



Department for
Business, Energy
& Industrial Strategy

Delivering a Smart System

Response to a Consultation on a Smart
Meter Policy Framework Post 2020

ANNEX B: Impact Assessment

June 2020



OGI

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Summary: Interventions and Options

Title: Post-2020 smart meter rollout – temporary extension of existing regulations IA No: BEIS016(C)-19-SMIP Lead department or agency: Department for Business, Energy and Industrial Strategy Other departments or agencies: None	Impact Assessment (IA)
	Date: 28/04/2020
	Stage: Final
	Source of intervention: Domestic
	Type of measure: Secondary legislation
	Contact: smartmetering@beis.gov.uk
Summary: Intervention and Options	RPC Opinion: Not Applicable

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	Business Net Present Value	Net direct cost to business per year	Business Impact Target Status
1 £286.5m	£62.1m	£0.5m	Non qualifying provision

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

Under the current smart meters regulatory framework, energy suppliers have an obligation to take all reasonable steps to install smart meters in all premises by the end of 2020. This has already delivered over 20 million smart meter installations and laid a strong foundation for an enduring smart system. This obligation will expire at the end of this year, so it is necessary to put a new policy framework in place to ensure that the momentum of the smart meter rollout continues. Government intends to introduce a framework of installation milestones to continue to drive smart meter installations to reach market-wide coverage. However, the impact of the Covid-19 pandemic has significantly impacted upon energy suppliers' ability to conduct installations at present. In recognition of this, Government intends to extend the existing all reasonable steps obligation by six months, out to the end of June 2021. This should allow time for energy suppliers to resume installation activity following the present interruption. Thereafter, Government will introduce the proposed more defined installation framework – we intend to consult on the relevant milestone and tolerance levels at the appropriate time.

What are the policy objectives and the intended effects?

In the long-term, the Department's aim is to encourage consumers to benefit from smart metering, deliver a market-wide smart meter rollout normalising these as the default meter in Great Britain, and provide certainty and clarity to the energy industry. However, we recognise that the current Covid-19 pandemic poses significant challenges to short-term delivery. This temporary measure aims to ensure that progress towards these aims continues when possible and appropriate, while allowing Government to take these impacts into account to ensure that the milestones and tolerance levels for the eventual permanent policy framework are based on sound evidence.

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

Our temporary measure extends existing regulation for six months beyond its scheduled expiry at the end of 2020. This means that energy suppliers would continue to be required to take all reasonable steps to install smart meters at all premises, but that they would have six additional months to achieve this objective. This additional time recognises the fact that the Covid-19 pandemic is likely to lead to a period of significantly reduced installation activity and allows energy suppliers time to build their capacity back up following these impacts. At consultation stage, we proposed establishing annual milestones during a period of four years for each energy supplier, based on a straight-line delivery trajectory towards the overall ambition of market-wide rollout. Energy suppliers would have been required to meet these milestones, within a tolerance that grows linearly as a proportion of their total customer base. We continue to believe that annual milestones are the best way to drive the smart meter rollout forward, however, the current uncertainty due to Covid-19 means that it would not be appropriate to move to this new framework at this time. We therefore consider this temporary measure to be preferable at this point, with the new framework to be introduced following its expiry. Given potential changes to the market, we intend to consult on milestone and tolerance levels at the appropriate time. We have also considered the situation without regulation – in that case, energy suppliers would only be required to install smart meters on new metering points and for meter replacements. This risks a loss of momentum to the rollout, which could be difficult to fully regain once the more defined policy framework is introduced. This could lead to substantially lower smart meter coverage, risking a large portion of the estimated benefits of smart metering and jeopardising the transition to a smart energy system.

