a hypothetical risk of undetected errors is a sufficient reason to not use the SMNCC model.

Appendix 11: Review of uncertainty

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

High-level review of uncertainty

Context

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

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

1.4. In our previous consultations and our August 2020 decision, we set out our assessment of the uncertainty around our calculated SMNCC values. In our August 2020 decision, we said that the net effect was roughly neutral. However, we said that there was a significant degree of conservatism for the period until our next review (ie cap periods five and six). This was due to our decisions to include sunk installation costs for 2020 and to freeze the SMNCC allowance for cap period six. We therefore did not include an uncertainty adjustment.[189]

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

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

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

1.6. In SMNCC WP1, we included a short section on uncertainty. We welcomed comments on our August 2020 assessment of uncertainty, and on how we could determine the value of an uncertainty adjustment, if we considered that one was required.[190]

Decision

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

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

1.9. These positions are unchanged from the proposals in our April 2021 consultation.

Overview of responses

1.10. In response to SMNCC WP1, suppliers commented on the scope of our review, and on our approach to assessing uncertainty.

1.11. In response to the April 2021 consultation, one supplier said that it had focussed its responses on the new elements in our consultation, but reserved its position on other areas such as uncertainty, where it said that it had "serious reservations".

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

Considerations

Scope of review

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

Approach to assessing uncertainty

1.13. In response to SMNCC WP1, two suppliers commented on our approach to assessing uncertainty.

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

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

1.14. We have considered whether there are viable alternatives to our previous approach (for example having a framework which classifies each uncertainty in a qualitative way). However, as set out in SMNCC WP1,[191] by their nature uncertainties are hard (or impossible) to quantify in a precise way. Even where we could quantify some uncertainties, we would not be able to do this in a consistent way for each uncertainty. Comparing different uncertainties would therefore inevitably require judgements. Furthermore, even if we had a framework for assessing uncertainty qualitatively, it would still not tell us what the value of any numerical uncertainty adjustment should be.

1.15. We consider that our existing approach is straightforward. It provides stakeholders with significant information on what we consider the uncertainties are, allowing stakeholders to

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

comment on them. It does not go beyond this to suggest that our uncertainty assessment can achieve a high degree of precision, given that we know this is impossible.

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

Consideration of uncertainty

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

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

1.19. We have added a couple of new points to our review of uncertainty and removed one point, following consideration of stakeholders' responses to our April 2021 consultation. As these points are minor, they do not affect our overall judgement on uncertainty.

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

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

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

Detailed review of uncertainty: introduction

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

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

1.24. Given our assessment is largely unchanged, we do not explain each element in full. For background on each element, please see the technical annex to our August 2020 decision.[192]

Detailed review of uncertainty: assessment of conservative assumptions

Methodological considerations

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

Choice of efficient benchmark (Maintained)

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

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

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

Rollout profile

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

Sunk installation costs in 2020 (Removed)

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

Sunk installation costs in 2021 (Removed after April 2021 consultation)

1.30. As set out in Chapter 3, we have now decided to include sunk installation costs in 2021. In our April 2021 consultation, we said that our proposed approach of flatlining the 2020 level (in real terms) was conservative. This is no longer relevant, as we have now changed our approach to calculating 2021 sunk installation costs.

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

1.31. In our August 2020 decision, we said that our assumption for suppliers' rollout performance for the first half of 2021 was conservative. We have changed our approach to estimating rollout in the first half of 2021, so this is no longer relevant (ie it is neither conservative nor less-conservative).

The new rollout target (Removed)

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

1.33. In our August 2020 decision, we said that it was conservative to use a historical productivity assumption (3.1 installations per installer per day), rather than the assumption in the 2019 CBA that suppliers would improve productivity to 5.0 installations per installer per day. We have now added BEIS's operational fulfilment assumption to our productivity calculation, and BEIS has updated its analysis since the 2019 CBA – we therefore do not consider that our revised approach is now conservative.

