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Decision

Reviewing smart metering costs in the default tariff cap: August 2020 decision

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We have consulted on proposals to update the allowance in the default tariff cap for the change in efficient net costs to suppliers of the smart meter rollout since 2017.

This document describes our decision.

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Executive summary

Our decision

Suppliers must install smart meters in their customers' homes, and they incur costs in doing so. We include an allowance in the default tariff cap ("the cap") to account for the net financial impact of the smart meter rollout on suppliers: the non-pass-through Smart Metering Net Cost Change ("SMNCC") allowance. We expect suppliers to install smart meters, and only include this allowance so that they can do so.

We have set the SMNCC for the next two cap periods and have published the SMNCC values we expect to include in subsequent cap periods, subject to our next review (see **Table 1**).

- The fifth cap period (1 October 2020 to 31 March 2021). We have set the SMNCC at £17.12 on a dual fuel basis for customers with benchmark consumption.[1] We have set this allowance using our updated analysis of net costs and we include an amount for potentially sunk installation costs due to COVID-19 (as we proposed in May).

- The sixth cap period (1 April 2021 to 30 September 2021). We will freeze the SMNCC, setting it in the sixth cap period at the same level as the fifth cap period. This delays a reduction in the SMNCC, providing time for us to consider the outcome of BEIS' autumn consultation on the tolerance levels for its new rollout Framework, the effects on rollout performance of basing the SMNCC on an average rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level.

Updates to our net cost assessment since May 2020

We have updated our calculations in the light of responses to our May 2020 consultation. This has increased our assessment of net costs by around £8. The main adjustments are:

- **Increasing the weighted average rollout profile:** we have increased the rollout profile to (a) reflect BEIS' next rollout Framework, which takes effect from 1 July 2021 and targets market-wide rollout by 30 June 2025, and (b) exclude the historical performance of small suppliers serving 10% of the market, as these suppliers pull down the average rollout profile achieved by suppliers serving 90% of customers.

- **Increasing the net cost per installation:** The operating cost allowance includes the cost of serving customers with traditional meters and the SMNCC recognises the benefit of

[1] 3,100 kWh for electricity and 12,000 kWh for gas, see paragraph 1.7 to 1.9.

avoiding those costs in future. We have reduced our assessment of those avoided costs to improve comparability with the cost included in the operating cost allowance.

- **Decreasing the reduction in fixed IT costs:** Suppliers incur fixed IT costs. We have reduced the extent to which these costs have declined since 2017.
- **Increasing the proportion of smart metering costs in 2017 that we include in the SMNCC:** We have reduced our assessment of the smart metering costs already included in the operating cost allowance, increasing the proportion we recognise in the SMNCC.

Our next review

We have published the SMNCC values we expect to include in the cap from the seventh cap period (1 October 2021 onwards), based on our current methodology – see **Table 1.** We expect the SMNCC to be around £11-12 in each cap period until the cap expires, if suppliers achieve the target to complete the rollout by mid-2025. If progress is slower, suppliers' aggregate costs should be lower.

The pace and cost of the rollout is uncertain, so we will review the SMNCC every 12 months to ensure the SMNCC reflects costs. These updates will include: suppliers' data on their rollout progress, costs, and benefits; and the result of BEIS' autumn 2020 consultation on the tolerance levels for its new Framework, below which enforcement action could be taken.

Suppliers and other stakeholders have raised concerns about the impact of the SMNCC on the progress of the rollout. Currently we set the SMNCC having regard to the costs of the market as a whole (i.e. using suppliers' weighted average rollout profile). This protects customers, ensuring they pay no more than the aggregate net costs of the rollout. However, this sets the allowance below the costs of suppliers that have made more progress than average.

In our next review, we will consider whether it is in customers' interests to maintain our current approach, or to use a higher rollout profile than the average. On that basis, we have frozen the allowance in the sixth cap period, delaying a further reduction in the SMNCC until we have given more consideration to the impact on customers.

We will also update our assessment of the costs suppliers have incurred and compare that with the money consumers have provided through the SMNCC. We will adjust future allowances accordingly, to ensure the customers' payments reflect suppliers' net costs over the life of the cap.

Table 1: Non-pass-through Smart Metering Net Cost Change allowance (£ per account)

Period[1]	Electricity	Gas	Dual fuel
Oct 20 - Mar 21 [2]	10.64	6.48	17.12
Apr 21 - Sep 21 [3]	10.64	6.48	17.12
Oct 21 - Mar 22 [4]	7.69	3.68	11.37
Apr 22 - Sep 22 [4]	7.90	3.25	11.16
Oct 22 - Mar 23 [4]	8.35	3.04	11.39
Apr 23 - Sep 23 [4]	8.80	2.83	11.63
Oct 23 - Dec 23 [4]	8.80	2.83	11.63

Notes

1. **Cap period.** The default tariff cap may end in December 2020, or it could be extended annually up to the end of 2023.[2] We present non-pass-through SMNCC allowance values for each potential cap period. However, we only intend to use this analysis to set the SMNCC allowance for the next two cap periods. We intend to review the SMNCC allowance for subsequent cap periods.
2. **The fifth cap period.** This allowance includes an adjustment for the maximum potentially sunk installation costs due to COVID-19. This increase our assessment of costs by £8.51 (£4.31 electricity, £4.20 gas). Suppliers that have redeployed or furloughed staff should have less exposure to these costs.
3. **The sixth cap period:** We have frozen the SMNCC at the same level we have allowed in the fifth cap period. This delays a reduction in the SMNCC, providing time to for us to consider the outcome of BEIS' forthcoming consultation on the tolerance levels for its new rollout Framework, its implications for the enforcement regime, and assess the impact on customers if suppliers with above average progress aligned their progress with the rest of the market. This increases the SMNCC by £5.53 (£3.15 for electricity and £2.38 for gas) compared to what the SMNCC allowance would otherwise have been, based on our assessment.
4. **Subsequent cap periods.** These are the SMNCC values we would expect to set from the seventh cap period, subject to our next review (and subsequent reviews).
5. **Prices.** Prices are in nominal terms.

[2] Domestic Gas and Electricity (Tariff Cap) Act, section 8. http://www.legislation.gov.uk/ukpga/2018/21/section/8/enacted

1. Introduction

What is the scope of this decision?

This document

1.1. This decision sets out how we will update the non-pass-through Smart Metering Net Cost Change ("SMNCC") allowance in the default tariff cap ("the cap"). This decision does not consider changes to other allowances in the cap (except to briefly note comments made by stakeholders in response to our May 2020 consultation). The levels of those allowances are outside the scope of this review.

1.2. The non-pass-through SMNCC allowance accounts for the net impact that the smart meter rollout has on the operating costs of an efficient energy supplier during the cap periods. Replacing traditional meters with smart meters affects suppliers' operating costs. Suppliers install smart meters in their customers' homes, and they incur costs in doing so (for example, purchasing smart meters and employing installers). Smart meters also reduce suppliers' costs, by changing their operations and by avoiding the cost of traditional meters. (They avoid both the costs of installing new traditional meters, and the ongoing rental payments for traditional meters they have removed in previous years).

1.3. In setting the SMNCC, we exclude benefits to consumers (such as energy savings) and the net benefits to suppliers after 2023. We also exclude smart meter industry charges from our review, as we include those costs in a different allowance.

1.4. This document is split into five chapters:

- **Chapter 1**: background
- **Chapter 2**: our decision
- **Chapter 3:** setting a single rollout profile
- **Chapter 4**: setting the SMNCC allowance
- **Chapter 5**: future reviews of the SMNCC allowance.

1.5. We have also published a technical annex alongside this document. This contains more detail about how we set the SMNCC allowance.

1.6. Our changes to the SMNCC allowance will be made in 'Annex 5 – Methodology for determining the Smart Metering Net Cost Change' of standard condition 28AD of the electricity and gas supply licences. We present the changes we will make to Annex 5 in Appendix 1.

Typical Domestic Consumption Values

1.7. We designed the default tariff cap using the Typical Domestic Consumption Values (TDCVs) in use at the time (2018) and set the values in the licence condition to a Benchmark Annual Consumption Level which matched the 2018 TDCVs.[3] The TDCVs have since been updated to reflect changing consumption patterns.[4]

1.8. All values presented in this decision are stated in terms of the 2018 TDCVs, as are the values used in the modifications to the licence conditions. This is because it would make it difficult for stakeholders to follow the actual changes in methodology and values resulting from our decisions if we simultaneously changed the way we present results in our detailed publications. The changes to the TDCV do not affect the calculation of the maximum charges.

1.9. For the press release accompanying the cap updates (published each August and February) we state the cap level using the latest TDCVs for presentational purposes only.[5] To avoid confusion, we refer to old TDCVs as "benchmark consumption" in this decision document, which is 3,100 kWh for electricity and 12,000 kWh for gas.

[3] Medium consumption values of 3,100 kWh per year for electricity profile class 1 and 12,000 kWh for gas.
[4] Medium consumption values of 2,900 kWh per year for electricity profile class 1 and 12,000 kWh for gas, set out in Decision for Typical Domestic Consumption Values, January 2020 https://www.ofgem.gov.uk/publications-and-updates/decision-typical-domestic-consumption-values-2020
[5] We will announce the cap level for the fifth cap period on Friday 7 August 2020, effective on 1 October 2020.

Smart meters

Modernising the energy network

1.10. Smart meters will bring net benefits to consumers, businesses and the nation as a whole – worth £6bn up to 2034.[6] They are an important feature for modernising the retail energy market. They help decarbonise the energy sector, enable energy suppliers to offer new products and services to customers, and allow consumers to take control of their energy consumption.[7]

A supplier-led rollout

1.11. Suppliers are responsible for installing smart meters in their customers' homes. They must install smart meters, subject to the obligations set out by government and enforced by Ofgem. Under the current licence obligations, suppliers must take 'all reasonable steps' to deliver the smart meter rollout by the end of 2020.[8]

1.12. The rollout will continue after 2020. On 18 June 2020, government set out its plans for the rollout Framework after 2020.[9]

- It has extended the current rollout obligation by six months, to 30 June 2021. Until that date, suppliers must take 'all reasonable steps' to install smart meters, as they must under the current obligation.

- It has decided to introduce a new four-year Framework from 1 July 2021. The new Framework will set annual installation targets for each energy supplier on a trajectory towards market-wide rollout by 30 June 2025, subject to an annual tolerance level (minimum levels, below which enforcement action may be taken). Government expects to consult in autumn 2020 on the annual tolerance levels associated with the new Framework.

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[6] Net Present Value.
[7] Government announced in 2008 that it intended to mandate energy suppliers to install smart meters across Great Britain. In 2013, government published a timetable setting a target date of 2020 for rollout of smart meters to all energy customers. The promotion of smart meter installations also takes place against a background of EU legislation which has encouraged this. (See Directives 2009/72/EC, 2009/73/EC, and 2019/244/EU).
[8] Standard licence condition 33 of the gas supply licence and standard licence condition 39 of the electricity supply licence.
[9] BEIS (2019), Smart meter policy framework post 2020. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020

Uncertainty about progress and costs

1.13. The pace and net cost of the smart meter rollout is uncertain. This makes it difficult to estimate in advance the net cost of the rollout to suppliers. It is even more difficult to estimate in advance the timing of those net costs.

Lags in performance

1.14. The pace of the rollout has not met initial expectations. Government expected suppliers to complete the smart meter rollout by the end of 2020.[10] At the end of 2019, suppliers had installed smart meters in just under 40% of energy consumers' homes. The progress made by different suppliers varied.

1.15. The reasons for delays vary, including variations in suppliers' performance and approaches, variation in consumer take-up of installation appointments, and technical issues. Some delays are in suppliers' control and others are not. The causes are not always predictable but their impact has been more consistent. Up to the end of 2019, the rollout rate achieved each year has been reasonably constant. On average, suppliers have installed a similar number of smart meters each year between 2017 and 2019 (4.2 million smart meters in credit mode, or about 9% of customers per year).

1.16. Lags in the rollout affect suppliers' operating costs. Suppliers will take longer to complete the rollout and so will incur programme costs for longer. This increases their lifetime costs, but not their costs per cap period. In principle, suppliers should not incur costs or benefits for smart meters they do not install. However, depending on their operating structure, and their ability to anticipate or mitigate the impact of delays, suppliers can incur 'sunk' (unproductive) installation costs. For example, a supplier might employ sufficient installers to install 100,000 smart meters, and still incur those costs if it faces unforeseen delays and installs fewer meters.

The impact of coronavirus (COVID-19)

1.17. Social distancing arrangements, to combat the coronavirus (COVID-19) pandemic, have increased uncertainty about the progress and costs of the smart meter rollout. In

[10] Suppliers are obliged to "take all reasonable steps to ensure that a Smart Metering System is installed on or before 31 December 2020 at each Domestic Premises or Designated Premises in respect of which it is the Relevant Electricity Supplier". Standard licence condition 33 of the gas supply licence and standard licence condition 39 of the electricity supply licence.

response to the implementation of social distancing measures, Energy UK announced that its members would halt "all non-essential field activities" and major suppliers indicated that only emergency installations would go ahead.[11]

1.18. At present, suppliers have begun to increase their rollout activities. However, it is unclear when suppliers will be able to continue with the smart meter rollout entirely unconstrained. BEIS and Ofgem are working closely with industry to ensure they are ready to scale up their operations as safely and quickly as possible.

1.19. The financial implications of social distancing measures are also unclear. Suppliers will install fewer meters in 2020 than originally expected. Unlike the causes of 'normal' delays, one could not reasonably expect suppliers to have anticipated and prepared for an event of this scale. Suppliers might reduce their costs (in proportion, or partially) if they redeploy staff and resources to other activities. For suppliers that availed themselves of financial support from government, such as the furlough scheme, that support will have mitigated the financial impact on those suppliers. Otherwise, the finances suppliers had already committed to the rollout could remain and could be 'sunk', increasing the costs they would incur in 2020. Different suppliers will be affected to different extents. The extent to which a supplier can mitigate the impact of COVID-19 on its smart-meter-related costs, compared with other suppliers, may not indicate a difference in suppliers' efficiency.

The new rollout Framework

1.20. As discussed above, suppliers must take 'all reasonable steps' to install smart meters up to 30 June 2021, and then each supplier will have a series of annual targets on a trajectory to complete the rollout by 30 June 2025. However, uncertainty about the pace and costs of the rollout remains.

1.21. The enforcement regime has not been specified. Suppliers will have targets to achieve market-wide rollout by mid-2025, subject to tolerance levels. Tolerance levels will set the minimum annual obligation that suppliers must achieve, below which enforcement action may be taken. BEIS will consult on tolerance levels in its autumn 2020

[11] Ofgem (2020), Ofgem information for energy licensees on coronavirus (COVID-19) response. https://www.ofgem.gov.uk/publications-and-updates/ofgem-information-energy-licensees-coronavirus-covid-19-response

consultation. Ofgem will then consider the implications of confirmed tolerance levels on the enforcement regime.

1.22. In response to our consultations, suppliers stated that the pace of the rollout will depend on consumers' resistance to smart meters. In its June 2020 response, government noted the strongly held views of some stakeholders that market-wide rollout is not achievable unless consumers' current rights to refuse smart meters are made more restrictive. Government intends to retain consumer choice in the new Framework. It also committed to explore a package of policy measures to support the consumer uptake of smart meters, including a consultation on strengthening the rights of tenants to request a smart meter, improved guidance for developers in new buildings, and considering further actions to maximise synergies between smart metering and other policy areas.

1.23. The cost of the rollout is also uncertain. In its consultation on its new Framework, BEIS considered that suppliers would accelerate the rollout, in part, due to productivity improvements (installing five smart meters per day per installer). Productivity improvements would mean an acceleration in the rollout, but not a proportional increase in total installation costs for suppliers. In its June 2020 response, government noted that "benchmarking with energy suppliers in 2019 on the maturity of their consumer engagement and operational fulfilment showed significant variability between their performance across the consumer journey. All energy suppliers can and should do more to remove friction from the consumer journey to drive the uptake of smart meters."[12]

The default tariff cap ("the cap")

The cap

1.24. We introduced the cap on 1 January 2019, protecting over 11 million customers on standard variable and default tariffs (which we refer to collectively as "default tariffs").[13]

[12] BEIS (2019), Smart meter policy framework post 2020, paragraph 14. https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020.
[13] Ofgem (2018), Default tariff cap: decision – overview. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview

1.25. The cap ensures default tariff customers pay a fair price for the energy they consume, reflecting its underlying costs. These underlying costs change over time, so we update the cap every six months to reflect this. We will announce the next cap update by 7 August 2020. This will have effect for the fifth cap period – between 1 October 2020 and 31 March 2021.

1.26. The cap is temporary. Each summer, we must review whether the conditions are in place for effective competition, and publish a report, including a recommendation on whether the cap should be extended or not.[14] The Secretary of State will then decide whether to extend the cap. If the cap is extended, this process will be repeated in 2021 and 2022. If the cap is extended into 2023, it will cease to have effect at the end of that year.[15]

The Domestic Gas and Electricity (Tariff Cap) Act 2018 ("the Act")

1.27. We set the cap in accordance with the Act. Section 1(6) states that we must protect existing and future domestic customers who pay standard variable and default rates.[16] 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.

[14] In October 2019, we published our decision on the framework that we will use to assess whether the conditions are in place for effective competition.
Ofgem (2019), Framework on conditions for effective competition in domestic supply contracts.
https://www.ofgem.gov.uk/publications-and-updates/framework-conditions-effective-competition-domestic-supply-contracts
[15] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 7,
http://www.legislation.gov.uk/ukpga/2018/21/section/7/enacted
[16] Domestic Gas and Electricity (Tariff Cap) Act 2018, Section 1(6).
http://www.legislation.gov.uk/ukpga/2018/21/section/1/enacted

1.28. 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 at all times. In setting the cap, our primary consideration is the protection of existing and future consumers who pay standard variable and default rates, but we are also required to have regard to the four "needs" identified in section 1(6). 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.

1.29. In setting the cap, we may not exempt holders of supply licences from their application, or make different provision for different holders of supply licences.[17] This means that in practice, we must continue to set a cap level for the duration of the cap and we cannot set a separate higher cap level for suppliers with higher costs.

Allowing for the net impact of the smart meter rollout on suppliers' costs

Costs and benefits of the smart meter rollout

1.30. Suppliers incur costs and benefits when replacing traditional meters with smart meters. The categories are:

- **The gross cost of purchasing and installing smart meters**: Suppliers incur costs for the smart meters (and associated assets) they install and the staff who install them. Suppliers pay these costs through Meter Asset Provider (MAP) rental charges over the life of the smart meter. Therefore these costs are (mostly) ongoing and increase as suppliers install more meters. Some costs are expensed in-year, such as charges for replacing traditional assets prematurely and the cost of purchasing In-Home Displays (IHDs).

- **The avoided cost of installing new traditional meters**: Each year a proportion of suppliers' traditional meters expire, reducing their operating costs. Suppliers would have incurred costs replacing expired meters with new traditional meters, which they no longer need to do due to the smart meter rollout. These benefits are ongoing and increase over time.