ANNEX B: Impact Assessment

Will the policy be reviewed? It will be reviewed. If applicable, set review date: During 2020				
Does implementation go beyond minimum EU requirements?		Yes		
Is this measure likely to impact on 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: -0.3		Non-traded: -0.7

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:

15/06/2020

Summary: Analysis and Evidence

Policy Option 1

Description: Main policy scenario – temporary extension of existing all reasonable steps obligation by six months

FULL ECONOMIC ASSESSMENT

Price Base Year 2011	PV Base Year 2019	Time Period Years 14	Net Benefit (Present Value (PV)) (£m)		
			Low: +97.6	High: +327.2	Best Estimate: +217.6

COSTS (£m)	Total Transition (Constant Price) Years	One- off	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.7		8.1	98.3
High	2.4		26.4	323.1
Best Estimate	1.7		19.1	232.6

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

The majority of these costs are incurred by energy suppliers for (a) the purchase of metering assets (smart meters, in-home displays, and communications hubs); and (b) the installation of these meters. Each of these areas makes up over two fifths of the total cost. These costs are likely to be passed through to consumers eventually through impacts on energy bills.

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

While we have monetised the time cost to consumers resulting from the typical duration of an installation visit (around two hours to complete), consumers will also incur a non-monetised opportunity cost relating to the time that they may stay at home prior to and following this installation visit.

BENEFITS (£m)	Total Transition (Constant Price) Years	One- off	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.0		17.1	195.9
High	0.0		57.3	650.3
Best Estimate	0.0		39.4	450.2

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

Consumers will benefit directly through energy savings that smart meters enable them to realise. This makes up over a third of the total benefits. Most of the remaining benefits are to energy suppliers, including avoided site visits (e.g. for meter reading), reduced customer service enquiries, and lower costs to serve prepayment customers. There are also environmental benefits from reduced energy usage and benefits to electricity network operators through improved fault detection and better-informed investment decisions.

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

Smart meters are a vital upgrade to our national energy infrastructure and are central to a smarter, more flexible, and more resilient energy system. They will enable energy suppliers to offer innovative new tariffs, including smart tariffs which charge consumers different prices for electricity at different times of the day. Empowering consumers to shift their electricity use away from peak times will be critical to the future of our energy system, reducing the need for costly network reinforcement and investment in additional peak generation.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5%
<p>This Impact Assessment is based on the latest Cost-Benefit Analysis model for the smart meter rollout, which was published in September 2019 alongside the consultation-stage version of this Impact Assessment. Therefore, this analysis is dependent on the accuracy and validity of the assumptions that were used within that analysis. However, the recency and comprehensive nature of that assessment gives confidence that it still accurately reflects the context in which the decision is being made. Opting for a temporary extension of the all reasonable steps obligation may result in some energy suppliers conducting fewer smart meter installations than they would under a fixed target framework, however, the proposed approach provides greater flexibility to react to the significant challenges presented by current circumstances. This flexibility will help prepare the industry for a more defined regulatory framework towards market-wide smart meter coverage following the expiry of this temporary measure. If the impacts of Covid-19 continue to be felt for a sustained period that prevents the setting of milestones and tolerance levels, it may be necessary to extend the temporary measure for a further period. The potential impact of this has been considered as a sensitivity test.</p>		

BUSINESS ASSESSMENT (Option 1) – calculated in 2019 prices, 2020 present values as per the BIT calculator

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 23.1	Benefits: 19.5	Net: 3.6	BIT score of 17.8

Evidence Base

Background

Problem under consideration

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 and reduce our reliance on fossil fuels. This will cut costs for consumers and help us achieve net zero carbon emissions by 2050.

Smart meters offer a range of intelligent functions and provide consumers with more accurate information, bringing an end to estimated billing. The half-hourly consumption and price data recorded by smart meters, combined with half-hourly settlement for suppliers, enables innovative tariffs that reward consumers for using energy away from peak times or when there is excess clean electricity available.

Energy suppliers are currently under a legal obligation to take all reasonable steps to install smart meters in all premises by the end of 2020. This obligation has delivered huge investment across the energy sector to design and deliver a national interoperable metering infrastructure, and millions of people across Great Britain are already benefitting from smart meters.

Rationale for intervention

The existing obligation will expire on 31 December 2020. After this date, the New and Replacement Obligation means that energy suppliers will be required to install smart meters at new metering points and for meter replacements (subject to all reasonable steps). Only making these installations would lead to a substantial slowdown in the typical smart meter installation rate. Any installations beyond this minimum would be optional, meaning that we could not be confident that the momentum of the rollout will be maintained beyond the end of 2020 (as a lack of clarity around continued Government and regulatory commitment could risk industry being less able to plan and contract to deliver a continued rollout). This would delay the point at which a market-wide smart meter rollout is reached, putting at risk the delivery of the benefits of a smarter energy system to industry, society, and consumers.