Smart metering in-premises costs

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

Premature Replacement Charges (Maintained)

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

Proportion of SMETS1 meters subject to PRCs (Maintained)

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

868MHz asset costs (Maintained)

1.37. We have included the costs of 868MHz assets.[193] However, as they are generally based on suppliers' expectations, there is a lower degree of confidence in these costs as opposed to other areas.

Communications hub liquidated damages (Maintained)

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

[193] 868MHz assets are required in certain properties where the standard frequency (2.4GHz) would not enable communication between the smart meter, IHD and communications hub.

Replacement IHDs (added since April 2021 consultation)

1.39. We include an assumption that 33% of IHDs are replaced at the end of their life. This could be conservative as a measure of the costs to suppliers, if suppliers charge customers for replacement IHDs. This impact would be very small.

Smart metering IT cost assessment

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

Isolating additional IT costs from counterfactual costs (Maintained)

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

DCC adaptor cost (Maintained)

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

Other costs

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

Legal and organisational costs (Maintained)

1.44. We have frozen legal and organisational costs at the 2017 level given suppliers' data, rather than reduce them in line with the 2019 CBA. Suppliers' RFI data suggests these costs

will reduce, but the extent varies, and these costs are uncertain. We take a conservative approach, keeping the costs flat. We consider it particularly conservative to assume that these costs will be flat through to 2023.

Tax (Maintained)

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

Optimism bias (Maintained)

1.46. We apply optimism bias at 10% to forecast costs (using the value from the Green Book).[194] This is conservative in our circumstances, because our input data for forecast years draw on realised costs in previous years.

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

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

Our assessment of benefits

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

Safety visit efficiency (Maintained)

1.49. In our August 2020 decision, we decided to apply the same pavement reading inefficiency to safety visits that the 2019 CBA applies to meter readings. Although the distance between a supplier's smart meters at the end of the rollout would be the same as the distance between its traditional meters before the rollout, we consider it unlikely that

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

during the transition period an efficient supplier would maintain the same level of efficiency that it currently has.

Less debt (Maintained)

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

Electricity-only SMETS1 switches (Maintained)

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

Theft (Maintained)

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

Non-quantifiable benefits (New)

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

Detailed assessment: assessment of less-conservative assumptions

In-premises costs

SMETS2 meters on deemed contracts (Maintained)

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

Recycled meters (Maintained)

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

Non-installed meters (Maintained)

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

Stranded meter costs and DCC functionality (Maintained)

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

Traditional meter age profile and PRCs (Maintained)

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

SMETS1 meters failing enrolment (Maintained)

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

SMETS2 PRCs (Maintained)

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

Installer training (Added since April 2021 consultation)

1.61. We project a decrease in the number of installers in training between 2019 and 2020. This assumption could be slightly less-conservative – it is plausible that the need for ongoing training may grow slightly as the installer base reaches a steady state.

Use of lower quartile (Maintained)

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

Lags in SMAIR data (Maintained)

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

Smart metering IT costs

IT operating costs (Maintained)

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

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

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

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

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

Other costs

Marketing costs (Maintained)

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

Restructuring costs (Maintained)

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

Benefits

Differences in customers (Maintained)

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

Inbound customer calls (Maintained)

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

Earlier identification of debt (Maintained)

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

Remote change of tariff (Maintained)

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

Trends in Long-Run Variable Cost (Maintained)

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

Detailed assessment: assessing further uncertainty

Default tariff customers (Maintained)

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

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

Timing differences in costs (Maintained)

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

Timing difference in benefits (Maintained)

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

Impact of COVID-19 (Maintained)

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

IT amortisation period (Maintained)

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

Quality of SMAIR data (Maintained)

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

Appendix 12 – Consideration of stakeholder comments on advanced payments

1.1. We considered advanced payments in detail in our August 2020 decision.[195] We do not duplicate the full discussion here – we focus on the points stakeholders raised in response to SMNCC WP1 and the April 2021 consultation. This appendix should therefore be read alongside our August 2020 decision, which constitutes our consideration of the points stakeholders raised in earlier consultations. In practice, many of the points stakeholders raised in response to SMNCC WP1 and the April 2021 consultation were the same as those raised in earlier consultations.