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

- **Programme and IT costs to support the rollout and operation of smart meters**: These are broadly fixed costs (non-variable).

- **Operational benefits**: Smart meters should change how customers behave and how suppliers operate, reducing their costs. These benefits, in general, are ongoing and increase as suppliers install more smart meters.

1.31. The interaction between the costs and benefits above means that there is not a simple relationship between installing smart meters and the net impact on suppliers' operating costs. Broadly speaking, we estimate that replacing traditional credit meters with smart meters is an ongoing net cost to suppliers.

Allowing for the net impact of the rollout on efficient operating costs

1.32. We seek to set allowances reflecting the net impact of the costs and benefits of the smart meter rollout on the efficient operating costs of a supplier with an average rollout profile (or, in other words, all suppliers taken as a whole). This allows suppliers to recover the efficient gross cost of installing smart meters, accounts for the lower and avoided rental costs for traditional meters, and ensures customers with default tariffs are protected, by paying a fair price.

1.33. We set separate allowances for default gas tariffs and default electricity tariffs. In each cap period, for each fuel, we split the net cost of the smart meter rollout between two allowances in the cap.

- **Operating cost allowance**: This allowance includes funding relating to the net costs of smart meters in 2017. The costs were part of our benchmark of suppliers' total operating costs in 2017, so they do not isolate the impact of replacing traditional credit meters or define 'efficiency' as leniently as we propose in our assessment of smart metering costs. We index the operating cost allowance over time with inflation.

- **The non-pass-through SMNCC allowance**: The net impact of smart meters on operating costs is not constant in real terms (i.e. increases or decreases in smart metering costs do not track inflation). In this allowance, we account for net costs not accounted for in the operating cost allowance. We include (a) the *change in our assessment of the efficient net cost of introducing smart meters since 2017* (i.e. the change in efficient operating costs and benefits relative to 2017) and (b) the difference between our assessment of the efficient net costs and benefits in

2017 of installing smart meters and the amount included in the operating cost allowance. We update this allowance using the values calculated in the SMNCC model and discussed in this decision.

1.34. The cap also includes a **pass-through SMNCC** allowance. This is an allowance for changes in industry body charges since 2017 (such as those from the Data Communications Company (DCC) and Smart Energy GB).[18] We estimate the net change in costs using sources including: the latest charging statements, forecasts, and budgets.[19] In the operating cost allowance we include industry body charges at the level incurred in 2017. Together, that proportion of the operating cost allowance and the pass-through SMNCC allowance equals the total industry body charges. We carried out a separate consultation on minor changes to the pass-through SMNCC model.[20] We have published the decision for that consultation separately.

1.35. The pass-through SMNCC allowance is outside the scope of this review, and we do not discuss these costs in the remainder of this consultation. The remainder of this decision therefore relates to the non-pass-through SMNCC allowance. For brevity, we refer to this as the SMNCC allowance, or SMNCC.

Developing these proposals

Our November 2018 decision on the first two cap periods

1.36. In our November 2018 decision we set the non-pass-through SMNCC allowance for the first two cap periods only. We recognised that the cost and pace of providing smart meters was uncertain. Therefore, we decided to review the smart meter allowance in time to inform the third cap period (October 2019 to March 2020).[21]

[18] During our October 2019 consultation on this review, one stakeholder queried whether industry charges in 2017 were included in the operating cost allowance. We confirm that they are.
[19] We carry out this calculation in the document Annex 5 referred to in the cap licence conditions (standard licence condition 28AD of the gas and electricity supply licences).
[20] Ofgem (2020), Consultation on minor changes to 'Annex 5 – Methodology for determining the Smart Metering Net Cost Change'. https://www.ofgem.gov.uk/publications-and-updates/consultation-minor-changes-annex-5-methodology-determining-smart-metering-net-cost-change
[21] Ofgem (2018), Default tariff cap: decision – overview. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview

Our April 2019 consultation

1.37. In our April 2019 consultation we proposed to review smart metering costs on the basis of BEIS' cost-benefit analysis ("2019 CBA") for the smart meter rollout, which would be published later that year. In the interim we proposed to set the allowance for the third cap period using the original SMNCC model and adjust allowances from the fourth cap period onwards for advanced or lagged payments in previous periods.

Our October 2019 consultation

1.38. In September 2019, BEIS published its 2019 CBA. This analysis is the most robust and comprehensive assessment of the financial impact of the rollout, including the impact on suppliers' costs.[22] We proposed to use the 2019 CBA as the starting point for our review of the non-pass-through SMNCC allowance.[23]

1.39. We presented our proposals in our October 2019 consultation.[24] In summary, stakeholders responded that the rollout assumptions underpinning our proposals were too high and that the net costs *per installation* were too low. In December 2019 we decided to make further enquiries to assess whether we should amend our proposals.[25]

Contingency allowances in the third and fourth cap periods

1.40. For the third and fourth cap periods (between October 2019 and September 2020) we implemented contingency non-pass-through SMNCC allowances. In both cases, we stated that the contingency allowances were likely to exceed the efficient costs of a supplier with an average rollout profile, and that we would adjust future allowances to take account of that advanced payment. In doing so, we would seek to ensure that the

[22] BEIS (2019), Smart meter roll-out: cost-benefit analysis 2019. https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019
[23] Ofgem (2019), Smart metering costs in future Default Tariff Cap periods. https://www.ofgem.gov.uk/publications-and-updates/smart-metering-costs-future-default-tariff-cap-periods
[24] Ofgem (2019), Reviewing smart metering costs in the default tariff cap: October consultation. https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-october-consultation
[25] Ofgem (2019), Reviewing smart metering costs in the default tariff cap: Contingency decision for Cap period four https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-decision-cap-period-four

allowances a customer is charged over the lifetime of the cap reflect the efficient costs of an average supplier over that period of time.[26]

May 2020 consultation

1.41. We published a further consultation on the SMNCC in May 2020.[27] This developed the proposals presented in our October 2019 consultation, taking into account stakeholders' feedback. It also incorporated the latest data from suppliers (as included in their Annual Supplier Returns (ASRs) to BEIS).

Related publications

1.42. The main documents relating to the cap and Smart Meter Implementation Programme are:

- Domestic Gas and Electricity (Tariff Cap) Act 2018: http://www.legislation.gov.uk/ukpga/2018/21/contents/enacted
- The Default Tariff Cap Decision: https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-decision-overview
- The Default Tariff Cap Decision, Appendix 7 – Smart metering costs: https://www.ofgem.gov.uk/system/files/docs/2018/11/appendix_7_-_smart_metering_costs.pdf
- Smart meter policy framework post 2020: https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020

[26] Ofgem (2019) SMNCC: Approach to the third cap period for the default tariff cap https://www.ofgem.gov.uk/publications-and-updates/decision-approach-third-cap-period-default-tariff-cap
Ofgem (2019), Reviewing smart metering costs in the default tariff cap: Contingency decision for Cap period four. https://www.ofgem.gov.uk/system/files/docs/2019/12/reviewing_smart_metering_costs_in_the_default_tariff_cap_-_decision_for_cap_period_four_v2_002.pdf

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

- The new smart meter roll-out: cost-benefit analysis 2019: https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019

- Decision 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

1.43. We launched our review of the SMNCC allowance in April 2019 with an initial consultation, leading to a statutory consultation in October 2019, and a further statutory consultation in May 2020.

- Reviewing smart metering costs in the default tariff cap ("the April consultation"): https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap

- Response Papers 1 and 2: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-response-papers-1-and-2

- Response Paper 3: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-response-paper-3

- Response Paper 4: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-response-paper-4

- Disclosure Arrangements for the October 2019 consultation: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-disclosure-arrangements

- October 2019 consultation: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-october-consultation

- May 2020 consultation: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-may-2020-statutory-consultation

1.44. In June 2019, we published our approach to setting the SMNCC allowance for the third cap period. In December 2019, we published our decision on setting the SMNCC for the fourth cap period. We published a response to other elements of the October consultation in January 2020.

- SMNCC: Approach to the third cap period for the default tariff cap https://www.ofgem.gov.uk/publications-and-updates/decision-approach-third-cap-period-default-tariff-cap

- Decision for fourth cap period: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-decision-cap-period-four

- January response: https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap-update-and-response-october-2019-consultation

Disclosure arrangements

Process followed

1.45. Alongside our May 2020 consultation[28] we disclosed, through a confidentiality ring:

- **Our modelling ("Disclosed SMNCC & PPM Model")**: This included the full SMNCC model, in the form which has informed the proposals we consulted on. This was made available to suppliers, upon application and subject to agreeing confidentiality arrangements.

- **Underlying data ("Disclosed SMNCC & PPM Data")**: This included underlying data that we used to calculate inputs in the SMNCC model. This data includes specific information from individual suppliers and is commercially sensitive. This was made available to suppliers' advisers, upon application and subject to agreeing confidentiality arrangements.

[28] We ran a similar confidentiality ring for previous versions of the SMNCC model and data alongside our October 2019 consultation.

1.46. The disclosure arrangements enabled suppliers to understand our proposals and respond intelligently to them. Stakeholders could:

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

Summary of stakeholders' responses

1.47. Some stakeholders raised concerns with the disclosure process we followed. These concerns largely focussed on the scope of the information disclosed. The stakeholders said that we should have disclosed all input data to allow suppliers' advisers to verify the calculations and to assess the consistency of the overall approach. The economic advisers to one supplier said that we should also have disclosed details of discussions and clarifications with individual suppliers about the data, so that it could check comparability.

1.48. One supplier referred to previous correspondence with its legal advisers during the consultation, especially about disclosure of information relating to the calculation of benefits. Among its points, it said that: we were taking a different approach to disclosing costs and benefits; we were imposing restrictions on what representations suppliers could provide, that we could not rely on each supplier pointing out errors with its own data, and that it was procedurally unfair not to disclose information on which assumptions were based.

1.49. One supplier also said that, by using the 2019 CBA as a starting point, the confidentiality restrictions had made it difficult for stakeholders to engage.

Consideration of suppliers' feedback

1.50. As discussed above we have disclosed a considerable amount of information allowing suppliers to understand our estimates of net costs, sensitivity-test the SMNCC model, and provide representations on our proposals. We have given stakeholders sufficient information in order to understand our proposals and to respond to the consultation.

1.51. We consider that the suggestions made by stakeholders represent a disproportionate and infeasible standard for the amount of information to disclose. We do not consider that it is necessary or appropriate for suppliers or their advisers to be able to validate all calculations. We also do not consider that suppliers or their advisers need additional data in order to understand our overall approach - there is significant information available through our consultations to help suppliers understand this.

1.52. We do not repeat the substance of our detailed exchanges with one supplier's legal advisers here. Our position is unchanged.

1.53. We emphasise that we have not (as the supplier says) treated costs and benefits differently for the purposes of disclosure. We have considered the appropriate approach to disclosure for each piece of analysis, having regard to what information was reasonably required to understand our methodology and proposals. The new benefits to which the supplier refers are just simpler than some of the cost spreadsheets that we have disclosed. There is nothing wrong with our disclosing some underlying data where we reasonably consider that it would assist understanding of our proposals, while not disclosing other underlying data for the purpose of enabling consultees to check relatively simple calculations.

1.54. We address two additional points raised specifically by the supplier in response to the May 2020 consultation (rather than in previous correspondence).

- We recognise that suppliers will engage with a consultation to different extents. This is a choice for each supplier to make. Some suppliers may be less likely to point out issues with their own data than others. This still does not mean that one supplier's economic advisers would be able to comment on whether the values provided by other suppliers were erroneous, and therefore that more extensive disclosure would be likely to improve the accuracy of our analysis.

- As set out in our summary of responses to our October 2019 consultation, a single supplier raising issues with the outputs we calculate does not necessarily

imply there is a problem. We calculate average values. There will always be variation around this.

1.55. We do not consider that the confidentiality restrictions around the SMNCC model based on the 2019 CBA prevented stakeholders from examining our proposals. In any event, even if we had developed a different model, we would always have needed to place confidentiality restrictions on the supplier-specific data, as this is commercially confidential.

2. Our decision

Section summary

In this chapter we set out our decision for the fifth, sixth, and subsequent cap periods. This chapter summarises our decision – we provide further detail in the subsequent chapters.

Summary

2.1. We have set the SMNCC in the fifth cap period at £17.12 (£10.64 for electricity and £6.48 for gas customers with benchmark consumption).[29] We set this allowance using our updated analysis of net costs and we include an amount for maximum potentially sunk installation costs due to COVID-19.

2.2. We will freeze the SMNCC, setting it in the sixth cap period at the same level as the fifth cap period. This delays a reduction in the SMNCC, providing time for us to consider the outcome of BEIS' autumn consultation on the tolerance levels for its new rollout Framework, the effects on rollout performance of basing the SMNCC on an average rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level.

2.3. We have published the SMNCC values we expect to include in subsequent cap periods, from 1 October 2021 onwards. These values are subject to future reviews, but accounting for BEIS' new rollout Framework, we expect the SMNCC to be around £11 to £12 in each cap period until the cap expires.

2.4. In the light of suppliers' representations we have made several adjustments to our calculations, increasing our assessment of net costs by about £8 in each cap period. The adjustments fall into four categories: changes to the rollout profile; changes to net costs per installation; changes to fixed costs; and changes to our allocation of smart costs between the operating cost allowance and the SMNCC.

2.5. We will review the SMNCC before setting the seventh cap period. This review will consider the latest data on costs, benefits, and progress with the rollout. We will

[29] We set the allowance using the Typical Domestic Consumption Values (TDCV) from 2018, which we refer to as "benchmark consumption": 3,100 kWh for electricity and 12,000 kWh for gas.

consider the outcome of government's autumn 2020 consultation on tolerance levels. We will also consider whether to maintain our current approach of using an average rollout profile.

2.6. As part of this review, we will assess the difference between the cumulative allowances between 1 October 2019 and 30 September 2021 and our updated assessment of suppliers' costs to identify whether suppliers have received payment in advance for costs they have not yet incurred (advanced payment), or alternatively have incurred costs in advance of payment through the allowance (lagged payment). When assessing costs for this period, we will use a higher than average rollout profile, even if we set the SMNCC based on an average rollout profile from 1 October 2021. We will deduct lagged payment from the SMNCC from 1 October 2021 to avoid double counting costs. We will add lagged payments to avoid under recovering costs.

The SMNCC values for forthcoming periods

The fifth cap period

2.7. We have decided to set the SMNCC in the fifth cap period (between 1 October 2020 and 31 March 2021) at £17.12 for a dual fuel customer with benchmark consumption. For an electricity customer, the allowance is £10.64. For a gas customer, the allowance is £6.48.

2.8. We have set the SMNCC in the fifth cap period using our updated assessment of the impact of the smart meter rollout on the net costs of an efficient supplier with an average rollout profile. This includes:

- Our assessment of the net impact of smart meters installed. We assess that the smart meter rollout will have increased operating costs in the fifth cap period by £8.61 since 2017,[30] for a supplier with an average rollout profile. This assessment includes adjustments we have made in the light of suppliers' representations to our May 2020 consultation, summarised below.

- An amount for the maximum potentially sunk installation costs due to COVID-19 (£8.51 dual fuel, £4.20 for gas customers and £4.31 for electricity customers). As

[30] That means we assess the net costs of the smart meter rollout to be £8.61 higher than the level we estimate is already included in the operating cost allowance. The operating cost allowance is a fixed level, based on a benchmark of large suppliers' total operating costs in 2017.

discussed in Chapter 1, the impact of social distancing arrangements on suppliers' rollout costs is uncertain and will vary from supplier to supplier. We have included an adjustment for the scenario where a supplier (a) can only install 30% of the meters it expected to in 2020 and (b) the vast majority of its total installation costs are sunk. For most suppliers this will be generous. Suppliers that have redeployed staff to other activities, or availed themselves of government's furlough scheme will avoid sunk costs. We discuss this issue further in Chapter 3.

Table 2.1: SMNCC in the fifth cap period (1 October 2020 to 31 March 2021)

	Electricity	Gas	Implied dual fuel
Net impact of smart meters installed	6.34	2.28	8.61
Maximum potentially sunk installation costs due to COVID-19	4.31	4.20	8.51
SMNCC	**10.64**	**6.48**	**17.12**

Notes: Units are pounds per customer with benchmark consumption per year. All values nominal.

The sixth cap period

2.9. We have decided to freeze the SMNCC for one cap period, setting the SMNCC in the sixth cap period (between 1 April 2021 and 1 October 2021) at the same level as the fifth cap period: £17.12 for a dual fuel customer with benchmark consumption.

2.10. This decision delays a reduction in the SMNCC. We set the SMNCC in the sixth cap period £5.53 above our updated assessment of the impact of the smart meter rollout on the net costs of an efficient supplier with an average rollout profile in that cap period.

Table 2.2: SMNCC in the sixth cap period (1 April 2021 to 30 September 2021)

	Electricity	Gas	Implied dual fuel
Net impact of smart meters installed	7.49	4.10	11.59
Effect of freezing the allowance	3.15	2.38	5.53
SMNCC	**10.64**	**6.48**	**17.12**

Notes: Units are pounds per customer with benchmark consumption per year. All values nominal.

Freezing the SMNCC

2.11. We have delayed a reduction in the sixth cap period for two reasons: (a) to allow us time to consider the effects on rollout performance of basing the SMNCC on an average rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level; and (b) to allow us to consider the outcome of BEIS' forthcoming consultation on the tolerance levels for its new rollout Framework and the effects on suppliers of the new enforcement regime.

2.12. In our May 2020 consultation we proposed to set the SMNCC based on an average rollout profile. That proposal would set the allowance below the efficient costs of suppliers with greater than average progress. Nonetheless, we considered that basing the SMNCC on an average profile would protect customers as it reflects the aggregate costs of the rollout. We stated that setting an SMNCC based on a higher rollout profile would mean customers pay more than the aggregate cost of the rollout, which we did not consider to be in their interests.

2.13. In response to our May 2020 consultation, some suppliers considered that our proposals would constrain the rollout, and in their view that would not protect customers. They considered that a higher allowance would deliver the benefits of the rollout to customers sooner, ultimately protecting customers.

2.14. We discuss this issue in detail in Chapter 3. In summary, we are not yet persuaded that setting an SMNCC based on a higher than average rollout profile is in customers' interests. However, we are persuaded that this issue merits further consideration

before we commit to using the average profile from 1 October 2021 onwards, as we currently expect to do subject to our next review.[31]

2.15. In Chapter 3 we discuss:

- **the effects on rollout performance of basing the SMNCC on an average rollout profile:** We consider stakeholders' views that setting the SMNCC based on an average profile would encourage suppliers with greater progress to slow down, aligning with the profile we use to set the SMNCC. We also consider stakeholders' views that setting a higher allowance will enable suppliers with lower performance to accelerate their performance.