In November 2018, the National Audit Office recommended that the Department clarify the post-2020 policy landscape during 2019. Government also recognised that industry needed clarity and certainty on the policy landscape post 2020 in order to enable energy suppliers to adequately plan for the delivery that will be required. The Energy Minister confirmed at the BEIS Select Committee in January 2019 that Government would provide clarity during 2019 on its plans for future smart meter rollout obligations. In September 2019, we consulted on proposals which indicated our expectation that energy suppliers should continue rolling out smart meters during 2021 and beyond. We have considered the responses provided by stakeholders across the industry and have taken account of their views in formulating a revised policy framework, to design a framework that balances achievability and ambition in order to stimulate the investment needed to deliver a market-wide roll out of smart meters across Great Britain.

We still intend to implement this framework. However, it is clear that the ongoing Covid-19 pandemic is having a substantial impact on energy suppliers' ability to conduct installations in volume. Moreover, the scale and duration of this impact are currently uncertain, meaning that the progress of the smart meter rollout by the end of 2020 and the magnitude of any long-lasting impacts on energy suppliers' installation capacity cannot be reliably predicted at this stage. Therefore, we consider that it would not be appropriate to move to this new regulatory framework at the end of 2020 as originally proposed. Instead, we intend to extend the existing all reasonable steps obligation by six months to the end of June 2021. This extension is intended to give sufficient time both for the immediate impacts of the Covid-19 pandemic to pass and for installation rates to increase back up to levels near or at pre-Covid-19 levels (both through consumer bookings and energy supplier resourcing). It is also intended to allow energy suppliers to resume activities that they had planned towards meeting their existing requirements under the all reasonable steps obligation. It will enable us to propose milestones and tolerance levels for the new regulatory framework that can take into account the recent impacts and evidence.

Policy objective

Our key policy objective is to ensure that the momentum of the smart meter rollout is maintained until such a time that we are able to implement a more defined policy framework based on well evidenced milestones and tolerance levels. This temporary measure will allow the impacts of Covid-19 to be taken into account in setting these milestones and tolerance levels. Furthermore, the temporary measure will provide flexibility and security to energy suppliers to reflect the unprecedented challenges that they are facing as a result of current circumstances.

Description of options considered

This Impact Assessment considers the costs and benefits likely to arise under the proposed temporary measure, compared against a status quo counterfactual scenario.

Status quo counterfactual scenario

In this Impact Assessment, we compare the temporary measure against the status quo counterfactual scenario. This is the scenario that we expect to prevail if no additional regulation is implemented. Under the status quo, the only ongoing obligation that would apply to energy suppliers' installation of smart meters from 1 January 2021 is the New and Replacement Obligation (NRO). This mandates that energy suppliers must (subject to all reasonable steps) use smart meters for all new metering points and all meters requiring replacement. The status quo counterfactual scenario thus assumes that only these installations take place post 2020,¹ resulting in a substantially lower level of smart meter coverage.

Policy scenario [Policy option 1]

Our policy option is to temporarily extend the existing all reasonable steps obligation out to the end of June 2021. In order to assess only the impact of the additional installations made during

¹ Whilst the technology had been available for several years prior to Government intervention, very few smart meters had been rolled out to domestic customers prior to the announcement of the existing mandate. Furthermore, in a deregulated and competitive supply market such as Great Britain, there is reduced commercial incentive for energy suppliers to voluntarily install smart meters due to the high risk of losing a major part of their value if consumers switch to a different energy supplier. Any smart meter installations taking place above those required under the NRO would therefore be expected to be in small numbers only and these would be highly uncertain. For simplicity, therefore, we do not attempt to estimate these numbers.

this temporary extension, we assume only the installations required under the NRO from July 2021 onwards.