Alleged "clawback"

1.2. In response to SMNCC WP1 and the April 2021 consultation, several stakeholders referred to the proposal as "clawback".

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

1.4. The upcoming cap periods therefore do not exist in isolation. The additional revenue that suppliers require in future depends on the allowances that they have already received through the cap and the costs that they have already incurred. As set out in our August 2020 decision, we are considering the cumulative costs and cumulative allowances.[196]

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

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

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

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

1.6. However, there could also be cases where the cumulative allowances were below the cumulative costs. For historical periods,[197] this could occur because we are assessing advanced payments using a market leader rollout profile. In future, it is also possible that the market leader supplier rolls out more smart meters than it is required to. In each case, adjusting for advanced payments would ensure that suppliers are able to recover revenue which reflects the efficient costs of their smart meter rollout.

Funds have already been invested

1.7. In response to SMNCC WP1, one supplier said that funds which have already been invested in past periods cannot also contribute to rollout in future periods. Another supplier said that although rollout had been lower than expected in 2019, net costs were higher. In response to the April 2021 consultation, one supplier's legal adviser said that it was unreasonable to include advanced payments where a supplier had fully invested the funds, as they would reduce future funding.

1.8. We considered this issue in the August 2020 decision. We noted that if a supplier had invested the SMNCC fully, the supplier would either have above average unit costs (inefficient costs) or above average rollout progress, or both.[198]

- We incorporate actual data on unit costs (for the key cost categories) once this is available. If unit costs are generally higher than expected (on average across suppliers) in a particular year, we will therefore take this into account before calculating advanced payments. However, as set out in our August 2020 decision, we do not consider that a supplier having above average unit costs is relevant.[199]

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

We assess smart metering costs using an average efficiency standard. Individual suppliers' costs will vary around this.

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

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

Impact on certainty for suppliers

1.10. In response to SMNCC WP1, two stakeholders said that the potential for further adjustments (based on annual reviews) would undermine suppliers' ability to plan and budget for their smart meter rollout programmes. In response to the April 2021 consultation, one supplier's legal adviser said that taking into account advanced payments was inconsistent with public law considerations of consistency, predictability and regulatory certainty. Another supplier said that annual reviews (including advanced payments) would increase uncertainty, and that this uncertainty should be reflected in the headroom allowance.

1.11. We considered similar points on certainty in our August 2020 decision.[200] In summary, while we considered that stability for planning is beneficial, we considered that avoiding the harm to customers or suppliers that would come from letting the allowances deviate

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

substantially from suppliers' costs (in either direction) outweighs any incremental uncertainty from such an approach.

1.12. We recognise that a supplier will not have certainty on what advanced payment adjustments may later apply, and that the extent of advanced payments will depend on another supplier's rollout.[201] 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. We would still expect this to be true even if we did not include advanced payments, given that smart meters in credit mode are a net cost to suppliers (during the life of the cap).[202]

1.13. As suppliers' costs will generally be driven by their obligations under the new framework (rather than the allowances provided through the cap), we also do not consider that including advanced payments requires an increase in the headroom allowance.

1.14. In response to SMNCC WP1, one supplier also said that taking into account advanced payments would add risk, when suppliers were returning to business as usual rollout and facing a new set of smart metering obligations.

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

Impact on the smart meter rollout

1.16. In response to SMNCC WP1, two stakeholders said that taking advanced payments into account risked harm to the smart meter rollout programme. We do not agree. Advanced payments are the result of considering the cumulative allowances and cumulative efficient costs. Suppliers will receive sufficient revenue on a cumulative basis. The cumulative revenue

[201] Except for the market leader.
[202] Ie during the period covered by the SMNCC model.

is the relevant aspect – the revenue available through the cap does not have to match costs in any individual period.