- **the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level:** It is not clear to us that the cost to customers of using a higher than average profile to set the SMNCC would be offset by the benefits of installing some smart meters earlier than they would be if suppliers aligned with the profile the SMNCC is based on. However, it may not be straightforward to optimise the costs and benefit of the rollout in practice. We consider that any assessment of the impact on customers will inevitably include judgement about balancing different strategic goals: protecting customers and delivering the benefits of the smart meter rollout as quickly and safely as possible. Our consideration on customers' interests could not be a formulaic assessment of the apparent costs and benefits.

2.16. In Chapter 3, we also consider the new rollout Framework and the effects on suppliers that a new enforcement regime might have. In response to our May 2020 consultation, suppliers were concerned our proposals would not allow them to comply with new obligations. In response we have included BEIS' target to achieve market wide rollout by mid-2025 in the profile we use to assess smart metering costs.[32] The effect of the enforcement regime on suppliers is not yet clear. BEIS expects to consult stakeholders on tolerance levels in autumn 2020. The enforcement action we would take if suppliers did not meet those tolerance levels has yet to be defined.

[31] As part of our next review, if it transpires that suppliers increase their installation costs above the levels on which the SMNCC is being based, including as a result of suppliers investing in advance of BEIS' new Framework taking effect, we can consider this in any future assessment of lagged payments.
[32] Specifically, we have included a straight line rollout profile from the expected rollout position at the end of the all reasonable steps obligation in mid-2021, through to 100% rollout in mid-2025. (The latter is an approximation of market-wide rollout). We discuss below how we would review this.

Subsequent cap periods

2.17. We have published the SMNCC values we expect to include in subsequent cap periods, from 1 October 2021 (see **Table 2.3**). These values are subject to our future reviews, but reflect our current expectations of the SMNCC we would set in each cap period.

2.18. In our next review we will adjust the SMNCC to deduct advance payments or add lagged payments to ensure that the SMNCC reflects the costs of the rollout. To do this, we will assess the difference between the cumulative allowances between 1 October 2019 and 30 September 2021 and an updated assessment of suppliers' costs in that period to identify whether suppliers have received payment in advance for costs they have not yet incurred (advanced payment), or alternatively have incurred costs in advance of payment through the allowance (lagged payment). When assessing costs for this period, we will use a higher than average rollout profile, even if we conclude to set the SMNCC from 1 October 2021 using an average rollout profile. We discuss this issue in detail in Chapter 5.

Table 2.3: SMNCC values from the seventh cap period (1 October 2021 onwards)

	Oct 2021 to Mar 2022	Apr 2022 to Sep 2022	Oct 2022 to Mar 2023	Apr 2023 to Sep 2023	Oct 2023 to Dec 2023
Electricity	7.69	7.90	8.35	8.80	8.80
Gas	3.68	3.25	3.04	2.83	2.83
Implied Dual Fuel	**11.37**	**11.16**	**11.39**	**11.63**	**11.63**

Notes: Units are pounds per customer with benchmark consumption per year. All values nominal. As discussed in Chapter 1, the cap may expire before the end of 2023.

Summary of stakeholders' views

2.19. Many suppliers were opposed to our proposals. The principal reasons were:

- **That our assessment of costs was too low.** We have updated our assessment based on suppliers' substantive representations. We summarise the main changes below and in Chapter 4, and we discuss them in detail in our technical annex.

- **That our proposal would penalise suppliers that have made the most progress, and if implemented could constrain some suppliers' rollout, which in their view would not be in customers' interests**. We consider this issue in Chapter 3. We have decided to freeze the allowance for the sixth cap period at the same level as the fifth cap period. This is so that we can consider further the effects on rollout performance of basing the SMNCC on an average

rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level, before deciding whether or not to commit to basing the SMNCC on an average profile from 1 October 2021.

- **That our proposals did not recognise suppliers' current losses and the impact on costs of COVID-19.** This decision considers the SMNCC and whether it adequately reflects the impact of the smart meter rollout on suppliers' efficient operating costs. We include an adjustment for the potential impact of COVID-19 on smart metering costs (which we describe in Chapter 3). In Chapter 5, we recognise: that the combined impact of price protection for default tariff customers and less-profitable competitive tariffs is challenging; that suppliers' finances across their retail activities are affected by broader factors than the impact of smart meters or the impact of the price cap alone; and that we continue to monitor this issue closely.

Our assessment of net costs

Updating our assessment

2.20. Alongside our May 2020 consultation we disclosed our assessment of the net impact of the smart meter rollout on the efficient operating costs of a supplier with a market average rollout profile. Suppliers have scrutinised our assessment and provided representations on its suitability.

2.21. In the light of suppliers' representations we have made several adjustments to our calculations, increasing our assessment of net costs by about £8 in each of the next two cap periods (see **Table 2.4**). The impact rises in later cap periods, reflecting the target to complete the rollout by mid-2025.

Table 2.4: Comparison of implied dual fuel SMNCC between May 2020 consultation and August 2020 decision

	Oct 2020 to Mar 2021	Apr 2021 to Sep 2021	Oct 2021 to Mar 2022	Apr 2022 to Sep 2022	Oct 2022 to Mar 2023	Apr 2023 to Sep 2023	Oct 2023 to Dec 2023
May 2020	8.97	3.72	2.29	0.85	0.40	-0.05	-0.05
August 2020	17.12	11.59	11.37	11.16	11.39	11.63	11.63
Difference	**8.15**	**7.87**	**9.08**	**10.30**	**10.99**	**11.68**	**11.68**

Notes: As this shows how our assessment of net costs has changed, it does not include our decision to freeze the SMNCC allowance for the sixth cap period at the level of the fifth cap period. Units are pounds per customer with benchmark consumption per year. All values nominal. As discussed in Chapter 1, the cap may expire before the end of 2023.

2.22. The adjustments fall into four categories: changes to the rollout profile; changes to net cost per installation; changes to fixed costs; and changes to our allocation of smart metering costs in 2017 between the operating cost allowance and the SMNCC. We summarise these changes below, and explain them in this document and its technical annex.

Changes to the rollout profile

2.23. In our May 2020 consultation we set a single rollout profile representing suppliers' weighted average progress with the rollout (which is equivalent to the aggregate progress of the rollout for the market as a whole). We used latest data on progress up to the end of 2019, and projected forward, based on suppliers' average progress between 2017 and 2019 under the "all reasonable steps" obligation.[33] We selected the weighted average as a reasonable means of estimating likely performance in the future, based on consideration of all the evidence.

2.24. We have made three changes to those proposals, which increase the single rollout profile historically and in subsequent cap periods.

2.25. First, we calculate separate rollout profiles for credit and prepayment, each reflecting the data for that meter type.[34] For this decision, only the profile for replacing credit meters is relevant to any significant extent.[35] As a consequence of the new data source, our rollout profiles are now identical for each fuel over the period we use the data.

2.26. Second, we calculate suppliers' weighted average rollout excluding the historical performance of smaller suppliers serving 10% of the market. We consider that these

[33] This is before the reduction in rollout we apply in 2020 due to the effects of COVID-19. This reduction means we assume rollout in 2020 is 30% of the historical average level.
[34] The new data source (ASR data) is split by payment method, but not by fuel. As a consequence, our rollout profiles are now identical for each fuel over the period where we use the new data.
[35] In the SMNCC model, the rollout profile for prepayment meters affects a small number of cost categories (such as the cost of SMETS1 communications hubs). These are cases where rollout affects total costs, and where we spread costs over all domestic customers.

small suppliers pull down the weighted average rollout profile below the level achieved by suppliers serving most (90%) of the market.

2.27. Third, we reflect the latest announcement by BEIS on its new rollout Framework, which it expects to be in force between 1 July 2021 and 30 June 2025. We have set the rollout from 1 July 2021 onwards in line with the target to complete the rollout by 30 June 2025.

2.28. Note that we have not, as yet, adjusted the productivity assumption in our cost assessment to reflect the targets in the new Framework. In its 2019 CBA BEIS judged that the acceleration required to achieve market wide rollout would also require a productivity improvement (from 3.1 installations per installer per day to 5.0). We expect the new target will require the same improvement.

2.29. For the period until our next review, we have maintained the level of productivity that we consulted on in May 2020, which reflects historical levels. However, we will consider productivity in our next review and would expect to reflect the improvements the new Framework requires.

2.30. We discuss these issues in detail, and suppliers' views on how we set a single rollout profile, in Chapter 3.

Changes to net cost per installation

2.31. As discussed in Chapter 1, suppliers incur costs installing smart meters and benefit from avoiding the ongoing costs they currently incur from serving customers with traditional meters. Each smart meter installation affects a suppliers' net operating costs.

2.32. We have made a number of changes based on the suppliers' representations. The most significant is that we have reduced our assessment of the benefits suppliers achieve by avoiding ongoing costs of serving customers with traditional meters. Those ongoing costs are reflected in the operating cost allowance. In setting the SMNCC, we estimate and deduct the costs avoided, thereby offsetting some of the costs represented by the operating cost allowance. In our 2018 decision we benchmarked the operating cost

allowance with reference to the lower quartile,[36] whereas we assess the SMNCC using average net costs. Taking benefits in isolation, this means we risked using the SMNCC to deduct more avoided costs than we included in the operating cost allowance to start with. On that basis, we have reduced our assessment of costs and benefits relating to assets and activities reflected in the operating cost allowance (see Chapter 4 for more detail).

2.33. The approach we proposed in the May 2020 consultation was already conservative. This was because we proposed to use an average to assess the net costs of smart metering (taking new costs and avoided costs together), whereas we used a level near the lower quartile to benchmark operating costs. Given that installing smart meters for credit customers has net costs (i.e. the new costs exceed the avoided costs), using a laxer standard to assess smart metering costs was already generous to suppliers.[37]

2.34. Our adjustment is now more conservative, given that we have reduced our assessment of avoided costs, but still assess the gross costs of smart metering using an average. Our new approach will become increasingly more conservative over time, as suppliers install more smart meters.

2.35. Nevertheless, we consider that our overall position still protects customers sufficiently. Customers are still not paying more than the efficient costs of installing smart meters – we just have a different judgement about what 'efficient' means in the context of a new activity than for the rest of suppliers' operations.

2.36. We provide further detail on this adjustment, and others, in Chapter 4 and the technical annex.

Changes to fixed costs

2.37. As discussed in Chapter 1, suppliers incur fixed costs, such as programme and IT costs relating to the installation of the smart meter rollout.

2.38. In response to suppliers' representations we have adjusted the assumed amortisation period for IT assets, reducing the extent to which these costs reduce over time.

[36] Using a level just below the lower quartile.
[37] The reasons for this are set out in Chapter 2 of our May 2020 consultation. In summary, we used a laxer benchmark to recognise that installing smart meters was a new activity and that suppliers rollout profiles would vary.

2.39. We provide further detail on this adjustment, and others, in Chapter 4 and the technical annex.

Changes to our allocation of smart costs in the operating cost allowance

2.40. For each year, we assess the net costs of the smart meter rollout. We set the operating cost allowance based on suppliers' total operating costs in 2017, so it already includes a proportion of the net costs of the smart meter rollout (as it includes the impact of the smart meter rollout on operating costs in 2017). The SMNCC should only reflect the change in smart metering costs relative to the level already included in the operating cost allowance.

2.41. The operating cost allowance includes the impact of all smart meters, not just those replacing traditional credit meters. Our assessment of smart metering costs in 2017 calculates the impact of replacing credit meters only. So it is not comparable to the operating cost allowance. We must adjust for the impact of replacing traditional prepayment meters in 2017.

2.42. In our May 2020 consultation, we calculated the impact on the operating cost allowance of replacing traditional prepayment meters with smart meters. To do so, we used the average rollout profile for PPM.[38] This approach overstated the costs in the operating cost allowance, as the majority of PPMs replaced by smart meters were installed by a supplier who was not included in the operating cost allowance analysis.

2.43. To correct that, we have reduced our estimate of the impact PPM costs had on the operating cost allowance. On that basis, we conclude that a lower proportion of the smart metering costs for credit costs are already included in the operating cost allowance. We therefore now allocate a greater proportion of the net costs of the rollout that we estimate for each year to the SMNCC.

[38] In our May 2020 consultation, this was the same as the rollout profile for credit meters. As noted above, we have since decided to set separate rollout profiles for credit and prepayment.

Our next review

Our decision

2.44. We have decided to review the SMNCC every 12 months. Our first review will inform the SMNCC from the seventh cap period onwards (from 1 October 2021).

2.45. We discuss these issues in detail, and suppliers' representation in Chapter 5.

Scope of future reviews

2.46. We have decided that our next review will have a larger scope than the one we proposed in our May 2020 consultation. It will consider:

- latest data on cost, benefits, and rollout progress, as set out in Annual Supplier Returns (ASRs);
- latest policy; in particular the outcome of BEIS consultation on the tolerance levels to set the minimum annual performance for its new Framework;
- the effects on rollout performance of basing the SMNCC on an average rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level.[39]

Adjusting to advanced or lagged payments

2.47. In our next review we will reassess the impact of the smart meter rollout on suppliers' efficient operating costs. To ensure that the cumulative allowances since 1 October 2019 are not substantially higher or lower than suppliers' cumulative costs we will deduct advanced payments (if the cumulative allowances exceed the cumulative costs) from the SMNCC in subsequent cap periods or add lagged payments (if the cumulative allowances were below the cumulative costs). This is a change from our May 2020 consultation.

[39] As part of this, we would also consider whether in the circumstances the use of an average rollout profile is a good proxy for expected future performance.

2.48. Specifically, we will:

- not assess costs in the first two cap periods (1 January to 30 September 2019); and

- assess costs between 1 October 2019 and 30 September 2021 using a higher than average rollout profile, whether or not we decide to set the SMNCC based on obligations for a supplier with an average rollout profile from 1 October 2021

2.49. We have not deducted advanced payments in this decision, as it would reduce the benefit of providing for potentially sunk installation costs due to COVID-19 or freezing the allowance in the sixth cap period.

3. Setting a single rollout profile

Section summary

In this chapter we explain the rollout profile we use to assess the impact of the smart meter rollout on suppliers' efficient costs.

Summary

3.1. Broadly speaking, suppliers that have installed more smart meters will have higher efficient costs than suppliers that have installed fewer smart meters.

3.2. We have decided to assess the impact of the smart meter rollout on suppliers' efficient operating costs using suppliers' weighted average rollout profile. (This decision is subject to future review, as discussed below). We have calculated a higher average profile than we proposed in our May 2020 consultation, as we have decided to exclude small suppliers. These suppliers have installed few smart meters, so they pulled down the average rollout profile. For credit meters, we now also use a rollout profile which reflects these meters specifically (rather than a shared profile between credit and prepayment as previously).

3.3. An allowance based on the average profile does not allow a supplier with above average progress to recover its costs in full. Some suppliers have made clear that, in that situation, they may slow their rollout activities to align their costs with the allowance (and aligning their cumulative progress with the average profile, reducing variation between suppliers). While that may be in consumers' interests, we have chosen to postpone a reduction in the SMNCC, to allow for further consideration of whether to maintain an average profile, or to adopt a higher profile if it is in customers' best interests.

3.4. We have decided to set the single rollout profile (across suppliers) in line with our latest understanding of the current "all reasonable steps" obligation and government's new Framework. We have set the single average rollout profile by:

- using data on suppliers' actual progress up to the end of 2019;
- using the average progress suppliers achieved between 2017 and 2019 under "all reasonable steps" to set the rollout profile between 1 January 2020 and 30 June

2021, assuming that the installation rate in 2020 reduces to 30% of the average rate per year between 2017 and 2019 to account for the possible effects of COVID-19, and then continues up to 30 June 2021 at the average rate between 2017 and 2019; and

- setting a straight line trajectory from 1 July 2021 to 100% rollout on 30 June 2025, in line with government's June 2020 response on its new Framework.

3.5. In line with our proposal in the May 2020 consultation, we have decided to include an amount within the SMNCC for the maximum potentially sunk costs in 2020 due to COVID-19 (as we proposed on our May 2020 consultation). In the fifth cap period, that additional amount is equivalent about £8.50 per dual fuel customer with benchmark consumption. In our next review, we will assess the impact of the rollout based on data regarding suppliers' actual progress and costs in 2020, and make adjustments to the SMNCC accordingly. In Chapter 5, we discuss our treatment of advanced or lagged payments when setting the SMNCC from 1 October 2021.

Suppliers' rollout and efficient net costs

A single rollout profile

3.6. Each supplier has made a different amount of progress with the rollout and as a result has incurred a different level of efficient cost. We would have to set a different allowance for each supplier, if we were to provide an allowance that was equivalent to each supplier's efficient costs. However, as discussed in Chapter 1, the Act states we may not exempt holders of supply licences from their application, or make different provision for different holders of supply licences. We can only set one allowance, based on a single rollout profile.

The relationship between rollout and net costs

3.7. As discussed in Chapter 1, suppliers incur costs and benefits when replacing traditional credit meters with smart meters. The total net impact on a supplier's efficient net operating costs depends on its rollout profile (i.e. the number of smart meters it has installed and when it installed them as a proportion of mandated meters). This profile acts as a multiplier, increasing certain costs and benefits in line with the number of meters it has installed up to that point in time. Other costs and benefits do not depend on a supplier's rollout profile.

3.8. In this chapter we discuss suppliers' rollout profiles and their relationship with total net costs. In the next chapter (Chapter 4) we discuss specific cost and benefit categories.

3.9. The net cost of replacing traditional credit meters with smart meters principally depends on:

- **The asset and installation cost of smart meters.** These costs scale with the rollout profile. They include (a) the costs expensed in the year of installation (b) ongoing costs of smart meters installed in prior years (i.e. rental payments) and (c) the net impact of premature replacement charges (PRCs – see below for more detail).

- **The operational benefits of installing smart meters**. These benefits scale with the rollout profile.

- **The avoided costs of installing new traditional meters**. These are benefits and do not scale with the rollout profile. Each year a portion of a supplier's traditional meters would have expired. Due to the rollout, a supplier no longer incurs the costs of replacing them with new traditional meters.

3.10. Broadly speaking, suppliers that have installed more smart meters will have higher efficient costs than suppliers that have installed fewer smart meters. That is because replacing traditional credit meters with smart meters is an incremental net cost to suppliers. It is also an on-going cost, as suppliers spread the cost of purchasing and installing a smart meter over its life (by paying rental charges).

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

- variation in suppliers' progress;

- variation against rollout expectations; and

- sunk installation costs.

Variation in suppliers' progress

Issue

3.12. Suppliers' efficient costs vary depending on the progress they have made with the rollout. However, we must set a single allowance for all suppliers. In our May 2020 consultation, we explained that each supplier has a different rollout profile. We used a single rollout profile in the SMNCC model[40] to assess suppliers' costs. Some suppliers will be ahead of this profile (i.e. they have installed smart meters in a higher proportion of their customers' homes than other suppliers at this point in time), and others will be behind.

3.13. We considered that the higher we set the single profile above the average level (which we consider provides a good estimate for the average expected level), the less we protect customers. This is because suppliers with slower progress can charge more than they require. As a result, customers would pay collectively more than the aggregate costs of the rollout. The closer we set the profile to the average profile, the better we protect customers. However, suppliers with above average progress would only recover part of their costs – the allowance would be below their efficient costs.

Our decision

Defining the average rollout profile

3.14. We have decided to assess the impact of the smart meter rollout on the efficient operating costs of a suppliers with a weighted average rollout profile (i.e. calculate the SMNCC allowance using a weighted average rollout profile).

3.15. We have decided to adjust our definition of weighted average rollout profile. We now exclude small suppliers, who serve 10% of customers, from our calculation of the average profile. These suppliers have installed few smart meters, so they pull down the average rollout profile compared with the average achieved by suppliers serving the majority (90%) of customers. We have also decided to use separate rollout profiles for credit and prepayment meters (as opposed to a shared profile as previously).[41]

[40] There are four domestic rollout profiles in the SMNCC model - a single rollout profile is used for each fuel and meter type.
[41] This is based on ASR data. We are therefore only able to calculate separate rollout profiles for credit

Using an above-average profile

3.16. We have not decided to set the SMNCC based on an assessment of the smart meter rollout's impact on the efficient operating costs of a supplier with an above-average, or a market leading rollout profile, now or in the future. As stated in our May 2020 consultation, we consider it likely that would mean customers pay more than the aggregate costs of the rollout, which would not protect them.

3.17. However, we have delayed a reduction in the SMNCC in the sixth cap period, allowing suppliers with above average rollout profiles to maintain their plans up to 30 September 2021. We have done this for two reasons: (a) to allow us time to consider the effects on rollout performance of basing the SMNCC on an average rollout profile, and the impact on customers if some suppliers reduced their rollout as a result of the SMNCC level; and (b) to allow us to consider the outcome of BEIS' forthcoming consultation on its new rollout Framework and the effects on suppliers of the new regime.

3.18. In our next review, we will consider whether to maintain our May 2020 proposals to set the SMNCC based on the impact of an average profile, or to use a higher rollout profile. To be clear, we are not yet persuaded that an average rollout profile fails to protect customers better than alternative profiles. But we are persuaded that the issue is worth further consideration before we commit to using an average profile.

Stakeholders' views

3.19. Most suppliers acknowledged that we must set use a single rollout profile to set the same allowance for all suppliers and as such, for individual suppliers, the extent to which their costs match the allowance provided under the cap will be highly dependent on their own rollout progress.

3.20. Suppliers that commented on this issue disagreed with our proposal to use a weighted average profile. Their views were broadly covered by four themes, which we consider below:

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and prepayment for the period where ASR data is available. Before this, we use a combined rollout profile.

- that our calculation of the average rollout profile was influenced by suppliers that were not complying with their obligations, or were otherwise underperforming;
- that our proposal did not have regard to some suppliers' efficient costs, in effect penalising suppliers that had made the most progress with the smart meter rollout;
- that our proposal did not support the smart meter rollout, as some suppliers (i.e. those who were ahead of the average) would slow their rollout; and
- that we should set the allowance in line with a market leading rollout profile, and use enforcement action against other suppliers to protect customers.

Considering the influence of underperforming suppliers on average rollout

3.21. Notwithstanding their views on whether or not we should set the SMNCC with reference to the weighted average profile, some suppliers argued that a market-wide average was inappropriate as it included the performance of suppliers that were not complying with their licence obligations, or were underperforming in any case.

3.22. We consider that the smallest suppliers,[42] who collectively serve 10% of customers, pull down the average rollout profile below the level achieved by suppliers serving the majority (90%) of customers. These suppliers have installed few smart meters. Including these small suppliers reduces the SMNCC to a level significantly below the average costs of the suppliers serving the majority of customers. We consider the performance of those small suppliers (as a group)[43] to be outlying and unrepresentative.

3.23. On that basis, we have decided to exclude them from our calculation of the rollout profile, increasing the weighted average profile, and hence our assessment of costs. The practical effect of this change is to bring the rollout profile used to calculate the SMNCC allowance much closer to that achieved by large suppliers so far.

[42] Those who are not classified as Large Energy Suppliers for the purpose of smart meter reporting, and are therefore not included in the ASRs. We have included all the suppliers for whom we have ASR data in our rollout profile analysis.
[43] Rollout activity by individual small suppliers will vary.

3.24. We do not consider enforcement action to be a good basis on which to include or exclude suppliers from our calculation of the average profile. Firstly, variation in performance is not an indication that suppliers have failed to meet their obligations, or otherwise underperformed. Under the current rollout obligation (which continues until in June 2021), suppliers must demonstrate that they have taken 'all reasonable steps' to deliver the rollout and this has resulted in different rollout profiles for different suppliers. Secondly, we must set the rollout profile in advance and cannot speculate on which suppliers will or will not be considered compliant in any forthcoming period. On that basis, we do not consider this approach to be practical or reasonable.

Considering suppliers' efficient costs (of those with the most progress)

3.25. In our May 2020 consultation we explained that, under the Act, we must protect default tariff customers and set a single allowance for all suppliers. In doing so, we must have regard to the costs of an efficient supplier.

3.26. We explained that this is a challenge, as suppliers' efficient (total) costs differ due to variation in their rollout progress. If we set the allowance at the level of the supplier with the highest efficient costs (in this case, the supplier that has replaced the most traditional credit meters with smart meters) then all other suppliers could charge their customers more than they require. If we set the allowance based on weighted average progress, then we set the SMNCC below the efficient costs of suppliers that have made more progress than average.

3.27. This challenge occurs because, for credit meters, faster roll out of smart meters increases a supplier's net costs. As the cap will end by 2023 at the latest, and BEIS' target is for rollout to be complete by 2025, a supplier with above average rollout will have higher costs than the average over the full life of the cap. (In other words, the average will not catch up until after the cap ends). This means that suppliers who achieve above average rollout over the lifetime of the cap will not recover their efficiently incurred costs from an allowance that is based on the average profile.

3.28. One supplier inferred that we treat suppliers as a uniform group, and that in doing so, we made a fundamental error because some suppliers had higher than average costs. We make no such assumption. Suppliers' efficient costs differ and do not each reflect the weighted average efficient costs. Due to variation in their progress, some suppliers have higher than average efficient costs; some have lower than average costs. We consider the weighted average cost because it reflects the simple average costs for consumers. It is equivalent to the aggregate costs for customers collectively.

3.29. One supplier considered that we should assess the efficient costs of *each* supplier. This does not circumvent the central difficulty: that suppliers have different efficient costs and that the Act states that we must set a single cap level that protects customers. Wherever we set that single allowance level, it cannot reflect the efficient costs of *each supplier*. In our May 2020 consultation, we considered that we would not protect customers if we set that single allowance at a level above average costs, because customers could be charged more than the aggregate costs of the rollout.

Considering protection for customers

Context

3.30. The effect of setting the SMNCC based on the average rollout profile is that customers pay collectively an amount that reflects the aggregate costs of the rollout. The aggregate effect of setting the SMNCC based on a higher rollout would be that customers as a whole would pay more than the efficient aggregate costs of the rollout. That is because *all customers* could be charged at a level that reflects the efficient costs of a rollout profile that only some suppliers have reached. In our May 2020 consultation we considered that setting the SMNCC based on an average profile would protect customers' interests.

3.31. We cannot ensure that customers do not pay more than the aggregate costs of the rollout and also ensure that each supplier, including ones with an above average rollout profile, can recover its efficiently incurred costs in full. As discussed in Chapter 1, we seek to balance those competing issues, bearing in mind that the primary focus of the Act is to protect customers.

3.32. Some suppliers disagreed that using an average profile would protect customers better than using a higher profile. Suppliers provided two separate reasons:

- that suppliers with an above average rollout would slow down to align their costs with an allowance based on the average profile. They considered that aligning their progress with the market average would harm customers, as the benefits of installing some smart meters earlier would be delayed; and

- that if the allowance was set in line with the most advanced rollout profile, suppliers with slower rollouts could invest the higher allowance in the rollout, allowing them to accelerate their performance and deliver benefits earlier.

The potential impact of market leaders aligning with the average

3.33. Using an average profile may encourage market leading suppliers to delay the installation of some of their smart meters, in order to align their progress and efficient costs with an SMNCC based on the market average. In response to our May 2020 consultation one supplier with above average progress said that it would do this, reducing its rollout capacity if we set the SMNCC in line with our assessment of costs for an average rollout profile.[44]

3.34. If a supplier made that decision, it would install some smart meters later than it would have done (for instance, if we had set the allowance using the rollout profile of a market leading supplier). Those smart meters would still be installed. They would still deliver benefits to customers. But those benefits would be delayed. All else being equal, it is better for customers to achieve benefits earlier.

3.35. We seek to support the rollout. It provides benefits to current and future customers. But, as we said in our May 2020 consultation, we do not consider that the SMNCC allowance should support the rollout *at any cost.*

3.36. We must consider the cost to customers of avoiding delays to some installations. If the cost to customers is very high, those costs may exceed the benefits of avoiding delay. In our May 2020 consultation we considered that setting the SMNCC allowance above efficient costs could harm customers, if that would reduce the net benefits to customers of installing smart meters (i.e. considering the benefit they receive, and the additional cost of achieving those benefits). Clearly, the net benefit of the rollout to customers is affected by the amount they are charged for it.

3.37. In principle, we should be able to establish a point at which the benefits achieved from market-leading suppliers installing some smart meters earlier are offset by the additional charges to customers (i.e. by setting the allowance above the average cost of the rollout). Beyond that point, it would be better value to reduce variation between the rollout profiles of different suppliers, so that customers paid a price not exceeding the benefits.

[44] One supplier inferred that we had assumed suppliers with above average progress would not reduce their rollout capacity. It considered this a fundamental error, as we would ignore the delay to a portion of customers' benefits if we made that assumption. We made no such assumption. Our view that an SMNCC based on the average profile protects customers did not depend on whether or not some suppliers with above average performance align with average performance.

3.38. However, in practice, we expect a quantifiable 'tipping point' will not be easily identified. Some of the benefits of installing a smart meter are immediate, certain, and accrue with each meter installed. Others are not. For example, the benefits of system transformation depend, in part, on the total number of meters installed reaching certain thresholds. Customers' change in behaviour can vary and change over time.[45] We should be cautious about 'over-interpreting' quantitative analysis regarding the relative trade-offs between the timing of benefits and the amount it is proportionate to charge customers to achieve some of those benefits earlier.

3.39. Furthermore, it may not be straightforward to optimise the net benefits of the rollout in practice, even if we could identify an optimum trade-off in principle. We consider it plausible that some degree of redundancy (excess cost) may be necessary in order for the rollout to maintain momentum, securing benefits for customers and protecting them more generally, even if additional charges do exceed the additional benefits.

3.40. For that reason, *any assessment* of the impact on customers will inevitably include judgement about balancing different strategic goals: protecting customers and delivering the benefits of the smart meter rollout as quickly and safely as possible. Our assessment of customers' interests could not be a formulaic consideration of the costs and benefits.

Potential impact of suppliers with below average performance

3.41. In response to our May 2020 consultation, some suppliers argued that if we set the allowance in line with the most advanced rollout profile, suppliers with slower rollouts could invest the higher allowance in the rollout, allowing them to accelerate their performance and deliver benefits earlier. On that basis, a higher allowance would protect customers.

3.42. It is not clear to us that increasing the allowance would increase suppliers' performance, to an extent that the benefits of that improvement would offset the costs of a higher SMNCC for customers. In our May 2020 consultation we stated that, in response to our October 2019 consultation, many suppliers argued that delays to the

[45] Furthermore, the benefits to customers (as a group) could be a mixture of benefits which accrue to customers who receive a smart meter (private benefits), and wider societal benefits which accrue to all customers. The private benefits would complicate any assessment, as there would be transfers between customers who paid additional charges and the customers who received the private benefits of a smart meter. This could have distributional implications.

rollout were due to consumer resistance and technical barriers. That would suggest a lack of funds is not a binding constraint, at least in some cases. We considered that suppliers had received more than sufficient funding to date, but the rollout has not progressed in line with expectations.

3.43. In response to our May 2020 consultation, one supplier noted that applying more resources is not always productive. It considered that decisions must be taken based on realistic expectations of return for the investment made. It noted that most suppliers had done as much as was feasibly possible in the circumstances.

3.44. On that basis, there is a risk that increasing the allowance may increase the cost of the rollout for customers, but not accelerate it. Additional funding (through the allowance) may not be sufficient to accelerate the rollout. Rather, it could increase costs for customers without (proportionately) accelerating installations.

3.45. It is also not clear to what extent improving performance requires additional investment. In its 2019 consultation on the new Framework, BEIS considered that the rollout would accelerate on the basis of improved productivity, not necessarily more investment. It considered suppliers could install five smart meters per installer per day, up from the historical average of 3.1 meters per installer per day that we included in the calculations supporting our May 2020 consultation.

3.46. In its June 2020 response, BEIS indicated that government-led benchmarking with energy suppliers in 2019 on the maturity of their consumer engagement and operational fulfilment showed significant variability between their performance across the consumer journey. It stated that all energy suppliers can and should do more to remove friction from the consumer journey to drive the uptake of smart meters.

3.47. This suggests it may not be necessary to charge customers more to increase the pace of the rollout (or at least, the increase in performance would be larger than the increase in costs). As discussed below, our approach of using an average rollout profile includes aligning the rollout profile in the SMNCC with the BEIS targets after the introduction of the new Framework in mid-2021. We do this by using the rollout profile that an average supplier would need to meet the BEIS target from this point. We will also consider making appropriate adjustments for advanced payments.

Considering using enforcement action against non-leading suppliers

3.48. Some suppliers considered that we should set the SMNCC in line with suppliers that had made the most progress, or alternatively, the forthcoming target to complete the rollout by 30 June 2025. They argued that underperformance, including failing to efficiently spend the consequent allowance, should then prompt regulatory scrutiny and ultimately enforcement action.

3.49. We do not consider this approach would resolve the problem. It does not appear to be practical or consistent with the enforcement regimes (either the current framework, or one that would support the new Framework that will be in force from 1 July 2021). It is not the case that suppliers that have made less progress than the market-leading suppliers have not met their obligations. Under 'all reasonable steps' Ofgem has approved plans that target different levels of progress, taking each supplier's individual circumstances into account. The new Framework will set different annual targets for each supplier on a trajectory towards market-wide rollout (although suppliers that have made less progress to date will have more stretching annual increases to catch up by mid-2025, those targets will be lower in absolute terms and therefore their efficient costs should lower).

3.50. On that basis, suppliers that have made less progress than others would have lower efficient costs and be compliant with their obligations. We would have no reason or ability to take enforcement action. Suppliers' performance can differ for legitimate reasons. Nonetheless, charging all customers at the level of the supplier with the highest costs would mean customers pay more than the total costs of the rollout.

3.51. It is not clear whether enforcement action could remedy the situation where a supplier with less progress than average has spent the allowance in full, but not done so efficiently (i.e. its cost per installation exceed the underlying cost per installation in the allowance). There would also be substantial time lags between the point customers are overcharged, and the point of remedial action. Where possible, it would be preferable to avoid charging customers more than the costs of the rollout in the first instance.

3.52. Neither is it likely that enforcement action would remedy the situation where a supplier has performance below the profile we use to set the allowance (which would be common if we based the SMNCC on a market leading profile) and has not spent the allowance in full. That supplier may have achieved its obligations, taking all reasonable steps or achieving its minimum enforceable tolerance levels. It may also face other constraints, such that increasing its spending would not increase its performance.

3.53. Nonetheless, the nature of the tolerance levels and the enforcement regime supporting them should have some bearing on how we address the impact on customers of setting the allowance in line with suppliers' average costs, or the costs of the suppliers that have made the most progress. By freezing the SMNCC allowance in cap period six, we provide time for the tolerance levels and enforcement regime that will enforce them to become clear.

Considering the impact of freezing the allowance in the sixth cap period

3.54. At present we are not persuaded that setting an SMNCC based on a higher than average rollout profile is in customers' long term interests. Based on our current understanding, it does not seem likely that paying more than the aggregate costs of the rollout would be offset by the benefit of some suppliers installing some smart meters earlier than if they aligned with market-average progress. Nor is it clear that additional funding (through the SMNCC) is necessary or sufficient to accelerate the rollout for suppliers that have made less progress than the market leaders.

3.55. However, given the potential impact of reducing the SMNCC allowance, we are persuaded that these questions merit further consideration before committing to the average profile from 1 October 2021 onwards, as we currently expect to do subject to our next review. In response to our May 2020 consultation, suppliers explained that they find reductions in their rollout capacity are not easily reversed. On that basis, we consider it would not be in consumers' long term interests to reduce the allowance in the fifth and sixth cap periods, if there is a possibility we might later increase the allowance to have regard to the net efficient costs of a market leading rollout profile.

3.56. We consider that by freezing the allowance temporarily, we mitigate the impact on suppliers with above average rollout profiles, increasing their ability to maintain their plans for the next 12 months, up to 30 September 2021. Based on suppliers' representations about their plans for 2021, and the sensitivity testing in the SMNCC model (using higher rollout profiles) we consider that the SMNCC level we set for the fifth and sixth cap periods should limit the need for suppliers to reduce their rollout capacity. In addition, one supplier viewed our January 2020 update as a signal that the contingency allowance could be £15 per dual fuel customer, so it had used that in its planning and considered it rational for other suppliers to have done the same. Given our decisions for the fifth and sixth cap periods, the SMNCC allowances will be above this level.

Variation against rollout expectations

Issue

3.57. As discussed in Chapter 1, on average, suppliers have installed smart meters at a slower rate than expected. Government placed an obligation on suppliers to take all reasonable steps to complete the rollout by the end of 2020. In June 2020, government confirmed that the next rollout obligations will set annual targets for each supplier to complete the rollout by 30 June 2025 subject to tolerance levels that it will consult on in autumn 2020.

3.58. In our May 2020 consultation we stated that delays against expectations are a challenge when forecasting the net impact that replacing traditional meters with smart meters will have on operating costs in the future. If we set the allowance in line with expectations that are not met, then suppliers can charge customers for meters they have not installed yet.

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

Our decision

3.60. We have decided to set the single rollout profile in line with our latest understanding of the current 'all reasonable steps' obligation and government's new Framework.

3.61. We have set the single average rollout profile by:

- using data on suppliers' actual progress up to the end of 2019;
- using the average progress suppliers achieved between 2017 and 2019 under 'all reasonable steps' to approximate likely performance between 1 January 2020 and 30 June 2021: we assume that the installation rate between 1 January 2021 and 30 June 2021 will reflect the same rate per year as between 2017 and 2019; and in 2020 we assume the installation rate reduces to 30% of that rate due to COVID-19; and

- setting a straight line trajectory from 1 July 2021 to 30 June 2025, in line with government's June 2020 response on its new Framework which aims to achieve market-wide rollout in that period.[46]

3.62. We have adjusted our May 2020 proposal to account for government's June 2020 response, which decided to extend the all reasonable steps obligation until 30 June 2021 followed by a four-year Framework seeking market-wide rollout by 30 June 2025.

3.63. For the new Framework period (1 July 2021 to 30 June 2025) we have included the new rollout target, but have not, as yet, updated the productivity assumption. We consulted on using the average productivity between 2017 and 2019 to calculate costs in future years. We have maintained that proposal. In its 2019 CBA, government assumed that suppliers would accelerate the rollout by improving their productivity from 3.1 installations per installer per day to 5.0. In our next review we will consider what productivity assumption is consistent with the new Framework and we would expect to reflect improved productivity in the SMNCC from 1 October 2021.

Stakeholders' views

3.64. Suppliers that commented on this issue considered that we must set the allowance in line with government's target to complete the rollout by 30 June 2025.

3.65. Some suppliers considered that their historical performance under 'all reasonable steps' would not be a good indicator of their future performance under 'all reasonable steps'. No supplier offered a more reliable forecast of the likely number of installations.

Considering the new Framework

Target to complete the rollout

3.66. We have decided to include government's target to achieve market-wide rollout by mid-2025. Specifically, we have included a straight line rollout profile from the expected rollout position at the end of the 'all reasonable steps' obligation in mid-2021, through to 100% rollout in mid-2025. (The latter is an approximation of market-wide rollout). We discuss below how we would review this.

[46] For the purpose of defining the rollout profile in the SMNCC model as part of this review, we interpret "market-wide" as meaning 100% rollout. We may revise this in our subsequent review, should government publish a different interpretation of "market-wide".

3.67. This decision has the effect of increasing the SMNCC compared with the level it would be if we projected suppliers' historical progress under 'all reasonable steps'. In absolute terms, using the target does not increase the SMNCC (from the point at which the new Framework begins). It prevents a reduction in the SMNCC that would occur if the rollout continued at the pace we have observed under the 'all reasonable steps' obligation.

3.68. The new Framework will set annual targets for each supplier, that all seek to achieve market wide rollout by mid-2025. As each supplier will have different starting points, the target trajectory for each supplier will differ. We must set a single allowance, so we cannot reflect each supplier's trajectory.

3.69. Some suppliers were concerned that the allowance would not reflect the efficient costs of their specific trajectory, in particular if they had made greater progress than average then they were concerned the allowance could restrict them from achieving those targets. In addition, they may not be able to align with the average rollout profile and allowance without risking enforcement action, if their individual minimum requirements were higher than the rollout profile on which the SMNCC was based.

3.70. Enforcement action relates to tolerance levels, not targets. This scenario depends on the tolerance levels that could potentially lead to enforcement action. BEIS will consult on tolerance levels in autumn 2020. We have decided to freeze the SMNCC allowance for the sixth cap period (which includes the first three months of the new Framework) at the level of the fifth cap period. That provides time for Ofgem, in the light of that consultation, to consider its implications for the enforcement regime.

Forecasting progress

3.71. It is not clear whether or not progress will reflect the market-wide target. BEIS intend to review progress after two years.

3.72. As we stated in our May 2020 consultation, most suppliers considered that the profile in the 2019 CBA was unachievable. In particular, suppliers argued that the profile assumed they could improve substantially the conversion rate of customers who do not yet have a smart meter. Without additional policy measures to increase consumers' uptake of smart meters, suppliers expected the opposite to be true; that the conversion rate would reduce, as the remaining customers would be more resistant to receiving a smart meter and the policy tools for conversion remained the same.

3.73. The new Framework's market-wide rollout broadly aligns with the 2019 CBA profile (with a six month delay). In its June 2020 response, government said it is considering new policy measures to encourage consumer uptake of smart meters. The new Framework retains the principle of consumer choice.

Forecasting costs

3.74. The cost of achieving the targets is also unclear. If suppliers maintain the same level of productivity, then higher targets could lead to a proportional increase in costs per period, and more meters would be installed in each period.

3.75. The 2019 CBA expected suppliers to accelerate performance by increasing their productivity from 3.1 installations per installer per day to 5.0. That would mean that the increase in performance would not mean a proportional increase in costs.

3.76. In response to our October 2019 consultation, suppliers considered that additional performance could require *additional* investment above the existing levels to overcome consumer resistance. On that basis, productivity might reduce as more resistant customers needed to have a smart meter installed (or costs per installation might increase through other means – such as financial incentives to customers).

3.77. Suppliers also suggested new policy measures could and should be adopted to increase consumer uptake. Those measures should, if adopted, affect productivity and costs per installation. In its June 2020 response government said it is considering measures to encourage uptake.

Our next review

3.78. In our next review we will consider the outcome of government's autumn 2020 consultation on the tolerance levels associated with its new Framework.

3.79. We expect, at a minimum, to update our cost assessment taking into account the costs per installation and productivity government consider to be consistent with the new Framework. We will also consider what impact, if any, government's conclusion on tolerance levels has on the rollout profile we use to assess costs and the enforcement regime that will underpin tolerance levels.

Considering the extension of 'all reasonable steps'

3.80. We have decided to set the profile up to 30 June 2021 in line with suppliers' track record under all reasonable steps, as government has confirmed that the obligation will remain in place up to that point in time. The points below are subject to the continued effects of COVID-19 on suppliers' performance levels – we will take this into account as part of future reviews.

Average rate of performance under 'all reasonable steps'

3.81. The 'all reasonable steps' obligation will remain in place until 30 June 2021. In our May 2020 consultation we stated that we have a good understanding of the installation rates that suppliers have achieved under the current policy framework and 'all reasonable steps' rollout obligations, before considering the impact of COVID-19. In addition, suppliers responded to our October 2019 consultation by providing estimates and explanations of what they could achieve. Those estimates were consistent with their average performance between 2017 and 2019.

3.82. Some suppliers considered our proposals reflected the high degree of uncertainty regarding the pace of the rollout. They noted that the smart meter rollout has not progressed at the same speed as originally expected, BEIS had just published clear guidance on its policy after 2020, and COVID-19 and the lockdown had further slowed uptake and installations.

3.83. In response to our May 2020 consultation, some suppliers considered that suppliers' average historical performance under the 'all reasonable step's obligation would not necessarily reflect suppliers' average future performance under the 'all reasonable steps' obligation.

3.84. We note that suppliers' performance between 2020 and 30 June 2021 is uncertain. No forecast is likely to be precise. However, we consider historic performance to provide a reasonable basis on which to base our assessment of costs in the 18 months from 1 January 2020. We consider the past performance of the same suppliers under the same obligation is a reasonable guide of performance in the immediate future.

3.85. Suppliers have noted that performance between 2017 and 2019 faced difficulties, such as technical barriers and consumer resistance. While technical barriers might be overcome and not constrain the rollout in future, uncertainties remain.

3.86. In response to all of our consultations most suppliers have suggested that consumer resistance would increase, not decrease, as the remaining group of customers with a smart meter were more likely to be resistant. Some suppliers also suggested that resistance would increase in the short term due to social distancing. Taking into account the significant uncertainty that COVID-19 creates for rollout in the 18 months between 1 January 2020 and 30 June 2021, we consider our approach a reasonable approximation in the circumstances.

3.87. We also note that our approach to setting the allowance is more lenient than a competitive market would be. In a competitive market, prices would be set by suppliers with the lowest costs and the most pessimistic prediction of future rollout (as those with a higher prediction would expect higher costs). That is not our approach. We set the allowance based on suppliers' average performance, removing the influence of small suppliers with limited progress, and taking suppliers' average costs per installation.

3.88. Most suppliers were concerned that using historical performance would not be consistent with government's new Framework, in place from 1 July 2021. We have updated our proposals accordingly. We start the trajectory for market-wide rollout at the start of the new obligation period.

The impact of social distancing arrangements (COVID-19)

3.89. We have decided to set the profile in 2020 at 30% of the average annual installation rate that suppliers achieved between 2017 and 2019.

3.90. As stated in our May 2020 consultation, this is an approximation. Suppliers installed smart meters in January and February 2020. At different points in March 2020, suppliers reduced their rollout, only installing meters in emergency cases.

3.91. Suppliers have begun increasing their installations. Recent data suggests that the installation will exceed 30% of historical levels, but it remains uncertain how social distancing arrangements will develop in the second half of the year. It is not clear if the installation rates will return to previous levels quickly. Installation rates, at least initially, may be less than in previous years if precautions are in place, or if consumer willingness to accept a smart meter is temporarily reduced.

3.92. One supplier agreed that we should reflect the impact of COVID-19 on installations, but was concerned that the reduction in the rollout assumption would impede suppliers'

ability to restart their operations. In fact, taking into account the additional allowance for potentially sunk costs (which we discuss below), our adjustments for COVID-19 *increase* the SMNCC. Were we to assume that suppliers will install a greater number of meters in 2020 (as data suggests they may do, if current trends continue), then we would *reduce* the amount of sunk installation costs in 2020, and so the SMNCC in the fifth cap period would be lower. We maintain the assumptions we consulted on as a conservative interim allowance.

3.93. In any event, we proposed to assess the impact of COVID-19 when actual data on suppliers' progress and costs in 2020 is available, and we will make adjustments to future allowances if necessary to ensure that costs are reflected in the cap appropriately. (See Chapter 5 for our consideration of advanced payments).

Accelerating in advance of the new obligation

3.94. In response to our May 2020 consultation, some suppliers argued that they would need to invest in advance of the new Framework's obligations to increase its rollout capacity. On that basis, one supplier considered a profile based on historical performance would not be consistent with the forthcoming obligation.

3.95. The rollout obligation under the new Framework is uncertain. In autumn 2020 government will consult on the tolerance levels that will set suppliers' obligations under the new Framework. The circumstances and nature of enforcement action that we might take if suppliers do not meet those tolerance levels has not been defined.

3.96. Suppliers can and should aspire to exceed their minimum obligations and install smart meters in line with targets. We have included those targets in our calculations when setting the rollout profile on which the SMNCC is based. We have included that target in the period that the new Framework will be in place. That does not preclude suppliers from preparing in advance if they consider that necessary.

3.97. Different suppliers will inevitably incur costs and plan their investment at different times from one another. It is very difficult in practice to model how suppliers across the industry will incur advance costs in planning for target obligations which will not be in force for another year. In addition, as noted above, government expects that suppliers will be able to make productivity improvements. This means that a higher rollout target does not mean that suppliers are expected to achieve this solely through higher investment.

3.98. Furthermore, if it transpires that suppliers increase their installation costs above the levels on which the SMNCC is being based, we can consider this in any future assessment of lagged payments. We receive installation cost data with a lag, so, as in general, there would be a timing difference between when suppliers incur costs and when any difference between expected and outturn costs would be included in our analysis.

Sunk installation costs (COVID-19)

Issue

3.99. In our May 2020 consultation we explained that when suppliers install fewer smart meters than expected it affects the costs and benefits they incur. For some cost and benefit categories, they will not incur the costs and benefits they would have incurred had they installed more meters. For instance, PRCs (paid for terminating rental contracts early) cannot be incurred on traditional meters that have not been replaced.

3.100. We considered a supplier may incur unproductive sunk installation costs if it installs fewer smart meters than it expected to. For instance, if it then failed to meet its installation plans, it may still incur the cost of employing installers in full, rather than the number it needed to employ with the benefit of hindsight.

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

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

3.103. No supplier anticipated COVID-19, and their ability to mitigate the impact of it on their operating costs therefore varies. In our May 2020 consultation, we stated that some suppliers had reduced their costs by redeploying or furloughing staff, but it was possible that experiences would vary for reasons that may not relate to efficiency.

3.104. For that reason, we proposed in our May 2020 consultation to account for the maximum potential sunk installation costs in 2020 that might result from COVID-19, but not to make an allowance for efficiently incurred sunk costs in other years.

Our decision

3.105. We have decided to include an additional amount within the SMNCC for the maximum potentially sunk costs in 2020 due to COVID-19. In the fifth cap period, that additional amount is equivalent about £8.50 per dual fuel customer with benchmark consumption. This is unchanged from our proposal in May 2020.

Stakeholders' views

3.106. Stakeholders disagreed that an efficient supplier would avoid sunk costs in 'normal' years, even if the installation rate had been consistent in each year. One supplier considered it disingenuous for Ofgem and government to insist on ambitious targets, and also to expect suppliers to avoid sunk costs when they did not achieve those targets.

3.107. Suppliers agreed with the principle of including an allowance for potentially sunk installation costs due to the unforeseen impact of social distancing arrangements to combat COVID-19. In general, suppliers neither disagreed that they had avoided some sunk costs by redeploying and/or furloughing staff, nor suggested that we allow for a lower percentage (than nearly 100%) of potentially sunk costs.

3.108. One supplier argued that it would incur sunk costs in categories other than installation costs, for instance because it had a minimum volume requirement for its assets (i.e. the price it pays for each asset is conditional on purchasing a minimum number of meters, such that it would incur additional charges if that minimum threshold was breached).

Considering sunk installation costs not due to COVID-19

3.109. We do not include sunk installation costs, other than in 2020 to account for the potential impact of COVID-19.

3.110. We do not consider ambitious targets and sunk costs to be a necessary combination for an efficient supplier. In our May 2020 consultation we noted that a supplier's exposure to sunk costs would vary, depending on their operating structure and commercial arrangements.

3.111. As stated in our May 2020 consultation, up to the end of 2019, we consider that an efficient supplier should have been able to anticipate and manage the installation resources it required. In normal circumstances, suppliers have installed smart meters at a stable rate between 2017 and 2019. A supplier should expect a degree of volume risk (that it might install fewer smart meters than expected), have experience of mitigating the impact of delays and barriers (either outsourcing that risk, or planning for it), and have good estimates of the resources it will likely require. Sunk costs should be low or avoidable in normal circumstances.

Considering potentially sunk costs due to COVID-19

3.112. We include an additional amount for potentially sunk installation costs due to COVID-19.

3.113. In our May 2020 consultation we considered that unlike other sources of delay, COVID-19 is a uniquely unanticipated, large, and sudden constraint. Due to social distancing, suppliers had reduced their installations, for all but emergency cases. Consequently, some suppliers may have incurred costs efficiently preparing for rollout activities that were no longer possible, due to events beyond their control. Those costs could be sunk, to some extent, but not inefficient.

3.114. Suppliers agreed with our rationale.

3.115. We include the maximum proportion of installation costs that could potentially be sunk. In our May consultation we considered three scenarios, that in turn assumed that 93% of installation costs would be sunk (scenario A), 44% would be sunk (scenario B), and no cost would be sunk (scenario C).

3.116. Most suppliers supported our proposal to assume that all installation costs were sunk (scenario A), and did not comment on whether this was the case in their own circumstances. One consumer group noted that the approach appeared to be extremely generous, given that most installation costs shown in the May 2020 consultation related to labour costs, which large suppliers would have avoided through

redeployment and furlough. It considered that it would be very likely that we would need to retrospectively correct for over-allowance - as we had proposed to do.

3.117. We consider that our decision (scenario A)[47] is likely to be an overestimate. As we said in our May 2020 consultation, we are aware many suppliers have been able to mitigate and avoid sunk in-house installation costs by redeploying or furloughing staff. In response to our consultation, few suppliers specified the extent to which this had enabled them to avoid sunk costs.

3.118. However, in our May 2020 consultation, we stated that for suppliers that do incur substantial sunk costs, that will not (or may not) be a mark of any inefficiency. On that basis, we considered the best approach is to adopt a conservative interim assumption that all costs (save those for tools and materials) will be sunk and to consider making a retrospective corrective adjustment in future cap periods to account for any inaccuracy in the assumption once data on the impact of COVID-19 is available.

3.119. We discuss the retrospective review in Chapter 5.

Calculation issues

3.120. Within our updated SMNCC model, we have addressed two issues with the calculation of sunk installation costs, which one supplier identified. These related to consistency between the calculation of our rollout profiles with and without the impact of COVID-19, and to an inconsistency in the total number of meters after applying the adjustment for COVID-19.

Considering other categories of sunk costs

3.121. In the technical annex (Chapter 3), we discuss the issue of a minimum volume requirement, which could mean that a supplier's meter asset costs would not scale with rollout. We do not adjust the SMNCC model for this issue.

[47] Our figure for the proportion of sunk costs is partly based on a breakdown of suppliers' in-house installation costs into different categories, based on suppliers' ASR data. In response to the May 2020 consultation, one supplier said that we should have taken a weighted average across suppliers for each installation cost category, rather than an unweighted average as we had proposed. While we generally use a weighted average in our analysis, we do not consider this would be robust in this specific case. There is limited data for the breakdown of in-house installation costs, and the weighted average would be dominated by one supplier. (We note that using the weighted average would increase the proportion of sunk costs for single fuel installations, but decrease it for dual fuel installations. As dual fuel installations are more numerous than single fuel installations, the net effect would be unfavourable to suppliers, compared to our May 2020 consultation proposal).

4. Setting the SMNCC allowance

Section summary

We summarise the key cost and benefit areas. (We provide further detail in the accompanying technical annex). We then assess the appropriate level to set the SMNCC allowance in each potential cap period.

Summary of our decision

4.1. We have decided to assess the efficient net costs (i.e. the net impact on the efficient operating costs of a supplier with an average rollout profile) of the smart meter rollout using our SMNCC model. This uses the 2019 CBA as a starting point, and then makes adjustments where appropriate. Our technical annex provides full details on our assessment of efficient net costs (i.e. costs and benefits).

4.2. To set the SMNCC allowance, we have decided to take the following approach:

- recognise the change relative to 2017 in our assessment of the efficient net costs for the smart meter rollout;
- allocate our estimate of the efficient net costs of smart metering in 2017 between (a) costs already included in the operating cost allowance and (b) costs we still need to recognise in the SMNCC allowance (this includes an adjustment for the impact of the stricter definition of the 'efficient benchmark' we used to assess total operating costs in 2017, and an adjustment for the difference between portfolio-wide costs and costs for replacing credit meters in isolation);
- not make an additional adjustment to account for the combined impact of uncertainty; and
- convert our annual SMNCCs into values for six-monthly cap periods.

4.3. The structure of our approach, and most of the detail, is unchanged from our May 2020 consultation. However, we have made changes in certain areas. The overall effect is to increase the SMNCC allowance relative to the level we proposed in our May 2020 consultation.

Our analytical approach

Context

4.4. In the May 2020 consultation, we proposed to use the 2019 CBA model as the starting point for our analysis. We proposed to modify it to make it more appropriate for our purposes, by only including the costs and benefits to suppliers which are relevant to serving customers with credit meters. We proposed to make changes where appropriate, such as to include new sources of information.

Decision

4.5. We have decided that the SMNCC model (i.e. the 2019 CBA model with modifications) is sufficiently robust to use as the basis for determining the SMNCC allowance.

Rationale

4.6. The SMNCC model is based on a well-established government model which has been subject to extensive checks. We have revised the SMNCC model to suit our purposes, using recent data and after carrying out several requests for information. We have carried out internal checks on the changes we have made. We have now consulted twice on our SMNCC model, in each case with extensive disclosure to suppliers and their economic advisers.[48] We have considered the points raised and refined our SMNCC model where necessary.

4.7. Given these steps, we have sufficient confidence in the reliability of the SMNCC model to use it to set the SMNCC allowance.

Summary of suppliers' responses

4.8. In response to our May 2020 consultation, some suppliers were broadly supportive of our overall approach.

[48] This is in addition to the earlier disclosure alongside our 2018 statutory consultation.

4.9. Some suppliers said that the SMNCC model was not reliable. They raised the following main concerns:

- that we were proposing to use the 2019 CBA model for a purpose for which it was not intended, meaning that the resulting SMNCC model was complex and hard to scrutinise;
- that we had not checked the SMNCC model sufficiently, both given that we were relying on the 2019 CBA and given the changes we had made to 2019 CBA model;
- that the SMNCC model did not meet modelling best practice; and
- that there were modelling errors.

Considerations

Complexity

4.10. As discussed in the technical annex, we consider the 2019 CBA to be a high quality piece of analysis, and a suitable starting point for our work.

4.11. The 2019 CBA is complex. To an extent, that is a feature of the detail it includes. In previous representations, suppliers have said that we should take into account additional aspects of their smart metering operations – in other words, saying that we should include more detail, increasing the complexity of the model. Any model used to estimate the net costs of smart metering at an equivalent level of detail (to the current SMNCC model) would have been complex. We are considering numerous detailed elements of suppliers' operations.

4.12. If we had developed an alternative model to calculate the SMNCC allowance, it is likely that we would have chosen a somewhat less complex, less detailed, approach than our current SMNCC model developed from the 2019 CBA. We would have been able to develop the model structure specifically for the calculations we wanted to carry out. We would also have been able to simplify some content (e.g. removing most information relating to the non-domestic segment). All else being equal, this would have made the SMNCC model easier to understand, at the expense of its granularity.

4.13. Ultimately, suppliers' representations show that they have sufficiently understood the SMNCC model, despite its complexity, to provide detailed comments on how it could be improved.

4.14. Furthermore, complexity is not the only relevant consideration. An alternative model might have been somewhat less complex. However, an alternative model would also have lost some of the advantages of the 2019 CBA – including that this was an established model that had been developed and refined over time. A brand new model would have had a greater risk of error. The time required to gain confidence in the robustness of a new model would have delayed protection to customers, contrary to the Act's objective.

4.15. We therefore consider that using the 2019 CBA was appropriate, despite any additional complexity arising from using it.

Checks on the 2019 CBA

4.16. We have made a number of changes to the 2019 CBA model in order to create the SMNCC model. The number of changes has increased over our consultation process (largely in response to feedback from stakeholders).

4.17. The SMNCC model therefore has significant differences from the 2019 CBA model. However, large elements are unchanged from the 2019 CBA model, and have therefore been subject to previous checks by BEIS.

4.18. For the changes we have made, we have checked these internally. We have also consulted twice and carried out an extensive disclosure exercise. This provides us with sufficient confidence in the changes we have made. This includes the risk of any knock-on implications for other calculations or assumptions in the model (even if those were originally entirely appropriate within the context of the 2019 CBA).

4.19. We discuss stakeholders' feedback on the extent to which we are required to validate all inputs to the 2019 CBA model in the technical annex.

Modelling best practice

4.20. We have considered the points raised by stakeholders about modelling best practice. There are always aspects of a model which could be refined, particularly when a model is as large as the SMNCC model. We will consider whether there are any refinements

we could make in the SMNCC model we present for consultation in our next review. However, we do not consider that such changes are essential before we are able to proceed to a decision.

4.21. It is also important to recognise that the SMNCC model does align with modelling best practice to a significant extent, especially given how BEIS developed the 2019 CBA model.

4.22. We are satisfied that the SMNCC model is sufficiently aligned with modelling best practice so as to be robust enough to calculate the SMNCC allowance.

Errors

4.23. The technical annex includes consideration of detailed issues raised by suppliers, including cases where suppliers have said that an error was affecting the calculations in our May 2020 consultation proposals.

4.24. Any significant modelling exercise will have occasional errors during its development – this has no bearing on the overall validity of the modelling approach.

Assessment of efficient net costs

Overview

4.25. To set the SMNCC, we first assess the net costs of the smart meter rollout in each year.

4.26. **Table 4.1** shows a breakdown of cost and benefits, after modifications, of the smart meter rollout for electricity accounts and the change in those efficient net costs since 2017. **Table 4.2** shows for the same information for gas accounts.

Table 4.1: Change in efficient net smart metering costs to suppliers (£ per electricity account) [1][2]

Cost and benefit categories	2017	2018	2019	2020	2021	2022	2023
In-premises: installation and asset net costs (including PRCs)	5.51	8.14	9.80	15.83	11.23	12.63	14.34
Other costs[3]	2.79	3.57	4.06	3.66	3.63	3.83	4.08
Operating benefits	-0.69	-1.17	-1.71	-2.12	-2.64	-3.41	-4.11
Total efficient net costs excluding IT	**7.60**	**10.53**	**12.15**	**17.38**	**12.23**	**13.06**	**14.32**
Change in total efficient net costs excluding IT		2.93	4.55	9.78	4.63	5.46	6.72
Change in IT costs		0.36	0.86	0.50	0.07	-0.53	-1.20
Change in efficient net operating costs	**0.00**	**3.29**	**5.42**	**10.28**	**4.70**	**4.93**	**5.52**
Single notional rollout[4]	19%	30%	40%	43%	53%	65%	76%

Notes:

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

(2) The 2019 CBA estimates the solely additional costs for rolling out smart meters (i.e. costs that suppliers incur over and above the costs that they would have incurred in a world without the smart meter rollout). Isolating the additional costs of IT investment is particularly challenging. Our analysis is less sensitive to the allocation between counterfactual and additional IT costs, because the total combined costs are included in the operating cost allowance. For that reason we track the change in IT costs.

(3) "Other costs" include operating and maintenance costs, communication hub operating costs and amortised costs (SMETS1), legal and organisational costs, marketing costs, pavement reading inefficiency costs, and disposal.

(4) The rollout profile shows the collective progress of suppliers at year end.

Table 4.2: Change in net smart metering costs to suppliers (£ per gas account) (1)(2)

Cost and benefit categories	2017	2018	2019	2020	2021	2022	2023
In-premises: installation and asset costs (including PRCs)	6.98	9.12	9.58	5.38	9.48	9.87	10.59
Other costs(3)	2.67	3.38	3.80	3.38	3.27	3.39	3.57
Operating benefits	-0.62	-1.06	-1.56	-1.93	-2.39	-3.08	-3.72
Total efficient net costs excluding IT	**9.03**	**11.43**	**11.83**	**6.82**	**10.36**	**10.18**	**10.45**
Change in efficient net costs excluding IT		2.40	2.80	-2.21	1.33	1.15	1.42
Change in IT costs		0.36	0.86	0.50	0.07	-0.53	-1.20
Change in efficient net operating costs	**0.00**	**2.76**	**3.66**	**-1.71**	**1.40**	**0.62**	**0.22**
Single notional rollout(4)	19%	30%	40%	43%	53%	65%	76%

Notes:

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

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

(3) "Other costs" include operating and maintenance costs, communication hub operating costs and amortised costs (SMETS1), legal and organisational costs, marketing costs, pavement reading inefficiency costs, and disposal.

(4) The rollout profile shows the collective progress of suppliers at year end.

4.27. Our technical annex provides more detail on our overall approach, as well as on the specific design features we discuss below.

In-premises costs

4.28. In-premises costs have a net impact on suppliers' operating costs.

- Suppliers incur gross costs purchasing and installing smart meter assets. Each year, suppliers install new assets, and continue to pay rental charges on the smart meters they installed in previous years.

- Suppliers avoid the cost of replacing expired traditional meters with new traditional meters, because they install smart meters instead. The avoided cost builds up over time in line with the cumulative number of traditional meters that suppliers would have needed to install. The larger benefits in later years also reflect that suppliers were still installing some traditional meters in 2017, the year of the operating cost benchmark.

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

4.29. The majority of costs relate to the net impact on operating costs of replacing traditional credit meters with smart meters. At a high level, these are the net costs of: installing the meters, paying for the meters and other assets, and paying off any remaining costs for the meters replaced early (PRCs). These are shown in **Tables 4.3 and 4.4** below, and we explain them briefly in the subsequent sections.

Table 4.3: In-premises costs - electricity (£ per account)

	2017	2018	2019	2020	2021	2022	2023
Net installation cost	2.06	3.77	5.24	13.01	6.91	8.31	9.71
Net asset costs	2.83	3.93	4.73	3.95	5.16	5.80	6.39
PRCs, including avoiding rent	1.13	1.22	0.76	-0.26	-0.02	-0.70	-1.00
Total net in-premises costs	**6.02**	**8.93**	**10.72**	**16.69**	**12.06**	**13.41**	**15.10**

Notes: All figures in 2011 prices. Installation and asset costs do not include PRCs.

Table 4.4: In-premises costs - gas (£ per account)

Cost and benefit categories	2017	2018	2019	2020	2021	2022	2023
Net installation cost	1.32	2.69	3.85	11.10	4.85	5.93	7.01
Net asset costs	2.99	4.16	4.97	4.12	5.39	6.09	6.75
PRCs, including avoid rent	3.19	3.06	1.69	-1.69	0.06	-1.38	-2.41
Total net in-premises costs	**7.50**	**9.91**	**10.51**	**13.53**	**10.31**	**10.64**	**11.35**

Notes: All figures in 2011 prices. Installation and asset costs do not include PRCs.

Net installation costs

4.30. Net installation costs consist of two sets of costs.

- **Smart meter installation costs:** These are the costs of paying for staff to install smart meters in customers' homes, providing them with the equipment they need (e.g. vans), and organising back-office support. We do not immediately recognise these costs in our review. These costs are capitalised and amortised (spread) over the life of the assets being installed.

- **Avoided costs of installing new traditional meters:** Each year suppliers would have incurred costs installing new traditional meters to replace meters that have expired.[49] Due to the smart meter rollout, suppliers do not need to install as many new traditional meters, if any, so they avoid the cost of doing so.[50]

[49] The annual cost of the expired meter was accounted for in the operating cost allowance and is no longer incurred. Prior to the smart meter rollout, a supplier would have incurred costs replacing that expired meter with a new traditional meter. It no longer incurs those replacement costs, due to the smart meter rollout. Suppliers would have incurred some traditional meter installation costs in 2017, given that their smart metering programmes were (generally) only in the process of ramping up. This means that some traditional meter installation costs would be reflected in the 2017 operating cost benchmark.

[50] Suppliers do not avoid installing new traditional meters entirely. In some cases during the rollout a supplier cannot install a smart meter when a traditional meter expires. In that case it would install a new traditional meter. However, the number of new traditional meters installed is much less than it would have been without the smart meter rollout. Suppliers are now subject to a New and Replacement Obligation. This requires them to take all reasonable steps to install a compliant smart meter when replacing a meter or installing one in new premises.

4.31. For years up to and including 2019, we use actual costs from the ASRs. For future years, we project costs forward from 2019 using an assumption based on historical productivity. For both historical and future periods, we then amortise costs and recover them over a number of years. We apply a meter rental uplift in certain cases[51] to reflect any significant differences between this bottom-up approach (which reflects the true economic costs of the installation costs) and the data we collected on suppliers' meter rental payments (i.e. the amounts they actually pay).

4.32. Our overall approach is unchanged from the May 2020 consultation, but we have made some calculation changes.

Net asset costs

4.33. Net asset costs consist of:

- **Smart meter costs:** Suppliers have to pay the cost of the smart meter. We use supplier data from the ASRs. We amortise these costs to spread them over the average smart meter rental period.

- **Communications hubs:** Communications hubs send information from a smart meter to suppliers (via other organisations, such as the DCC). We include the cost of SMETS1 communications hubs from the ASRs, and amortise the costs in the same way as for smart meters.

- **In-Home Displays (IHDs):** Suppliers install IHDs which display information to customers about their energy use. We base the calculation on supplier data from the ASRs, and expense these costs in the year of installation (rather than amortising them).

- **Avoided costs of traditional meters:** As with installation costs, suppliers avoid having to pay for new traditional meters that they would have needed in the counterfactual.[52]

[51] We apply an uplift to SMETS1 meters and traditional gas meters. Based on our review of suppliers' data, we do not apply uplifts to SMETS2 meters and traditional electricity meters.
[52] Suppliers do not avoid purchasing new traditional assets entirely. In some cases during the rollout a supplier cannot install a smart meter when a traditional meter expires. In that case it would install a new traditional meter. However, the number of installations of new traditional meters is much less than

4.34. Our approach is generally unchanged from the May 2020 consultation. However, we adjust all costs relating to traditional meters to assess these costs at the same level of stringency as included in the 2017 operating cost benchmark. (See the benefits section below for more detail on this).

Premature replacement charges

4.35. Suppliers incur a charge for replacing a meter before the cost of that meter has been paid off – a PRC. The level of the PRC depends on a number of factors including the contract with the meter owner and (in particular) the age of the meter. Generally, the PRC a supplier faces decreases as the meter ages.

4.36. We have decided to apply PRCs to both traditional and SMETS1 meters. This is unchanged from our May 2020 consultation.

4.37. Once a supplier pays the PRC, it pays no rent in subsequent years for the meter it removed. For both traditional and SMETS1 meters, we have decided to include the offsetting asset and installation costs that a supplier avoids in future years after replacing a meter early. This is unchanged from our May 2020 consultation.

IT costs

4.38. We expect suppliers to incur additional IT costs related to the smart meter rollout, over and above the expenditure they would have incurred without the smart meter rollout. We recognise three groups of IT system costs:

- amortised investment in hardware and software, excluding enrolment;
- amortised investment in enrolment costs (the costs suppliers are expected to incur to enrol SMETS1 meters in the DCC);
- ongoing operating expenditure.

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it would have been without the smart meter rollout. Suppliers are now subject to a New and Replacement Obligation. This requires them to take all reasonable steps to install a compliant smart meter when replacing a meter or installing one in new premises.

Amortising IT capital expenditure

4.39. We base our assessment of amortised IT costs on the change in suppliers' average amortised smart metering related IT charge since 2017.

4.40. We calculate the smart metering related IT capital expenditure costs from data provided by suppliers in an RFI. This is unchanged from our May 2020 consultation. The reported IT costs may overstate the additional costs of smart metering. However, for our purposes, we are interested in the *trend* in additional amortised costs related to smart meters, not the absolute level of expense.

4.41. We amortise IT costs over six years, starting in the year after the capital expenditure occurred. We have increased the amortisation period since our May 2020 consultation, which used five years. Following feedback, we consider that including a six year amortisation period is a better representation of the typical approach of large suppliers.

4.42. In the years after our historical data stops (from 2019[53] inclusive), we project a 33% year on year decrease in smart meter IT investment. This reflects our assessment of information provided by suppliers. This is unchanged from our May 2020 consultation.

Amortising DCC enrolment and adoption costs

4.43. The 2019 CBA provides additional funding for the costs suppliers are expected to incur to enrol SMETS1 meters in the DCC.[54]

4.44. We have decided to use the capital costs in the 2019 CBA, and amortise them using the approach we discuss above. (We have therefore made the same change to the amortisation period since our May 2020 consultation, using the same approach as for IT capital expenditure, as discussed above). The amortisation period starts in 2019, which is when suppliers began enrolling SMETS1 meters with the DCC.

[53] For IT capital expenditure, our historical data runs up to 2018 only.
[54] BEIS (2019), Smart meter roll-out: cost-benefit analysis 2019, pages 28-29: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831716/smart-meter-roll-out-cost-benefit-analysis-2019.pdf

IT operating costs

4.45. Suppliers incur IT operating expenditure in order to maintain their IT systems relating to smart metering.

4.46. Our assessment of IT operating costs is unchanged from our May 2020 consultation.

Other costs

4.47. There are other cost categories beyond installation costs, asset costs and IT costs. The technical annex provides information about the costs we have amended or where we received feedback in response to previous consultations.

Assessment of efficient benefits

Overview

4.48. Smart meters save suppliers money in some areas. (These are the operational savings, which are separate to the costs suppliers avoid related to traditional meters themselves which we discuss earlier under net asset costs). In this section we summarise the benefit categories in our SMNCC model.

4.49. For all the benefits we have decided to include, we have decided to apply an adjustment factor. This factor reduces the size of benefits by 12%, so that we are assessing these benefits at approximately the same level of stringency as we measured traditional metering costs within our 2017 operating cost benchmark. This adjustment factor also applies to the avoided costs of installing new traditional meters and the costs of PRCs for traditional meters. This is a change since our May 2020 consultation. We provide further detail on the adjustment in our technical annex.

4.50. **Table 4.5** shows our assessment of benefits in each category for electricity. **Table 4.6** shows our assessment of benefits in each category for gas.

Table 4.5 – Supplier benefits from smart metering - electricity (£ per account)

	2017	2018	2019	2020	2021	2022	2023
Avoided site visits	0.40	0.66	0.93	1.08	1.24	1.49	1.72
Customer switching	0.00	0.01	0.04	0.11	0.23	0.36	0.44
Inbound customer calls	0.19	0.34	0.51	0.66	0.80	1.07	1.37
Debt handling	0.03	0.06	0.08	0.09	0.13	0.17	0.20
Reduced theft	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remote Change of Tariff	0.07	0.11	0.15	0.18	0.23	0.31	0.37
Operational benefits	**0.69**	**1.17**	**1.71**	**2.12**	**2.64**	**3.41**	**4.11**

Notes: All figures in 2011 prices.

Table 4.6 – Supplier benefits from smart metering - gas (£ per account)

	2017	2018	2019	2020	2021	2022	2023
Avoided site visits	0.40	0.66	0.93	1.08	1.24	1.49	1.72
Customer switching	0.00	0.01	0.04	0.10	0.23	0.36	0.44
Inbound customer calls	0.19	0.34	0.51	0.65	0.80	1.07	1.37
Debt handling	0.03	0.06	0.08	0.09	0.11	0.15	0.19
Reduced theft	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remote Change of Tariff	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operational benefits	**0.62**	**1.06**	**1.56**	**1.93**	**2.39**	**3.08**	**3.72**

Notes: All figures in 2011 prices.

Avoided site visits

4.51. Smart meters can provide remote meter readings. Suppliers will avoid the cost of sending meter reading operatives to properties in order to read traditional meters.

4.52. We have decided to calculate both the number of avoided meter reading visits and the cost of these visits using ASR data. We have not changed this benefit since the May 2020 consultation (except by applying our general avoided cost reduction).

Customer switching

4.53. Smart meters will deliver benefits when customers switch suppliers.

4.54. We have decided to include a benefit from smart metering reducing the cost of obtaining a change of supplier meter reading. This is based on ASR data for the cost of a change of supplier meter reading. We have decided to include this for enrolled SMETS1 and all SMETS2 meters. We have not changed this benefit since the May 2020 consultation (except by applying our general avoided cost reduction).

Inbound customer calls

4.55. Smart meters provide suppliers with accurate billing information. This reduces the need for customers to contact their suppliers to discuss errors.

4.56. In summary, based on ASR data, we assume that customers with a smart meter will call less often. However, for the first year after a smart meter installation, we assume this is partly offset by an increase in the cost per call, compared to a customer with a traditional meter. We have not changed this benefit since the May 2020 consultation (except by applying our general avoided cost reduction).

Debt handling

4.57. Smart meters provide suppliers with more frequent, accurate consumption information. This allows them to reduce the costs of handling bad debt and payment in arrears (administrative costs and financing costs, such as working capital).

4.58. We have decided to include a benefit from earlier identification of debt issues (and the consequential benefits in other areas). This uses part of the methodology from the 2019 CBA. We have made a minor calculation change since the May 2020 consultation (which we describe in the technical annex), but otherwise this benefit is unchanged (except for our general avoided cost reduction).

Reduced theft

4.59. By providing suppliers with more information about consumption, smart meters can help them detect and resolve energy theft.

4.60. We have removed this benefit from our SMNCC calculations. This is a change since our May 2020 consultation. It reflects that suppliers may use smart meters to increase the amount of theft they detect, rather than to reduce the amount they spend on dealing with theft.

Remote change of tariff

4.61. For traditional meters, suppliers must visit a customer to switch them from a single rate tariff to a multiple rate tariff (e.g. standard to Economy 7) or vice versa. For smart meters, suppliers can do this remotely, saving them money.

4.62. We have decided to include this benefit, which is based on ASR data. We have decided to allocate the total benefit across electricity meters. We have not changed this benefit since the May 2020 consultation (except by applying our general avoided cost reduction).

Allocating smart metering costs between operating costs and baseline

Decision

4.63. For the purpose of setting the SMNCC allowance, we have decided to (a) recognise the change in our assessment of smart metering costs relative to 2017 and (b) include the portion of our 2017 net smart metering cost assessment that is not already included in the operating cost allowance.

4.64. This high-level position is unchanged from our May 2020 consultation. However, the values for our adjustments have changed because (a) the changes to our assessment of costs and benefit we describe above have updated the values and (b) we have reduced our assessment of the proportion of smart metering costs in 2017 that are largely recognised in the operating cost allowances, which means we have increased the proportion of costs we must recognise in the SMNCC.

Context

4.65. We would not simply add our assessment of smart metering costs to the cap. That would significantly overstate the costs of the rollout because a proportion of those costs are already captured in the operating cost allowance. We set the operating cost allowance based on the total operating costs of ten large suppliers. Those costs included the impact of the smart meter rollout up to 2017.

4.66. In our May 2020 consultation we proposed that the SMNCC should reflect the change in our assessment of smart metering costs since 2017. This is straightforward. The operating cost allowance is fixed in real terms; we update it each cap period for trends in inflation. The impact of the smart meter rollout on suppliers' efficient costs does not follow trends in inflation, as can be been in our assessment of costs for each year. This is why we include the SMNCC – to account for this difference.

4.67. We also proposed to increase the SMNCC to reflect the proportion of our assessment of smart metering costs in 2017 that is not already included in the operating cost allowance. The operating cost allowance will include less cost than we assess above for two reasons:

- The operating cost allowance uses a stricter definition of 'efficiency' than our assessment of smart metering costs. We benchmarked total operating costs using a lower quartile. We assess smart metering costs using average costs, which are higher. So the operating cost allowance will be less generous in its assessment of the same activity.

- The operating cost allowance includes the impact of replacing all meters, not just credit meters, whereas our assessment of smart metering costs is focussed on the impact of replacing credit meters only. The net costs of replacing credit meters is higher than the costs (per meter) of replacing all meters.

Summary of suppliers' responses

4.68. Stakeholders did not comment on our proposal to allow for the change in smart metering costs since 2017.

4.69. Stakeholders did not comment on our proposal to apply an uplift to reflect that our operating cost analysis is not specific to credit meter customers.

4.70. A couple of stakeholders said that we had increased our assessment of smart metering costs already included in the operating cost allowance (in 2017), but without a corresponding increase to the operating cost allowance. One supplier said that there was reason to believe our assessment of smart metering costs already included in the operating cost allowance (in 2017) was overstated. It clarified that this concern related to the scale of IT costs. It further said that suppliers could not account for changes to the smart metering baseline when complying with the 'all reasonable steps' obligation.

Considerations - updated assessment of the SMNCC

4.71. Tables 4.7 and 4.8 show the breakdown of the three issues considered and their impact on the SMNCC allowance for each calendar year. This is before allocating into cap periods. It is also before reflecting our decision to freeze the allowance for the sixth cap period at the level of the fifth cap period.

Table 4.7: SMNCC for calendar years – electricity (£ per account)

	2017	2018	2019	2020	2021	2022	2023
Change in efficient costs	0.00	3.68	6.14	11.84	5.50	5.88	6.73
Adjustment for different definitions of 'efficient' benchmark	1.02	1.04	1.06	1.07	1.09	1.11	1.14
Adjustment for weighted average	0.84	0.85	0.86	0.88	0.89	0.91	0.93
Total	**1.86**	**5.56**	**8.06**	**13.79**	**7.49**	**7.90**	**8.80**

Notes: Nominal prices.

Table 4.8: SMNCC for calendar years – gas (£ per account)

	2017	2018	2019	2020	2021	2022	2023
Change in efficient costs	0.00	3.08	4.15	6.44	1.64	0.75	0.26
Adjustment for different definitions of 'efficient' benchmark	1.00	1.01	1.03	1.05	1.06	1.08	1.11
Adjustment for weighted average	1.31	1.33	1.35	1.38	1.40	1.42	1.46
Total	**2.31**	**5.43**	**6.53**	**8.86**	**4.10**	**3.25**	**2.83**

Note: Nominal prices.

Considerations – change in smart metering costs since 2017

4.72. To calculate the change in efficient costs since 2017, we compare take the difference between our assessment of smart metering costs (described above) in 2017 and subsequent years. For details, see Chapter 5 of the technical annex.

Considerations – allowing for 2017 costs not already included in the operating cost allowance

Adjusting for different 'efficient' benchmark definitions

4.73. We define 'efficiency' differently when benchmarking suppliers' total operating costs compared with when we assess their smart metering costs. The amount included in the operating cost allowance that relates to smart metering is less than the amount we assessed as the efficient smart metering net costs for 2017. Essentially, our operating cost benchmark is less generous than we considered appropriate *for smart metering costs*, so we have decided to 'top up' the SMNCC allowance to have regard to that difference.

4.74. In our May 2020 consultation, we set out two ways to consider the impact of our definition of efficiency:

- **A 'stricter' assessment of efficient net costs:** Assess the net smart metering costs in 2017 using a 'stricter' approach that is closer to the spirit of our analysis of operating costs. We would then adjust the SMNCC allowance to account for the gap between our assessment of efficient smart metering costs in 2017 (average costs) and this stricter assessment.

- **Benchmark supplier method:** Estimate the actual smart metering costs in 2017 for the suppliers near our operating cost benchmark. We would then adjust the SMNCC allowance to account for the gap between our assessment of efficient smart metering costs in 2017 (average costs) and our estimate of benchmark suppliers' costs.

4.75. In Chapter 5 of the technical annex, we describe those methods in detail, considering suppliers' representations.

4.76. Our stricter assessment has changed between our consultations, as we have refined our assessment of net smart metering costs. We apply changes to our SMNCC model in all years where they apply, including 2017. The 2017 operating cost benchmark itself has not changed – we have just improved our understanding of the proportion of operating costs in 2017 which are likely to have related to smart metering.

4.77. Suppliers' total operating costs in 2017 remain what they were, so it would be irrational to change the operating cost allowance based on those unchanged total

costs. We therefore do not agree with stakeholders' suggestion that we should have allowed for additional operating costs. However, we do need to ensure the SMNCC reflects the proportion of smart metering costs in 2017 that we estimate is not already included in the benchmark of suppliers' total operating costs.

Adjusting the 2017 baseline for credit meters only

4.78. The operating cost allowance includes smart metering costs related to replacing traditional meters for all domestic customers, not just those customers with credit meters. The SMNCC should reflect efficient cost of replacing a traditional credit meter with a smart meter. That cost (for credit meters only) is higher than the net cost of replacing a traditional prepayment meter with a smart meter. As the operating cost allowance will include the weighted average costs of both types of installation, we need to increase the SMNCC allowance to reflect that difference.

4.79. We have decided to increase this adjustment compared with our May 2020 proposal. We now exclude the impact of a supplier which was not included in our operating cost benchmarking analysis. That supplier had higher smart metering costs relating to PPM, but it had no impact whatsoever on the operating cost allowance analysis. Including that supplier would overstate the proportion of the operating cost allowance that related to smart meters. Excluding that supplier reduces our estimate of the net costs of smart metering for prepayment customers and therefore increases the proportion of costs we recognise in the SMNCC.

4.80. Note that we have decided to include a PPM level in the default tariff cap. This level includes a PPM-specific SMNCC which we have set to zero for the next two cap periods. We have not set a value for the PPM-specific SMNCC because the net costs of the average PPM rollout profile is lower than the average costs of suppliers' different PPM profiles. This issue does not affect our assessment of the costs of replacing traditional prepayment meters in 2017 for the suppliers included in the operating cost allowance analysis.[55]

[55] See our separate decision on applying the default tariff cap to prepayment customers, published at the same time as this decision.

Considering uncertainty

Decision

4.81. We have decided not to apply an uncertainty adjustment to the calculated SMNCC allowance.

4.82. This position is unchanged from our May 2020 consultation. However, our assessment of uncertainty has shifted following our consideration of consultation responses.

Context

4.83. Any assessment of net costs has a degree of uncertainty. In our October 2019 and May 2020 consultations we considered the extent that our assessment was uncertain, reviewing each aspect of our assessment in turn. We set out where we thought our approach was conservative (increasing the allowance compared to where the 'true' costs likely were) and where our approach may be aggressive ('true' costs could be higher).

4.84. In our May 2020 consultation, we considered that our estimate was conservative overall. We did not propose to reflect this conservatism numerically in our SMNCC allowance. This was due to the inevitable lack of precision for any assessment of uncertainty, and due to some otherwise efficient suppliers having higher costs due to their rollout profiles.

Summary of suppliers' responses

4.85. Please see Chapter 6 of the technical annex.

Rationale

4.86. We have reassessed uncertainty in the light of changes we have made (after considering suppliers' views on the SMNCC model we previously disclosed). This means that we are taking additional points into account within our review of uncertainty. We have also adjusted our view on the scale of uncertainty for certain points. (See our technical annex for a full discussion of uncertainty).

4.87. We previously considered that the net effect of our assumptions was likely to be conservative. In light of feedback to our May 2020 consultation, we now consider that

the degree of conservatism has reduced. We consider that the net effect of our assumptions is now roughly neutral (rather than conservative).

4.88. However, for the next two cap periods (i.e. the year before our next review), we consider that our SMNCC allowances are significantly conservative.

- The fifth cap period is still affected by the sunk costs adjustment for COVID-19. We expect this is particularly conservative, given that most suppliers have been able to avoid some costs (especially through the furlough scheme).

- The sixth cap period is affected by the decision to freeze the allowance, meaning that the SMNCC allowance will be above our assessment in any case. This is also conservative, at least for the majority of suppliers.

4.89. This means the SMNCC is more than adequate to cover any uncertainty in the two periods before our next review. In future assessments, we will consider whether to include an uplift for uncertainty from that point (i.e. from the seventh cap period).

4.90. See Chapter 6 of our technical annex for further detail.

Allocation into cap periods

Decision

4.91. We have decided to set allowances for all remaining cap periods. However, we expect to review those allowances, with effect from 1 October 2021.

4.92. This position is unchanged from our May 2020 consultation.

Context

4.93. We have calculated annual assessments of the change in smart metering costs. However, we set the cap periods on a six-monthly basis (except for the first and last cap periods). We therefore need to apply our annual figures to six-monthly cap periods.

Summary of suppliers' responses

4.94. Suppliers did not comment on this specific area in response to our May 2020 consultation.

Rationale

4.95. The cap periods are six months in length. We express each cap level in annualised terms. There are three types of cap period.

- **Summer cap periods** (from 1 April to 31 September): We will set the SMNCC allowance in line with our assessment of efficient smart metering rollout costs for that year. So the SMNCC allowance in summer 2021 (if the cap is extended) will reflect the assessment for 2021, and so on and so forth.
- **Standard winter cap periods** (from 1 October to 31 March in following year). We will set the SMNCC by taking a simple average of the two relevant annual assessments above. So the winter cap in 2020/21 will be an average of the 2020 and 2021 levels.
- **Short winter cap periods** (from 1 October 2023 to 31 December 2023). The cap could be extended to the end of 2023, but not further. If we are required to update the cap level for the final possible cap period, we will use the annual assessment for 2023 only. This is similar to the first cap period (1 January 2019 to 31 March 2019), which was also a short winter cap period.

4.96. We have calculated SMNCC levels for all potential cap periods. This does not indicate that we have formed a judgement on whether or not we expect the cap to be extended. Only that, if the cap is extended, then an SMNCC allowance will be required. As discussed in Chapter 5, we intend to conduct reviews when the next set of ASR data is available, when there is an outcome for the tolerance levels for the new Framework, and when the impact of COVID-19 is clear (or clearer). We therefore expect a subsequent review to replace the estimated allowances from 1 October 2021 onwards.

4.97. Note than the cap could end on 31 December during the fifth, seventh, or ninth cap periods. At the point we set the cap level for those periods the Secretary of State will not have published his decision on whether to extend the cap or not. We will set the level as though the cap will continue (rather than making adjustments and correcting for them if the cap is extended). This issue is relatively limited, given that we set the cap level on an annualised basis.

5. Future reviews of the SMNCC allowance

In this chapter, we explain our approach to future reviews of the SMNCC allowance.

Summary of our decision

5.1. We will continue to consider reviews for systematic errors which are unforeseen, clear, material and which necessitate change. This position is unchanged from our May 2020 consultation.

5.2. We will review the SMNCC allowance every 12 months, updating the SMNCC model with latest data. We will conduct and consult on our first review in time to update the SMNCC allowance for the seventh cap period, effective 1 October 2021, using the next ASR update on suppliers' costs, benefits, and progress in 2020. This position is unchanged from our May 2020 consultation.

5.3. Our next review of the SMNCC will also consider:

- latest policy updates: in particular we consider the outcome of government's autumn 2020 consultation on the tolerance levels for its new Framework; and
- whether to maintain our current approach of using an average rollout profile.

5.4. In our next review we will reassess the impact of the smart meter rollout on suppliers' efficient operating costs. To ensure that the cumulative allowances since 1 October 2019 are not substantially higher or lower than suppliers' cumulative costs we will deduct advanced payments (if the cumulative allowances exceed the cumulative costs) from the SMNCC in subsequent cap periods or add lagged payments (if the cumulative allowances were below the cumulative costs). This is a change from our May 2020 consultation. Specifically, we will:

- not assess costs in the first two cap periods (1 January to 30 September 2019); and

- assess costs between 1 October 2019 and 30 September 2021 using a higher than average rollout profile, whether or not we decide to set the SMNCC based on obligations for a supplier with an average rollout profile from 1 October 2021.

5.5. We have not deducted advanced payments in this decision, as it would reduce the benefit of providing for potentially sunk installation costs due to COVID-19 or freezing the allowance in the sixth cap period.

Reviews and correcting forecast errors in general

Decision

5.6. We will continue to consider reviews for systematic errors which are unforeseen, clear, material and which necessitate change in the default tariff cap. This position is unchanged from our May 2020 consultation.

Rationale

5.7. Reviews can prevent the cap from becoming misstated due to material systematic errors. Such misstatement could fail to protect customers. Misstatement could also mean that we have insufficient regard to the four statutory needs set out in Section 1(6) of the Act, include the need for an efficient supplier to finance the costs of its licensed activities. This applies across the cap.

Context

Our November 2018 decision

5.8. In our November 2018 decision[56] we stated that:

- we would not have a specific review of the cap level or methodology (apart from a review of smart metering costs); and

- we would review the cap level, or aspects of the methodology, if specific systematic errors were unforeseen, clear, material, and necessitated changes.

[56] Ofgem (2018), Decision – Default tariff cap – Overview document, paragraphs 3.6 to 3.17. https://www.ofgem.gov.uk/system/files/docs/2018/11/decision_-_default_tariff_cap_-_overview_document_0.pdf

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

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

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

Our April 2019 consultation on reviewing the SMNCC allowance

5.11. In our April 2019 consultation[57] we:

- explained that in our 2018 decision we had set the SMNCC allowance in line with suppliers' rollout targets,[58] but that the number of smart meters installed in 2019 was likely to be lower than those expectations;
- stated that we viewed any excess in the allowances (i.e. customers paying more that suppliers' efficient costs) as paying suppliers in advance for installations that suppliers would achieve at a later point in time (either in a subsequent cap period, or after the cap expires); and
- proposed to set the SMNCC allowances in the fourth cap period and beyond having regard to any substantial advance payment (or lagged payment) in first three cap periods, reducing future allowances to remove advanced payments and increasing them to include lagged payments.

5.12. We developed these proposals in a working paper and presented them in our October 2019 consultation.[59]

[57] Ofgem (2019), Reviewing smart metering costs in the default tariff cap: April consultation. https://www.ofgem.gov.uk/publications-and-updates/reviewing-smart-metering-costs-default-tariff-cap
[58] In this case, we set the profile for both fuels in line with the EU target for installing smart meters in 80% of electricity customers' homes by the end of 2020.
[59] Ofgem (2019), Response paper #3: reviewing smart metering costs in the default tariff cap – having regard for carry forward balances. https://www.ofgem.gov.uk/system/files/docs/2019/08/response_paper_3_-

May 2020 consultation proposal

5.13. In line with our previous positions, we said we would consider reviews for systematic errors which are unforeseen, clear and material. We proposed to adjust the SMNCC allowance to remove advanced payments made in previous periods.

Summary of suppliers' responses

5.14. In response to our consultations suppliers have argued that either:

- we should not include any kind of correction mechanism for smart meters, as we ruled it out in our 2018 decision; or
- if we correct allowances for smart meters we should also make corrections in other areas.

5.15. Specifically in response to our May 2020 consultation, stakeholders said that we should make corrections for the impact of COVID-19 on suppliers' operations beyond smart metering (e.g. bad debt). One supplier said that any review of ECO (which we cited as an example of another area we might review) should include a reassessment of costs, which it stated have increased.

5.16. One supplier said that our approach to reviews is unsystematic and biased toward reviewing items that reduce the cap.

Considering reviews in principle

Clear systematic material errors

5.17. We maintain the principles that we set out in our November 2018 decision in relation to whether reviews are needed, as explained and elaborated in this chapter.

_carry_forward_balances.pdf
Ofgem (2019), Reviewing smart metering costs in the default tariff cap, Chapter 4, p91 onwards. https://www.ofgem.gov.uk/system/files/docs/2019/10/smart_metering_review_in_the_default_tariff_cap_-_october_consultation.pdf

5.18. We do not consider it is in customers' or suppliers' interests to rule out reviews. In the case that clear systematic material errors occur, these would disadvantage either suppliers or customers (depending on the direction of the error).

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

5.20. We stated in our November 2018 decision that we did not intend to review the cap, but would do so if there were specific systematic errors that were unforeseen, clear, material, and necessitated changes.[60]

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

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

Considering which issues in the cap that we should review

5.23. As discussed in Chapter 1, the future pace and cost of the smart meter rollout is highly uncertain. This increases the chances that the SMNCC is clearly, materially, and

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

systematically misstated. For that reason, in our November 2018 decision, we said that we would review the SMNCC. In response to our consultations on updating the SMNCC, most suppliers suggested that reviews will be inevitable. We consider the specific detail of our future reviews of the SMNCC below.

5.24. We consider that other aspects of the cap may need to be reviewed, not just the SMNCC. Below, we consider the issues raised by suppliers.

5.25. It is not always clear cut if and where a review is necessary. However we seek to consider the issues and reasons for reviews in fair and unbiased ways. Reviews are subject to consultation, giving stakeholders an opportunity to consider and scrutinise our proposals.

Future reviews of the SMNCC allowance

Decision

5.26. We have decided to review the SMNCC allowance every 12 months, with the first review taking effect from 1 October 2021. We have maintained this position from our May 2020 consultation.

5.27. Our next review of the SMNCC will consider:

- latest data on suppliers' costs and benefits in certain areas, and rollout progress;
- latest policy updates: in particular we will consider the outcome of government's autumn 2020 consultation on the tolerance levels for its new Framework; and
- whether to maintain our current approach of using an average rollout profile.

5.28. Within this review, we have not adjusted the SMNCC allowances for the fifth and sixth cap periods for advanced payments since 1 October 2019. This would undermine the purpose of providing an allowance for potentially sunk installation costs (in the fifth cap period) and freezing the allowance (in the sixth cap period).

5.29. In our next review, we will deduct advanced payments when setting the SMNCC from 1 October 2021. To mitigate the impact on suppliers with above average costs, we will not assess advanced payments between 1 October 2019 and 30 September 2021 based on the efficient costs of a supplier with an average rollout profile *even if* we

conclude that it is in customers' interests to set the SMNCC using an average profile from 1 October 2021 onwards. We will assess advanced or lagged payments by comparing the allowances between 1 October 2019 and 30 September 2021 with the efficient costs of a supplier with a market leading rollout profile, even if we set subsequent cap periods based on an average profile as we currently expect to do subject to the findings of our review.

5.30. That is because we have frozen the SMNCC allowance for the sixth cap period at the level for the fifth cap period so that suppliers with higher than average progress could avoid significant reductions to their smart metering operations in the periods before our next review. If we subsequently evaluated that period based on an average rollout profile, we would reintroduce the incentive to align with an average rollout profile in the periods before our next review.

The frequency and scope of reviews

Stakeholders' views

5.31. In response to our May 2020 consultation, stakeholders supported reviewing the SMNCC allowance. Some stakeholders supported our proposal for annual reviews. However, some stakeholders said that there should be a one-off review only, to take account of COVID-19 and/or BEIS' new Framework. This was primarily because they considered that annual reviews would create budget uncertainty for operational planning. One supplier said that they were incompatible with suppliers' 'all reasonable steps' obligations. Another supplier said that reviews should be forward looking only (i.e. should not consider advanced payments from previous periods) – and that otherwise we should increase the headroom allowance to cover the uncertainty.

Considering the frequency of reviews

5.32. We agree that there are reasons why a review is particularly important in 2021. A review will allow us to take into account the impact of COVID-19 and BEIS' decision on the tolerance levels associated with the new smart metering rollout Framework.

5.33. However, we cannot rule out further reviews. As previously recognised by suppliers, the smart meter rollout has historically been subject to uncertainty. This is separate from either COVID-19 or the new Framework. Uncertainty affects both the numbers of meters rolled out and the costs of doing so. Reviews will help us to improve the accuracy of the SMNCC allowance.

5.34. We do not agree that regular reviews undermine certainty for suppliers. The SMNCC allowance ensures overall funding for suppliers as a whole matches efficient costs over the lifetime of the cap. It is not a tool for short or medium term operational or financial planning. Ultimately, we consider that the benefits to accuracy from future reviews outweigh any lack of certainty for suppliers.

5.35. The argument that the SMNCC allowance is incompatible with an 'all reasonable steps' objective is not relevant for reviews after 30 June 2021, when the new Framework will have replaced 'all reasonable steps'. Indeed the move to a new system of regulatory obligations is itself a potential reason to continue to conduct reviews.

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

Considering the scope of reviews

Stakeholders' views

5.37. Some suppliers said that we should engage with suppliers on the scope of future reviews, in order to avoid concerns that we might cherry pick items where costs had fallen, and due to uncertainty about which items required review.

5.38. As stated above, suppliers considered that our next review should account for COVID-19 and/or BEIS' new Framework.

Considering latest data

5.39. We do not expect to carry out all future reviews with the same level of detail as our May 2020 consultation. We consider that this would be disproportionate, because the potential gains in accuracy would not justify the significant amount of resources required (both from Ofgem and industry).

5.40. For all reviews, we would update our assessment of costs, benefits, and suppliers' progress with the rollout. As we stated in our May 2020 consultation we would update significant parameters based on the ASRs. This would allow us to take into account new data, and therefore improve the accuracy of the cap.

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

- **the rollout profile**. We would use historical data when it becomes available. We would set the rollout profile for future years in light of our consideration of the new Framework (see below).

- **the costs of smart meters, communications hubs and IHDs**. We would take the latest data from suppliers, in their ASRs. We would maintain the methodology from this decision to model these costs.

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

- **the number and cost of avoided site visits**. We would maintain the methodology from this decision to model these benefits.

5.42. While we do not consider that in-depth annual reviews are necessary or desirable, we will consider input from stakeholders on the items we should consider within the scope of future reviews. These should be items where there is clear and material systematic error, rather than elements of detail. We will also bear in mind the risk of any review becoming biased in either direction.

Considering latest policy announcements

5.43. As discussed in Chapter 1 and Chapter 3, in autumn 2020 government expects to consult on the tolerance levels for its new rollout Framework. Based on the outcome of that consultation, we will consider whether the rollout profile and productivity assumptions in our current assessment of costs are appropriate for the new obligation period.

5.44. In its June 2020 response, government stated that it is considering further policy measures to support the uptake of smart meters. We will consider whether the outcome of these considerations affects our understanding of the likely pace or costs of the rollout.

Considering changes to our rollout methodology

5.45. In Chapter 3 we explained that we expect to set the SMNCC from 1 October 2021 in line with our assessment of the net impact of the smart meter rollout on the efficient costs of a supplier with an average rollout profile. We expect that would protect customers better than charging customers at the level required to match the efficient costs of suppliers with higher than average costs. We consider this may be the case even if suppliers with above average progress reduce their capacity to align with the market as a whole, reducing variation between suppliers' costs. Otherwise customers would pay more than the aggregate costs of the rollout.

5.46. In our next review we will consider whether to maintain that approach, or set the SMNCC using a higher rollout profile. In Chapter 3 we explained that, in principle, the delay in benefits if suppliers with above average progress aligned with the average profile should be compared against the additional costs to customers of avoiding that delay. However, in practice, that tipping point will be difficult to quantify reliably. Ultimately, we expect the decision will involve some judgement on the appropriate balance of achieving multiple goals which could affect the interests of customers: protecting customers from paying more for their energy than the underlying costs of serving them, and keeping pace on the long term benefits to customers of smart meters (system transformation and net zero).

Considering adjustments for advanced or lagged payments

Context

5.47. In our May 2020 consultation we explained that reviews risked introducing systematic error, by double counting costs and benefits that were assessed in one cap period but then delayed into a subsequent cap period. The review would reassess the costs and benefit of that delayed installation, despite have already taken it into account and charging customers on that basis.[61]

5.48. On that basis, we proposed to deduct advanced payments when setting future allowances to avoid double counting. We also proposed to add lagged payments when

[61] Ofgem (2020), Reviewing smart metering costs in the default tariff cap: May 2020 statutory consultation, paragraphs 3.37 to 3.40. https://www.ofgem.gov.uk/system/files/docs/2020/05/reviewing_smart_metering_costs_in_the_default_tariff_cap_may_2020.pdf

setting future allowances, to ensure those costs were accounted for. This would ensure that the cumulative costs neither exceeded nor fell below the cumulative allowances to a clear systematic material extent over the life of the cap.

Our decision

5.49. We have not adjusted the fifth and sixth cap periods for advanced payments since 1 October 2019, on the basis that this would undermine the purpose of providing an allowance for potentially sunk installation costs and freezing the allowance.

5.50. In our next review we will assess the difference between the cumulative allowances between 1 October 2019 and 30 September 2021 and our updated assessment of suppliers' costs to identify whether suppliers have received payment in advance for costs they have not yet incurred, or alternatively have incurred costs in advance of payment through the allowance. We will adjust future allowances from 1 October 2021 to avoid double counting advanced payments or to ensure that lagged payments are included in the allowance.

5.51. In our next review we will reassess the impact of the smart meter rollout on suppliers' efficient operating costs. To ensure that the cumulative allowances since 1 October 2019 are not substantially higher or lower than suppliers' cumulative costs we will deduct advanced payments (if the cumulative allowances exceed the cumulative costs) from the SMNCC in subsequent cap periods or add lagged payments (if the cumulative allowances were below the cumulative costs).

5.52. Specifically, we will:

- not assess costs in the first two cap periods (1 January to 30 September 2019);
- assess costs between 1 October 2019 and 30 September 2021 using a higher than average rollout profile, whether or not we decide to set the SMNCC based on obligations for a supplier with an average rollout profile from 1 October 2021; and
- spread the balance of advanced or lagged payments over the maximum number of remaining cap periods (in line with our May 2020 proposal)

Stakeholders' views

5.53. Stakeholders supported our proposal to not consider advanced payments in the first two cap periods (1 January 2019 to 30 September 2019), as our policy to ensure the costs of the rollout and the allowances were aligned over the life of the cap was not clear in that period.

5.54. Some stakeholders (including two suppliers) appreciated that it would be unacceptable to double count smart metering costs, and to the extent they would be double counted, it was appropriate to deduct those costs from future cap periods. Most suppliers opposed our proposal.

5.55. In response to our May 2020 consultation, suppliers opposed our plans to adjust future allowances for advanced or lagged payments. The principal reasons were that:

- the extent of double counting was overstated, as suppliers' efficient costs were higher than our assessment (or the allowances at the time) allowed for;
- in principle we should consider the difference between the allowance and suppliers' costs to an "over collection" and not an "advanced payment", and that the over-collection against smart metering costs was: (i) offset by "under-collection" in other allowances, as demonstrated by the losses suppliers reported in the Consolidated Segmental Statements (CSS), (ii) passed on to customers with competitive tariffs, or (iii) invested in the rollout, so no surplus exists to carry forward;
- suppliers with higher than average progress would have higher than average costs, which would be "clawed-back" in future periods unfairly (for the interests of those suppliers);
- adjusting for payments in subsequent periods would mean the allowance would be below the costs in those periods, causing additional strain for suppliers;
- Ofgem should correct for all errors or none, and not select only those that reduce the cap;
- in any event, suppliers required certainty for planning purposes.

5.56. In addition, one supplier stated that we should not consider the third cap period for calculating advanced payments. This was because it considered: our April 2019 description of the approach was insufficiently clear, the numerical impact was not provided, and in any event six months was insufficient notice of the policy. On that basis it considered that suppliers have a legitimate expectation that we would not assess and adjust for costs in that period.

5.57. We consider the third cap period is relevant. The policy was sufficiently clear for suppliers to write to us stating their opposition to it. By its nature, the policy estimates and accounts for the impact of uncertain progress and costs, so the specific numbers cannot be known in advance. That does not negate the need to consider and address the impact on customers and suppliers of deviation between costs and the allowance. We consider we gave adequate notice.

Considering whether advanced payments were overstated

5.58. We assess any advanced payment on the basis of our updated costs assessment, including latest data on suppliers' actual costs in historical periods. On that basis, the assessment should reflect the average costs to suppliers. That may not match the costs of *each supplier*, if for example they made greater than average progress, or had higher than average unit costs (for the purpose of this assessment, inefficient costs).

Considering "over-collection" of efficient smart costs

5.59. For the purposes of setting the SMNCC, we are focussed on ensuring that the SMNCC reflects the impact of the smart meter rollout on efficient operating costs.

5.60. Some suppliers accepted that the SMNCC was higher than the impact of the smart meter rollout on efficient operating costs, but considered this was offset by other factors.

5.61. For instance, suppliers reported losses across their entire retail business in 2019, so some suppliers reasoned the SMNCC could or should not be reduced and the "over-collection" was offset by other costs. This is not an issue specific to smart metering costs, which are the focus of this review. For illustration, some suppliers made losses before we introduced a cap. The matter of business-wide profitability is broader than the adequacy of the SMNCC allowance.

5.62. Similarly, one supplier suggested that over-collection from default tariff customers had been passed on to customers, through competitive tariffs. Our consideration is whether the SMNCC reflects efficient costs in order to protect default tariff customers. That is not affected by any decision suppliers have taken to use money collected from default tariff customers to finance discounts for customers on competitive tariffs.

5.63. Below we explain that we monitor the combined impact that price protection for default tariff customers, and less-profitable competitive tariffs for active customers have on suppliers. It is a broader issue than either the cap or the SMNCC specifically.

Considering suppliers with above average rollout

5.64. Some suppliers consider that the SMNCC had not led to over-collection or advanced payment. It had been spent on the rollout, so there was no payment to carry forward.

5.65. As we set out in our May 2020 consultation, we reassess costs based on the impact on the efficient operating costs of a supplier with an average rollout profile. If the SMNCC was higher than those costs, and invested fully, then either the supplier has above average unit costs (inefficient costs) or above average rollout progress, or both.

5.66. The former is not a relevant consideration to the adequacy of the SMNCC. We discuss the latter in Chapter 3. Above average rollout progress is not a problem specific to deducting advanced payments. It is a consequence of the need to set one allowance for all suppliers, even though suppliers' circumstances differ. In Chapter 3 we explain that we are considering further the impact on customers if some suppliers with higher than average rollout aligned with the average rollout profile. If they did so, their exposure to further deductions for advanced payments based on an average profile (but not their own progress) would reduce.

5.67. We have decided to assess advanced payments between 1 October 2019 and 30 September 2021 using a rollout profile that is higher than the average profile, even if we conclude that it better protects customers to set the SMNCC using an average rollout profile from 1 October 2021 (as we expect to do, subject to our next review).

Considering other adjustments

5.68. As discussed in this chapter, we are considering the impact of smart metering costs as that is the scope of this review. We are also open-minded to considering adjustments to other elements of the cap, in either direction, where the cap would be otherwise

clearly and materially misaligned with efficient costs. Below, we discuss the issues stakeholders raised.

Considering certainty

5.69. We consider that stability for planning is beneficial. As discussed in Chapter 3, on that basis we have provided the SMNCC we would expect to set from 1 October 2021 onwards. However, we cannot guarantee these amounts. If suppliers do not incur sunk installation costs due to COVID-19, or fall behind rollout expectations (for whatever reason), then the allowances paid to that date may be ahead of the costs incurred to that date. Similarly, updates may show that unit costs have increased by more than our assessment anticipated, which we should take into account. On that basis, we would consider the impact of updates to our assessment of efficient costs on the gap between suppliers' costs and the allowance and adjust the SMNCC accordingly (depending on whether suppliers have advanced payments or lagged payments).

5.70. We consider that avoiding the harm to customers or suppliers that would come from letting the allowances deviate substantially from suppliers' costs (in either direction) outweighs any incremental uncertainty from such an approach (i.e. in addition to the uncertainty that affects planning in any case).

Reviewing other costs in the cap

Impact of COVID-19 on suppliers' other costs

5.71. Suppliers have likely incurred additional costs due to COVID-19. This is an unforeseen event that may have clear material net costs.

5.72. In June 2020 we committed to reviewing the impact of COVID-19 on suppliers' bad debt costs, and to include a retrospective adjustment in the cap from 1 April 2021, if suppliers' efficient bad debt costs have materially increased.[62]

5.73. In our May 2020 consultation we noted that disruption to ECO (a programme requiring suppliers to install insulation in certain customers' homes) would likely mean that the allowance suppliers receive to install insulation in a certain number of properties would

[62] Ofgem (2020), Managing the impact of COVID-19 on the energy market – relaxing network charge payment terms. https://www.ofgem.gov.uk/publications-and-updates/managing-impact-covid-19-energy-market-relaxing-network-charge-payment-terms

exceed actual costs. Were we to review the allowance we would consider what information we needed in order to make the assessment of costs suppliers have actually incurred, compared to the allowance for ECO.

5.74. Suppliers have raised other areas of costs affected by COVID-19, including policy costs such as feed-in-tariffs. The fall in non-domestic energy demand has meant that the allowances we include in the cap have not matched the costs to suppliers. (This is because domestic suppliers have had to pay for a greater fraction of the total costs than expected). When non-domestic energy demand returns there should be the same effect in reverse. We may need to review the net impact of this misalignment between the allowance and costs.

Market conditions

5.75. Several stakeholders have suggested that we review headroom and the financeability of suppliers, since the cap was introduced. For instance they indicated that most of the large suppliers affected by the cap have reported losses in their CSS.

5.76. We continue to monitor the retail market closely. The combined pressure of price protection for default tariff customers and suppliers offering less profitable competitive tariffs, set below the level of the cap, is proving a significant challenge.

5.77. Some suppliers have also raised concerns that the mutualised costs of supplier failures may increase this winter, and require an additional allowance in the cap to cover those mutualised costs. The extent and cost of supplier exits is difficult to establish in advance.

Appendices

Index

Appendix	Name of appendix
1	Changes to Annex 5 of SLC28AD

Appendix 1 – Changes to Annex 5 of SLC28AD

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

1.2. Within that document, we have decided to make changes to sheet '2a Non pass-through costs', cells L7:R8.

1.3. The values we have decided to insert are set out in the table below. These are the output values from the model we have disclosed, except for the sixth cap period, where we freeze the values from the fifth cap period.

Table A1: Values to insert into Annex 5 of SLC28AD

Cap period	Electricity	Gas
Fifth cap period	10.64	6.48
Sixth cap period	10.64	6.48
Seventh cap period	7.69	3.68
Eighth cap period	7.90	3.25
Ninth cap period	8.35	3.04
Tenth cap period	8.80	2.83
Eleventh cap period	8.80	2.83

Notes:
All values are £/customer, nominal.
The table in Annex 5 has electricity and gas rows (rather than columns). We present it in this format for readability.