Cost-benefit analysis

In order to estimate the costs and benefits of the policy framework, we produce forecasts of the levels of smart meter coverage expected under the temporary measure and in the absence of any policy intervention (the NRO counterfactual). To evaluate the impact that these differences in rollout rate would have on the overall costs and benefits of smart metering, we then use the methodology and values for quantifying costs and benefits from the 2019 Smart Metering Cost-Benefit Analysis.² A full explanation of how each area of cost and benefit is modelled can be found there.

Historical installation totals

We use known smart meter coverage levels at the end of 2019, as reported in large suppliers' 2019 Progress Reports,³ as the baseline from which to build our forecasts. We use the values reported in these documents including all SMETS1 meters that have either been installed after the scheduled SMETS1 end-date or have been gained during the last year through consumer churn. These are included within the figure because it is expected that they will count towards the coverage figures for the purposes of the full post-2020 regulatory framework when it is eventually introduced following the expiry of this temporary measure.

Forecasting based on energy suppliers' forecast installation totals

As part of their obligation under the existing all reasonable steps framework, large energy suppliers are required to submit forecasts of their installation totals up to the end of 2020 to Ofgem each year. We use the latest such forecasts, submitted in early 2020, as the basis for our rollout projections.

Unfortunately, the impact of the Covid-19 pandemic has significantly impacted feasible installation rates, meaning that installations during 2020 will not be fully delivered in line with these forecasts. However, we can still use these forecasts as the basis for the installation rates we expect after the impact of this disruption has passed. To do this, we adjust this forecast by assuming that the impact of Covid-19 is as follows:

- Three months of zero smart meter installations;⁴ followed by
- Three months in which installation rates gradually rebuild from zero up to the levels at which they left off prior to the disruption.

These impacts are assumed to occur from mid-March 2020,⁵ lasting until mid-September 2020. Thereafter, installation rates revert to the levels that would have been expected under energy suppliers' own forecasts described above, subject to a six-month delay. However, under the existing all reasonable steps obligation, installation delivery has consistently fallen below the

² This is a fully quality assured analysis of the rollout's costs and benefits, which was published in September 2019. It can be found at <https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019>.

³ These were submitted to Ofgem by all large energy suppliers (those with at least 250k customers) in early 2020.

⁴ This is a modelling assumption. In reality, smart meter installations will continue to take place in small numbers, for example in premises where a safety issue with the existing metering equipment has been discovered.

⁵ Up to mid-March 2020, we use the forecasts as-is, subject to the 80% delivery adjustment described below.

levels that energy suppliers project to be feasible. Generally, this delivery has been around 70-90% of prior projections, so in line with this we make an adjustment to assume that only 80% of these forecasts are delivered as our central forecast. While we expect that energy suppliers will be able to get back to these delivery rates, we recognise that there is currently substantial uncertainty around the extent that the impacts of Covid-19 could endure for the medium term (either positively or negatively). In recognition of this, we also consider an optimistic scenario in which the full forecast levels are delivered and a pessimistic scenario in which delivery drops to only 50%.

In our central scenario, installation totals from mid-September 2020 are therefore assumed to be at 80% of the levels that energy suppliers expected from mid-March 2020. Clearly, this is a highly uncertain situation, and the disruption may last for longer or shorter than these assumptions would indicate. For this reason, we include a sensitivity test in which the impacts last up to 50% longer than in our central scenario (and in which the duration of the extension to the all reasonable steps obligation is changed correspondingly).

Since the temporary measure will begin on 1 January 2021, the forecasts for both the policy and counterfactual scenarios are the same up until the end of 2020 (as per the description above). For the duration of the temporary measure, the installation levels under the policy scenario continue to follow the forecasts described above, with installation rates at the end of the temporary measure reaching the levels that had been expected by energy suppliers (subject to the 80% delivery adjustment) at the end of 2020. By contrast, installations under the NRO counterfactual from 1 January 2021 are forecast as follows:

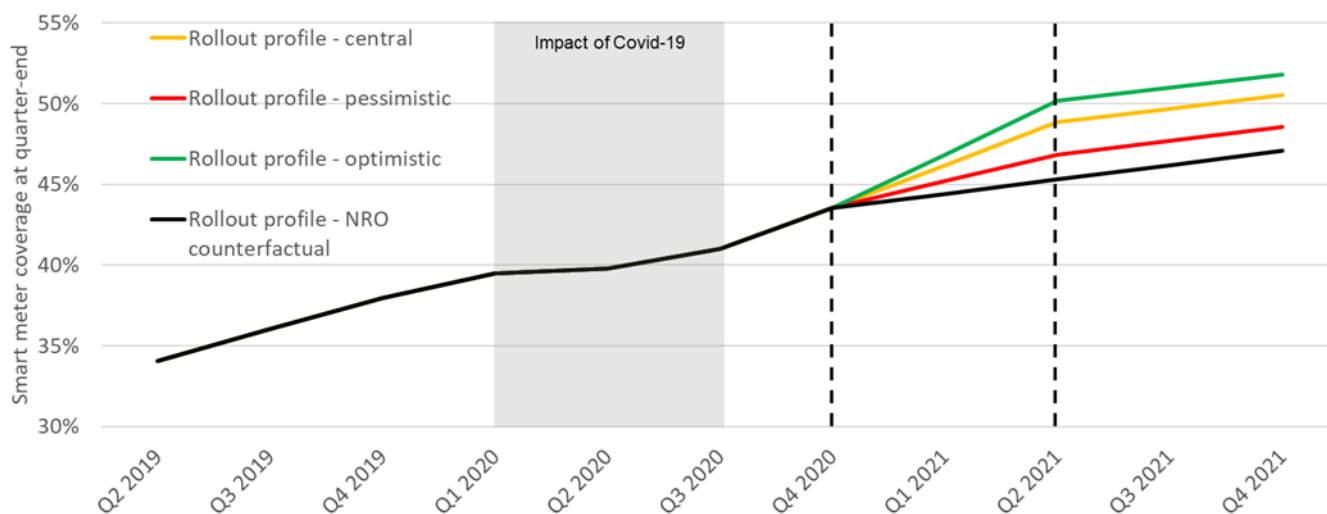
- The number of new metering points is projected based on household growth forecasts, consistent with the approach taken in the 2019 Smart Metering Cost-Benefit Analysis (page 15). These will all receive a smart meter installation.
- Traditional meters are assumed to require replacement around every 20 years for credit meters and every 10 years for prepayment meters, meaning that each year around 6% of each energy supplier's remaining non-smart metering points will receive a smart meter. This is also consistent with the approach taken in the 2019 Smart Metering Cost-Benefit Analysis (page 17).

These installation rates are also used for each of our policy scenario rollout forecasts beyond the expiry of the temporary measure, as this is the point at which the policy options being assessed come to an end. We will separately assess the impact of the annual milestones and tolerance levels under the new post-2020 framework as part of the consultation on those levels, which we intend to publish at the appropriate time.

Comparison of scenario rollout forecasts

The forecast overall smart meter coverage levels under each of the three scenarios considered are shown on the following chart:

Graph 2: Overall smart meter coverage under policy options considered – the impact of the temporary measure is shown by the difference between the coverage lines between the two vertical dashed lines



This shows that the policy scenario helps to maintain the rollout’s momentum, whereas in the status quo counterfactual this momentum could be lost as installation rates could be substantially lower. By the end of June 2021, smart meter coverage under the main policy scenario is expected to be between 2 and 5 percentage points higher than under the status quo counterfactual. From July 2021, all scenarios install only those meters required under the NRO, so the gap between coverage levels begins to narrow, although the status quo counterfactual scenario remains between 1 and 2 percentage points lower at the end of the appraisal period (2034).

It should be noted that it is possible that moving to a more defined policy framework, including installation targets for energy suppliers, might be more likely to drive delivery towards the full feasible levels and thereby result in higher levels of smart coverage. However, the current uncertainty around the scale and duration of the impact of Covid-19 means that we cannot robustly set annual milestones and tolerance levels at this stage. The temporary measure is currently a more practical and flexible option, making it more appropriate under the current circumstances

Evaluation of costs and benefits

As described above, we now evaluate the impact of these different rollout profiles on the overall costs and benefits of smart metering using the methodology and values for quantifying costs and benefits from the 2019 Smart Metering Cost-Benefit Analysis. This considers the following costs and benefits:

Costs	Benefits
<ul style="list-style-type: none"> • Metering asset costs • Installation costs • Operation and maintenance costs • Costs associated with the DCC • Costs incurred by energy suppliers and the wider industry (capex and opex) • Energy costs • Other costs (including for disposal of old meters and marketing) 	<ul style="list-style-type: none"> • Energy savings for consumers • Time savings for consumers • Avoided site visits • Reduced customer service enquiries • Improved debt handling • Reduced cost to serve prepayment customers • Customer switching benefits • Remote outage detection • Use of data to inform network reinforcement • Reduced theft and losses • Benefits from time-of-use tariffs • Carbon and air quality benefits

These costs and benefits were all calculated based on a range of evidence, including data provided by energy suppliers, international comparisons, and research commissioned by the Programme. They represent a robust understanding of both the fixed costs of delivering the smart meter rollout and the incremental costs and benefits that are accrued once each smart meter is installed. Note that we do not yet have any robust evidence to justify changing these assumptions. The present analysis determines the difference in the net present value (total benefits minus total costs) that arises within the model that was used for the 2019 Smart Metering Cost-Benefit Analysis when the rollout of smart meters follows the various profiles shown in Graph 2 above. These differences are appraised over the period from 2013 to 2034 using a 2019 present value base year and 2011 prices,⁶ consistent with the approach used in the 2019 Cost-Benefit Analysis (see page 17 of that document for a discussion of the rationale behind these assumptions and how the 2034 appraisal end-date was chosen to encompass the full lifespan and replacement cycle of the median smart meter installation). Since the policy options would be implemented in 2021 (and installation levels are the same in all years prior to this across all scenarios considered), this corresponds to fourteen appraisal years (2021-34).

Analysis results

Comparing the overall Programme net present value under the central forecast for the policy scenario described above against the status quo counterfactual scenario yields the following result (using 2011 prices and 2019 present values, over an appraisal period out to 2034):

⁶ These assumptions are used for all analysis and decision-making across the Smart Metering Implementation Programme, to ensure consistency and comparability. These assumptions are used for the majority of analysis throughout this Impact Assessment. The exceptions to this are the numbers presented on page 1 and the direct costs/benefits to business shown on page 15, which use 2019 prices and 2020 present values in line with the latest BIT methodology.

Scenario	Net benefit compared with status quo counterfactual
Policy scenario – central case	£218m

As described above, we can also form natural upper and lower net benefit estimates. These give the following net benefit range:

Scenario	Net benefit compared with status quo counterfactual
Policy scenario – pessimistic case	£98m
Policy scenario – optimistic case	£327m

From these results, we can see that the temporary extension of the policy framework is expected to deliver a net benefit to Great Britain of slightly over £200m over the appraisal period to 2034. This benefit is due to the higher numbers of smart meters that will be installed, driving consumer energy and time savings, energy supplier operational efficiencies, and wider environmental benefits. It assumes that energy suppliers deliver rollout rates in line with our central forecast during the duration of the temporary measure and makes no assumptions as to what regulatory target levels are implemented beyond mid-2021. These benefits will be stronger the earlier smart meters are installed, but it is important to balance this against deliverability.

If energy suppliers are able to deliver their forecast installation numbers in full (subject to a six-month delay), then a further £110m of net benefit could be realised. By contrast, however, if – for whatever reason – delivery is lower than expected at only 50% of these forecasts, then the resulting slower installation rates could reduce the net benefit figure by around £120m. Nonetheless, the policy option would still provide a strong net benefit relative to the status quo counterfactual. A breakdown of the costs and benefits that are expected in the central case is provided below:⁷

⁷ Some cost and benefit categories, such as DCC costs, show zero difference between the two scenarios and so are not shown in this table.

Costs	(£m)	Benefits (£m)	
<i>In-premise costs</i>		<i>Consumer benefits</i>	
Installation of meters	93	Energy savings	174
Meter assets	96	Time savings	32
Operation and maintenance	17		
		<i>Energy supplier benefits</i>	
<i>Other costs</i>		Avoided site visits	58
Supplier IT costs	3	Reduced customer calls	31
Device energy consumption	15	Reduced prepayment cost-to-serve	24
Pavement reading inefficiency	8	Customer switching	33
Disposal costs	0	Remote change of tariff	4
		Debt handling	28
		Reduced theft and losses	7
		<i>Other benefits</i>	
		Network benefits	1
		Environmental benefits	60

This shows that the vast majority of costs relate to the installation of new metering equipment (around 40% each for the installation process and the new assets). Over one third of benefits are energy savings that smart meters enable consumers (domestic and non-domestic) to realise, while consumers will also realise a smaller benefit due to time savings. Most of the remaining benefit is to energy suppliers, largely through efficiency savings that greater numbers of smart meters will enable them to make. The environmental benefits include an emissions reduction equivalent to 1.0m tonnes of CO₂.

Sensitivity analysis

As explained above, the analysis presented is based on the impact of Covid-19 being contained within a six-month period – three months of assumed zero installations and three months to rebuild installation volumes back to expected levels. However, this is presently a speculative assumption as it is very difficult to know how long these impacts will last. If they were to exceed this six-month period, then the proposed six-month extension of the all reasonable steps obligation would likely be insufficient to enable tolerances to be set for the new framework afterwards. For this reason, we now consider the potential impact if the temporary measure were to last for a longer duration of nine months, either due to a longer hiatus in installations or a longer period being required to return to normal levels.

In order to test the impact of temporary measures of such longer durations, we consider two alternative scenarios:

- 100% longer period of zero installations: six months of zero installations, followed by three months to return to normal levels; and
- 100% longer ramp-up period: three months of zero installations, followed by six months to return to normal levels.

These can both be thought of as representing plausible illustrative scenarios that could result in a nine-month extension to the all reasonable steps obligation. We model these scenarios in the same way as described above for our central case, but including longer periods of delay to installations during 2020.

We then consider two distinct comparison approaches. For the first, we appraise each option in exactly the way described above: that is, evaluating the impact of the additional installations taking place during the extension period and assuming only NRO-driven installations from the end of the temporary measure (however long this is). This shows how the potential scale of the positive impact of the temporary measure above the NRO varies with its length. However, this naturally increases with the length, as more smart meters can be installed. An alternative comparison is thus also presented, to compare scenarios over equivalent time periods. For this, we consider the additional installations taking place under each scenario throughout the whole of 2021, where a framework of defined milestones and tolerance levels is assumed to drive energy suppliers to deliver at the full rates they forecasted for the second half of 2020 throughout the remainder of 2021 following the expiry of the temporary measure. This allows us to understand the potential reduction in net benefit that could result from delaying the introduction of a more defined regulatory framework.⁸

The two sensitivity scenarios described lead to the following central NPV estimates:⁹

Extension duration	Net benefit compared with status quo counterfactual (central scenario; additional installations to end of temporary measure only)	Net benefit compared with status quo counterfactual (central scenario; including full feasible installations for rest of 2021 after temporary measure)
Six months	£218m	£563m
Nine months – longer hiatus	£260m	£420m
Nine months – longer ramp-up	£264m	£426m

We see from this analysis that each additional quarter of this temporary measure would be expected to deliver around £40-50m of additional benefit compared to the NRO counterfactual. However, the consequent delays to the possible introduction of a more defined regulatory framework could risk a further £140m of benefit which could arise through higher installation levels. It will only be appropriate to move to such a framework once we have sufficient confidence in projections of feasible installation rates and can propose appropriate tolerance levels for the post-2020 period.

⁸ Note that this analysis should be regarded as entirely indicative – full modelling of the impact of such a framework will be considered in the Impact Assessment which will support the consultation on milestone and tolerance levels which we propose to publish at the appropriate time.

⁹ The impact of any longer delays would be to reduce the NPV further, Given the inherent uncertainties around Covid-19, we cannot be certain how long any impact will last.