1.17. In response to the April 2021 consultation, two stakeholders commented on the potential impact of advanced payments on suppliers' ability to recover their efficient costs in future periods. Again, suppliers will receive sufficient revenue on a cumulative basis to meet their efficient costs in future cap periods, even if the revenue available in a given cap period is lower than their costs in that cap period.

Addressing other comments in response to SMNCC WP1

1.18. In response to SMNCC WP1, one supplier said that we could not lawfully prejudge future decisions. We take this to be a reference to our statement in SMNCC WP1 that: "In line with our August 2020 decision, we will therefore include advanced payments from the third cap period onwards in the seventh cap period (which starts in October 2021)".[203] For the avoidance of doubt, this statement was a reference to a decision that we already made in August 2020, following consultation. We have considered the feedback that suppliers provided on advanced payments in response to SMNCC WP1 and have likewise considered the feedback received in response to the April 2021 consultation.

1.19. In response to SMNCC WP1, one supplier said that we should carry out enforcement action against suppliers who had failed to invest allowances appropriately. The supplier and its legal adviser repeated this point in response to the April 2021 consultation. The supplier's legal adviser said that we cannot use advanced payments as a way to "punish" all suppliers because some suppliers have not complied with their obligations.

1.20. We 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 non-compliance (including

[203] Ofgem (2020), Updating the allowance for smart metering costs in the default tariff cap: working paper, paragraph 4.10. https://www.ofgem.gov.uk/publications-and-updates/updating-allowance-smart-metering-costs-default-tariff-cap-working-paper

consideration of funding received via the cap), penalties include an additional penal element, meaning that the total penalty significantly exceeds the gains.

1.21. For the avoidance of doubt, advanced payments simply help us to align the cumulative allowances and the cumulative efficient costs. We have to apply the same adjustment across suppliers given the requirement in the Act to set a single cap. Enforcement action is also not a substitute for taking advanced payments into account. The existence of advanced payments does not necessarily result from non-compliance with rollout obligations.

1.22. In response to SMNCC WP1, one supplier said that we had not explained our position that we cannot require suppliers to ring-fence allowances intended to support the smart meter rollout for that purpose. We still consider that this is the case.

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

- Even if we could introduce ring-fencing requirements using our powers under another piece of legislation, we do not consider that this would be effective. The cap only applies to a subset of a suppliers' customers – there are no defined allowances in the fixed tariff segment to ring-fence. If we ring-fenced default tariff cap allowances only,[204] there would be a risk that suppliers would reduce the amount they spend on smart metering using revenue from the fixed tariff segment. This could mean no overall increase in smart metering spending, which would make ring-fencing ineffective.

1.23. In response to SMNCC WP1, one supplier said that new or growing suppliers would be underfunded, as the allowances for future periods would be reduced, without these suppliers having received advanced payments previously. It repeated this point in response to the April 2021 consultation. We considered this point in our May 2020 consultation. As noted there, fast growing suppliers tend to price below the cap and serve a small proportion of default tariff customers.[205] Furthermore, we must set a single cap level across suppliers – this means

[204] Through a licence modification under the Electricity Act 1989 and Gas Act 1986.
[205] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 7.47. https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf

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

1.24. In response to SMNCC WP1, one supplier said that previous SMNCC allowances had been based on Ofgem assessing the funding required to meet 'all reasonable steps'. We set previous SMNCC allowances taking suppliers' obligations into account. However, we do not consider that this prevents us from reassessing what the SMNCC allowances should have been, and taking the difference (against previous SMNCC allowances) into account through advanced payments. When we have set previous SMNCC allowances, these have necessarily been based on projections. New information has become available over time for material cost areas, and we therefore consider that it is appropriate to incorporate this, in order to improve the accuracy of the cumulative allowances.

