

Title: Smart meter targets framework: churn adjustment IA No: RPC Reference No: N/A Lead department or agency: Department for Business, Energy and Industrial Strategy Other departments or agencies: N/A	Impact Assessment (IA)			
	Date: 19/05/2022			
	Stage: Final			
	Source of intervention: Domestic			
	Type of measure: Secondary legislation			
Contact for enquiries: smartmetering@beis.gov.uk				
Summary: Intervention and Options				RPC Opinion: N/A

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status Non qualifying provision
-£11.1m	-£3.6m	-£0.2m	

What is the problem under consideration? Why is government action or intervention necessary?

The new four-year smart metering Targets Framework commenced on 1 January 2022 and sets energy suppliers annual individual smart meter installation targets. Under the current method used to set annual targets, customer switching ("churn") may make targets in Year 2 of the Framework (2023) more challenging for suppliers that see more smart meter customers switching away from them than joining them in Year 1 (2022). This intervention is needed to ensure that suppliers are not required to make disproportionate efforts in Year 2 of the Framework as a result of losing customers to other energy suppliers after having invested in installing smart meters for those customers. The intervention has been designed to mitigate the impact of churn, to ensure that smart meter installation targets are fair and appropriate and that suppliers are not penalised as a result of losing more smart meter customers than they gain through churn.

What are the policy objectives of the action or intervention and the intended effects?

The policy objective is to fulfil the intention of the Smart Metering Targets Framework to focus energy suppliers' obligations on the number of smart meters that they install in each rollout year. This will effectively support the aim of continuing to drive the investment needed to achieve market-wide rollout of smart meters. It is also intended to resolve a potential imbalance whereby suppliers further ahead in their rollout are more likely overall to lose rather than gain smart meter customers through switching and, as a result, may see higher installation requirements than they would have expected had they not experienced churn. By redressing the balance of this impact, the proposed churn adjustment seeks to support the delivery of market-wide rollout of smart meters across all suppliers.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Do Nothing: There is no adjustment made to the Targets Framework to account for customer churn.

Preferred Option: There will be an adjustment made so that supplier installation requirements for Year 2 of the Targets Framework are a minimum of: i) their targets with the churn adjustment applied; and ii) their targets without the churn adjustment applied.

Will the policy be reviewed? It will not be reviewed. If applicable, set review date: N/A				
Is this measure likely to impact on international trade and investment?			No	
Are any of these organisations in scope?	Micro Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: 0.005	Non-traded: 0.034	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister  Date: 19/05/2022

Summary: Analysis & Evidence

Policy Option

Description: There will be an adjustment made so that supplier installation requirements for Year 2 of the Targets Framework are a minimum of: i) their targets with the churn adjustment applied; and ii) their targets without the churn adjustment applied.

FULL ECONOMIC ASSESSMENT

Price Base Year 2019	PV Base Year 2020	Time Period 12 Years	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: -£21.5m	Best Estimate: -£13.1m

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	12	Optional	Optional
High	£0.0m		£2.7m	£26.6m
Best Estimate	£0.0m		£1.7m	£17.1m

Description and scale of key monetised costs by 'main affected groups'

The key monetised costs for all groups are the unrealised benefits of smart meters due to a reduction in overall installation requirements across the market in the second year of the Targets Framework (2023). They correspond to the following benefits from the 2019 Smart Metering Cost-Benefit Analysis: customer benefits (£13.7m), avoided site visits (£1.0m), customer switching benefits (£0.6m), debt handling improvements (£0.6m), and customer handling benefits (£0.5m).

Other key non-monetised costs by 'main affected groups'

Given the nature of the policy, we believe we have captured and monetised all key impacts felt by the main affected groups.

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	12	Optional	Optional
High	£0.0m		£0.5m	£5.1m
Best Estimate	£0.0m		£0.4m	£4.0m

Description and scale of key monetised benefits by 'main affected groups'

The key monetised benefits are the unrealised costs of smart meter installation due to a reduction in overall installation requirements across the market in the second year of the Targets Framework (2023). They correspond to the following costs from the 2019 Smart Metering Cost-Benefit Analysis: asset costs (£1.3m), installation costs (£1.7m), operation and maintenance costs (£0.3m), and Opex costs (£0.7m).

Other key non-monetised benefits by 'main affected groups'

Given the nature of the policy, we believe we have captured and monetised all key impacts felt by the main affected groups.

