



Department for
Energy Security
& Net Zero

Smart Meter Targets Framework

Government response to a consultation on
minimum installation requirements for Year 3
(2024) and Year 4 (2025)

ANNEX B: Analytical evidence



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Background

Modelling Approach

1. In our February 2023 consultation, we set out the details of the modelling approach that we proposed to use to calculate the tolerance levels for Year 3 (2024) and Year 4 (2025) of the Targets Framework. This proposed approach was based on the rollout model used to calculate tolerance levels in Year 1 (2022) and Year 2 (2023) of the Framework, and confirmed in June 2021.¹ This model, which is further explained in Part One of this document, was based on four main factors which drove the smart meter rollout projections:
 - a. **Consumer acceptance:** based on consumer attitudes ('seek'/'accept'/'indifferent'/'unlikely') towards smart metering which will define consumers' willingness to accept a smart meter and then their likelihood to be 'converted' to smart, given their attitudes.
 - b. **Technical eligibility:** based on the proportion of customers whose metering points are technologically capable of completing a successful smart meter installation.
 - c. **Operational fulfilment:** based on energy suppliers' ability to fulfil an installation promptly and effectively once the customer has agreed to have a smart meter installed.
 - d. **Operational capacity:** based on the market installation capacity and the ability to meet the potential demand for installations.
2. We proposed that separate projections would be calculated for the domestic and non-domestic rollouts, to reflect the unique circumstances in each sector, as they had been when modelling the rollout in Year 1 (2022) and Year 2 (2023). Both the domestic and non-domestic rollout modelling was calculated using the four main factors above, however bespoke sector assumptions were used as inputs to the model, producing different estimates for the rollout trajectory in each Framework year.

Mid-Point Review

3. We did not confirm tolerance levels for Year 3 (2024) and Year 4 (2025) of the Targets Framework in June 2021, as we wished to ensure that the most recent data was used to set installation requirements for the final two Framework years. We therefore confirmed that a 'mid-point review' would take place in 2023 that would consider the tolerance methodology, including the rollout model, and the latest available evidence on the progress of the rollout in order to set the tolerance levels for the second half of the Framework.
4. Following this review, we considered that the overarching methodology used to set tolerance levels remained appropriate and the central components of the rollout model –

¹ [Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers](#) (June 2021). In previous published documents this model was referred to as the 'BEIS rollout model'. Following Machinery of Government changes and the transfer of the Smart Metering Implementation Programme to the Department for Energy Security & Net Zero this is now referred to as 'the rollout model'.

consumer acceptance, technical eligibility, operational fulfilment and operational capacity – remained the most accurate and reliable means of projecting the installation trajectory in Year 3 (2024) and Year 4 (2025). We identified a number of areas where we considered updates to the methodology and rollout model were needed to ensure the Targets Framework remained relevant and robust for 2024 and 2025. We consulted on the proposed amendments in February 2023.

5. The model supporting the February 2023 consultation, alongside the description of the assumptions underpinning the projections, was made available to energy suppliers and designated parties during the consultation process. The disclosed information also included a description of the data used in the model (although excluding any references to commercially sensitive data about individual licence-holders). During the consultation process we also operated a separate email address where energy suppliers (or their contractors) with access to the Disclosed Data could ask any question about the functionality of the model, including clarification of formulae or definitions.
6. In response to the consultation, we received comprehensive feedback from stakeholders and in particular from energy suppliers on the assumptions used in our projections. A trade body representing energy suppliers also submitted an analytical report alongside their response to the consultation, which was commissioned by the trade body through a third party on behalf of their members (hereafter referred to as the 'Energy Suppliers' Report' or 'the report').

Government response

7. We have considered all the feedback raised in the Energy Suppliers' Report and by all consultation respondents. **In response to this feedback, we have made a number of updates to our modelling.** These changes relate to:
 - a. The assumed starting point for Year 3 (2024);
 - b. Assumed levels of consumer acceptance in Year 3 (2024) and Year 4 (2025), including the domestic consumer 'attitude boost';
 - c. Assumed operational fulfilment, particularly our assumptions relating to improvements in operational performance in the latter part of the Framework;
 - d. Assumed installation capacity in Year 3 (2024) and Year 4 (2025).
8. The result of these changes is to reduce the minimum smart coverage that we expect to be reached in Year 3 (2024) and Year 4 (2025) of the Framework. In turn, this has the result of increasing the domestic and non-domestic tolerance levels for those years from those we consulted on in February 2023.
9. In this document we focus on the analytical feedback received in response to our proposed rollout model, and how we have amended our analytical approach to reflect challenges raised and suggestions made by respondents. This is intended to supplement the main response document, which presents a broader outline of all the feedback received in response to the consultation and sets out our response in detail.

10. **Part One** of this document describes our general modelling approach and the main assumptions underpinning our projections. It then details each of the drivers of the model and outlines the changes that we are making to them in response to feedback received to the consultation.
11. **Part Two** sets out the updated projections that result from the revised modelling approach and confirms the tolerance levels for Year 3 (2024) and Year 4 (2025), which have been calculated on the basis of the revised rollout model.
12. **Part Three** briefly summarises the additional changes that are being made to the Targets Framework and outlines the relation between these changes and the rollout model. Fuller detail of these changes is provided in the main response document.

Part One: Rollout projections and addressing feedback from respondents

Modelling Approach

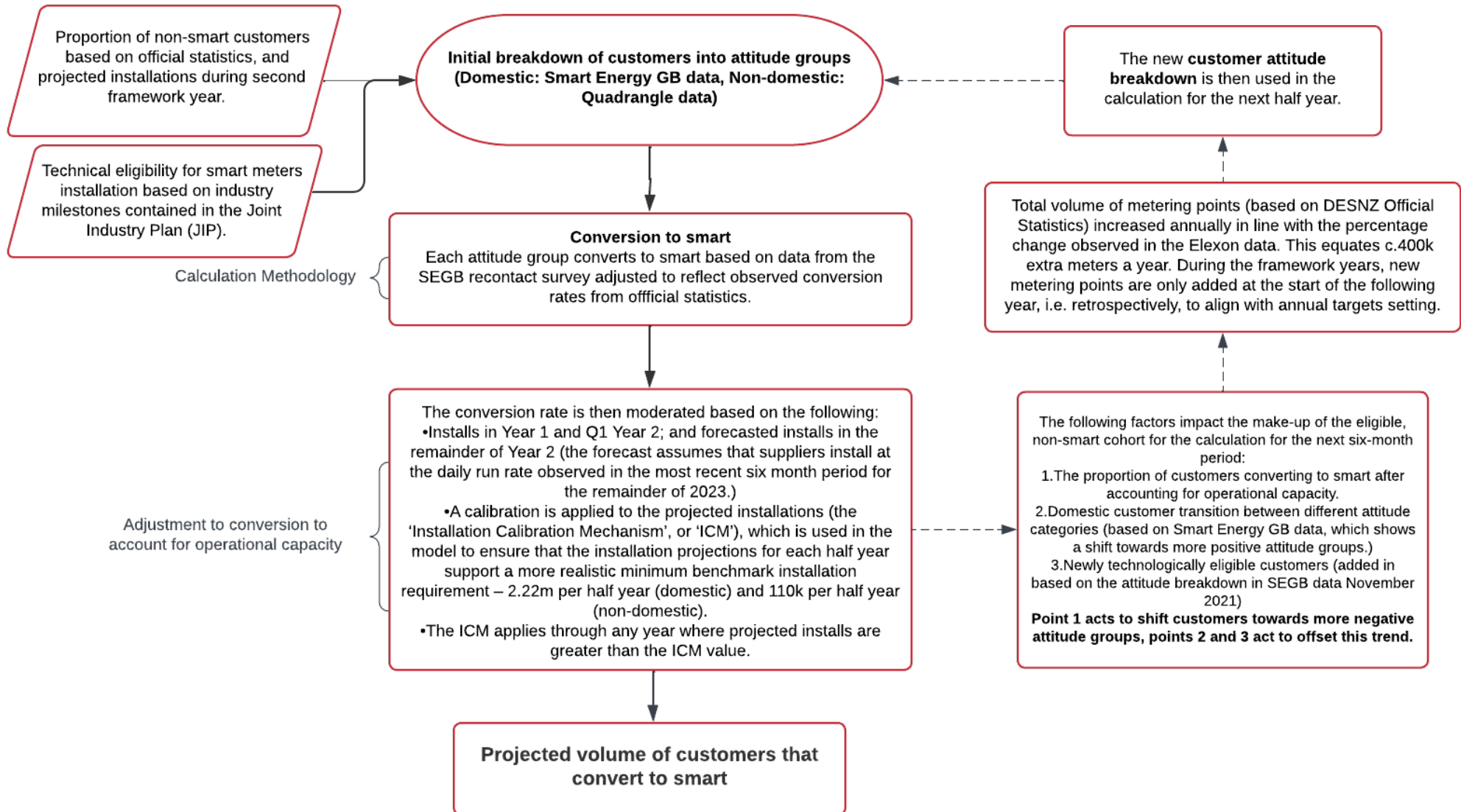
13. Industry-wide projections for installations are modelled separately for domestic and non-domestic sectors. These projections take into account a variety of drivers and constraints in order to ensure that the minimum requirements set for energy suppliers are attainable and realistic, while also achieving a sufficient level of ambition to deliver the benefits of the rollout.
14. The binding minimum installation requirements for each energy supplier are determined based on these industry-wide projections, combined with the smart coverage of individual suppliers at the beginning of each year of the Targets Framework. Supplier 'targets' are set on a straight line from the smart coverage at the beginning of the Framework – the 'starting point' – to 100% smart coverage by the end of 2025.² However, as is explained below, in each year a 'tolerance level' is applied to this target, so that the minimum required installations per supplier are below their straight line to 100% coverage.
15. The main drivers of the rollout model used to calculate minimum requirements are:
 - a. **Consumer acceptance**, or willingness to accept a smart meter installation.
 - b. The **technical eligibility** of consumers to have a smart meter installed in their home or non-domestic premises.
 - c. The level of **operational fulfilment**, i.e., the rate at which energy suppliers and third parties are able to install smart meters for willing consumers (the rate at which willing, non-smart customers are 'converted' into smart customers).
 - d. The industry-wide **operational capacity**, i.e., the total capacity of industry to install smart meters in a given period.
16. Each of these drivers are discussed in more detail in the next section. Jointly, they determine the rate at which consumers are converted from traditional meters to smart meters, which in turn determines the forecasted coverage and thus the industry-wide minimum requirement at each point of the Framework.
17. Another key component within the model is the **starting point**, which is the assumed smart coverage at the start of the relevant Framework period. For tolerance levels for Year 3 (2024) and Year 4 (2025), this is coverage as of the end of December 2023.
18. Within this model, the minimum requirements for the domestic and the non-domestic sector are calculated separately in order to reflect the differences between the two sectors. While

² This line is redrawn to 100% at the beginning of each Framework year to account for installation performance in the previous year.

the specific inputs used for the domestic and non-domestic calculations are different, the overall modelling approach is the same for both.

19. **Figure 1** summarises our modelling approach.

Figure 1: Diagram of the modelling approach



Rollout Assumptions

20. The main inputs and assumptions underpinning the model used to calculate minimum requirements are listed below. For each assumption we set out the position as outlined in the consultation and then detail our response to the feedback received from consultation respondents and confirm the approach taken in the final rollout modelling. Both domestic and non-domestic assumptions are considered below.

Consumer acceptance: consultation position

21. In order for an energy supplier to install a smart meter, consumers need to be willing to permit an installation. Consumers willing to permit an installation may be those that are positive about receiving a smart meter, or those that are indifferent to smart meters but are willing to accept one if offered (even some consumers in the most negative attitude category do accept a smart meter too). A given consumer's willingness to receive a smart meter is not fixed and can change over time.

Domestic

22. Smart Energy GB's Outlook survey is a large-scale survey of individuals carried out every six months.³ Domestic customers who do not yet have a smart meter are asked about their current attitude to getting one. Outlook uses a mixed methodology approach with an online and offline component, to ensure that results are representative of GB adults and customer groups.⁴ The sample size is specified to ensure that robust estimates can be generated for key variables and breakdowns with c. 10,000 respondents per wave.

23. The Outlook survey segments non-smart consumers in the following five categories:

- a. Seek: likely to actively seek a smart meter in the next six months.
- b. Accept: if offered one, would accept a smart meter in the next six months.
- c. Indifferent: are not sure as to whether they would accept a smart meter in the next six months.
- d. Unlikely: unlikely to take up an offer of a smart meter over the next six months.
- e. Unaware: unaware of smart meters.

24. Awareness of smart meters amongst domestic consumers is high, with only 3% reporting they were unaware in November 2022.⁵ Whilst awareness levels are high overall, some groups of consumers are less likely to be aware of smart metering. We have no evidence to

³ Smart Energy GB, is the independent, not-for profit organisation funded by energy suppliers that is responsible for the national public engagement campaign for the rollout of smart meters in Great Britain. The survey includes both smart meter owners and non-owners.

⁴ From November 2020, the offline component was carried out via a telephone survey. Prior to this a face-to-face survey was used.

⁵ Smart Energy Outlook, November 2022 (unpublished). This includes awareness amongst both smart meter owners and non-owners.

suggest that, once aware, the attitudes of these consumers towards getting a smart meter would differ from existing aware non-smart consumers. Therefore, the model distributes this group proportionately between the other four attitude groups.

25. There are now 17 waves of the Outlook survey, providing a timeseries of data on domestic consumer attitudes. We used this data as the basis for our modelling of domestic consumer acceptance for Year 1 (2022) and Year 2 (2023) of the Framework and considered it remains appropriate when modelling domestic consumer acceptance in Year 3 (2024) and Year 4 (2025).⁶

26. The Recontact survey (carried out as a follow-up to Outlook), also commissioned by Smart Energy GB, indicates the proportion of domestic consumers within each of the consumer attitude categories that claim to have been successfully converted to smart during the six-month follow-up period. Recontact is sampled from the Outlook survey, comprising of respondents who said they did not own a smart meter at that time. It has been running since 2017, providing a time series on how consumer attitudes change over time and is designed to collect a follow-up sample from the Outlook survey, with the sample sufficient to provide robust estimates for these groups. Data collected from Recontact finds that, while 'seekers' are more likely to receive a smart installation than those in other categories, consumers from all other attitude categories are also converting to smart meters. This allows us to estimate half-yearly 'conversion rates' for each attitude group.

27. It is important to note that the attitudes outlined in the Outlook survey relate to consumers' intentions over the coming six months and that these can, and do, change over this period. For example, the most recent Recontact survey shows that after six months, 1 in 5 (20%) of those who said they were unlikely to take-up a smart meter had either had a smart meter installed, attempted to get one, or moved to a more neutral or positive attitude.⁷ Many current rejectors highlight resolvable concerns, such as negative word of mouth and potential technical issues (that have now been addressed), as reasons for their current negative attitudes towards smart metering. This information demonstrates that changes in consumer attitudes towards smart meters are taking place and can be expected to continue.

28. Further evidence to support the assumption that attitudes are not fixed is provided by the trend in overall attitudes to smart. If consumer attitudes were fixed, we would expect that the attitudes of non-smart consumers would become progressively worse as those accepting a smart meter are more likely to have positive attitudes and are thus removed from the pool of non-smart consumers. However, observations from the Smart Energy GB Outlook and Recontact surveys shows that the proportion of non-smart consumers who are 'seekers' does not decrease as quickly as would be expected (between some periods, there has even been an increase). This shows that customers do move between attitude groups, creating new 'seekers' over time, replacing some of those who have had a smart

⁶ We have used data from both Smart Energy GB's Outlook survey (available from Smart Energy GB's [website](#)) and subsequent Recontact (unpublished) surveys.

⁷ Smart Energy GB Recontact Survey, November 2022

meter installed. To account for this trend, we calculate a 'boost' to consumer attitudes within our modelling of domestic consumer acceptance.

Non-domestic

29. When calculating rollout projections for the first two years of the Framework, eligible⁸ non-smart, non-domestic customers were split into the customer attitudes of 'seek', 'accept', 'indifferent' and 'unlikely to take up' based on the categories used in Smart Energy GB's Microbusiness Tracker.⁹
30. The Programme has since undertaken two rounds of data collection relating to non-domestic customer attitudes, which divide non-smart customers into the same seek/accept/indifferent/unlikely/unaware categories measured for domestic consumers, and form the basis of the non-domestic consumer smart meter segmentation.¹⁰ The approaches taken by both surveys address some limitations in existing evidence around non-domestic consumer attitudes:
- a. The surveys have large sample sizes of 705 (Wave 1) and 800 (Wave 2) non-smart, non-domestic customers, weighted to allow for inferences to the wider population.
 - b. Findings have been weighted to represent the non-smart, non-domestic population.
 - c. The surveys include the whole population covered by the non-domestic smart meter mandate; microbusinesses, non-microbusinesses and public sector organisations.
31. Smart Energy GB does not undertake Recontact surveys of non-domestic customers. To estimate non-domestic conversion rates, we have therefore calibrated an average of the domestic conversion rates for each attitude group against historical non-domestic smart conversion figures.¹¹ In other words, we assume that, on average, the extent to which consumers in the 'seek', or 'accept' attitude group are more easily converted than, consumers in the 'indifferent' and 'unlikely' groups is the same as in the domestic sector. However, historical data shows the actual conversion rate for all categories is lower in the non-domestic sector, therefore our parameters are calibrated against this historical data. This ensures that installation projections are realistic while also allowing for differential conversion rates based on attitudes in the non-domestic sector.
32. We considered this methodology the best way to estimate non-domestic conversion with the data available. This is because:
- a. Evidence to date shows that, for those aware of smart metering, non-domestic attitudes are similar to domestic ones, and have exhibited similar trends over time.

⁸ Based on operational insights on technical eligibility.

⁹ The SEGB Tracker includes those who are aware and unaware of smart meters for businesses, and only collects attitude breakdowns for those who are already aware.

¹⁰ [Non-domestic smart meter consumer segmentation](#) (February 2023)

¹¹ The average is calculated from Recontact data since November 2017. This is an update from the approach used for modelling the Year 1 and Year 2 rollout, when only the most recent Recontact data, rather than an average, was used. In light of the additional waves of data available to us, we consider that using an average for Year 3 and Year 4 modelling is prudent, to mitigate against the potential impact that one-off variations in domestic market circumstances will have on non-domestic conversion.

This includes the proportion of non-smart customers who would seek or accept a smart meter being maintained (or improving), despite ongoing uptake. It is reasonable to assume, therefore, that the extent to which consumers in the 'seek' or 'accept' attitude groups are more easily converted than consumers in the 'indifferent' and 'unlikely' groups is the same as in the domestic sector, although overall all groups convert at a slower rate. This assumption could be further tailored through the collection of non-domestic recontact data (equivalent to that collected for domestic customers), however:

- i. It is not realistic (in the context of conducting research with small businesses) to secure sample sizes that would allow meaningful analysis by attitude group.
 - ii. In addition, we also do not consider it proportionate, given the range of evidence already available in this area as set out above.
- b. Calibrating conversion rates to non-domestic installation rates ensures a high degree of prudence in the assumption, i.e., by 'capping' assumed conversion in line with past installation rates/past supplier performance we allow for the factors which make conversion more challenging in the non-domestic sector as well as allowing for factors which could have been caused by poor supplier customer journeys. Having therefore already accounted for the differences between domestic and non-domestic sectors by calibrating to installation rates in each sector, we consider it is reasonable to assume that the relative rate of conversion for each attitude group is broadly consistent between domestic and non-domestic sectors.
- c. Additionally, we are also prudent in modelling non-domestic customer acceptance more generally by not applying the consumer 'attitude boost' (see paragraph 28 above) in calculating the non-domestic tolerance, as we recognise that we do not have a data series equivalent to that for domestic consumers that would enable us to do so.

33. More generally, it should be noted that there are a number of areas where improvements to the customer journey could overcome challenges which can make non-domestic conversion challenging. For example, collecting (and maximising opportunities to collect) good data on the non-domestic customers in a supplier's portfolio, transparently communicating the need for power down, what it will entail and any reassurances sufficiently in advance of installation, and supporting tenants to obtain the permission of their landlord as needed (or providing them with templates or the information they need to readily obtain it). Given these factors, we considered it would be too conservative to assume even lower conversion rates than under the current approach.

Consumer acceptance: response and final approach

34. Several respondents raised concerns that our rollout projections – domestic and non-domestic - overstated the level of consumer acceptance likely in Year 3 (2024) and Year 4 (2025) and suggested that we should alter our approach. We do not agree that we should fundamentally change our approach to modelling consumer attitudes in either the domestic

or non-domestic sector. However, we consider that there is merit to some of the detailed suggestions for how we can adjust our conversion assumptions to reflect historic conversion and recent data and we have, therefore, updated our conversion assumptions to reflect this feedback.

Domestic

35. As regards the domestic sector, whilst some respondents did report lower levels of conversion within their own portfolios, the data we use is reflective of market wide consumer attitudes. This data is provided by Smart Energy GB via their Outlook and Recontact surveys. Smart Energy GB's data is based on a robust methodology with a large sample size of data collected on behalf of energy suppliers. The Outlook tracker is designed to be representative of the GB population. The Recontact survey is a follow-up survey of respondents to Outlook. Both surveys are based on a robust methodology with a large sample size. Furthermore, to ensure that this data does not overestimate conversion, we calibrate it using installation data reported by official statistics on rollout progress, which ensures that projections are in line with observed levels of conversion.¹² We also note that some of the evidence provided by respondents analysed just one method of communication (for example phone calls) and therefore does not provide an accurate picture of the conversion that is possible with more effective and tailored customer engagement across a range of channels.
36. The Energy Suppliers' Report raised a concern that the attitude boost was overestimated, as it is based on the Recontact survey's conversion rates which they claimed overstate historical conversions. We consider that our calculations already adjust conversion rates to match historical installation volumes in the main model, and it would, therefore, be inappropriate to adjust the attitude boost further.
37. Neither do we agree with the suggestion in the Energy Suppliers' Report that amendments are needed to account for customer heterogeneity. As set out in the government response document (paragraph 242), the rollout model operates at a market-wide level, and produces domestic and non-domestic tolerance levels that are the same for all suppliers. While we acknowledge there will be circumstances specific to each individual energy supplier, including the particular attitudinal profile of their customers, the principal rationale for applying market-wide tolerance levels is that we consider all suppliers should be converging towards high levels of smart meter coverage as soon as possible and should be subject to the same domestic or non-domestic smart meter regulatory requirements. This universal approach seeks to ensure that all energy consumers are included in the rollout no matter who their energy supplier happens to be. This universal approach is also important to help support the government's commitment to reaching the levels of smart coverage necessary to unlock the benefits of a more flexible energy system. In addition, the Smart Energy GB attitude and Recontact data provides us with robust data on overall conversion from each attitude group at the market-wide level (and thereby captures any heterogeneity in propensity to get a smart meter. This includes those whose attitudes become more positive and those whose attitudes become more negative between survey waves). We

¹² [Smart meter statistics](#)

consider that this projection derived from Smart Energy GB data is more robust than that presented by the Energy Suppliers' Report, which relied on evidence from a single supplier (cross-referenced with a small number of other suppliers). We already account for heterogeneity between domestic and non-domestic consumers through the sector-specific rollout models, as well as between different attitude groups. As set out in the main response document, we consider there remains more that suppliers can do to learn more about attitudes among groups of consumers and that this will enable them to more effectively tailor customer engagement to different groups of customers, which will in turn improve levels of conversion.

Non-domestic

38. We do not agree with the suggestion made in the Energy Suppliers' Report that we should revert to using Smart Energy GB's Microbusiness Tracker as the basis for modelling of non-domestic consumer attitudes. The Smart Energy GB Microbusiness Tracker uses a sample of 250 microbusinesses (of which some have already upgraded to smart meters), and does not include non-microbusinesses. In addition, it does not include a quota for public sector sites (who are therefore only included in limited numbers) or capture whether organisations have a mix of smart and non-smart metered premises (and therefore may exclude some organisations with traditional meters at other sites). It is also not weighted to the characteristics of the broader non-smart non-domestic population, including by size and by prevalence of private versus public sector. In comparison, the Programme-commissioned survey has a larger sample size (705 in Wave 1 and 800 in Wave 2), has been weighted using GB-wide population characteristics and includes non-microbusinesses (as well as microbusinesses) and a quota for public sector organisations. Other respondents provided a range of alternative (and highly varying) proposed figures regarding non-domestic customer attitudes but did not provide detail of their methodologies.
39. That said, we have taken some steps to ensure additional prudence in our final model. Wave 1 of the survey used a mixed mode (online and telephone) methodology, whereas the Wave 2 survey was online only. Therefore, to mitigate for any online-only bias, we have amended the final model to utilise Wave 1 attitudes (rather than Wave 2) which results in more conservative final assumptions of seek and accept levels (56%), indifferent levels (19%) and reject levels (25%).
40. To further validate our assumptions, we carried out a like for like comparison of attitudes measured by Smart Energy GB's July 2021 Microbusiness Tracker to the Programme's Wave 1 survey by excluding non-microbusinesses from the latter.¹³ These show similar attitude distributions indicating that any uplift in attitudes from the Programme's survey is largely driven by the inclusion of non-microbusinesses rather than being a consequence of

¹³ The Smart Energy GB Tracker includes those who are aware and unaware of smart meters for businesses, and only collects attitude breakdowns for those who are already aware. To compare with the Programme's survey, we adjusted the SEGB Microbusiness Tracker to distribute the 'unaware' population (36%) in proportion with seek/accept/indifferent/reject rates from the wider sample. This was to ensure a like-for-like comparison between the two surveys, as the Programme's survey obtains attitude breakdowns for the whole sample (by providing some information about smart metering to unaware non-domestic consumers as part of the survey process), whereas the Smart Energy GB Tracker only collects attitude breakdowns for the 'aware' portion of its sample.

a different methodology. The inclusion of non-microbusinesses means that the Programme's survey is a more realistic reflection of the wide range of organisations that suppliers will need to engage to meet targets.

41. We have also validated our assumptions relating to how we treat non-domestic organisations that are unaware of smart meters in the modelling. **Table 1** below shows that the attitudes of customers who were aware of smart prior to the survey, and those who learned about them in the survey are similarly distributed. This reaffirms the validity of assuming that the attitudes of the unaware, once aware, are distributed in the same way as already aware consumers.
42. We do not agree that it is appropriate to factor in additional modelling assumptions relating to broker usage or customer contact within our model. **Table 1** below also shows additional analysis of non-domestic customer attitudes from Wave 1 of the survey, including comparisons of attitudes of organisations that use an energy broker (or say they are critical to their energy decisions) versus those that do not use a broker or say they are not critical. The analysis shows that:
- Organisations that use brokers or say they are critical to their energy decisions have more positive attitudes to smart meters than those that do not (for example, 67% of those who use a broker said they would seek or accept a smart meter in the next six months compared to 49% of those who do not use a broker). Therefore, whilst there may be some operational factors which make these organisations harder to reach, once they have been reached they are more likely to accept smart meters.
 - Whilst the attitudes of those that do not use a broker are more negative overall (30% of businesses who do not use a broker said they were unlikely to take up a smart meter compared to 16% of those who use a broker), around half of them still said they would seek or accept a smart meter in the next six months. This suggests there is still significant demand to be fulfilled amongst customers where broker/customer contact considerations are not relevant.

Therefore, it is not clear in what direction (e.g. easier or harder conversion) we would amend the model if we were to factor in any such assumption into the model, nor is it clear why one customer journey factor should be modelled over others.

Table 1: Programme survey consumer attitudes to smart meters

Non-domestic attitude	Whole sample	Micro businesses only	Non-micro businesses only	Respondent already aware of smart only	Respondent unaware of smart before the survey only	Organisations that use a broker	Organisations that don't use a broker	Organisations who say brokers are critical to energy decisions	Organisations who say brokers are not critical to energy decisions
WAVE 1									
Seek	32%	28%	40%	32%	31%	46%	23%	56%	19%
Accept	24%	25%	23%	23%	31%	21%	26%	15%	27%
Indifferent	19%	19%	19%	20%	16%	16%	20%	15%	19%
Reject	25%	28%	18%	25%	22%	16%	30%	15%	35%
Base size (unweighted)	705	273	432	552	153	309	362	208	294

Source: Programme survey Wave 1 (conducted by Quadrangle). Survey of 705 businesses (504 online, 201 telephone) conducted in July-August 2021. More detail on methodology can be found in the non-domestic segmentation report¹⁴

¹⁴ [Non-domestic smart meter consumer segmentation](#) (February 2023)

Amendments: domestic and non-domestic

43. While we are not, therefore, fundamentally altering our approach to calculating consumer acceptance in either the domestic or non-domestic sector, we did see merit in respondents' suggestions that we should update the way in which we use Smart Energy GB data to calculate customer acceptance assumptions. **We are, therefore, making several amendments to our consumer acceptance assumptions to reflect this feedback.**

Conversion calibration

44. The Energy Suppliers' Report raised a concern about what they identified as a discontinuity in the way that the initial attitudinal group distribution is used to calibrate consumer acceptance. The report noted that for both domestic and non-domestic rollout modelling, the distribution within attitudinal groups in H1 2021 is a modelled forecast based on pre-COVID-19 actuals in H2 (July – December) 2019. However, for H2 2021 this is replaced with, for domestic modelling, actual figures from the Smart Energy GB Outlook survey, and for non-domestic modelling, the Programme's own survey (see paragraph 30). The report noted that the modelled H1 forecasts appeared to be understated and the result was that the number of 'seekers' increased considerably between H1 2021 and H2 2021. The report argued that as the H1 2021 attitudinal group distribution is used to calibrate the initial conversion rate, which is then applied in the following period, the result is to inflate conversion rates beyond what can be accounted for by an underlying change in attitudes.

45. We consider there is merit to the suggestion that we should update the way in which our conversion assumptions are adjusted to reflect historic conversion to avoid this discontinuity. We are therefore updating our approach to use actual, rather than modelled, attitudes for H1 2021. For the domestic projection, we have used Smart Energy GB's Outlook data and for the non-domestic projection, we have used the Smart Energy GB Microbusiness Tracker, as proposed in the Energy Suppliers' Report. While there are some limitations to the Microbusiness Tracker (as set out in paragraph 38) this provides an actual historic data point that can be used to ensure conversion assumptions do not exceed real-world past performance, which then can then be applied to the more robust market-wide data collected through the Programme's survey on attitudes. Using the Microbusiness Tracker in this limited way (i.e. as a historic benchmark) results in more conservative final assumptions of consumer demand than either a modelled historic data point or applying the Programme survey retrospectively. The result is a reduction in the levels of conversion that are assumed possible in Year 3 (2024) and Year 4 (2025).

Domestic 'attitude boost'

46. The Energy Suppliers' Report also raised a concern that the 'attitude boost' applied to the domestic modelling does not include the latest available data from Smart Energy GB and suggested that the calculation should be updated to include the additional period May 2022, for which figures are available.

47. We agree with the suggestion that we should update the attitude boost so that it is based on the latest Smart Energy GB data (May 2022 for Outlook and the corresponding November 2022 data for Recontact) and have updated our calculation to include this data.

48. In addition, as we now have a longer time series, we have also amended the calculation of the attitude boost to only use data from the period after COVID-19 restrictions (starting with data from May 2021). This has been done to ensure that the calculated attitude boost is reflective of the most recent data and trends. Furthermore, where the sum of the attitude distribution is over 100% we have reduced the size of the 'seek' category to ensure totals are 100% and attitudes are conservatively estimated. Where the sum is under 100% we have increased the size of the 'unlikely' category to again ensure a prudent estimate. The result of these amendments is to further reduce the amount of conversion that we expect to see in Year 3 (2024) and Year 4 (2025).

Technical eligibility: consultation position

49. For a non-smart consumer in any attitude group to be converted to smart, they need to be technically eligible to receive a smart meter. That means their metering points need to be technologically capable of having a smart meter installed in smart mode.

50. The conversion rates estimated from the Recontact survey do not take into account the ineligibility of consumers. This has an obvious impact on conversion rates, as ineligible consumers cannot be converted to smart. We therefore adjust the conversion rates for all attitude groups to account for technical eligibility.

Domestic and non-domestic

51. The overall proportion of consumers whose metering points are technically eligible is expected to increase over time, due to the availability of technical solutions such as the Fylingdales Communications Hub and Alt-HAN (a technological solution for premises where the components in the Home Area Network (HAN) are otherwise unable to communicate). Our consultation position was that around 99.3% of metering points are expected to be technically eligible during Year 3 (2024) and Year 4 (2024) of the Targets Framework.

52. This technical eligibility series accounts for market-wide factors that are applicable to both the domestic and non-domestic sectors. The technical eligibility series is derived from milestones contained within the Smart Metering Implementation Programme's Joint Industry Plan (JIP) and represents the best available evidence of industry wide smart meter technical eligibility.

Technical eligibility: response and final approach

53. Some respondents challenged our technical eligibility assumptions, claiming that they were too high and did not align with their own data on eligibility within their portfolios. We do not, however, agree with respondents' arguments that our technical eligibility assumptions in the domestic and non-domestic sectors are overstated.

54. While several respondents presented evidence of the eligibility profile within their own portfolios, we do not consider that supplier-level data provides a sufficiently comprehensive or robust data set to estimate market-wide eligibility. In contrast, the JIP is an industry-backed plan of agreed milestones. The JIP was baselined in 2014, so is a long-standing and well-established set of milestones, and is reviewed regularly in consultation with industry. The most recent iteration of the JIP was baselined with industry support in March

2023. The milestones consist of technical developments that are valid for both the domestic and non-domestic sectors. We therefore consider that an eligibility series derived from the JIP remains the most robust means of calculating domestic and non-domestic technical eligibility in Year 3 (2024) and Year 4 (2025). We do not, therefore, agree with the criticism in the Energy Suppliers' Report that our technical eligibility series leads to an overstated conversion rate.

55. We do, however, accept the suggestion in the report that we should correct a minor referencing issue in the non-domestic calculations (in which an incorrect spreadsheet row was referenced in part of the calculation). This minor error did not have any impact on the modelling outturns and has been corrected in our final modelling.

Operational fulfilment: consultation position

56. Before being used to project the smart metering rollout in the model, the eligibility-adjusted conversion rates are further adjusted in order for them to match observed overall conversion rates from the official statistics. This is to ensure that the model does not implicitly assume a higher level of operational fulfilment than that observed in historical data. These final, adjusted conversion rates are then used to project the number of smart installations in each half year of the Framework.

57. While calibrating conversion rates to match official statistics is necessary to ensure our assumptions are in line with historical data, it is also important to reflect the fact that operational fulfilment – the converting of positive consumer attitudes into successful appointments – is influenced by supplier performance in operational delivery and that this is an area where there is scope for improvement. Industry can improve on their operational fulfilment and thereby exceed previous conversion rates. In the modelling proposed at consultation stage, we therefore included an increase in conversion rates for both the domestic and non-domestic sectors.

Domestic

58. Evidence from the Programme's benchmarking work with large energy suppliers (which is shared in anonymised form with participating energy suppliers) indicates that there remain several areas in which energy suppliers could deliver improvements to operational fulfilment, in addition to improvements already demonstrated by some energy suppliers. For instance, through adoption of industry best practice in relation to pre-installation engagement with customers to reduce cancellations and in rebooking of previously failed appointments. Such improvements would be expected to translate into increases in conversion rates.

59. In our consultation proposals, we therefore included a small improvement in operational fulfilment based on the improvement seen in the weighted average of installation completion rates (for appointments booked in Q3 2021 – Q2 2022) provided by energy suppliers to the Programme as part of their reporting on appointment outcomes. This improvement amounted to an increase in conversion rates of 0.7 percentage points per half year.

Non-domestic

60. For Year 3 (2024) and Year 4 (2025), we supplemented our analysis with data now available to us via internal monitoring to further tailor the operational fulfilment analysis for the non-domestic sector. This followed a similar methodology to that used for the domestic sector and was based on the improvement seen in non-domestic installation failure rates (installations attempted in Q4 2021 – Q3 2022) provided by energy suppliers to the Programme.
61. This analysis suggested that it remained appropriate to assume that energy suppliers have scope to improve their non-domestic operational fulfilment outcomes. This improvement amounted to an increase in conversion rates of 0.9 percentage points per half year.

Operational fulfilment: response and final approach

62. We have strong evidence that operational fulfilment has been improving over the course of the Framework to date and there are clear advantages to suppliers of improving operational fulfilment to the level of better performing suppliers (see main response document for detail). However, we accept concerns raised by respondents that there is uncertainty over how this rate of improvement will continue into the latter part of the Framework. This uncertainty makes it more difficult to calculate a robust assumption for the uplift to conversion rates that we can expect to see in Year 3 (2024) and Year 4 (2025).
63. **We have, therefore, made the following amendments to our assumptions for operational fulfilment:**
- **We have removed the operational improvement uplift as a standalone metric within our domestic rollout projection.** This means that we no longer apply the 0.7 percentage point increase in conversion rates per half year within our modelling.
 - **We have removed the operational improvement uplift as a standalone metric within our non-domestic rollout projection.** This means that we no longer apply the 0.9 percentage point increase in conversion rates per half year within our modelling.
64. In removing the standalone operational improvement uplift from the domestic and non-domestic modelling, we are taking a prudent approach to modelling the rollout in Year 3 (2024) and Year 4 (2025). However, whilst we are removing this uplift from the projection, this is only because we accept there is uncertainty in the exact magnitude of this improvement in the latter years of the Framework. Indeed, we continue to expect there to be further operational improvement for the duration of the Framework and our evidence consistently shows that there remains considerable room to improve operational fulfilment. For example, data provided to the Programme shows that the best suppliers successfully install meters for over 75% of customers that make appointments, whereas the weakest performers do so for less than 55% of booked appointments. Suppliers are expected to continue to make progress in this area and this will support their activities to meet their installation requirements in Year 3 (2024) and Year 4 (2025). We will continue to work closely with industry to share evidence and best practice on what improvements can be made.

Operational capacity: consultation position

65. A potential constraint on energy suppliers' ability to operationally deliver on their obligations is the size of their installation workforce.
66. Our rollout projections use a consumer attitude-based conversion calculation to generate installation numbers for each half year period. This means that the calculation projects installations based on consumer demand and assumes that this demand can be fulfilled.
67. To address the risk of consumer demand generating high volumes of projected installations we proposed continuing to apply a calibrating mechanism to the installation projections generated by the consumer conversion projection. This Installation Calibration Mechanism (ICM) applies in situations where meter installations are projected at a rate above levels that evidence suggests the market can successfully complete. In such a scenario, the ICM – rather than the conversion projection – directly sets the tolerance levels. In effect, the ICM operates as a safety net to ensure any projections generated by expected consumer demand are supported by market operational capacity, thus avoiding unrealistic minimum installation requirements.
68. It is important to note, however, that the ICM does not represent an upper limit on the operational installation capacity of the market; and should not be viewed as a restriction on energy suppliers who can install above their minimum installation requirement 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.
69. If the consumer conversion projection predicts installations below the level defined in the ICM, then the conversion projection will set the tolerance levels.

Domestic

70. The domestic ICM was originally calculated using SMETS2 installation numbers from Data Communications Company (DCC) and Elexon data on SMETS1 and traditional meter installations. It was calculated in this way to reflect the total possible installation capacity across industry. The ICM applied to the modelling of Year 1 (2022) and Year 2 (2023) tolerance levels was calculated as the total of:
- October 2020 domestic SMETS2 installation numbers taken from DCC data, scaled up to 6 months (taking into account public holidays);
 - SMETS1 installations in September 2020 taken from Elexon data, multiplied by 6 (6 monthly) and multiplied by 1.8 to scale up to dual fuel installations, then scaled to reflect the size of the domestic proportion of the market;
 - Traditional meter installations in September 2020 from Elexon data multiplied by 6 (6 monthly) and multiplied by 1.8 to scale up to dual fuel installations, then scaled to reflect the size of the domestic proportion of the market.

71. This amounted to 2.45m installations in each half year for the domestic sector. At the time, we considered that this reflected a reasonable and recent benchmark of the market's capacity to install meters in domestic premises.
72. At consultation we proposed that this remained an appropriate value for the ICM in Year 3 (2024) and Year 4 (2025) of the Framework. We noted that since the COVID-19 pandemic, there has been some reduction in the installer field force headcount from pre-pandemic levels. However, we were also aware that a number of suppliers and third-party installers had taken action during 2022 to recruit and train additional resource, such that the ICM used to calculate the rollout in Year 1 (2022) and Year 2 (2023) remained appropriate to use in Year 3 (2024) and Year 4 (2025).

Non-domestic

73. As in the domestic sector, the ICM is designed to ensure that non-domestic installation requirements do not exceed the market's capacity to meet demand. The non-domestic ICM is used to calculate the non-domestic tolerance level and is therefore specific to the sector. This reflects the fact that non-domestic installation capacity may differ from domestic, for example installations may require additional specialisms and skillsets (such as managing 'hot shoes', meter variants or meter access challenges associated with non-domestic premises).
74. For Year 1 (2022) and Year 2 (2023) of the Framework, the non-domestic Installation Calibration Mechanism was calculated using the same methodology that was used to calculate the domestic ICM, as outlined above.
75. Following a review of the evidence, at consultation we proposed an alternative 'bottom-up' methodology for measuring capacity in the non-domestic sector in Year 3 (2024) and Year 4 (2025) of the Framework. The intention of the alternative methodology was to avoid factoring in factors that may have influenced historic non-domestic installation rates but which were not driven by capacity, for instance the level of focus placed upon the non-domestic rollout by some energy suppliers.
76. This methodology was based on a series of questions the government asked to large and small energy suppliers in Summer 2022 regarding non-domestic installation capacity. Answers at that time did not suggest that current non-domestic installation levels were being impacted by concerns regarding capacity, such as the availability of specialised skillsets to deliver non-domestic installations.
77. The proposed method multiplied the average number of non-domestic installations it is possible for one installer to successfully deliver per day, by an estimate of the number of Full Time Equivalent (FTE) installers available to undertake non-domestic installations. This was then multiplied by the number of working days in a six-month period.
78. To do this, we assumed that:
- a. On average, and if installation resource were allocated to non-domestic installations in any given one day, that it was possible to successfully deliver three non-domestic meter installations per working day. We considered this a fairly conservative

assumption that accounted for some installation failure. This was based upon data received via the Summer 2022 data collection exercise from industry cited above, quality assured by internal industry experts.

- b. We assumed that there are 210 working days in a year: 105 in a six-month period.¹⁵
- c. We assumed that the number of existing installers that could, theoretically, be allocated to non-domestic installations was 420 FTE. This was based on Full Time Equivalent data provided to us by dedicated non-domestic meter installers and an allowance for those staff working for mixed portfolio suppliers/installation companies who are fungible across domestic and non-domestic work. We considered this to be a reasonable and conservative number based on the data available to us.

79. Overall, this methodology produced an ICM of 132,000 non-domestic installations per six-month period.

Operational capacity: response and final approach

Domestic

80. Many respondents argued that our modelling overstated the installation capacity available in the sector and was based on out-of-date assumptions. We do not agree with the suggestion from some that the ICM should be reduced to account for smart meter replacements, asset maintenance or 4G communications hub swap-outs. We consider it remains reasonable to expect that an organised, motivated and efficient supplier will make the necessary investments in field force to meet their installation requirements alongside all their other obligations. For further detail of our expectations in this area see paragraphs 117 – 118 in the main response document.

81. However, we saw merit in respondents' arguments that continuing to base the ICM on data from 2020 risked not basing the rollout modelling for Year 3 (2024) and Year 4 (2025) on recent assumptions. Therefore, we are updating our capacity assumption to use data from 2022. We have used as our benchmark period the best period of installations under the Targets Framework, as consistent with our modelling for Year 1 (2022) and Year 2 (2023) of the Framework, details are set out in **Table 2** below. We consider this represents a reasonable balance of incorporating the latest evidence and maintaining the reasonable assumption that industry can consistently perform in line with their best recent installation rates. **The adjustment we are making has the effect of reducing the domestic ICM from 2.45m to 2.22m per six-month period.**

¹⁵ This figure is reached by taking the number of weekdays in the year (260), and removing 50 days for bank holidays, paid leave, training and sickness.

Table 2: Details of Domestic ICM calculation

Calculation of Domestic ICM (for 6 months)	
Components	Description
1. SMETS2 installations – DCC data	<ul style="list-style-type: none"> • Average installations per day during November 2022 • Scaled up to 6 months (taking into account public holidays)
2. SMETS1 & traditional installations - regular energy supplier reporting to the Programme	<ul style="list-style-type: none"> • For large suppliers this is Q4 2022, for small suppliers it is annual 2022 reporting (where available) • Scaled up to 6 months (taking into account public holidays)

82. Following the adjustments made to the modelling of consumer demand and conversion, the revised domestic ICM does not bind for the domestic rollout projection in Year 3 (2024) or Year 4 (2025). This is because the model projects that consumer demand will be below the level of installation capacity in the second half of the Framework for the domestic sector.

Non-domestic

83. Several respondents disagreed with our proposed alternative methodology for calculating non-domestic installation capacity in Year 3 (2024) and Year 4 (2025). In particular, respondents queried whether making assumptions about daily installer resource that can be ‘ringfenced’ for non-domestic is valid given the way that resource is often managed fungibly between sectors and that assuming each installer can deliver three installations per working day may not account for varying installation types and complexities that can occur in the non-domestic sector.

84. **Following consideration of this feedback, we are now reverting to the previous methodology and assumption of non-domestic installation capacity of 110k per six-month period** which was used in setting tolerance levels for Year 1 (2022) and Year 2 (2023) of the Framework (as suggested in the Energy Suppliers’ Report). This reflects historic non-domestic installations (although, as in the domestic sector, the ICM does not represent an upper limit on the operational installation capacity of the market). In line with the approach taken in domestic modelling, we have validated this assumption using data from 2022 to ensure that the non-domestic ICM is consistent with latest evidence. To do this, we assessed total market-wide installations in 2022 and analysed various scenarios regarding the ratio of domestic to non-domestic installations. For example, ratios that the market has shown capacity to deliver in periods of higher non-domestic installations. Our sensitivity analysis places 110,000 installations comfortably within the range of outcomes,

suggesting that this remains a valid assumption of capacity moving into Year 3 (2024) and Year 4 (2025) of the Framework.

85. In the non-domestic rollout model, the revised lower ICM binds in all of Year 3 (2024). This is because the model projects that consumer demand is above the level of the ICM in this period.

Starting point: consultation position

86. To determine the tolerance levels for Year 3 (2024) and Year 4 (2025) of the Framework, an assumed level of smart coverage as of the end of December 2023 is required.

87. Data from official statistics on the number of smart meters operated (as of 31 December 2021) has been used to measure smart coverage to the end of 2021.¹⁶

88. In measuring the growth in smart meter coverage in 2022 (Year 1 of the Framework), at the time of consultation we had to make some estimations of installation numbers. This is because at that time, large supplier operational data was only available to end September 2022 and small supplier data to end 2021. We noted in the government response to the consultation that this starting point would be updated to reflect the end-of-2022 operating data, following publication of the official statistics that would be published in March 2023.

89. Our proposal at consultation was that, for 2022 (Year 1 of the Framework) the following steps would be taken to estimate the growth in smart meter coverage:

- a. Supplier level data on qualifying smart meter installations from official statistics was used, for large suppliers, for installations in Q1 – Q3 2022.¹⁷
- b. The installation rate over the period Q1 – Q3 2022 was then assumed to continue into Q4 2022. This gave us a figure for total installations by large suppliers in 2022.
- c. We then estimated the number of installations by small suppliers using the observed ratio of installations between large and small suppliers from historic end-of-year official statistics. Summing large and small supplier estimates gave us an estimate for qualifying smart meter installations in 2022.
- d. We used data from administrative sources including the DCC and ElectraLink to validate these projections against installation numbers in more recent periods in 2022; these showed that the installation figures are similar to the projections, indicating they are suitably robust.

90. We used individual suppliers' performance in Year 1 (2022) of the Targets Framework (arrived at using the calculations described in paragraph 88), to estimate their minimum installation requirements for Year 2 (2023) of the Framework. We then assumed that all suppliers would meet these Year 2 (2023) installation requirements, giving us an estimate

¹⁶ [Smart meters in Great Britain, quarterly update December 2021](#) (March 2022)

¹⁷ 'Qualifying' refers to smart meters installed to replace traditional meters or in new connections, it does not include smart for smart replacements. [Smart meters in Great Britain, quarterly update September 2022](#) (November 2022)

for the smart coverage at the end of Year 2 (2023), and the start of Year 3 (2024) of the Framework.

Starting point: response and final approach

91. There was general disagreement with the proposed Year 3 (2024) starting point. The majority of respondents noted that Year 1 (2022) targets largely had not been met and argued that it was therefore inappropriate to base our calculation of the Year 3 (2024) starting point on the installation requirements for Year 2 (2023) being achieved.
92. Meeting annual smart meter installation requirements is a condition of suppliers' licences. As such, we continue to expect all suppliers to meet their obligations as set out in licence conditions. Enforcement action is a matter for Ofgem.
93. However, we agree that the assumptions used to calculate the starting point should be grounded in the most recent available evidence of installation progress. **We have therefore updated our assumption for the Year 3 (2024) starting point.** The Year 3 (2024) starting point will now be calculated as follows:
- Domestic and non-domestic meters in operation at the end of December 2022 as reported by official statistics provides an observed initial position.¹⁸
 - For Q1 2023 we have used the reported number of qualifying domestic and non-domestic smart meter installations from official statistics, adjusted to account for an estimated number of installations completed by small suppliers in this period.¹⁹
 - For Q2 – Q4 2023, we have taken sector specific daily installation run rates from the last six months (Q1 2023 and Q4 2022) and multiplied them by the number of working days in each quarter in 2023. This figure has been validated, where possible, by administrative data on installations for April – June.
94. We have based our Q2 – Q4 2023 estimate on Q1 2023 and Q4 2022 as this period represents the most recent six months of installations. In addition, it also includes the best performing quarter under the Targets Framework for both the domestic and non-domestic sectors. For the domestic sector, the best performing quarter was Q4 2022. For the non-domestic sector, it was Q1 2023. We consider it is reasonable to assume that energy suppliers achieve run rates in the remainder of 2023 akin to those that they have recently achieved, and which include the best performance under the Targets Framework so far in each of the domestic and non-domestic sectors.²⁰
95. Following these amendments, we are now projecting that market-wide smart meter coverage will reach 61.4% by 1 January 2024 (61.6% domestic smart coverage, and 57.0% non-domestic smart coverage). This is compared to 64.0% in the proposals that we consulted on. **It should be noted that these amendments represent a change to our modelling assumptions only. Energy suppliers' installation requirements for Year 2**

¹⁸ [Smart meters in Great Britain, quarterly update March 2023 \(May 2023\)](#)

¹⁹ This estimation is based on the average quarterly installations by small suppliers in 2022.

²⁰ Q1 2023 was the best performing period for the non-domestic sector, and Q4 2022 was the best performing period for the domestic sector.

(2023) remain unchanged. Suppliers that fail to meet their installation requirements in Year 2 (2023) may face enforcement action from Ofgem as set out in their Enforcement Guidelines.

Part Two: Tolerance Levels

96. The methodology described in the preceding section allows us to calculate an industry-wide forecast of annual installation numbers. This is used to calculate tolerance levels for all energy suppliers. The calculation of individual suppliers' minimum installation requirements is:

- a. A straight line is drawn from the estimated industry-wide smart coverage at the beginning of the Targets Framework on 1 January 2022 up to 100% coverage at the end of the Framework on 31 December 2025.
- b. The industry-wide minimum installation forecast, as calculated by the model described above, is then subtracted from the line to 100% coverage, resulting in percentage tolerance levels in each year of the Framework. These tolerance levels are separate for the domestic and non-domestic sector.
- c. These percentage tolerance levels are applied to individual suppliers in each year, subtracting them from that individual supplier's line to 100% coverage. For mixed portfolio suppliers, operating in both the domestic and the non-domestic energy market, the relevant tolerance level (domestic or non-domestic) is applied to their domestic and non-domestic customer bases when calculating their minimum installation requirements.
- d. At the end of each year, the line to 100% coverage is redrawn for each supplier, with the subsequent year's tolerance level applied to the newly drawn line. In the non-domestic sector the new line is also adjusted to take into account the effect of smart meter churn on installation targets in Year 3 (2024) of the Framework, as is further described in Part Three of this Annex and in the main response document.

97. The modelling discussed in this Annex results in the smart penetration and tolerance levels shown in **Table 3**.

Table 3: Smart coverage and tolerance levels for Year 3 (2024) and Year 4 (2025) (domestic and non-domestic rollouts)

Rollout	Position at year end	Year 3 (December 2024)	Year 4 (December 2025)
Domestic	Target (straight line to 100%)	80.8%	100.0%
	Minimum smart coverage	69.1%	74.5%
	TOLERANCE	11.7%	25.5%
Non-domestic	Target (straight line to 100%)	78.5%	100.0%
	Minimum smart coverage	63.6%	68.7%
	TOLERANCE	14.9%	31.3%

Part Three: Other amendments

98. Part Three of this Annex summarises four further amendments to the Targets Framework that we are making in relation to the target setting methodology as part of this consultation response. Two of these amendments were proposed at consultation and we are now confirming our intention to proceed with both. The two further amendments are being made in response to feedback received at consultation.
99. Full details of the amendments are provided in the main response document. None of these other amendments change the fundamentals of the modelling approach, however, they may have some impact on suppliers' final minimum installation requirements, as set out below.

Amendments proposed at consultation

Adjustment to the structure of installation requirements: separate domestic and non-domestic targets

100. Currently, mixed portfolio energy suppliers (suppliers of both domestic and non-domestic premises) have a single annual installation requirement that reflects both the domestic and non-domestic components of their portfolio. As set out in paragraph 18 above, separate domestic and non-domestic tolerance levels are applied to the relevant section of mixed suppliers' portfolios to reflect the different circumstances between the two sectors. However, these suppliers currently have the flexibility to meet their requirement through any combination of domestic and non-domestic installations.
101. In the consultation, we proposed to remove this flexibility in Year 3 (2024) and Year 4 (2025) of the Framework, so that mixed portfolio suppliers would be required to meet both the domestic and the non-domestic components of their installation requirements.
102. We are now confirming that we will proceed with making this amendment to the structure of installation requirements, so that mixed portfolio suppliers will be required to meet both the domestic and non-domestic components of their obligation. This decision has been made to ensure that non-domestic consumers can derive maximum benefit from smart metering, as we have evidence that some mixed portfolio suppliers are using the flexibility under the current system in a way that slows progress on the non-domestic rollout. This poses a risk to benefits for small businesses and public sector consumers, particularly if it is carried into Year 3 (2024) and Year 4 (2025) of the Framework.²¹ Full detail of our rationale is set out in the main response document.
103. This amendment does not impact the assumptions used within the rollout model. Mixed portfolio suppliers' overall installation requirements are already set by applying the domestic and non-domestic tolerance levels to their respective domestic and non-domestic

²¹ The non-domestic rollout accounts for 6% of meters covered by the smart meter rollout but 21% of consumer benefits.

portfolios and summing these together. The policy change removes the flexibility mixed portfolio suppliers have to meet their overall target through any combination of domestic and non-domestic installations. The non-domestic rollout projections and the non-domestic tolerance levels are therefore a separate consideration from whether non-domestic requirements should be enforceable for mixed portfolio suppliers.

Smart meter ‘churn adjustment’ proposals

104. Another amendment relates to a partial extension of the adjustment to the target calculation to mitigate the impact of customers switching supplier (‘churn’). Some respondents to our November 2020 consultation on the Targets Framework highlighted the effect that churn of consumers between different suppliers might have on suppliers’ ability to meet their installation targets.²² In particular, respondents were concerned that suppliers who were further ahead with their smart meter rollout (compared to the industry-wide average) will on average lose more smart meter customers through churn than they will gain. They then argued that if annual installation requirements fail to account for this, there could be perverse consequences, with energy suppliers who are further ahead in the rollout being effectively penalised within the Framework.
105. In May 2022, following consultation, the government confirmed the implementation of an adjustment to mitigate the impact of customer-driven smart churn on energy suppliers’ minimum installation requirements for the second year of the Targets Framework. This adjustment to Year 2 (2022) installation requirements was designed to mitigate the impact of customers switching their energy supplier during the previous year (2022).²³ This modification defined supplier installation requirements for Year 2 of the Targets Framework as the minimum of: i) their targets with the churn adjustment applied; and ii) their targets without the churn adjustment applied.
106. This adjustment for Year 2 (2022) of the Framework was implemented in order to prevent the potential unfairness that could arise for suppliers who are ahead of market average smart coverage. Suppliers who are ahead of market average smart coverage will, all other things being equal, be more likely to lose rather than gain smart meter customers through churn. This is because while these energy suppliers are likely to lose smart meter customers in proportion to their coverage levels, they will likely only regain them at the market average (i.e., a lower) smart coverage rate. The reverse is true in relation to traditional meter customers. Suppliers ahead of market average will be more likely to gain a larger proportion of traditional meter customers than they lose through churn. A net gain of traditional meter customers will then lead to higher installation requirements in the subsequent rollout year.
107. When confirming this adjustment, we noted that the adjustment would apply for Year 2 (2023) of the Targets Framework only. Further, we noted that as the rollout progresses differences in smart coverage between suppliers will reduce. This is because, under the Framework, suppliers’ installation requirements derive from the number of traditional

²² [Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers](#) (June 2021)

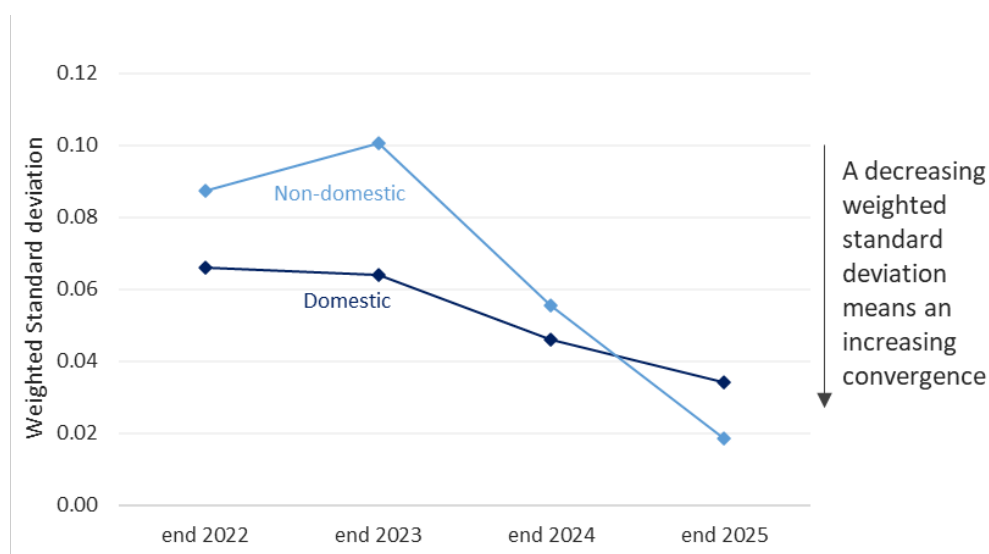
²³ [Smart meter targets framework: government response to a consultation on a churn adjustment](#) (May 2022)

customers remaining in their portfolio that need to be converted to smart (less tolerance levels applied to each supplier's portfolio). The effect of this is to increase the pace of installations required by suppliers farthest behind and, in this way, bring suppliers into line with similar smart coverage levels over time. The potential unfairness experienced by suppliers ahead of market average as a result of churn will, therefore, also reduce to the point at which an adjustment is no longer required or justified.

108. As part of the Mid-Point Review consultation, we considered the variation and convergence in smart coverage between energy suppliers. We measured convergence using a weighted standard deviation between suppliers' smart coverage at the end of each year, with weights proportional to suppliers' portfolios. The smaller the weighted standard deviation, the closer the convergence and the less potential impact churn will have on a supplier's target. Using a weighted measure means that larger suppliers have a bigger impact on the amount of variability which is used to indicate convergence (a chart showing this analysis was included at paragraph 70 in the consultation stage Annex B: Analytical evidence).²⁴
109. Based on this analysis we proposed to extend the Year 2 (2023) churn adjustment in relation to non-domestic installation requirements in Year 3 (2024) of the Framework. Given the higher level of convergence in the domestic sector we did not consider that any extension of the Year 2 (2022) adjustment was justified in relation to domestic installation requirements. We did not consider that any churn adjustment was required, for either domestic or non-domestic installation requirements, by Year 4 of the Framework (2025) given the high levels of convergence in levels of smart coverage that we expect to have seen by the latter stages of the Framework.
110. We have updated this analysis using the same starting point projection as described in paragraph 93 and the confirmed tolerance levels (**Table 3** above). The results are as shown in **Figure 2** below. This updated analysis shows very similar results to that produced prior to consultation and we therefore consider our previous conclusions remain valid. We are now confirming that we will proceed with the approach to the churn adjustment as set out in the consultation document. Namely, the Year 2 (2022) churn adjustment will be extended to apply to non-domestic targets in Year 3 (2024) only. For further details of this decision see Section Three of the main response document.

²⁴ [Annex B; Smart Meter Targets Framework Year 3 and Year 4 analytical evidence](#) (February 2023)

Figure 2: Updated modelled convergence in the domestic and non-domestic sectors



111. This amendment to the target setting calculation for the non-domestic targets in Year 3 (2024) does not affect the modelling approach applied to calculate the domestic and non-domestic tolerance levels. This is because the churn adjustment applies to the calculation of each supplier’s annual target (i.e. their trajectory to 100% smart coverage). It makes no change to the tolerance levels, which are calculated as set out in Part One and are then applied to this annual target to produce each supplier’s minimum installation requirement.

Amendments made in response to consultation feedback

112. Following consideration of the feedback received from respondents to the consultation, we are implementing two adjustments to mitigate the impact of the additional technical challenges associated with some gas smart meter installations. Full details are set out in the main response document.

113. As with the amendments above, neither of these changes to the Targets Framework affect the modelling approach applied to calculate the domestic and non-domestic tolerance levels. This is because both amendments apply to the way in which each supplier’s progress towards meeting their annual installation requirements is measured. This makes no change to the tolerance levels.

Gas-first SMETS2 installations

114. Respondents noted the additional challenges associated with installing gas smart meters when the electricity meter is not already smart (‘gas-first SMETS2’ installations). We accept that gas-first SMETS2 installations (i.e. installations in circumstances where a different supplier provides the electricity and the electricity meter is not a smart meter) take longer than electricity single fuel installations, and that this may lead to potential unfairness for those suppliers that need to conduct ‘gas-first’ installations. We are therefore amending licence conditions so that SMETS2 gas-first installations are weighted more when assessing progress towards targets.

115. Based on evidence received in the consultation, we are setting a weighting of 1.5 for these installations (meaning each gas-first single fuel SMETS2 installation will count for 1.5 of an installation in progress towards target). This weighting has been calculated on the basis of evidence provided by a respondent to the consultation that job times for single fuel gas installations requiring a 'hot shoe' (as the electricity meter is not a smart meter) are around 50% longer than other single fuel installations.
116. Respondents highlighted that they have prioritised dual fuel consumers in Year 1 (2022) and Year 2 (2023) of the Framework. We therefore consider this issue to be material for the latter half of the Framework only, as suppliers increasingly seek to target these more resource-intensive gas-first SMETS2 installations in order to meet their installation requirements.

Advanced meters

117. We are also making a technical change to licence conditions to align the Targets Framework rules on advanced Meters (AMRs) with the New and Replacement Obligation (NRO) in response to feedback received through this consultation. Currently, under the NRO suppliers can install advanced meters in microbusinesses (or non-microbusinesses that initially chose SMETS2) if a SMETS2 installation has failed, to ensure that a non-domestic customer is left with some smart functionality. However, suppliers cannot count these meters towards their annual installation requirements under the Targets Framework. We are making a change to allow suppliers to count these meters towards their annual non-domestic installation requirements in Year 3 (2024) and Year 4 (2025) of the Framework. We consider this an important amendment to introduce for Year 3 (2024) and Year 4 (2025) of the Framework specifically, where we anticipate gas-first SMETS2 installations increasing in number due to the prioritisation by some suppliers of dual fuel customers in Year 1 (2022) and Year 2 (2023) and as there become fewer non-domestic sites available to convert.
118. This is intended to particularly support energy suppliers to meet their non-domestic gas targets, while resulting in better customer outcomes through smart functionality via SMETS2 (default) or advanced meters (as a technical backup). This change does not impact the Advanced Meter Consumer Choice Policy as set out in licence conditions (whereby the default offer for microbusinesses must remain SMETS metering and non-microbusinesses can be offered a choice between SMETS and AMR but the choice must include SMETS). For more details see the main response document.

This consultation is available from: www.gov.uk/government/consultations/smart-meter-targets-framework-minimum-installation-requirements-for-year-3-2024-and-year-4-2025

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