1.25. In response to SMNCC WP1, one supplier said that any overpayment would already have been returned to customers by suppliers offering lower prices than they would otherwise have been able to offer. We considered this point about competitive tariffs in our August 2020 decision.[206] To reiterate – the objective of the Act is to protect default tariff customers. We would not protect default tariff customers by allowing suppliers to overcharge them, even if the money was returned to fixed tariff customers. The large suppliers who have the majority of default tariff customers continue to price their default tariffs at the cap level, so we can be confident that default tariff customers did not receive lower prices as a consequence of suppliers receiving excess revenue through the SMNCC.

Addressing other comments in response to the April 2021 consultation

1.26. One supplier's legal adviser said that the SMNCC allowance was not an advanced payment at the time. It said that we were failing to meet the legitimate expectations of suppliers, who had relied on our previous actions. We considered previous comments on legitimate expectations in our August 2020 decision. In summary, we considered that we gave adequate notice of our policy intentions ahead of cap period three (ie the point when we

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

started including previous cap periods in our calculation of advanced payments).[207] It would be even more difficult for suppliers to advance that there was a legitimate expectation from cap period four onwards, as the notice period for our policy intentions would be even longer.[208]

1.27. One supplier's legal adviser said that it was irrational to assume that a supplier would have put itself in potential breach by not taking all reasonable steps. (This relates to whether the 'all reasonable steps' obligation required the supplier to spend the full allowance provided, or whether the supplier could have decided not to spend the full allowance, given the potential for future adjustments through advanced payments). As set out in our May 2020 consultation, we do not agree that the SMNCC allowance defines all reasonable steps – ie that spending the SMNCC allowance constitutes taking all reasonable steps.[209] A supplier would have been able to take into account our intention to apply advanced payments when considering what rollout activities to carry out.[210]

1.28. One supplier said it recognised that there were challenges linked to COVID-19, especially high estimates of sunk costs which had not been realised. However, it said that we should consider the adjustment for advanced payments in the round with other costs related to COVID-19. Advanced payments are not a specific mitigation for COVID-19 – we proposed to include advanced payments well before COVID-19. Across the cap, our approach to considering the costs of COVID-19 was to address this as part of existing reviews where available (SMNCC and Feed-in Tariffs), and otherwise to consider them through a bespoke review.[211] We cannot attribute the advanced payment to any single element of the SMNCC

[207] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: August 2020 decision, paragraphs 5.56 and 5.57.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
[208] We first discussed the concept of advanced payments in our April 2019 consultation.
Ofgem (2019), Reviewing smart metering costs in the default tariff cap, paragraph 4.3.
https://www.ofgem.gov.uk/sites/default/files/docs/2019/04/review_of_smart_metering_costs_in_the_default_tariff_cap.pdf
[209] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 7.52.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf
[210] 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.
[211] We published our decision following our review of COVID-19 costs in February 2021. Ofgem (2021), Decision on the potential impact of COVID-19 on the default tariff cap.
https://www.ofgem.gov.uk/publications/decision-potential-impact-covid-19-default-tariff-cap We are carrying out ongoing work on the debt-related costs of COVID-19. We have published our latest decision on debt-related costs for cap period seven at the same time as this decision, and this is available on our website.

methodology – advanced payments are an output from the SMNCC model, and so take into account a variety of factors.

1.29. One supplier said that we should only adjust for advanced payments if these were material, as we had done for other adjustments such as the impacts of COVID-19. We calculated 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.[212]

1.30. One supplier said that reconciliation should take place for other costs impacted by COVID-19, that this reconciliation should take place in the round to avoid it being unfairly asymmetric, and that reconciliation should be spread over several periods. This decision is focussed on the SMNCC allowance, rather than on other cost areas. However, for the SMNCC allowance, we will make the adjustment for advanced payments over all of the potential cap periods up to the end of 2023.[213]

[212] In our 2018 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
[213] Ofgem (2020), Decision on reviewing smart metering costs in the default tariff cap, paragraph 5.52.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/08/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf
Our August 2020 decision referred to our May 2020 proposals – therefore see also: Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraph 7.56.
https://www.ofgem.gov.uk/sites/default/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf