Department for
Business, Energy
& Industrial Strategy

Smart Meter Policy Framework Post 2020:

Minimum Annual Targets and Reporting Thresholds for Energy Suppliers

Closing date: 15 January 2021

November 2020

Any enquiries regarding this publication should be sent to us at:

enquiries@beis.gov.uk

Contents

General Information

Why are we consulting

In June 2020 Government confirmed a new four-year smart metering policy Framework to start on 1 July 2021. This Framework is designed to drive the consistent, long-term investment needed to achieve high levels of smart meter coverage by setting annual targets and providing regulatory certainty. Under the new Framework, we are proposing that each energy supplier will be set individual targets on a trajectory to 100% coverage, subject to an annual tolerance level that applies across industry as a percentage of their customer base. This creates a minimum number of installations that each energy supplier must meet in each year under the new Framework.

We are now consulting on these tolerance levels for the first two years of the Framework so they can be confirmed ahead of the new Framework coming into effect on 1 July 2021.

We are also consulting on reporting thresholds for large energy suppliers.

Consultation details

Issued: 23 November 2020

Respond by: 15 January 2021, 12 midday.

Enquiries by email only to: smartmetering@beis.gov.uk

Consultation reference: "Smart Meter Policy Framework Post 2020 – Consultation on Tolerance Levels to Define Minimum Annual Targets for Energy Suppliers and on Reporting Thresholds for Large Energy Suppliers."

Territorial extent:

This consultation applies to the gas and electricity markets in Great Britain. Responsibility for energy markets in Northern Ireland lies with the Northern Ireland Executive's Department for the Economy.

How to respond

Responses should be emailed to: smartmetering@beis.gov.uk

When responding, please state whether you are responding as an individual or representing the views of an organisation.

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. We would advise you to follow the summary of consultation questions on page 43 of this document.

Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018, and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential please tell us but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable UK and EU data protection laws. See our privacy policy.

We will summarise all responses and publish this summary on GOV.UK. The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

Quality assurance

This consultation has been carried out in accordance with the government's consultation principles.

If you have any complaints about the way this consultation has been conducted, please email: beis.bru@beis.gov.uk.

Interpretation

In this document:

"the Government" refers to the UK Government;

"we" refers to the UK Government;

"BEIS" or "the Department" refer to the Department for Business, Energy and Industrial Strategy, that has published the consultation on behalf of the UK Government;

“the Programme” refers to the Smart Metering Implementation Programme, which includes the Department’s Smart Metering Team and the wider group of partners and stakeholders responsible for delivering the rollout;

“the existing all reasonable steps (ARS) obligation” or “the existing obligation” refers to the legal obligation on energy suppliers to take “all reasonable steps” (ARS) to install smart meters. This obligation initially required installations to take place by the end of 2019 and, in 2013, it was extended to the end of 2020 (“the 2020 rollout duty”). In June 2020, due to the disruption caused by the COVID-19 pandemic, it was extended to 30 June 2021;

“the new Policy Framework”, “the new Framework”, “the Framework”, “the new obligation” and “the post-2020 obligation” refer to the smart meter installation obligation which has been implemented and is due to take effect from 1 July 2021;

“the regulator” refers to Ofgem, the Government regulator for gas and electricity markets in Great Britain;

“COVID-19”, or “COVID” refers to the coronavirus (COVID-19) pandemic:

“the model” refers to the forecasting model developed and owned by BEIS to calculate rollout projections for smart (and advanced) meter installations for the period of the new Framework, which are used as the basis for setting the tolerances incorporated within the calculations of annual supplier minimum targets within the post-2020 obligation.

Executive Summary

1. Smart meters are a vital upgrade to our national energy infrastructure and underpin the cost-effective delivery of Government's Net Zero commitment.[1] They are a critical tool in modernising the way we all use energy and support the transformation of the retail energy market, helping the system to work better for energy consumers. At the end of June 2020, there were 21.5 million smart and advanced meters in homes and businesses across Great Britain, representing 40% smart coverage.[2]

2. During 2020, the coronavirus (COVID-19) pandemic has brought the consumer benefits for millions of households with smart meters into sharp focus. Automatic readings mean that meter readers do not need to visit homes and consumers receive accurate bills, avoiding excess debt and credit. Prepayment customers with smart meters can track and top-up credit without leaving home. Energy suppliers can also offer timely support when they are alerted to prepayment customers who have gone off-supply, offering emergency credit or switching meters into credit mode remotely where it is appropriate. Customers with smart meters can see their energy use and costs in near real-time via an In-Home Display (IHD), helping them to budget effectively, use less energy and save money.

3. COVID-19 has had an inevitable impact on the smart meter rollout. Government and Ofgem have been working closely with industry throughout the pandemic, enabling energy suppliers to keep the safety, health and wellbeing of their customers and staff as their central priority. Government is continuing to work with Ofgem and industry to ensure that energy suppliers and key industry stakeholders can collaborate and share good practice on smart meter installation activities, in line with the latest public health advice.

4. Government wants to ensure all households and small businesses can benefit from smart meters. In June 2020, the Government confirmed a new four-year policy Framework with fixed annual installation targets for energy suppliers that will continue to drive the investment and momentum needed to achieve this goal. This Framework has been implemented and is due to take effect from 1 July 2021. The new four-year Framework will apply to all domestic and non-domestic energy suppliers, in line with the existing rollout obligation.

5. The June 2020 Government response[3] confirmed that under the new Framework energy suppliers will have individual annual targets, derived from a formula, to achieve market-wide coverage. We also confirmed that each energy supplier would be recognised for all the installations of smart meters that they achieve in each year of the new Framework. This represents a change that better measures in-year installation performance compared with the current "all reasonable steps" obligation, where targets are assessed on levels of smart coverage. Under the current obligation energy suppliers are more susceptible to within-year churn where customers move to a new supplier following the installation of a smart meter.
6. In this consultation, we propose that the individual obligations are set on a trajectory to 100% coverage, subject to an annual tolerance level that applies across industry as a percentage of customer base. This creates a minimum number of installations that an energy supplier must

[1] The UK's 2050 net zero target — one of the most ambitious in the world — was recommended by the Committee on Climate Change, the UK's independent climate advisory body. Net zero means any emissions would be balanced by schemes to offset an equivalent amount of greenhouse gases from the atmosphere, such as planting trees or using technology like carbon capture and storage. Further information on Net Zero.
[2] Smart metering statistics, June 2020
[3] Smart meter policy framework post-2020, June 2020

meet in each year of the new Framework. Individual obligations will then be automatically reset at the start of the subsequent rollout year, again on a trajectory to 100% coverage and subject to the annual tolerance level in the next year.

7. Following stakeholder feedback, we have revised our modelling that projects installation quantities under the new Framework. The revision adapts an approach taken by a model provided by Energy UK on behalf of their member organisations in response to our previous consultation, based on consumer conversion. This model and general feedback received from energy suppliers suggested that consumer conversion was the primary constraint on the rollout, hence we have considered consumer conversion rates as the basis of our rollout projections. However, as we noted in our June 2020 Government response, attitudes towards smart meters are not necessarily strongly held and can change quickly over time. This means that outcomes under the updated modelling approach become more uncertain the further ahead the projections are made.

8. To ensure that targets continue to be proportionate and appropriate to drive a market-wide rollout we have been clear that we will undertake a mid-point review. Targets for the third and fourth years of the Framework will be consulted upon following the conclusion of this review. This approach enables consideration of the impact of ongoing improvements in operational fulfilment and technical eligibility, whilst also taking into account any new policy incentives introduced to support consumer engagement and the most up to date data available at the time. We have therefore decided to make a projection for only the first two years of the new Framework at this stage. As such, we are only consulting on tolerance levels for the first and second years of the new Framework from 1 July 2021 – 30 June 2022 and 1 July 2022 – 30 June 2023, respectively. We also set out proposals for the methodology for calculating the tolerance levels for these two years of the Framework.

9. We have taken an approach that recognises the tolerances need to be proportionate and reasonable. However, we anticipate that energy suppliers will actively take advantage of positive opportunities that will support the achievement of market-wide coverage. These include: consumer sentiment becoming more accepting of the default smart metering offer; improved operational fulfilment; and, increased eligibility with the introduction of the SMETS2 pre-payment service in the CSP North region, the availability of dual band communications hubs nationally, and the availability and installation of SMETS2 meter variants to meet different customer needs.

10. Government is continuing to work with energy suppliers to share good practice on operational fulfilment, including on increasing the volume of successful installations and new approaches to rectification where an installation was not achieved first time so that these improvements can be understood and implemented across the sector as quickly as possible. Our modelling includes reasonable assumptions about operational fulfilment improvements to increase installation completion rates, drawing on evidence of what is being achieved by market participants. Finally, in the June 2020 Government response we also indicated that we would consider policy measures to support the uptake of smart meters by consumers. These potential measures are not included in the modelling for this consultation and we will bring forward proposals in due course, where appropriate and taking into account wider industry progress. New policy measures therefore represent additional upside for the installation forecasts in the modelling for this consultation.

11. Overall, these factors give Government confidence that the rollout can make further substantial progress over the next two years and across the four-year Framework period. Under this proposed approach, energy suppliers who deliver beyond the minimum installations required in a given rollout year, and putting changes in market share to one side, will see their progress

recognised by having fewer installations to complete across the remaining years of the Framework.

12. In the June 2020 Government response, we stated our intention to review the tolerance levels once during the four-year Framework period. This review, which will include a further consultation, is expected to take place during the second year of the new rollout Framework (July 2022 – June 2023) to enable its outcomes to be implemented ahead of the third and fourth rollout years. This review will consult on and set annual tolerance levels for the third and fourth years of the Framework.

13. In the June 2020 Government response, we also signalled that we would reconsider whether the large energy supplier reporting threshold of 250,000 domestic customers remains appropriate for the new Framework. At the time, we noted Ofgem's minded-to proposal to revise its own monitoring threshold for large energy suppliers to 150,000 gas and/or electricity customer accounts.[4] In this consultation we are therefore proposing to amend electricity licence condition SLC43 and gas licence condition SLC37 to reduce the threshold for large energy supplier reporting to 150,000 gas or electricity (or both) customer accounts. This also aligns with our decision to lower the threshold by which domestic energy suppliers fund Smart Energy GB's capital costs.[5]

[4] Statutory consultation on the post-2020 smart meter rollout reporting requirements, October 2019
[5] Smart meter coordinated consumer engagement, November 2020

Introduction

Policy background

14. Smart meters are the next generation of gas and electricity meters. They are the enablers of a vital upgrade to our national energy infrastructure, and a critical tool in aiding the transformation of the retail energy market. This transformation into a smarter and more flexible energy system will play a key role in decarbonising the energy sector, helping us to deliver on our long-term target of Net Zero by 2050.[6]

15. The information provided by smart meters via their digital readings allows energy suppliers to accurately charge their customers. Smart meters also enable consumers to access innovative and smart technologies, unlocking opportunities that give them more control, choice and flexibility in their energy use. For example, smart meters are allowing energy suppliers to offer consumers 'time of use' tariffs. These tariffs financially reward consumers for using less electricity at peak times of demand or using more when overall demand is low and there is surplus generation available on the energy system. An increasingly smart energy system means that saving money and reducing carbon emissions can be achieved in parallel, benefitting individual consumers and society as a whole while also making a key contribution to Net Zero.