Key assumptions/sensitivities/risks	Discount rate	3.5%
<p>The key assumptions feeding into the analysis of impacts of this policy are those affecting the rate of churn. These have been explored using sensitivity analysis found below. Other risks of unintended consequences and potential perverse incentives were identified and have been mitigated against through policy design. As our modelling factors in the potential impact of the policy in slowing rollout, the option is linked to a negative NPV due to changes in the impacts related to the foregone rollout. The policy can be nevertheless considered justified on the basis of minimising the potentially adverse impact of customer switching for some suppliers, and thereby ensuring the robustness of the Targets Framework. The overall NPV of the Targets Framework was £1,306m as detailed in the Smart meter policy framework post 2020 Impact Assessment.</p>		

BUSINESS ASSESSMENT

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m: N/A
Costs: £0.2m	Benefits: £0.4m	Net: -£0.2m	

Evidence Base

Problem under consideration and rationale for intervention

1. Smart meters are replacing traditional gas and electricity meters across Great Britain as part of a vital national infrastructure upgrade that will digitise our energy system. Smart meters will make our energy system more efficient and flexible, enabling us to use more renewable energy more cost effectively and reduce our reliance on fossil fuels. This will cut costs for consumers and help us achieve net zero carbon emissions by 2050. Government intervened in ensuring the roll out for Smart Meters due to a range of barriers to take up – these are set out in the 2019 Smart Meter Roll Out: cost-benefit analysis¹.
2. In June 2021, Government confirmed the tolerance levels for the first two years of the new Smart Meter Targets Framework.² Under the Targets Framework, energy suppliers are set a minimum number of smart meters that they need to install in a given year. The government also committed to consulting on proposals for a modification in the calculation of Year 2 installation requirements, to mitigate for the impact of churn³ in smart meter customers on suppliers' individual targets.
3. In the same June 2021 Government Response, we acknowledged that smart meter churn may represent a particular challenge for energy suppliers that have a greater than average smart penetration and are therefore overall more likely to lose, rather than gain, customers with smart meters through churn. This is, in part, a function of how the market works; some energy suppliers are further ahead than others with regards to their smart meter rollout and all customers are free to move between energy suppliers. When a customer who has had a smart meter installed moves to a new energy supplier, the "credit" for that install (in terms of smart meter coverage) is transferred to the new energy supplier. Whilst a supplier can't meet its minimum install requirements through a gain in smart meters alone, a net gain in smart meters obtained via churn in Year 1 would have a material impact on supplier minimum install requirements in Year 2.
4. The current methodology – set out in Electricity and Gas Supply Licence Conditions – for calculating minimum installation requirements does not mitigate for positive smart churn (gaining more smart meters than are lost as a result of customers switching suppliers) or negative smart churn (losing more smart meters than are gained from customers switching). This could lead to more challenging Year 2 targets for suppliers experiencing negative smart churn, which would force suppliers with higher overall smart penetration to undertake more new installations than they would have expected had they not experienced churn. This results from the fact that installation requirements under the Framework are based on suppliers' portfolio size and their proportion of smart and non-smart customers. Meters gained and lost in Year 1 contribute to a supplier's portfolio in Year 2 and, therefore, their installation requirements for that year. If a supplier experiences negative smart churn in Year 1, their proportion of smart customers relative

¹ <https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019>

² [Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers – government response](#)

³ The movement of customers between energy suppliers.

to their overall portfolio will reduce and this will result in higher installation requirements in Year 2.

5. Given the disparity between market wide smart coverage and individual suppliers' smart coverage, a supplier with above average smart penetration is more likely, all other things being equal, to have a net gain of traditional meters and a net loss of smart meters as a result of churn. Therefore, the net effect of Year 1 churn may be to make Year 2 installation requirements more difficult for suppliers with above average smart penetration (and easier for suppliers with below average smart penetration). This would run contrary to the stated objectives of the policy framework. By not accounting for churn, responsibility for a comparatively higher proportion of Year 2 installs could fall on a segment of energy suppliers who are (or were) already ahead of the market average for smart penetration. We have previously acknowledged the importance of delivering market-wide rollout and the role that all suppliers will play in achieving this. We therefore look to ensure that the minimum installation requirements are appropriately spread between suppliers, to put all suppliers on a track to achieving full smart coverage. While Ofgem has the power to modify energy licence conditions and industry codes, the Government, rather than Ofgem, is responsible for developing smart metering policy and strategy, including by providing the right policy framework against which energy suppliers and network operators can plan. Government intervention is therefore required to address this issue which, if unaddressed, may undermine the robustness of this policy framework.

Rationale and evidence to justify the level of analysis used in the IA (proportionality approach)

6. The policy is low impact and a non-qualifying regulatory provision as the equivalent annual net direct cost to business (EANDCB) is significantly below the *de minimis* threshold of £5m⁴⁵. As such the analysis supporting the policy is straightforward and uses estimates and assumptions supported by easily obtainable, but robust, evidence including insights drawn from the consultation responses.
7. Indirect impacts have not been monetised in line with the proportionality approach, however a full small and micro business assessment (SaMBA) has been undertaken. Direct Impacts have been monetised for the preferred option, but not for the discarded options.

Description of options considered

Description of Policy

8. In November 2021, the Government consulted on an adjustment to mitigate the impact of customer-driven smart churn on energy suppliers' minimum installation requirements for the second year of the new Targets Framework. It was proposed to do this by revising the formula used to define supplier installation requirements in Year 2 (2023) of the Targets Framework.

⁴ <https://www.gov.uk/government/publications/proportionality-in-regulatory-submissions-guidance>

⁵ <https://www.gov.uk/government/publications/better-regulation-framework>

9. The aims of this adjustment are to focus energy suppliers' obligations on the number of smart meters that they install in each rollout year and to prevent suppliers facing higher installation required in Year 2 of the Framework because of have lost smart meter customers to other suppliers in Year 1.

Description of Options considered

10. In November 2021, the Government consulted on two options: a full adjustment to mitigate the impact of churn and a partial adjustment to mitigate the impact of churn. The full adjustment was the minded-to position. Following consultation, the Government developed an additional option in response to the feedback received and this is the preferred option.

11. Details of each option, as well as a baseline Do Nothing option are as follows:

- **Option 0 (Do Nothing):** There is no adjustment made to the Targets Framework to mitigate the impact of Year 1 churn on Year 2 minimum installs requirements.
- **Option 1:** There is a full adjustment made to supplier minimum installation requirements in Year 2 of the Targets Framework to account for churn. This is achieved by revising the formula used to calculate supplier annual installation requirements under the new Framework. The revision would introduce a “churn adjustment parameter” that could be set at increments from 0.00 to 1.00 to apply a degree of mitigation of the impact of smart meter customers switching supplier. In order to make the full adjustment in Year 2, the value of the churn adjustment parameter in Year 2 would be set at the highest level possible (1.00). Given the potential challenges that churn may present for some suppliers, this option was proposed as the minded-to position in the consultation on the basis that it fully mitigates for the impact of Year 1 churn on Year 2 minimum installation requirements. This adjustment would be implemented by introducing the following formula to licence conditions.

$$N_y = \left(\frac{1}{a_y} \{ \beta_y * (TMS_y - (S_1 + NQ_y)) + (1 - \beta_y) * (RSMS_y) \} - T_y \right)$$

12. Where:

N_y	means the minimum installation requirement for the Rollout Year “y”
TMS_y	means the total number of premises (domestic and designated) (smart and non-smart) supplied by supplier at start of year “y”
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 and Electricity Supply Licences;
S₁	means the total number of Qualifying Metering Systems (i.e. smart and advanced) that are the responsibility of the supplier at the start of Year 1.
NQ_y	means the total number of Qualifying Metering Systems installed by a supplier in year “y”
y	means each Rollout Year within the Framework
RSMS_y	means the number of Qualifying Relevant Premises at the beginning of the Rollout Year.

β_y	means a number representing a churn adjustment parameter in a range of 0.00 to 1.00 which will apply a level of mitigation of the impact of smart meter customers switching supplier on supplier installation requirements
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13.

- **Option 2:** There is a partial adjustment, set at half the level of the full adjustment, made to minimum installation requirements in Year 2 of the Targets Framework to account for churn. This is achieved by revising the formula for calculating supplier installation requirements as in Option 1 above and the value of the churn adjustment parameter (β_2) in Year 2 at 0.5. This option has also been considered for the same reasons as option 1 but is a less complete churn adjustment which spreads the impact of churn across the industry. This was viewed as sub-optimal when compared to Option 1 as it does not effectively meet the policy intentions, as churn can still effect the installation requirements in the following rollout year.
- **Option 3 (preferred):** a revised formula is applied to Year 2 installation requirements so that energy suppliers' requirements are defined as the minimum of:
 - i) their targets with the full churn adjustment (equivalent to a churn adjustment parameter of 1) applied; and
 - ii) their targets with no churn adjustment (equivalent to a churn adjustment parameter of 0) applied.

This will ensure that the adjustment mitigates the impact of customers switching supplier for those suppliers that experience negative smart churn. However, the adjustment will not increase supplier installation requirements above what would be expected under the formula currently included in licence conditions (i.e. the formula without the churn adjustment applied). This would reduce any potential distorting or polarising impact of the churn adjustment. Whilst it would lower the overall aggregate installation requirements across the market in the second year of the Targets Framework (2023), in a market with minimal churn expected any reduction in market wide installation requirements would be low.

14. Option 0 represents both our status quo baseline and non-regulatory option. This would not address the acknowledged challenge that smart meter churn may represent for energy suppliers that have a greater than average smart penetration and are therefore more likely to lose, rather than gain, customers with smart meters through churn. Therefore Option 0 would not resolve the problem under consideration.

15. Following consultation, it was also determined that Options 1 and 2 should be discarded:

- a. Option 1 was discarded as feedback received in response to the consultation indicated that a full adjustment for churn using the methodology proposed had a risk of potential unintended consequences. Respondents to the consultation raised concerns that the minded-to position may disproportionately inflate the Year 2 targets of energy suppliers that gain more smart meters than they lose through churn in Year 1. It was suggested that this could lead to suppliers being given unachievable targets. It was also suggested that it would create a risk of a perverse incentive for suppliers to seek to avoid gaining customers that already have a smart meter. Such a perverse incentive may be to the detriment of

consumer experience and to services and offers associated with smart meters. The Government noted these concerns and accepted that such an outcome would be contrary to the intentions of the churn adjustment and to the Government aim to achieve market-wide smart rollout.

- b. Option 2 was discarded as it neither fully meets the intentions of the adjustment to prevent any potential penalisation of suppliers ahead in their smart rollout as a result of losing smart meter customers through churn, nor does it entirely eradicate the risk of unintended consequences as set out above. Only one respondent to the consultation stated that the partial adjustment was a viable option for implementing the churn adjustment.

16. On the basis of the unsuitability of Options 1 and 2 for driving intended policy outcomes without unintended consequences or perverse incentivisation issues, Option 3 was developed as the preferred option. Option 3 provides a means of fulfilling the intention of the adjustment whilst mitigating the risks raised by respondents to the consultation. As Options 1 and 2 were discarded following consultation, Option 3 and the status quo are the only options where a fully quantified cost-benefit analysis has been undertaken.

Description of implementation plan

17. The churn adjustment methodology will be implemented through the following formula used to set supplier installation requirements in Year 2 of the Framework. This formula will be introduced to licence conditions 33A and 39A of the Gas and Electricity Supply Acts respectively.

$$N_2 = \text{The minimum of:}$$

- i) $\left(\frac{1}{3}(TMS_2 - (S_1 + NQ_1))\right) - T_2$; or
- ii) $\left(\frac{1}{3}RSMS_2\right) - T_2$

18. Where:

N₂	means the minimum installation requirement for the Second Rollout Year (2023)
RSMS₂	19. means the number of Qualifying Relevant Premises ⁶ at the beginning of the Second Rollout Year (2023)
T₂	means a number representing a tolerance level for the Second Rollout Year (2023), which has 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 and Electricity Supply Licences. ⁷
TMS₂	means the total number of premises (domestic and designated) (smart and non-smart) supplied by a supplier at the start of the Second Rollout Year (2023)

⁶ Qualifying Relevant Premises are defined as Domestic Premises or Designated Premises in respect of which the licensee is the Relevant Electricity Supplier and at which there is installed neither: (a) a Smart Metering System; nor (b) an Advanced Meter installed in accordance with the requirements of standard condition 39 (Smart Metering System – Roll-out, Installation and Maintenance), [Energy supply licence conditions](#).

⁷ This document was published in June 2021, [Smart meter policy framework post 2020: minimum annual targets and reporting thresholds for energy suppliers – government response](#)

S₁	means the total number of premises (domestic and designated) with a Qualifying Metering System (i.e. Smart Meter or Advanced Meter) that are the responsibility of the supplier at the start of the First Rollout Year (2022)
NQ₁	means the total number of Qualifying Relevant Premises at which a supplier has installed a Qualifying Metering System (i.e. Smart Meter or Advanced Meter) from the start of the First Rollout Year (2022) up to the date which immediately precedes the start of the Second Rollout Year (2023).

20. The Government will lay amending regulations in Parliament in Summer 2022 in line with the procedure under Section 89 of the Energy Act 2008, including changes to licence conditions to implement the modification of the calculation used to set supplier installation requirements for Year 2 of the Targets Framework (2023) to mitigate the impact of customer-driven smart churn. Subject to Parliament, these amendments will come into effect as soon as the required parliamentary laying period is concluded. For further details please consult the main Government Response document and Annex C.

21. Responsibility for compliance and enforcement of this policy will sit with the regulator, Ofgem.

Monetised and non-monetised costs and benefits of each option (including administrative burden)

22. The impacts of options 1 and 2 have been considered; however they have not been quantified as all impacts are just transfers between businesses and therefore net to zero.