16. Research shows the vast majority of consumers have a positive experience with smart meters:

    - 7 in 10 (69%) people with smart meters are more conscious of their energy use;[7]
    - just under two thirds (64%) of people with smart meters feel more in control of the energy they use at home;[8]
    - just over 60% (62%) of people with smart meters would actively recommend to a friend, neighbour or relative;[9]
    - nearly 7 out of 10 smart customers (67%) are satisfied with their smart meter;[10]
    - customers with traditional meters are three times more likely than those with smart meters to make a billing complaint to their energy supplier.[11]

17. Consumers are at the heart of the Programme and the new policy Framework seeks to ensure that benefits are delivered to consumers as soon as possible. In particular, it seeks to:
    i. encourage consumers to benefit from the rollout of smart meters, including how to use the data from their smart meters;
    ii. deliver a market-wide rollout of smart meters as soon as possible, that ensures value for money and maintains installation quality so that consumers can derive maximum benefit and have a good experience;
    iii. normalise smart meters so they are the default meter used in Great Britain; and
    iv. give certainty to the whole sector to invest and plan, ahead of and beyond 30 June 2021.

18. Our overall objective is to ensure large numbers of consumers are not left behind without a smart meter, unable to participate in the future retail market and the benefits this will bring. Our

[6] See footnote 1
[7] Smart Energy GB Smart Energy Outlook, March 2020
[8] Smart Energy GB Smart Energy Outlook, March 2020
[9] Smart Energy GB Smart Energy Outlook, March 2020
[10] Consumer perceptions of the energy market (April 2020), September 2020
[11] Ofgem Complaints Data - unpublished

aim is to enable the associated consumer, energy and wider environmental benefits, completing the smart meter rollout as soon as practicable.

19. The Programme is also an important contributor to the national economy supporting around 15,000 jobs across Great Britain[12] with an annual investment running at c.£1bn, over 99% of which is funded by the private sector.[13] We anticipate that the next phase of the Programme under the new policy Framework, starting on 1 July 2021, will drive further investment and employment opportunities in the coming years, and will play an important role in the post COVID-19 recovery period.

COVID-19 impact

20. Throughout 2020 COVID-19 has had an inevitable impact on the smart meter rollout. Government and Ofgem have been working closely with industry throughout the pandemic, enabling energy suppliers to keep the safety, health and wellbeing of their customers and staff as their central priority. From mid-March 2020, in line with Government guidance, energy suppliers focussed on essential and emergency metering work and supporting those in vulnerable circumstances in the communities they serve.

21. Government has worked closely with industry to support remobilisation following the disruption caused by the COVID-19 pandemic to share good practice on operational and consumer engagement activities and drive timely and efficient ramp-up of smart meter installations, in line with COVID-19 safe working guidance.

22. Further to the publication in May 2020 of guidance on safe working[14] during the pandemic, energy suppliers have worked hard to successfully remobilise their rollouts and have scaled up installation volumes to pre-COVID levels, while implementing additional safety measures to ensure the wellbeing of both customers and staff.

23. The pandemic has also affected consumers and their position towards smart meters in different ways. For example, COVID-19 has brought the consumer benefits for millions of households with smart meters into sharp focus, particularly for prepayment customers who can track and top-up credit without leaving home or needing to reach inaccessible meters. In light of these considerable consumer benefits, there is a significant opportunity for energy suppliers to focus on deploying smart meters to their legacy prepayment customers. With SMETS2 prepayment services available across Great Britain, we expect energy suppliers to consider steps they can take to ensure that their prepayment consumers can realise the significant benefits of having a smart meter as soon as reasonably practicable.

24. COVID-19 changed some consumers' short-term attitudes in relation to allowing an installer inside their homes. However, the safety measures mentioned above have helped mitigate concerns and greater numbers of consumers working from home has enabled energy suppliers to complete more domestic installations first time.

25. In the June 2020 Government response, we extended the existing ARS obligation by six months until 30 June 2021 due to the impact of COVID-19. This consultation sets out our new proposals for tolerance levels for the first two years of the new Framework, taking into account

[12] Including energy suppliers' installers and jobs in the supply chain and national communications infrastructure providers.
[13] Information collected through industry data sources.t
[14] Working Safely During Coronavirus (COVID-19) – May 2020

the impact of COVID-19. We are therefore not proposing any further delay to the start of the new Framework.

26. We recognise that the introduction of additional restrictions across Great Britain during autumn 2020 has brought further uncertainty with regards to consumers' willingness to allow installers in their homes. However, the Government's guidance on safe working has made clear that work undertaken in people's homes can continue, subject to the relevant safety measures being in place. At this stage, we are not seeing any significant impact on operations and/or consumers' attitudes towards smart meters as a result of these additional restrictions. However, we will monitor consumer attitudes on an ongoing basis and will update our model with evidence available ahead of the Government response to this consultation, planned for publication in 2021.

Progress to date on the rollout

27. As of the end of June 2020,[15] there were 21.5 million smart and advanced meters in homes and small businesses across Great Britain. Energy suppliers are now installing second generation (SMETS2) smart meters as the default meter. These meters are designed to be fully interoperable between all energy suppliers, so consumers can retain their smart services when they switch energy supplier. As of November 2020, there are over 5.8 million SMETS2 meters connected to the national data communications system operated by the DCC. Energy suppliers have remobilised their smart meter rollouts following the initial disruption caused by COVID-19 and are installing at scale.

28. First generation smart (SMETS1) meters were installed by energy suppliers who used their own data and communications systems to provide smart services. As these meters operated on energy suppliers' own systems, consumers did not always retain smart services upon switching. Since August 2019, SMETS1 meters have started to be enrolled into the DCC's national smart metering communications network remotely, without consumers needing to take any action. SMETS1 migrations are now well underway, with over two million devices migrated to date.[16] The enrolment solution has been proven to operate at scale and DCC is prioritising the migration of dormant devices, allowing consumers who have lost smart services to have these returned as quickly as practicable.

29. As outlined in the June 2020 Government response, the vast majority of technical constraints associated with installing smart meters have now been resolved. There is widespread deployment of SMETS2 meters across all areas of GB and for different customer types, whilst SMETS2 meter variants are now available to support rollout at scale for those domestic and non-domestic consumers requiring more complex metering solutions.

30. In the June 2020 Government response, we also committed to considering a range of policy measures to support consumer uptake of smart meters, including measures that are not directly led by the Smart Metering Implementation Programme.

31. In September 2020, Government published the Energy Performance Certificate (EPC) Action Plan,[17] which recognised the potential for smart meters to be used to provide actual energy

[15] Smart meter statistics: June 2020
[16] Smart DCC
[17] Energy Performance Certificates in Buildings: call for evidence

usage data for a building within the methodology[18] to produce EPCs, and the changes to the data architecture that such a development would require. The action plan re-affirmed our commitment to consider including the presence of smart meters on EPCs.

32. In parallel, Government published a consultation on improving the energy performance of privately rented homes in England and Wales,[19] which sought views on the role that the private rented sector could play in supporting the rollout of smart meters, together with any barriers and potential solutions. The consultation noted the significant benefits that smart meters bring for both landlords and tenants, whilst recognising that privately rented homes are less likely to have smart meters installed,[20] and restating our commitment to considering policy measures to support the uptake of smart meters in this sector. The consultation is open until 30 December 2020, and we encourage stakeholders to respond with their views.

33. In October 2020, the Government published a consultation on extending the Warm Home Discount (WHD) scheme to winter 2021-2022,[21] and sought views on whether, in addition to energy advice, information about the benefits of smart meters should be provided to customers benefiting from an Industry Initiative. The consultation included information about Smart Energy GB (the organisation responsible for the national smart meter consumer engagement campaign), who have developed a wide range of materials and resources outlining the benefits of smart metering.[22] In addition, a case study on how an energy company uses smart meter data to help customers at risk of self-disconnection was provided. The consultation closed on 11 November 2020.

34. Finally, we have today published guidance for developers on how they can accommodate smart meters into their building design to ensure they are smart meter compatible from the outset.[23] This will prevent energy suppliers having to incur costly retrofitting to install smart meters at a later stage. We continue to progress other measures and will bring forward proposals in accordance with the progress of the overall rollout and improvements in energy supplier operational fulfilment.

Government response to the consultation on the smart meter policy framework post 2020

35. In June 2020, the Government confirmed that from 1 July 2021 a new four-year policy Framework with fixed annual installation targets for energy suppliers will come into effect that will continue to drive the investment and momentum needed to achieve the overall ambition of market-wide rollout as soon as practicable. The new four-year Framework will apply to all domestic and non-domestic energy suppliers in line with the existing rollout obligation. Changes to energy supply licence conditions that underpin this new Framework have been implemented and come into effect on 1 July 2021.

[18] Standard Assessment Process, Reduced Standard Assessment Process, Simplified Building Energy Model, and Dynamic Simulation and Thermal Modelling.
[19] Improving the energy performance of privately rented homes, September 2020
[20] MHCLG, English Housing Survey, English Housing Survey 2018: energy report. Note Scottish and Welsh households are not included in this survey but are in scope of the rollout.
[21] Warm Home Discount scheme 2021 to 2022, October 2020
[22] Smart Energy GB Resource Centre
[23] Guidance on smart meter installations in domestic new build premises, November 2020

36. Under the new Framework energy suppliers will have individual annual targets on a trajectory to 100% coverage, subject to an annual tolerance level that applies across industry. We also confirmed that each energy supplier would be recognised for the installations of smart meters (and advanced meters, where relevant) that they achieve in a given year of the new Framework. This means that annual targets will be assessed based on the number of installations undertaken during a specific Rollout Year, rather than on the levels of smart coverage achieved, which can be subject to customers switching between energy suppliers in-year.

37. The value of these tolerance levels will help to define the target number 'N_y' referred to in paragraphs 33A.2 and 39A.2 of the Standard Licence Conditions for Gas and Electricity[24] respectively, via the formula included in paragraphs 33A.5 and 39A.5 of these Standard Conditions. The formula is as follows:

$$Ny = \left(\frac{1}{ay} RSMSy\right) - Ty$$

Where:
N_y means the minimum installation requirement for the Rollout Year "y"
a_y means a number used to calculate a proportion where "y" is equal to the number specified in the table below:

Rollout Year	**Value of a_y**
First Rollout Year	4
Second Rollout Year	3
Third Rollout Year	2
Fourth Rollout Year	1

$RSMS_y$ means the number of Qualifying Relevant Premises[25] at the beginning of the Rollout Year.
y means each Rollout Year within the Framework.
T_y means a number representing a tolerance level, which shall have the value that is determined, or calculated in accordance with a methodology **specified in a document published and issued by the Secretary of State for the purposes of Conditions 33A and 39A,** following a consultation with all holders of Gas Supply Licences and Electricity Supply Licences and such other persons as the Secretary of State considers appropriate.

38. For the avoidance of doubt, the document referred to in the paragraph above, confirming the value of T_y for the first and second Rollout Years is intended to be the Government response to this consultation, which is planned for publication in spring 2021.

[24] Energy supply licence conditions
[25] Qualifying Relevant Premises means a domestic or designated premises in respect of which there is installed neither a smart metering system nor an advanced meter (where permissible). In September 2020 we consulted on minor changes to energy supply licence conditions to account for SMETS1 meters installed after the SMETS1 end-date. We proposed that any premises where a SMETS1 meter is installed on or before 30 June 2021 are not counted as Qualifying Relevant Premises. This will ensure that these meters are not forced to be replaced early, which would result in unnecessary hassle for consumers and increase programme costs overall. This proposal was confirmed in a consultation response published in parallel to the current consultation document. See https://smartenergycodecompany.co.uk/latest_news/

Assumptions and Projections

BEIS model and assumptions

BEIS model

39. In our initial consultation on a Smart Meter Policy Framework, which closed on 11 November 2019,[26] we supported our policy proposals with a detailed analysis of the installation levels that our modelling suggested were feasible based on the available data for the 13 large suppliers[27] at the time. This modelling suggested that all the 13 large energy suppliers considered would be able to reach 85% coverage by the end of 2024. Indeed, the cross-industry average coverage level was expected to reach 92% by this time.

40. This approach received substantial challenge from stakeholders during the consultation period and in formal responses to the consultation, particularly from energy suppliers. Some stakeholders submitted a comprehensive alternative modelling approach with key challenges on:

    - The starting point of the smart meter rollout curve at the start of the new Framework.
    - Consumer attitudes being a primary constraint on energy suppliers' ability to roll out smart meters. Stakeholders considered that this should therefore be one of the key drivers of the forecast.
    - The irrelevance of operational challenges such as installer numbers and productivity levels. Stakeholders suggested that in practice such operational challenges were not a constraint as they tend to be matched to demand level.
    - A preference for a model based on rates, rather than installation levels. This would lead to a rollout model based on the rates at which eligible consumers are converted to smart, rather than the absolute number converted.

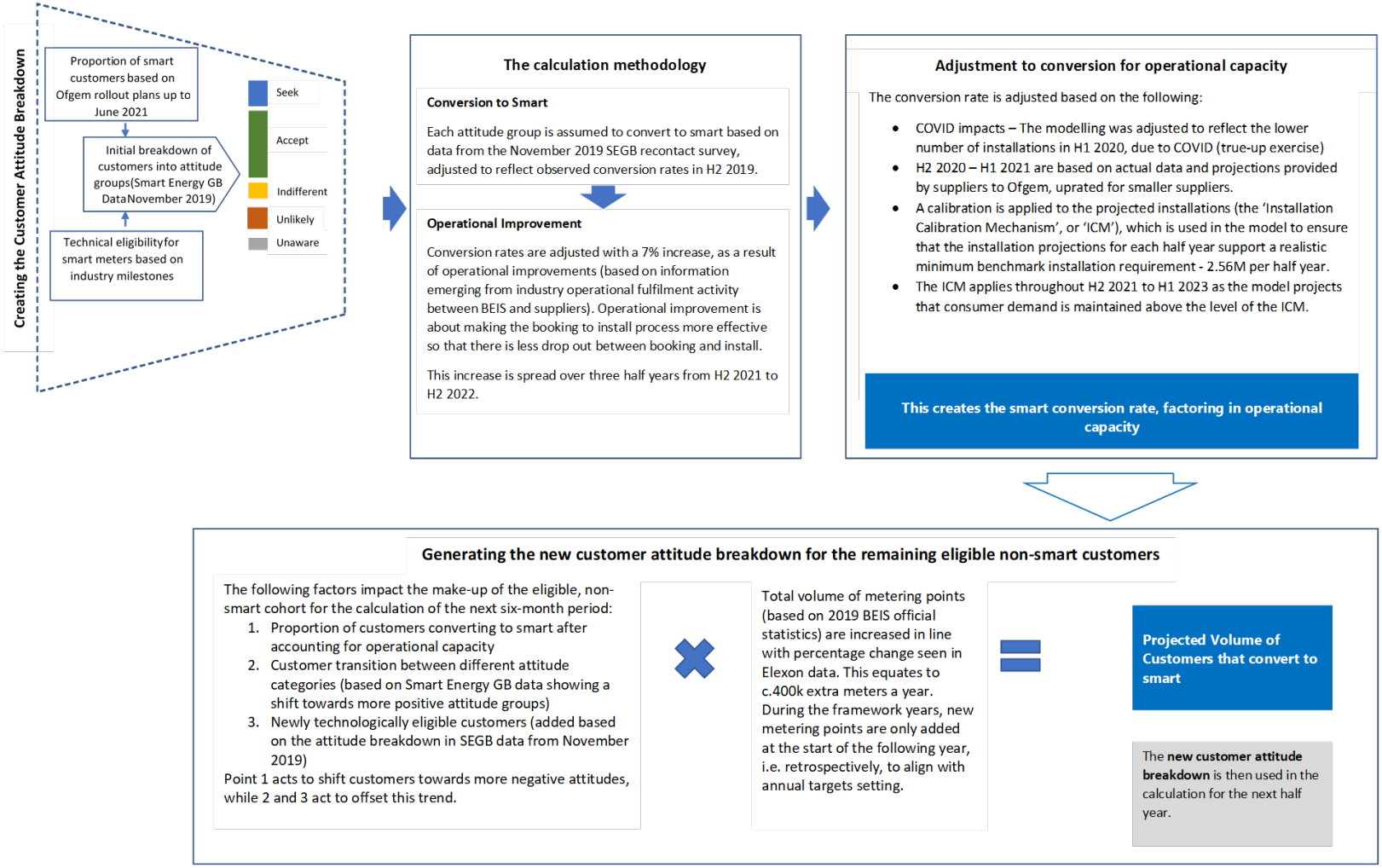
41. We welcome the detailed feedback from stakeholders on the initial modelling approach and recognise that the feedback provided a means to improve the modelling reliability and the development of a policy framework that works across industry. We have therefore taken these concerns on board in developing a revised model to support this new consultation. The updated model is adapted from the one provided by energy suppliers during the 2019 consultation, namely a model based on the rates at which eligible consumers are converted to smart meters. The revised model also considers specific adjustments to account for the impact of COVID-19 and is supported by the most recent available evidence.

42. Figure 1 on page 21 provides a high-level illustration of how the model works, and the main parameters underpinning our projections. Further details on the model approach can be found at Annex B.
43. Our latest analysis is based on the rate at which eligible consumers are converted to receive a smart meter installation. This rate is dependent on three key factors:

[26] Smart meter policy framework post-2020 consultation, September 2019
[27] The energy suppliers were British Gas, Bulb, Coop, EDF, E.ON, Shell Energy (formerly First Utility), Just Energy, Npower, OVO, Scottish Power, SSE, Utilita, and Utility Warehouse.

i. **Consumer acceptance** – in order for the energy supplier to convert a given eligible customer, they need to be sufficiently positive (or indifferent) towards smart metering to permit an installation.
ii. **Operational fulfilment** – once a customer is both eligible and willing, it is then up to the energy supplier to fulfil their installation promptly and effectively, so that the opportunity is not lost.
iii. **Operational capacity** – the potential demand for installations calculated from (i) and (ii) has been calibrated in line with a current market installation capacity to support a reasonable floor from which to calculate the tolerance levels.

Figure 1: Model Diagram



Assumptions

44. This section gives a high level overview of the main assumptions used to project installations numbers for the extension of the ARS obligation (to 30 June 2021) and the first two years of the new Framework (1 July 2021 to 30 June 2023). Further detail on assumptions has been included in Annex B.

Installations levels during 2020 and January – June 2021 (first half (H1) 2021)[28]

45. We have used actual installation data from BEIS official statistics for large energy suppliers in the first and second quarters of 2020 (Q1 and Q2 2020).[29]

46. The smart meter coverage between H2 2020 and the end of H1 2021 is based on large energy supplier installation forecasts provided to Ofgem in November 2020, adjusted for smaller energy suppliers. Further details are provided in Annex B. This data shows that the smart meter coverage should reach 47.2% by June 2021. This data includes energy suppliers' current expectations of the implications of COVID-19. On this basis, we have not made further adjustments to account for COVID-19 and the potential effect of the additional restrictions across Great Britain, other than the impact already implicit in energy suppliers' forecasts and current levels of installations. At this stage we are observing good levels of installations supported by the mature approach industry now have in dealing with local and national restrictions. We have therefore not included an enduring adjustment to account for additional consequences on the installation projections during H2 2020 and H1 2021. However, we will continue monitoring available information and will update our model with the most up-to-date figures ahead of our Government response planned for spring 2021.

Installations for the first two years of the new Framework

47. The first year of the Framework begins on 1 July 2021 (H2 2021). Installations from this point onwards are projected based on customer attitude data, as described in the model diagram in Figure 1, then adjusted by a calibration mechanism to account for operational capacity (see paragraphs 51-53). Eligible non-smart customers are split into the customer attitudes of seek, accept, indifferent and unlikely to take up based on data provided by Smart Energy GB. For customers with newly eligible meters (i.e. meters that are newly technically eligible to convert to smart in that half year) we assume that their attitudes mirror those shown in latest Smart Energy GB data in November 2019. We make this conservative assumption because these consumers may have been targeted already, despite not being eligible for smart meters. On this basis, their attitude breakdown is assumed to be similar to the rest of the market.

48. Each of these attitude groups has a corresponding conversion rate taken from the Smart Energy GB recontact survey,[30] which has been adjusted to reflect observed conversion rates in 2019. Over time, as the more positive attitude groups convert more quickly, the overall non-smart population trends towards the more negative groups and overall conversion rates begin to drop. However, observations from the Smart Energy GB recontact survey also suggest that

[28] This period corresponds to the All Reasonable Steps extension confirmed in the June 2020 Government Response.
[29] Smart metering statistics, June 2020
[30] Smart Energy GB, Re-contact survey – wave 6, November 2019 (unpublished). Please note we have not used the May 2020 survey as the impact of the COVID19 pandemic skewed the figures and then we will be double-counting the impact in our projections.

customers move between attitude groups, which offsets some of the reductions in the positive attitude groups. Any customers with newly eligible meters are added based on the attitude breakdowns in November 2019, which feeds into the attitude breakdown for the following half year. These conversion rates include the impact of operational factors so, as these improve, we would expect an improvement in conversion. We have also included an improvement in operational fulfilment, which is explained below.

49. In H1 2021, the vast majority of technical issues relating to meter installations will have been resolved. Eligibility is anticipated to be 94% in H1 2021, rising towards 99% in H1 2022 to recognise that Alt HAN starts to be delivered during H2 2021. See Annex B for further details on these assumptions.

50. Subject to consultation, the BEIS rollout projections that support this consultation will be used to set the tolerance levels from which individual energy supplier annual installation minimum requirements will be calculated. As explained above, in line with previous consultation stakeholder feedback that the primary constraint on the rollout is consumer demand, the BEIS rollout projections uses a consumer attitude-based conversion model to generate installation numbers for each half year period. This means that the model projects installations based on consumer demand and assumes that this demand can be fulfilled. The reduction in installations in 2020 (particularly in Q2) caused by the COVID-19 response, alongside noted increases in consumer smart eligibility in 2021, generates a large number of Seek/Accept consumers ready to be converted to smart during the first two years of the framework. This arrangement of large numbers of non-smart customers in the model waiting to be converted to smart generates high volumes of projected installations and if these flowed through directly to the tolerance levels without being calibrated for market installation capacity they would potentially generate unrealistic minimum annual targets for energy suppliers.

51. To address this, we have applied a calibrating mechanism to the installation projections generated by the consumer attitude-based conversion model. This Installation Calibration Mechanism (ICM) applies only in situations where the consumer conversion model projects meter installations at a rate above levels that the market has demonstrated it can successfully complete currently and historically. In such a scenario, the ICM – rather than the conversion model – directly sets the tolerance levels from which individual energy supplier annual installation minimum requirements will be calculated. In effect, the ICM, operates as a safety net to ensure any projections generated by expected consumer demand are supported by the market operational capacity, thus avoiding unrealistic minimum targets based on a flow of unconstrained consumer demand. It is important to note that the ICM does not represent an upper limit on the operational installation capacity of the market; rather it is used in the model to ensure that the installation projections for each half year support a realistic benchmark and set reasonable minimum installation requirements, based on proven underlying market installation capacity. The ICM has been set at 2.56 million installations in each half year of modelling. Annex B gives more detail on how the ICM is calculated and the evidence used to validate the outcome of these calculations. The ICM should not be viewed as a restriction on energy suppliers who can install above their minimum installation target if their operational capacity allows them to do so. In fact, we expect energy suppliers to increase their operational capacity over time, where needed, to meet consumer demand, including through improvement (and, in some cases, expansion) in energy suppliers' smart meter installation operations.

52. If the consumer conversion model projects installations below the level defined in the ICM, then the conversion model will set the tolerance levels from which individual energy supplier annual installation minimum requirements will be calculated.

53. Based on the modelling set out in this consultation, the ICM applies throughout the two year period from H2 2021 to H1 2023, as the model projects that consumer demand is maintained above the level of the ICM, hence the ICM defines the tolerance levels.

54. An assumption around improvements in operational fulfilment is spread over three half years between H2 2021 and H2 2022, which raises average market conversion rates by 7% by H2 2022. This is based on information provided by large energy suppliers during bilateral meetings with the Programme relating to the average improvements in operational fulfilment they expect to achieve, in addition to improvements demonstrated by some energy suppliers to date. It also considers the lead time for introducing improvements into processes. As the tolerance levels are driven by the ICM during the two year period modelled, the improvement in operational performance has no impact on the projections that flow from the model over this same period.

55. As explained in paragraph 8, we want to ensure that targets are proportionate and appropriate to drive a market-wide rollout. On that basis, our proposal in this consultation only covers targets for the first two years of the Framework. In line with our intention to carry out a mid-point review, we will consult on targets for the third and fourth year of the Framework following this review. This review will take into account the most up to date information available at the time, including the impact of improvements in suppliers' operational fulfilment and the effect of policy incentives which will be introduced gradually and in line with the overall progress in the rollout.

Projected outcome and sensitivity analysis

BEIS rollout projections

56. As explained in the previous section we have updated the assumptions underpinning rollout projections in line with the most up-to-date evidence available, including observed COVID-19 impacts. However, as we noted in our June 2020 Government response, not all consumer attitudes towards smart meters are strongly held and can change over time.[31]

57. The June 2020 Government response also conveyed our commitment to support the installation of smart meters by encouraging consumer uptake with the introduction of relevant policy measures, the implementation of more targeted and tailored engagement with specific consumer groups, and the improvement of energy supplier operational performance. We anticipate that all of the above will generate more optimistic scenarios supporting higher levels of consumer uptake ambition than currently set out by the projections in our model.

58. However, at this stage, there is insufficient evidence to quantify the impact these measures will have on the rollout in the longer term and on that basis, they have not been included in the current projections.

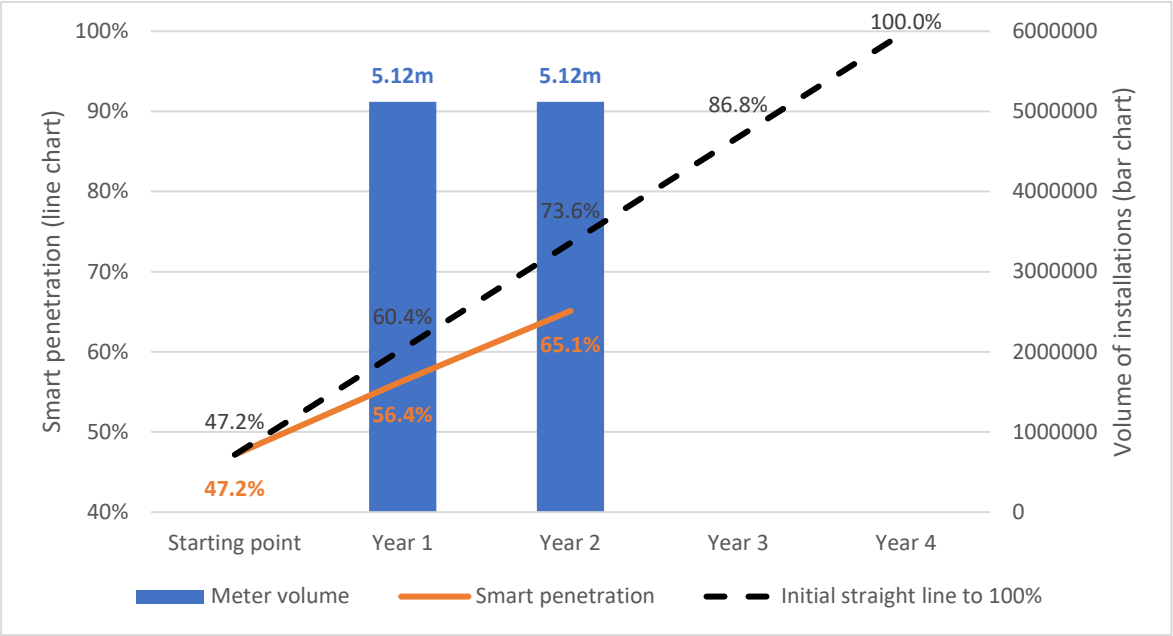
59. Achieving rollout completion as soon as practicable remains Government's overall objective, consistent with supporting the cost-effective delivery of Net Zero. As such, and as already indicated in the June 2020 Government response, we will, during the second year of the Framework (1 July 2022 to 30 June 2023) review the model and underpinning assumptions in line with prevailing market conditions and most up to date evidence at the time. This review, followed by a further consultation, will allow us to project the trajectory towards the last year of the Framework based on robust up to date evidence. This will ensure that the tolerances for the

[31] Smart Energy GB, Re-contact survey – wave 6 November 2019 (unpublished).

last two years of the Framework, from which targets will be set, are realistic, whilst seeking to maintain the necessary ambition to complete the smart meter rollout as soon as practicable.

60. Figure 2 below shows the BEIS rollout projections based on the modelling approach described in the previous section. The outcome is presented in terms of smart meter penetration at the end of each Framework year against a trajectory to 100% at the end of the Framework.

Figure 1: BEIS rollout projections for smart penetration, installations, and aspirational line to 100%



61. The blue bars represent the minimum smart installations projected each year based on the BEIS rollout projections, representing a reasonable minimum installation number for industry and therefore defining the tolerance levels across industry. We are assuming a total of 55 million metering points across the whole market, (i.e. including all large, small, domestic, and non-domestic suppliers), increasing by c.400,000[32] meters a year. During the first two years of the Framework, new metering points are assumed to be added at the end of each year. This is to reflect that energy suppliers' requirements will be set at the start of the Rollout year and new metering points will not be reflected until the next Rollout year. Further details on how this has been modelled can be found in Annex B.

Sensitivity analysis

62. We have undertaken a sensitivity analysis to determine how sensitive the overall projections for smart meter coverage are to changes in individual assumptions and the impact of these changes (individually and combined) on the smart coverage expected under the BEIS rollout projections. Details of this analysis can be found in Annex B.

[32] Based on the observed percentage change in Elexon data.

Questions

1. Do you agree that the key drivers of the model should be consumer acceptance, operational fulfilment and operational capacity? Please provide rationale for your answer, supported with relevant evidence.

2. Do you agree with the assumptions used to reach the starting point of the new Framework i.e. the assumptions used to project the smart meter coverage before the start of the new Framework in July 2021? Please provide rationale for your answer, supported with relevant evidence.

3. Do you agree with our proposal to model the average smart meter coverage only for the first two years of the new Framework, given the uncertainty across the four-year period? Please provide rationale, supported with relevant evidence.

4. Do you agree with the assumptions used to project the first two years of the new Framework, i.e. 1 July 2021 to 30 June 2023? Please provide rationale for your answer, supported with relevant evidence. *Note that further details on assumptions can be found in Annex B.

Tolerance Levels and Targets

Annual installation targets policy proposal

63. We need to ensure that any tolerance levels proposed in this document are proportionate and reasonable, recognising that the proposed minimum installation numbers need to be achievable. However, we anticipate that the conditions exist for energy suppliers to go beyond these minima. We consider the BEIS rollout projections show a reasonable and realistic scenario for the first two years of the Framework. As explained in the section above, the assumptions underpinning this model are based on the most recent available data and observed evidence, including the impact of COVID-19 restrictions and the impact of COVID-19 in subsequent operations and consumer attitudes. Projections beyond the first two years will be difficult to support with firm evidence at this stage given the uncertainties surrounding some of the key assumptions, particularly with regards to the evolution of consumer attitudes and its translation into conversion rates. As stated previously, targets for the third and fourth years of the Framework will be consulted on following the conclusion of a review during the second year of the Framework, where we will update the projections using the most recent data available.

64. For these reasons, this consultation focuses on the proposal for tolerance levels and resulting targets for the first two years of the Framework, aligning with the outcome of the current BEIS rollout projections. We anticipate that more optimistic scenarios than our proposed minimum installation requirements for the first two years of the Framework could be supported by the following:

    i. The impact of policy incentives on consumer acceptance (which are not included in the current projections and therefore could provide some positive upside). The June 2020 Government response included commitments to take forward a number of policy measures that we consider will positively impact smart meter uptake and support energy suppliers to achieve their targets. We will bring forward proposals in accordance with the progress of the overall rollout and improvements in energy supplier operational fulfilment. As outlined in our response to the consultation some of these measures are contingent on the remaining technical barriers being overcome and improved operational fulfilment by energy suppliers.

    ii. Further improvements in energy suppliers' operational performance (above those already factored into our projections) which will deliver additional installations. The Government is committed to supporting energy suppliers in enhancing their consumer engagement and operational fulfilment strategies to improve their installation performance. This support will continue to take the form of industry good practice identification and sharing as well as the relative benchmarking of supplier performance to demonstrate improvement opportunity.

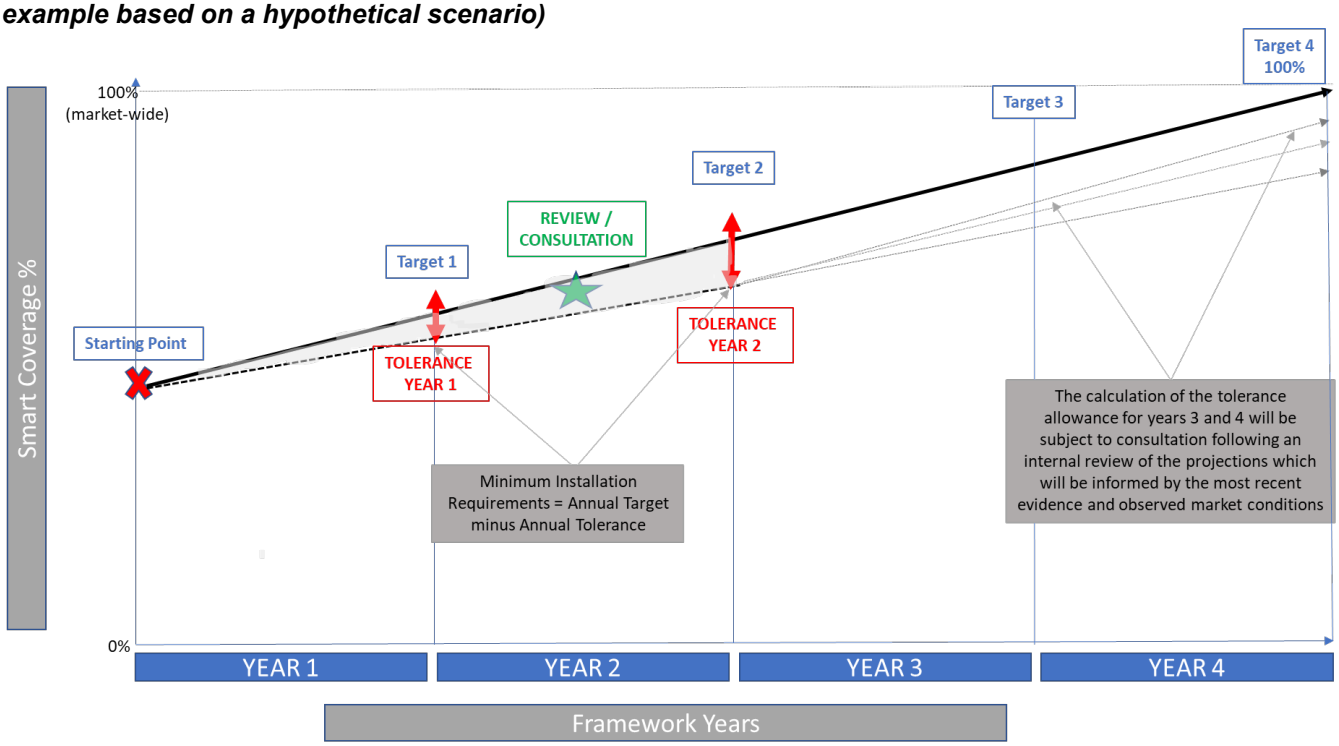
    iii. An improvement in consumer experiences and positive word of mouth. To date we have seen a clear impact of negative PR,[33] which is easing as technical issues are resolved and eligibility increases (e.g. enrolment of SMETS1 meters).[34] We would expect further

[33] Smart Energy GB econometrics shows that if negative PR is reduced, people are more likely to search for information online on how to book a smart meter installation. Therefore, less negative PR would improve customer attitudes.
[34] Evidence from the Smart Energy Outlook (November 2019) suggests that 37% of non-smart consumers have a concern about smart meters. Technical and logistical concerns were the most commonly cited (17%). Concerns over interoperability/switching are the most mentioned technical concern (9% of all non-smart consumers with a concern).

enhancements from improved energy supplier operational performance, as poor installation experience can be an important source of negative media coverage.

65. Figure 3 below, illustrates our proposed approach to this consultation, where only tolerance levels for the first two years of the Framework are being consulted upon, for the reasons identified above. These levels, once confirmed, will set the basis to calculate the minimum installation requirements energy suppliers need to meet under the new obligation. Tolerance levels for years three and four will be confirmed following a further consultation planned during Year 2 of the Framework. For the avoidance of doubt, the minimum installation requirements after the application of tolerances constitute the legal obligation that energy suppliers are required to meet.

Figure 3*: *Presentation of annual targets and tolerance levels in scope of this consultation (illustrative example based on a hypothetical scenario)



Calculation of tolerance levels for years one and two of the Framework

Consideration of stakeholder feedback on the initial proposal (September 2019 consultation)

66. In the September 2019 consultation,[35] we proposed an overall tolerance level of 15% which would determine a minimum smart coverage required at the end of the monitoring Framework period of 85% for every energy supplier.

67. In the consultation we also recognised that delivery challenges faced by energy suppliers were likely to change over time in line with changes in market conditions and therefore could become harder as smart meter coverage reached higher levels. On this basis, we invited respondents to suggest different ways of applying a tolerance regime that allowed flexibility, whilst ensuring a steady trajectory towards rollout completion (i.e. 100% coverage).

68. Our initial proposal in 2019 suggested that the tolerance allowance should increase linearly year on year towards the final allowance of 15% at the end of the Framework, creating tolerance cones which would have been applied individually for each energy supplier. This was illustrated in the Analytical Annex to the consultation.[36] The proposed methodology envisaged an equal tolerance level allowance for each year (3.75%), growing linearly towards the overall allowance of 15% as follows:

    - Year 1: 3.75% (= 15%*1/4)
    - Year 2: 7.5% (= 15%*2/4)
    - Year 3: 11.25% (= 15%*3/4)
    - Year 4: 15% (= 15%*4/4)

69. Some respondents suggested an alternative methodology where a consistent level of tolerance was applied to each year of the Framework (e.g. 15% tolerance in each year). In our view, this proposal would have permitted energy suppliers to do too little in the first years of the Framework (as some energy suppliers' rollout curves would be above the minimum installation requirements as a result of such a generous tolerance during the first years). We discounted this option as we did not consider it an appropriate approach to driving installations towards completion and felt it would introduce an unrealistic installation requirement for the final year of the new Framework.

70. As part of the 2019 consultation process, some energy suppliers also suggested that they would aim for the minimum number of installations required in each year. This means that instead of aiming for the higher targets (defined by the trajectory towards 100%), they would install the minimum number of smart meters allowed by the tolerance level for that year (target minus tolerance). Aiming for the minimum target would mean that at the end of a given year, the smart coverage achieved by the energy supplier would be lower than the one defined by the initial trajectory towards 100%. On that basis, the application of tolerance levels (without resetting the trajectory from the new starting point) would become overly generous for the following year. If this approach were to be continued, the tolerance level for year three would also overstate the allowance originally permitted, thus decreasing the minimum number of

[35] Smart meter policy framework post-2020 consultation, September 2019
[36] Smart meter policy framework post-2020 consultation, Annex 4: Analytical evidence, September 2019

installations required for that year. Therefore, that approach would ultimately create a "hockey stick" installation curve which would delay a very large proportion of the delivery of the rollout until the last year of the Framework. This would likely render the last year of installations unachievable and unreasonable, therefore countering our objective of completing the rollout as soon as practicable.

71. Based on the consideration of these proposals and stakeholders' feedback during the initial consultation, we have concluded that:

    i. the methodologies to calculate and apply tolerance levels we initially proposed, and that relied on setting a final tolerance level in year four (and then working backwards to calculate the tolerance levels for the previous years), are not applicable for the proposal under this consultation as we are consulting on targets only for the first two years of the Framework;

    ii. the same tolerance level across the Framework is unsuitable and therefore we do not consider it as an appropriate option to drive delivery of the rollout under the new Framework;

    iii. if we increase the tolerance by a set amount in each year (applying a linear growth) without resetting the starting point, and therefore without re-setting the trajectory towards 100%, this approach leads to a "hockey stick" rollout curve creating unachievable targets for energy suppliers in the last year of the Framework.

On this basis we have considered alternative options.

Options assessment for tolerance levels for years one and two of the new Framework

72. Under our current proposal, tolerance levels are calculated as the difference between the BEIS rollout projections and the annual path to market-wide smart coverage, which remains our overall ambition. The levels are justified by their alignment to the BEIS rollout projections, which represent the average smart meter penetration curve expected to be achieved by energy suppliers. We have considered two options within this methodology:

- **Option 1:** The tolerance is calculated as the difference between the market-wide BEIS rollout projections and a straight line drawn from market average coverage on 1 July 2021 (the starting point) to market-wide rollout (100%) on 30 June 2025 (end of the Framework). This generates a tolerance value for years one and two.

- **Option 2:** The tolerance is calculated in Year 1 as the difference between the market-wide BEIS rollout projections and a straight line drawn from market average coverage on 1 July 2021 to market-wide rollout (100%) on 30 June 2025 (as per option 1). In the second year, the tolerance is recalculated as the difference between the market-wide rollout profile and a straight line to 100% re-drawn from the market coverage reached if energy suppliers deliver the minimum requirement in Year 1.[37]

[37] For illustrative purposes, this methodology could be repeated for years three and four, but the tolerance values for these years are not subject to this consultation and are therefore not described further.

73. Under both options the market average rollout profile (based on BEIS rollout projections) determines the tolerance levels by subtracting the estimated annual smart penetration from a straight line to 100%. The differences in tolerances between options one and two resides in the re-setting of the line to 100% in Year 2 under option 2. An illustrative example can be seen in Table 1 below.

Table 1 – Tolerance profiles under options 1 and 2

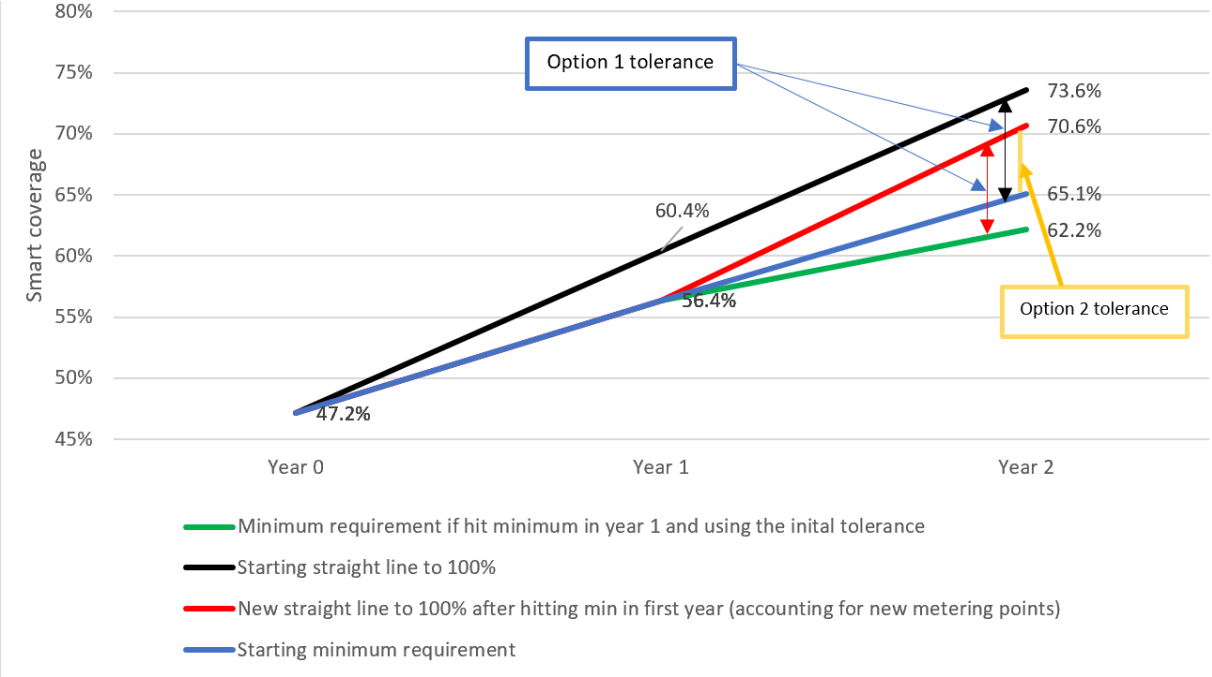
	Starting point	End of Year 1	End of Year 2
Smart Meter market-average coverage	47.2%	56.4%	65.1%
Initial straight line to 100% (in Y1)		60.4%	73.6%
Option 1 tolerances		4.0%	8.5%
New metering points		+400k meters	
Smart Meter market-average coverage accounting for new metering points at the start of Y2 (new meters will decrease smart coverage slightly)		56.0%	
Re-set line to 100% if only minimum requirements hit in each year		60.4%	70.6%
Option 2 tolerances		4.0%	5.5%

74. Under both options the installation numbers are front-loaded and are expected to reduce progressively in line with our assumptions that installations will decrease towards the later years of the Framework, as we assume those with more positive attitudes receive smart meters earlier and are thus removed from the pool.

75. As outlined in paragraph 71, some energy suppliers in response to the 2019 consultation suggested that they would aim for the minimum number of installations required in each year, rather than meeting higher targets in line with a straight line trajectory towards 100% coverage. If energy suppliers under option 1 chose only to install the minimum requirements this creates a “hockey stick” effect and counters the Programme’s overall ambition to deliver the rollout as soon as practicable and on a reasonable overall trajectory.

76. Option 2 reflects the scenario where each energy supplier achieves only the minimum installation requirements during Rollout Year 1. As a contingency measure to allow for this, we consider it necessary to re-draw the line to 100% from the smart coverage point energy suppliers achieved during Year 1 to calculate their tolerance for Year 2. Graph 2 below illustrates this for years one and two of the Framework.

Graph 2 – Illustrating how option 1 creates a hockey stick of installations and how option 2 corrects this anomaly (smart coverage levels are based on a supplier at the projected marker average and is for illustrative purposes only)



Minded-to position

77. On the basis of this analysis, we have discounted option 1 and are proposing to set the tolerance levels on the basis of option 2. Using the BEIS rollout projections as a baseline, **we propose tolerance levels of 4.0% in Year 1 and 5.5% in Year 2 against the trajectory towards 100%.** This option ensures that the installation requirements are feasible, whilst keeping the rollout within an ascending trajectory towards completion.

78. On a market-wide level, based on our current projections of the starting point on 1 July 2021, these proposed tolerance levels would see the rollout reaching a minimum smart coverage of c.56% by the end of Year 1 and a minimum smart coverage of c.65% by the end of Year 2. Please refer to Table 1.

79. In practice, the proposed tolerance levels for Years one and two of the Framework will be converted into a minimum installation requirement for each energy supplier (because individual energy suppliers have made varying levels of progress on smart metering to date). For example, an energy supplier starting with 50% smart meter coverage on 1 July 2021 (i.e. starting point) would be set a minimum installation target such that they reach 58.5% smart meter coverage in the first year of the Framework (a 12.5% increase less the 4.0% tolerance). This calculation would be repeated in the second year with the energy supplier's new coverage level and applying the Year 2 tolerance (5.5%) to calculate the minimum installation requirements for Year 2 of the Framework.

Value of T_y in the formula to calculate annual targets for years one and two of the Framework

80. In the June 2020 Government response to the Smart Meter Post 2020 consultation we confirmed that under the new Framework energy suppliers' annual installation targets would be calculated on the basis of annual tolerance levels which would define minimum annual installation requirements. These minimum requirements would be binding and subject to action by the regulator, in line with its enforcement guidelines.

81. As signalled in the June 2020 Government response, we propose that the percentage tolerance allowance should be universal i.e. the same for every energy supplier, regardless of their specific characteristics. Under our proposals the tolerance levels would be set as a fraction of each energy suppliers' market share. This means that when applied to individual energy suppliers, the resulting tolerance allowance will be relative to their customer base.

82. In practical terms the calculation of the minimum targets for annual installations for each energy supplier for each Rollout Year would be based on:

    i. the number of premises that the energy supplier supplied on the day immediately preceding the Rollout Year and in which a smart metering system or Advanced Meter has yet to be installed;

    ii. the total number of premises supplied by the energy supplier on the last day immediately preceding the Rollout Year and

    iii. the universal tolerance percentage for that Rollout Year.

83. The calculation of the minimum required number of installations is based on the following formula (see paragraph 37 for definitions):

$$Ny = \left(\frac{1}{ay} RSMSy\right) - Ty$$

Where $\mathbf{T_y}$ means a number representing a tolerance level, which shall have the value that is determined, or calculated in accordance with a methodology, specified in a document published and issued by the Secretary of State for the purposes of Conditions 33A and 39A, subject to consultation.

84. On the basis of our recommended tolerance levels in paragraph 78, we propose that the calculation of Ty for Years 1 and 2 of the Framework should be as set out in Table 4 below:

Table 4: Value of T_y for Years One and Two of the Framework

Framework Year 1	**Tolerance Level: 4.0%**
The value of T_y for each licensee for the First Rollout Year (T_1) shall be equal to **$0.04*MS_1$**	
Where:	
For the purposes of Standard Condition 33A of gas supply licences	
MS_1	means, in relation to each licensee, the total number of Domestic Premises and Designated Premises in respect of which that licensee is the Relevant Gas Supplier on the date which immediately precedes the start date of the First Rollout Year.
For the purposes of Standard Condition 39A of electricity supply licences.	
MS_1	means, in relation to each licensee, the total number of Domestic Premises and Designated Premises in respect of which that licensee is the Relevant Electricity Supplier on the date which immediately precedes the start date of the First Rollout Year.
Framework Year 2	**Tolerance Level: 5.5%**
The value of T_y for each licensee for the Second Rollout Year (T_2) shall be equal to **$0.055*MS_2$**	
Where:	
For the purposes of Standard Condition 33A of gas supply licences	
MS_2	means, in relation to each licensee, the total number of Domestic Premises and Designated Premises in respect of which that licensee is the Relevant Gas Supplier on the date which immediately precedes the start date of the Second Rollout Year.
For the purposes of Standard Condition 39A of electricity supply licences.	
MS_2	means, in relation to each licensee, the total number of Domestic Premises and Designated Premises in respect of which that licensee is the Relevant Electricity Supplier on the date which immediately precedes the start date of the Second Rollout Year.

Impact of tolerance levels in practice

Impact of tolerance proposal on different energy suppliers

85. As explained in previous sections of this document, the proposed minimum installation requirements under the new Framework will apply to all qualifying metering points across all energy suppliers, regardless of their size, type or date of entry into the market. We acknowledge there will be delivery challenges and external factors, some common amongst energy suppliers and others specific to each individual energy supplier and their operating model. The tolerance is intended to account for all such external factors. A universal approach reflects our objective to normalise smart meters so they are the default meter used in Great Britain. All customers should be included in the rollout no matter who their energy supplier happens to be, and full participation in the rollout should be a normal core part of every energy supplier's responsibilities. Making specific allowances for specific energy suppliers would be unfair to other energy suppliers, who, in turn, may advocate allowing for claims about their individual circumstances, thereby undermining the basis of the policy intent and Government's commitment to deliver net zero.

86. However, the proposed minimum installation requirements will be set at an individual level using the same formulation and the same tolerance level, with each energy supplier subject to individual minimum targets, based on the energy supplier's progress towards rollout completion at the beginning of the rollout year. On this basis, we have considered how the average smart

coverage, based on BEIS rollout projections modelled across industry, is likely to vary depending on energy supplier specific circumstances. This section considers the impact on the operational achievability of different types of energy suppliers. More detailed analysis has been provided in Annex B.[38]

87. We recognise that the conditions created by COVID-19 have been difficult for energy suppliers who saw their non-emergency installations halted during Q2 of 2020. Some energy suppliers, particularly in the non-domestic sector, reported difficulties in accessing some of their customers as their workplaces and businesses were closed. However, this experience is not universal, with some energy suppliers able to work with their customers to install meters while business premises were closed during this challenging time. Feedback from some domestic energy suppliers has suggested that greater numbers of consumers working from home has enabled them to successfully complete more domestic installations first time. The benefits of smart pre-payment services have also been highlighted as an opportunity to promote uptake. As mentioned in previous sections of this document, it is difficult to predict at this point whether the effects of the pandemic will have an enduring impact and how this impact will manifest on consumers' attitudes going forward. The Government has worked closely with industry and Ofgem to ensure the remobilisation of installation activities in line with latest public advice and safe working guidance. Domestic installation rates have now broadly returned to pre-COVID levels and, despite further COVID-19 related restrictions across Great Britain, we have not seen a significant disruption in installation operations so far. However, we will continue monitoring how the situation evolves and the potential impact on energy suppliers.

Large (domestic) energy suppliers

88. As noted in the analysis in Table 6, Annex B, when we consider industry-wide operational capability, we consider the proposed minimum installation requirements are reasonable. An analysis of individual performances[39] (against installation volumes from 2018, 2019 and 2020) suggests that some energy suppliers will need to improve upon their past performance to be able to deliver the proposed minimum targets under the new policy Framework. However, we do not consider that this means the proposals are unreasonable. For energy suppliers for whom meeting the minimum requirements could be more stretching, there are actions they can take that will materially mitigate this, for example, investing in and improving operational performance, and increasing their installer capacity so it is more proportionate to their customer bases vis-a-vis similar size competitors.

89. We also note that the modelling does not take account of operational improvements in end-to-end fulfilment, where there is margin for significant enhancements by all energy suppliers. If these improvements were delivered, then each energy supplier would be able to deliver additional metering installations from the same number of consumer appointments and the same number of installers as they would have a higher productivity. The Programme is continuing to work with energy suppliers, collecting and giving further feedback to energy suppliers and wider industry (including via the Independent Suppliers Forum) as to how they can improve their productivity. This gives us further confidence that the minimum requirements for this set of energy suppliers are reasonable, as projections are drawing on evidence of improvements that can be achieved provided by industry participants (please see paragraph 54).

[38] Data from the Smart Meters Official Statistics, Q2 2020 as starting point for the calculations
[39] Analysis of individual performances is not available as it contains commercially confidential data.

Small (domestic) energy suppliers

90. The analysis in Annex B indicates that on average small domestic energy suppliers will need to install at a faster rate than they have done historically, which could prove challenging in some cases. However, we do not consider it appropriate to slow down the pace of the rollout to accommodate this group of energy suppliers for the following reasons:

    i. Their historical performance is not a good indicator of whether they can achieve a greater number of installations in the future.

    ii. The majority of small energy suppliers will rely on third party installers to meet their installation requirements. In 2020, the overall market including third-party installers has the capacity to deliver c.6.5 million installations (assuming an installer base of 7,500, 210 working days a year and a productivity rate of 4.1 installations per day based on benchmarking of a number of large suppliers over the past 18 months). This number is significantly above the rollout projections for Years One and Two of the new Framework and means that there is sufficient installer capacity in the overall market to meet additional installations without compromising consumer experience.

    iii. We would expect that, given their lower smart meter coverage, a higher proportion of the customers of these suppliers than the market average remain in positive attitude groups which translates into more opportunity to convert them, and as relatively newly acquired customers they may be more likely to be engaged.

91. On the basis of these arguments, and the recent evidence on their installation rates,[40] we consider that small energy suppliers can increase their installation rates to the level required under the new Framework.

Large (non-domestic) energy suppliers

92. Annex B indicates that the aggregate minimum requirement under the new Framework for these energy suppliers is more than double what they have achieved historically. However, we consider that past performance should not be taken as an indicator of what these energy suppliers can achieve under the new Framework, for a number of reasons:

    i. The large domestic energy suppliers supply a large majority of the non-domestic market (c.70%). These energy suppliers have focused on installing smart meters to their domestic customer base whilst the meter variants more widely needed for non-domestic consumers were developed. This has slowed down the progress of the non-domestic rollout curve.

    ii. With SMETS2 meter variants widely available from multiple meter manufacturers and now being installed by energy suppliers, non-domestic energy suppliers can now target micro-businesses (which make up some 70% of non-domestic customers) with a SMETS2 solution, meaning that each energy supplier will have a pool of non-domestic customers that they have not previously been able to engage on smart metering. We are also confident that these large energy suppliers have substantial experience, expertise and capabilities – whether that is from AMR installations, or for many, their domestic smart rollout - that could be applied to supporting non-domestic SMETS2 installations to the required levels.

[40] Information on installation rates is obtained from the Data Communications Company (DCC)- Technical Operations Centre (not publicly available).

iii. Coverage in the non-domestic sector is currently slightly ahead (in percentage terms) due to the number of advanced meters which were installed prior to the mass rollout of smart meters. This means that these energy suppliers have a higher starting point towards the installation trajectory towards 100%.

93. In the June 2020 Government response, we acknowledged the concerns raised by some of the respondents about the specific circumstances and delivery barriers affecting non-domestic large energy suppliers. Aside from the technical issues which are now resolved, or will be resolved by the time the new Framework comes into place, the other challenge relates to consumer engagement. BEIS scoping of available evidence[41] suggests that awareness of smart metering amongst microbusinesses is increasing over time and is expected to continue to increase as the Smart Energy GB microbusinesses campaign continues. In addition, evidence suggests that the smart meter "offer" can be the point at which awareness is gained, meaning that pre-existing awareness (whilst helpful) does not determine conversion alone.

94. Evidence also suggests that microbusinesses can be somewhat 'passive' energy consumers and may not proactively drive self-awareness. Given this, proactive communications by Smart Energy GB and energy suppliers will be important. Therefore, it is within the control of energy suppliers to drive microbusiness campaigns and test new channels/messaging as needed to secure installations.

95. Finally, there is currently limited evidence of hard microbusiness refusal. There are businesses that may initially be deterred from getting a smart meter due to the perceived difficulty of installation or gaining more information about smart meters. However, evidence[42] suggests that these may be perceptions rather than deep-rooted concerns at this point in the rollout. Despite this, these businesses are unlikely to proactively seek further information, once again reaffirming the importance of proactive communications and reassurances by Smart Energy GB and energy suppliers to drive up installations.

96. Overall, there is limited evidence at this stage to suggest that consumer acceptance is a specific barrier to non-domestic installations, particularly as efforts have not yet been exhausted to convert consumers. BEIS expects the evidence base in this area to grow as SMETS2 installs ramp up and industry tests new and innovative approaches.

Small (non-domestic) energy suppliers

97. As the analysis in Annex B suggests, small non-domestic suppliers are starting from a higher coverage (c.54.8% in 2019) than their larger counterparts. These energy suppliers have a higher proportion of advanced meters, as they typically supply to customers with multiple sites and metering points (i.e. larger SMEs rather than microbusinesses). Whilst their performance during 2019 was lower than what is proposed to be needed under the new Framework, they achieved double this number in 2018, before the non-domestic consumer choice policy was implemented. This policy required that only SMEs and not microbusinesses could be offered an advanced meter as well as a smart meter. Due to the characteristics of the businesses supplied in this segment, we expect that advanced meters will continue to be offered alongside the new

[41] Research available from Citizens Advice, Ofgem and Smart Energy GB.
[42] Smart Energy GB 2017 qualitative research (unpublished)

SMETS2 meter variants, where it is appropriate to do so under the consumer choice policy. We expect these energy suppliers to be able to transfer their expertise from offering only advanced meters to offering SMETS2 devices and deliver at pace to newly eligible customers.

Impact on consumers

98. During our initial consultation process, some respondents raised concerns regarding the impact that a framework based on annual targets could have on energy consumers. They questioned whether it would disadvantage different consumer segments leading to a poorer consumer experience, particularly for consumers in vulnerable circumstances.

99. Smart meters bring significant benefits for all consumers, improving consumer experience and empowering them to take control of their energy use. Recognising that some consumers may have particular needs during the installation process, or require additional support, appropriate consumer protection safeguards are in place. In particular, energy suppliers are required to comply with the Smart Metering Installation Code of Practice (SMICoP). This code is designed to ensure that consumers have a positive installation experience, including by requiring energy suppliers to offer tailored energy efficiency guidance and meet the needs of vulnerable consumers.

100. In addition, Smart Energy GB has a specific objective to assist vulnerable, prepayment and low-income consumers in realising the benefits of smart metering. The importance of this objective is emphasised in the Government response to the consultation on coordinated consumer engagement,[43] published alongside this document, which sets out how Smart Energy GB needs to evolve to continue supporting the rollout. Respondents to the consultation supported our view that it is appropriate for Smart Energy GB to review the scale and scope of their activities to assist those who may experience barriers to engaging with smart metering over the next phase of the rollout. We also welcome the recent work undertaken by Smart Energy GB to develop a new vulnerability strategy, which outlines how the needs of these audiences will be considered across all of Smart Energy GB's activities. As indicated in the coordinated consumer engagement Government response it will be important for Smart Energy GB to consider an enhanced focus on supporting domestic consumers in vulnerable circumstances going forward.

101. We consider that the new Framework will motivate energy suppliers to engage their entire customer base to secure smart meter installations, adapting their communications and drawing on materials developed by Smart Energy GB.

Potential impact of market features on the tolerance proposal

The impact of churn

102. As noted in the June 2020 consultation response, the new Framework ensures energy suppliers' investment in individual smart meter installations are recognised each year. This is a positive departure from the current "all reasonable steps" obligation where targets are assessed on levels of smart coverage, under which energy suppliers are more susceptible to the impacts

[43] Smart meter coordinated consumer engagement, November 2020.

of in-year churn.

103. Under the new Framework, an energy supplier can only meet their licence obligation by installing at least the minimum number of smart meters within a given rollout year. Churn within the year is accounted for at year-end in the difference it makes to the end-year coverage. On this basis, we recognise that churn will have an impact on the minimum installation requirements in subsequent years of the Framework. The proportion of smart metering customers that an energy supplier loses or gains through churn will depend on a range of factors including, for example, the overall level of smart coverage in the market at a point in time, pricing, customer service levels and innovative tariffs offerings linked to smart meters. Energy suppliers can influence switching volumes through their pricing and customer retention strategies to seek to dampen the impact of churn on their level of smart metering coverage. In addition, the impact of losing or gaining smart metering customers through churn will lessen as the rollout progresses and a higher proportion of customers have smart meters. We do not consider there are further specific actions we should propose to mitigate the impact of churn beyond what is proposed within the overall new Framework.

The impact of the "Supplier of Last Resort" (SoLR) process

104. During our initial consultation process, we also considered the impact of the new Framework on the SoLR process operated by Ofgem as part of the wider discussions on churn. Some stakeholders suggested that fixed tolerances could discourage energy suppliers taking part in the SoLR process.

105. We confirmed in the June 2020 Government response that when an energy supplier gains customers via a SoLR process, this will not impact on their in-year target. Similarly, they will not be expected to inherit the in-year target of the company they have absorbed through the process. However, we recognise that it will influence their minimum requirements for subsequent years as it will increase their customer base in a similar way to churn.

The impact of the default tariff cap

106. The default tariff cap was introduced in 2019 to protect consumers on default tariffs from excessive pricing from energy suppliers. Ofgem is responsible for setting the level of the default tariff cap and for its administration. About half of the households are on a default tariff with the other half on fixed tariffs that are generally priced lower, and so are not capped.

107. Smart metering is a key component of an energy supplier's business and the level of the cap is set according to a calculation that includes an assessment of the efficient cost to energy suppliers of installing smart meters. The use of market average rollout curves for the calculations of the default tariff cap has led to energy suppliers with rollouts ahead of the industry average claiming that they are likely to incur costs larger than the allowance received via the cap. They argue that this inhibits their potential to invest in the rollout, with a detrimental impact on their ability to meet annual targets.

108. In August 2020, Ofgem confirmed that the smart metering allowance[44] within the default tariff cap would be set at £17.12 on a dual fuel basis for consumers with benchmark consumption from 1 October 2020 until 30 September 2021. Ahead of October 2021, they confirmed that they would review the level of the cap including considering whether it is in customers' interests to maintain their current approach of a market average rollout profile, or to use a higher rollout profile than the average.

109. We acknowledge the overlap between these two policies. Both the potential impact of the default tariff cap on the funding available to energy suppliers to invest in the delivery of the Programme, and the potential impact of ambitious annual installation targets on the allowances included for smart meters under the default tariff cap. The size of those allowances, and any changes to them, will have an impact on default tariff customers.

110. As we note above, it is Ofgem's responsibility to set the default tariff cap such that energy suppliers who operate efficiently are able to finance their regulated activities. We appreciate that Ofgem is required to set a single cap level across the market (with variation between certain segments, for instance by payment method), whereas energy suppliers will face individual smart metering obligations under the new Framework. The cost to individual energy suppliers of meeting its smart meter obligations is likely to vary depending (amongst other things) on how far the energy supplier has progressed with its current rollout. Some energy suppliers' actual expenditure could be lower than the amounts provided for by the allowances included for smart meters under the default tariff cap, and some may be higher, for example if an energy supplier is less efficient than its competitors.

111. We acknowledge that the majority of the costs of the rollout are incurred by energy suppliers and there may be variation between energy suppliers in the extent to which they can pass the costs on to their customers. We consider the tolerance levels proposed are necessary to deliver the smart meter rollout as soon as practicable. Setting ambitious but realistic annual installation targets for energy suppliers will continue to drive the investment and momentum needed to achieve the ultimate goal of market-wide smart coverage. The delivery of the smart meter rollout is a key Government commitment to support the transition to a more flexible and resilient energy system. Any delay in the delivery of the rollout will have a detrimental impact not only in the path towards the decarbonisation of the energy sector but also in the transformation of the retail energy market and the realisation of significant benefits for households and small businesses across Great Britain (including for those customers on a default tariff).

Questions

5. Do you agree with using the BEIS rollout projections as the basis for calculating tolerance levels for years one and two of the Framework? Please provide rationale for your answer, supported with relevant evidence.

6. Do you agree that the tolerance level should be applied universally? If not, how do you propose that this could be applied on a fair basis? Please provide rationale for your answer, supported with relevant evidence.

[44] This smart metering allowance provides for the change in smart metering costs for an efficient energy supplier since 2017. Efficient smart metering costs in 2017 are included in the cap's operating cost allowance. There is also a separate allowance for the change in industry charges linked to smart metering since 2017.

7. Do you agree that the formula for the tolerance methodology proposed in paragraphs 79 to 83 of this document gives effect to the tolerance proposals described in this consultation? Please provide rationale for your answer, supported with relevant evidence.

Impact Assessment

112. An impact assessment for this policy proposal set out in this consultation has been included at Annex A. The results suggest that the policy will deliver a net benefit to society of just over £1bn between 2021 and 2034 compared to a counterfactual where only the New and Replacement Obligation (NRO)[45] applies.

113. The impact assessment uses the cost and benefits from the Smart Metering Implementation Programme 2019 Cost Benefit Analysis (CBA).[46] It compares the overall cost and benefit of two scenarios: a counterfactual where smart meters are installed in adherence only with the New and Replacement Obligation and a policy scenario where smart meters are installed according to the modelling conducted to support the tolerance levels set out in this consultation. As more smart meters are installed under the policy scenario than the counterfactual, and each smart meter installation delivers a net benefit to GB, the policy scenario results in a net benefit overall.

[45] The New and Replacement Obligation requires energy suppliers to take all reasonable steps to install a compliant smart metering system where a meter is replaced or installed for the first time, from 30 June 2019. See: Consultation response letter and associated documents

[46] Smart meter rollout: cost benefit analysis 2019, September 2019

Reporting Threshold for Large Energy Suppliers

114. In the June 2020 Government response, we stated that we would consider whether the large energy supplier reporting threshold of 250,000 domestic customers remains appropriate for the new Framework.[47] At the time, we noted Ofgem's minded-to proposal to revise its own smart metering monitoring threshold for large energy suppliers to 150,000 gas and/or electricity customer accounts.[48] We have also confirmed in the Government response to the consultation on future coordinated consumer engagement that we will be lowering the threshold by which domestic energy suppliers fund Smart Energy GB's capital from 250,000 to 150,000 gas or electricity (or both) domestic customer accounts.[49] This decision ensures a proportionate funding model is in place, which aligns with the thresholds of other relevant energy policies.

115. Energy suppliers who are above the large energy supplier reporting threshold are subject to quarterly rather than annual reporting requests. We do not intend to unduly burden small energy suppliers with additional reporting requirements. However, as we acknowledged in the coordinated consumer engagement consultation, the retail energy market has changed considerably in recent years, with many smaller energy suppliers entering the market. Some of these new entrants have acquired significant numbers of customers and offer a range of innovative services, which has contributed to greater diversity and consumer choice. In recognition of these changes, several energy related policies have undertaken reviews of the thresholds in place for energy supplier obligations. For example, as of 1 April 2020, the obligation thresholds for the Energy Company Obligation (ECO)[50] and Warm Home Discount (WHD)[51] were reduced from 200,000 or more domestic gas or electricity (or both) customer accounts, to 150,000. The decision to reduce these thresholds was taken to create a more level playing field for energy suppliers, whilst continuing to protect new and recent market entrants. The Government committed to monitoring the market impacts of this change and indicated that should future ECO and WHD obligations exist, they could have no or minimal thresholds.

116. Under the new smart metering policy Framework, all energy suppliers will have a minimum smart meter installation requirements based on their progress towards rollout completion. Energy suppliers approaching, but not exceeding, 250,000 customer accounts will be expected to install a substantial number of smart meters in each year of the Framework. As such, we consider it appropriate to monitor these energy suppliers more closely, particularly ahead of the review of tolerance levels during the second year of the Framework. In line with the precedents set by thresholds elsewhere, and in light of the market developments that these changes reflect, we propose to reduce the threshold for large energy suppliers' reporting requirements to 150,000 gas or electricity (or both) customer accounts.

117. Additionally, the existing reporting requirements create a threshold for domestic energy suppliers only. The non-domestic retail market has also undergone significant change, with two energy suppliers over the nominal threshold of 250,000 customers. At present, these energy suppliers provide quarterly information to BEIS on a voluntary basis. Whilst we do not consider that this arrangement is at risk, our preference is to amend the licence conditions to remove the

[47] Smart metering policy framework post-2020, June 2020
[48] Statutory consultation on the post-2020 smart meter reporting requirements, October 2019
[49] Smart meter coordinated consumer engagement, November 2020
[50] Energy Company Obligation: ECO3 2018 to 2022, July 2018
[51] Warm Home Discount Scheme 2018 to 2019, June 2018

reference to domestic customers only in the large energy supplier reporting threshold. This would ensure that all energy suppliers above the reporting threshold are treated equally.

118. **We are therefore proposing to amend electricity supply licence condition 43 and gas supply licence condition 37 to reduce the threshold for energy supplier reporting to 150,000 gas or electricity (or both) customer accounts.**

119. Any change to the threshold needs to balance establishing a fair and equitable system with the Government's wider aim to support and improve competitiveness in the energy market. We consider that a threshold of 150,000 gas or electricity (or both) customers achieves an appropriate balance, whilst providing consistency with participation thresholds used in other relevant energy policies. This also aligns with our decision to lower the threshold by which domestic energy suppliers fund Smart Energy GB's capital costs. We note that Ofgem has not yet published its response to its consultation on reporting thresholds but in reaching a post-consultation decision on this issue we would expect to take Ofgem's final position into account, alongside stakeholders' responses to this consultation.

120. Finally, when a large energy supplier holds more than one energy supply licence, we may request that they provide information for all their licensed activity jointly. We understand that Ofgem has taken this approach to energy supplier progress reporting under the current 'all reasonable steps' Framework for some time.

Questions

8. Do you agree with the proposed changes to the reporting threshold for large energy suppliers? Please provide rationale for your answer.

9. Do you agree that the legal drafting in Annex D implements the policy intention proposed in paragraphs 113 to 119 of this document ? Please provide rationale for your answer.

Summary of Questions

1. Do you agree that the key drivers of the model should be consumer acceptance, operational fulfilment and operational capacity? Please provide rationale for your answer, supported with relevant evidence.

2. Do you agree with the assumptions used to reach the starting point of the new Framework, i.e. the assumptions used to project the smart meter coverage before the start of the new Framework in July 2021? Please provide rationale for your answer, supported with relevant evidence.

3. Do you agree with our proposal to model the industry average only for the first two years of the new Framework, given the uncertainty across the four-year period? Please provide rationale for your answer, supported with relevant evidence.

4. Do you agree with the assumptions used to project the first two years of the new Framework, i.e. 1 July 2021 to 30 June 2023? Please provide rationale for your answer, supported with relevant evidence.

5. Do you agree with using the BEIS rollout projections as the basis for calculating tolerance levels for years 1 and 2 of the Framework? Please provide rationale for your answer, supported with relevant evidence.

6. Do you agree that the tolerance level should be applied universally? If not, how do you propose that this could be applied on a fair basis? Please provide rationale for your answer, supported with relevant evidence.

7. Do you agree that the formula for the tolerance methodology proposed in paragraphs 79 to 83 of this document gives effect to the tolerance proposals described in this consultation? Please provide rationale for your answer.

8. Do you agree with the proposed changes to the reporting threshold for large energy suppliers? Please provide rationale for your answer.

9. Do you agree that the legal drafting in Annex D implements the policy intention proposed in paragraphs 113 to 119 of this document? Please provide rationale for your answer.

Annexes

Annex A: Impact Assessment

Annex B: Analytical Evidence

Annex C: Confidentiality Arrangements

Annex D: Proposed Amendments to Electricity Licence Condition SLC43 and Gas Licence Condition SLC37