Key assumptions for modelling customer churn

23. By adjusting the formula to account for customer churn between suppliers, the policy reduces the overall targets for smart meter installations in Year 2 in line with overall churn levels in Year 1. The impacts of the policy therefore depend on the levels of churn in Year one. As our modelling factors in the potential impact of the policy in slowing rollout, the option is linked to a negative NPV due to changes in the impacts related to foregone rollout. The policy can be nevertheless considered justified on the basis of minimising the potentially adverse impact of customer switching for some suppliers, and thereby ensuring the robustness of the Targets Framework. The overall NPV of the Targets Framework was £1,306m as detailed in the Smart meter policy framework post 2020 Impact Assessment⁸. The monetised impacts were modelled by using an average rate of meter churn for domestic suppliers of 4.9% and for non-domestic suppliers of 13.5%. This equates to a reduction in smart meter installs of approximately 18,000 for domestic suppliers and approximately 6,500 for non-domestic suppliers during the second year of the Targets Framework. The domestic figure is based on Ofgem analysis on current levels of customer switching (as of the end of 2021)⁹, whilst the non-domestic figure is based on the levels of electricity meters that switched suppliers in the period from November 2021-January 2022¹⁰. Although recent data on domestic switching

⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/991994/Impact_Assessment.pdf

⁹ <https://www.ofgem.gov.uk/retail-market-indicators>

¹⁰ <https://www.energy-uk.org.uk/publication/293-research-and-reports/switchingreports.html>

indicates these figures may be high estimates¹¹, they have been used to account for the inherent uncertainty currently present in the energy supply market.

Monetised benefits

24. The main monetised benefits from the policy are a reduction in the supplier costs identified in the 2019 Smart Metering Cost-Benefit Analysis (2019 CBA)¹² and are monetised following the same assumptions as the 2019 CBA.
25. The policy affects targets in Year 2 of the Framework and the majority of the benefits are felt in Year 2. There is a knock-on impact of reduced costs throughout the Framework period, however reduced costs beyond Year 2 are small. The total present value benefit of the policy is estimated to be £4.0m. The main monetised benefits are listed below.
26. **Reduction in meter asset costs:** having lower installation targets is assumed to lead to a reduction in smart meter installations. Through statistical returns from energy suppliers and regular contact with delivery partners, the programme has collected information on the costs of smart, advanced and traditional meters. For future installations, we take the most recent data, based on 2018 asset values, and apply a cost erosion for all assets based on the observed cost developments over time for traditional metering equipment. This decreases the costs of equipment deployed in the home by roughly 1% per annum to the end of the roll-out. We also include a 5% optimism bias to account for potential exchange rate fluctuations and economic risk. The savings for energy suppliers from reduced asset costs is estimated at £1.3m in present value terms over the appraisal period.
27. **Reduction in installation costs:** having lower installation targets is assumed to lead to a reduction in asset installs. The programme collects information on the cost of smart meter installations through regular¹³ statistical returns from suppliers. Costs have been provided for single- and dual-fuel installations for both in-house and third-party installations and include factors such as the costs of training installers, providing tools, managing installers in the field, appointment setting, insurance, legal, van and other back-office support costs. The savings for energy providers reduced installation costs is estimated at £1.7m in present value terms over the appraisal period.
28. **Reduction in operation and maintenance costs:** having fewer smart meters installed in Year 2 will lead to a small reduction in ongoing costs for energy suppliers. We assume an annual operations and maintenance cost for smart meters of 2.5% of the meter purchase cost. This is incurred largely due to the costs associated with replacing equipment if found to be faulty. This assumption is based on information collected from Meter Asset Providers. The reduction in operation and maintenance costs is estimated to be just under £30,000 per year for the industry over the appraisal period.
29. **Reduction in Communication Hubs Financing Costs:** By reducing the number of smart meter installs that are likely to take place in Year 2 of the Framework, fewer communication hubs (which allow smart meters to communicate in premises and with the

¹¹ <https://www.gov.uk/government/statistical-data-sets/quarterly-domestic-energy-switching-statistics>

¹² <https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019>

¹³ At least annually through Annual Supplier Returns, but also through regular engagement between the programme and stakeholders.

DCC) are required and so this represents a cost savings. This is a separate line from asset costs as they are financed differently from the meter asset. The savings here are estimated at £0.7m in present value terms over the appraisal period

Monetised costs

30. The main costs from the policy coincide with the consumer benefits identified in the 2019 Smart Metering Cost-Benefit Analysis (2019 CBA) and are monetised following the same assumptions as the 2019 CBA (with some inputs updated to reflect newly available evidence and changes to Green Book guidance¹⁴ on appraisal). There are also transitional familiarisation costs, the main monetised costs are listed below.
31. **Familiarisation costs:** the total cost of familiarisation for the policy has been estimated at £6,800. This has been calculated by multiplying the Full Time Equivalent (FTE) hourly wage rate of a compliance officer employed by an energy supplier¹⁵ by the expected time taken for a compliance officer to understand and process this change. Based on the industry expertise available to the programme¹⁶, we have prudently estimated the time taken by the compliance officer to be 8 hours (FTE) and that dissemination of any changes will be worked into regular training activity, incurring no additional cost. The product of the hourly wage rate and hours worked has then been multiplied by the number of energy suppliers that this policy will apply to, arriving at the above cost estimate.
32. **Foregone benefit from avoided meter reading and inspection visits:** smart meters enable energy suppliers to avoid costs of having to send meter reading operatives to properties in order to obtain a meter reading or inspect a meter for safety purposes. Using data from energy suppliers on the volume of meter reading/inspection visits and the overall expenditure on these, we can track the unit cost of a meter read visit and the average frequency with which these visits occur. We can then multiply these two factors together to get an average cost per meter per year for each energy supplier. The average figure across the suppliers is then obtained by weighting these values by market share. The foregone benefit from avoided meter reading and inspection visits is estimated at £1.0m in present value terms over the appraisal period.
33. **Foregone benefit from customer handling improvements:** there are reduced costs to energy suppliers from handling customer billing enquiries from smart meter customers. Since smart meters are expected to result in an end of estimated bills for consumers, the volume of these type of enquiries is falling. This reduces the cost of the two components of total call handling costs to suppliers: inbound enquiries (i.e. the direct cost of dealing with a customer call) and customer service overheads (i.e. fixed costs such as rent of buildings and IT systems). Overheads are assumed to represent 15% of overall customer call costs for traditional meters (based on BEIS industry knowledge) and therefore decline alongside the costs of inbound inquiries. The foregone benefit from customer

¹⁴ <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

¹⁵ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashtable14>

¹⁶ In particular, we have consulted with an industry expert with 20+ years' experience of working in and around the retail energy industry and has particular insight into how energy suppliers operate.

handling improvements is estimated at £0.5m in present value terms over the appraisal period.

34. **Foregone debt handling benefits:** Smart metering helps to avoid or reduce the impact of debt – both on the consumer and the energy supplier – in three key ways:

35. More frequent billing

36. Earlier identification of debt build-up and faster follow-up action

37. Reduced bad debt charges and final debt write-off

38. Each of these benefits can enable energy suppliers to reduce the amount of consumer debt that they hold and/or write-off, which reduces suppliers' working capital requirements. Since the provision of this working capital is not free (it could be utilised elsewhere and therefore carries opportunity costs), reductions in working capital requirements equate to an operational cost saving that suppliers can realise and consequently pass on to consumers. Based on an analysis of the energy market, we assume a cost of capital of 6% per annum within all our calculations in this benefit area. The foregone debt handling benefit is estimated at £0.6m in present value terms over the appraisal period.

39. **Foregone customer switching benefits:** smart meters enable suppliers benefit from reduced costs of handling customer switching. Smart meters provide automated reads thus avoiding the cost to suppliers of obtaining an actual meter reading when a customer switches (either through sending a meter reader or by requesting a read to be submitted by the customer), and in investigating any exceptions to this. The foregone customer switching benefit is estimated at £0.6m in present value terms over the appraisal period.

40. **Foregone non-domestic customer benefits:** smart meters provide both time and energy savings to customers. The foregone smart meter benefits for non-domestic customers is estimated at £4.7m in present value terms over the appraisal period.

41. **Foregone domestic customer benefits:** smart meters provide both time and energy savings to customers. The foregone smart meter benefits for domestic customers is estimated at £9.1m in present value terms over the appraisal period.

Table 1. Direct costs and benefits to business calculations

Discounted Costs and Benefits	
Costs	
	Foregone benefit from Avoided Meter Reading & Inspection Visits (£m) 1.0
	Foregone benefit from Customer handling improvements (£m) 0.5
	Foregone debt handling benefits (£m) 0.6
	Foregone customer switching benefits (£m) 0.6
	Foregone non-domestic customer benefits (£m) 4.7
	Foregone domestic customer benefits (£m) 9.1
	Other foregone benefits (£m) 0.6

Benefits	Reduction in asset costs (£m)	1.3
	Reduction in installation costs (£m)	1.7
	Reduction in operation and maintenance costs (£m)	0.3
	Reduction in Opex (£m)	0.7
Net Present Value (NPV, £m)		-13.1

Risks and assumptions

42. This Impact Assessment is based on the latest Cost-Benefit Analysis model for the smart meter rollout, the most recent comprehensive assessment for which was published in September 2019¹⁷. The comprehensive nature of that assessment gives confidence that it remains suitable for the purposes of this impact assessment. The unpredictability of levels of customer switching in the retail energy market in Year 1 of the Targets Framework (2022) presents a risk in assessing the impact of the churn adjustment. Levels of customer switching have decreased as overall energy price increases, caused by global market factors, have reduced the possible savings from switching energy supplier. We have accounted for this where practicable in our assessment – more detail can be found in the sensitivity analysis section.

43. As noted in paragraph 14 above, respondents to the consultation raised concerns about risks of unintended consequences and potential perverse incentives associated with Options 1 and 2. The preferred option has been designed to mitigate these risks while still delivering the policy objectives. For an explanation of how the preferred option effectively mitigates the risks identified, please refer to the main Government Response document.

Impact on small and micro businesses

44. With reference to the policy under consideration, both the energy suppliers and some consumers are businesses. Most of the non-domestic consumers covered by the smart metering mandate are micro businesses, while the rest are small and medium-sized enterprises (SMEs) and smaller public sector organisations.

45. The impact on small business consumers is slightly negative as the policy reduces the benefits to consumers by reducing the aggregate installation requirements across the market in Year 2 of the Targets Framework. Small and micro businesses which want a smart meter in order to experience the benefits are still able to request one and will be unlikely to be materially affected by the policy. Those businesses which are affected would only feel a very minor impact.

46. The impact of the policy on small energy suppliers is more uncertain, at least in the short term. It has not been possible to source complete data that distinguishes energy suppliers by their exact number of employees and so, given the absence of data on the number of employees by energy supplier, it has not been possible to undertake an

¹⁷ <https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019>

assessment of the effect of this policy on small and micro businesses using the most typical definition of small and micro businesses (which are those with between 11-50 employees and 10 or fewer employees, respectively). Indeed, given the complexity of energy suppliers' operations and business structures, an employment-based definition may not have given an accurate representation of whether an energy supplier is a small or micro business – it is common practice in the energy supply industry to have a third-party business manage a large proportion of the business operations (including back-office functions and installations), which would likely skew the findings of any such assessment.

47. Instead, this Impact Assessment (IA) has used an annual turnover-based approach where a small business is defined as one with an annual turnover less than £6.5m and a micro business is defined as one with an annual turnover less than £632k. This is in line with the approach used for the Smart Meter Policy Framework Post 2020 IA¹⁸. Annual turnover has been collected from Companies House data, where available, to determine which suppliers meet the above criteria. Where no specific turnover data is available, individual financial accounts submitted to Companies House have been studied to determine the basis on which abridged accounts have been submitted. Where the likely cause for abridged accounts is that individual businesses do not meet the required turnover threshold to submit full accounts, they have been classified as a small or micro business.

48. At the time of writing there are 56 energy suppliers who have obligations covered by the smart metering mandate operating in the market. Of these, we estimate that 17 of these are small businesses and micro businesses. The policy reduces the costs to energy suppliers by reducing the overall installation requirements across the market in the second year of the Targets Framework (2023). While this has a positive impact on small and micro suppliers as they generally have less advanced smart meter rollout than the market average, they represent a very small proportion of the rollout, so the impact on rollout as a whole is negligible.

Wider impacts (consider the impacts of your proposals)

49. By mitigating the impact of smart meter customers switching energy supplier, the churn adjustment aims to prevent unfair penalisation of energy suppliers further ahead in their smart rollout. The Government has revised the methodology of the churn adjustment following consultation. This was done in response to supplier feedback that the original proposal could result in some suppliers being competitively disadvantaged by higher installation requirements as a result of their business models and customer acquisition strategies.

50. By designing the adjustment so that suppliers experiencing positive smart churn (gaining more smart meters than they lose) do not receive higher installation requirements that then would expect under their current obligations, the adjustment seeks to ensure that all suppliers remain incentivised to adopt approaches for encouraging consumers to accept a smart meter, which is consistent with a competitive and dynamic market. We would not,

¹⁸ <https://www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020-minimum-annual-targets-and-reporting-thresholds-for-energy-suppliers>

therefore, expect this policy to have any significant impact on trade and investment or act as a barrier to effective competition within the energy market.

51. The preferred option has also been designed to reduce any risk that energy suppliers are disincentivised from offering innovative smart products and services. As such, the policy ensures that the smart meter rollout policy framework will continue to spur innovation and delivery of a smart and more flexible energy system.

Sensitivity Analysis

52. In our sensitivity analysis we have run an additional scenario for both domestic and non-domestic churn where we have increased the average churn rate used for the scenario analysis to simulate a return to more typical market conditions happening sooner and impacting churn in Year 2.

53. The impacts of the “high scenario” were modelled by using an average rate of meter churn for domestic suppliers of 19% and for non-domestic suppliers of 25%. This equates to a reduction in smart meter installs of approximately 70,000 for domestic suppliers and approximately 12,500 for non-domestic suppliers. These values are based on historic churn rates¹⁹. The actual churn rates will vary by supplier and depend on switching rates/levels of smart coverage for each supplier.

54. This has the effect of increasing the number of smart meters lost via churn for suppliers who have greater than average smart penetration and increasing the number of smart meters gained via churn for those suppliers who have a lower than average smart penetration. Under our preferred policy option, the greater reduction in the number of smart meters installed in year 2 of the framework works to increase the foregone benefits (costs) by a larger amount than the avoided costs (benefits) – leading to a larger decrease in net benefit than observed in the central scenario.

Table 2. Direct costs and benefits to business calculations central vs high scenario

	Discounted Costs and Benefits	Central	High
Costs	Foregone benefit from Avoided Meter Reading & Inspection Visits (£m)	1.0	1.3
	Foregone benefit from Customer handling improvements (£m)	0.5	0.7
	Foregone debt handling benefits (£m)	0.6	0.9
	Foregone customer switching benefits (£m)	0.6	0.8
	Foregone non-domestic customer benefits (£m)	4.7	8.6
	Foregone domestic customer benefits (£m)	9.1	13.8
	Other foregone benefits (£m)	0.6	0.6
Benefits	Reduction in asset costs (£m)	1.3	1.7
	Reduction in installation costs (£m)	1.7	2.2

¹⁹ <https://www.gov.uk/government/statistical-data-sets/quarterly-domestic-energy-switching-statistics>

	Reduction in operation and maintenance costs (£m)	0.3	0.4
	Reduction in Opex (£m)	0.7	0.9
Net Present Value (NPV, £m)		-13.1	-21.5

Monitoring and Evaluation

55. The reporting, monitoring, compliance and enforcement of this specific policy are not within the Department's remit and will be a matter for the regulator, Ofgem, who have consulted separately on the reporting requirements of the wider obligation.
56. From a regulatory point-of-view, this adjustment will see little change from the approach established with the implementation of the wider framework and so should not lead to any costs increases in respect of reporting, monitoring and enforcement activities. In terms of suppliers, the new reporting requirements will seek to collect information already collated by suppliers as part of their obligations under the Targets Framework although it may differ in the presentation format. On that basis, the implementation of this policy does not impose any additional reporting burden for suppliers and therefore no additional reporting costs.
57. In parallel, the Programme will continue to monitor the progress of the smart meter rollout, including (but not limited to):
58. Producing quarterly and annual statistical releases making transparent the progress of the rollout.
59. Holding regular bilateral meetings with energy suppliers to identify issues, promote best-practice, and monitor developments within the industry.
60. Working with specific business sectors to ensure that they are able to get the most out of smart metering.
61. Reviewing the benefits being delivered by smart meters, as part of ongoing benefits realisation activity within the Smart Meter Implementation Programme.
62. Undertaking a mid-point review of the new Framework in 2023 to support the setting of the targets and tolerances for the final two years of the Framework; including the role of any potential churn adjustment.

Public Sector Equality Duty Assessment

63. The Smart Metering Implementation Programme has undertaken assessments of this nature for previous policy interventions in line with the requirements of the Public Sector Equality Duty (the equality duty) as set out in section 149 of the Equality Act 2010. Whilst we do not believe that these licence conditions amendments will have any further impacts in this space, we will continue to consider PSED implications alongside any future policy changes in this area.

64. In June 2021, we implemented our new post-2020 policy framework (which underpins the rollout of smart meters.) In doing this, we completed a PSED assessment in line with the aforementioned requirements. The impact of smart metering on statutory equality duties (including our obligations under the Public Sector Equality Duty) is considered on pages 67-72 of the 2019 Smart Metering Cost-Benefit Analysis²⁰ The churn adjustment does not significantly alter the intention or consumer-facing impacts of the post-2020 policy framework. As such, we consider that this intervention falls within the remit of the previous PSED assessment and that the analysis remains relevant and appropriate. We do not consider that any of the social impact tests available are relevant to this assessment

65. The Government and Ofgem have worked with a range of consumer and other organisations to use the opportunities created by smart metering to protect and provide benefits for those in vulnerable circumstances and to avoid possible disbenefits. The Programme has put in place measures designed to ensure that consumer interests are protected. These measures include a Code of Practice covering the necessary steps required during installation; and a Data Access and Privacy Framework, which sets out the purposes for which energy consumption data can be collected and the choices that consumers have about access to their data. The Smart Metering Implementation Programme will continue to monitor consumer protection policy to ensure appropriate safeguards are in place, including for vulnerable consumers and consumers with protected characteristics.

²⁰ <https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019>