Direct costs and benefits to business

The costs of the smart meter rollout are incurred predominantly by energy suppliers. In turn, the benefits delivered are split between consumers and the energy industry. To determine the direct costs and benefits to business, we consider only those costs and benefits that accrue to energy suppliers and other businesses that operate within the energy industry. Inputting these into the BIT methodology (using the BIT spreadsheet) gives the following estimates:

Cost of Option (2019 prices, 2020 present value)			
Total Net Present Social Value	Business Net Present Value	Net direct cost to business per year	BIT Score
259.1	29.0	3.6	17.8

These calculations are based on the fourteen remaining years of the 2013-34 appraisal period after the policy option is scheduled to take effect. A large portion of the business net present value is made up of the energy savings that non-domestic energy customers are able to realise with smart meters. These (along with the time savings that smart meters enable) are treated as indirect benefits to the business, since they require consumer action in order to be realised, and thus are excluded from the net direct cost and BIT score calculations above.¹⁰ Note that, in line with BIT methodology, 2019 prices and 2020 present values are used, so these numbers are not comparable to those determined above for the temporary measure's net present value.

Consideration of the impact on small and microbusinesses

Approximately 99% of businesses in the UK are small (10-49 employees) or micro-businesses (1-9 employees). In this section, we consider the potential impacts of this temporary measure on these businesses.

The smart meter rollout includes within scope all non-domestic metering points within electricity profile classes 3 and 4 and with gas consumption below 732MWh per annum. This covers the vast majority of British business metering points and would be expected to include the vast majority of small and micro-businesses (as these are likely to be smaller energy consumers). Therefore, the temporary measure considered within this analysis is expected to drive higher rollout of smart metering to small and micro-business premises. As shown in Graph 2, we would expect around 3-5% more such businesses to have a smart meter by the end of June 2021 under the temporary measure than would be the case without policy intervention. The 2019 Smart Metering Cost-Benefit Analysis showed that receiving a smart meter will enable these consumers to realise substantial bill reductions through energy savings (up to 2.8% savings on electricity bills and 4.5% for gas, subject to consumer action). The accelerated rollout under the temporary measure will allow these savings to be realised earlier, delivering higher benefits to those small and micro-business consumers who receive a smart meter earlier.

Furthermore, the analysis on pages 65-66 of the 2019 Smart Metering Cost-Benefit Analysis showed that the overall benefits of smart metering will begin to exceed the costs in the early

¹⁰ If these were included, then the net direct cost to business figure shown in the table above would improve to -2.6 (a net benefit), while the Business Impact Target (BIT) score would become -12.8.

2020s. This includes a range of efficiency savings that can be accessed by energy suppliers, which will reduce their costs and ultimately lead to lower energy bills. Therefore, energy bill reductions are expected to be realised across the market, leading to benefits for all small and micro-business consumers, even if they don't yet have a smart meter.

Since this temporary measure simply extends existing regulations, it will not impose any new requirements on businesses (of any size). All energy suppliers will continue to be required to take all reasonable steps to install smart meters across all eligible premises, but will receive an additional six months to do this in order to account for the disruption resulting from Covid-19. Therefore, the temporary measure will help ensure that these businesses are given sufficient time to enable them to complete their planned activities to meet their existing obligation. This will apply to all energy suppliers within the market, including small and micro-businesses, ensuring that no energy supplier is judged on its activities against the existing obligation without being given sufficient time to react to the challenges of Covid-19.

Wider impacts

Consumers are paying for the smart meter rollout through additions to energy bills. Without policy intervention, there is a risk that the rollout could slow down considerably in early 2021. This lost momentum could be difficult to regain, which could mean that those consumers who had not received smart meters by this point would likely have to wait considerable periods of time before they are able to access the benefits of smart metering. Thus, these consumers would be paying for smart metering, but not receiving the benefits that it offers. Furthermore, these customers would be unable to access new market offerings that are enabled by smart meters (e.g. new tariffs¹¹ that energy suppliers will be able to offer based on half-hourly energy usage data that can be provided by smart meters). The measure proposed will mitigate this by ensuring that the rollout's momentum continues during the temporary period.

We would not expect this policy to have any significant impact on trade and investment. Supporting the continued rollout of smart meters will contribute to the development of a smarter energy system, which may stimulate innovation and investment in future. Examples of this are already being seen, with some energy suppliers beginning to offer tariffs that offer consumers energy prices that vary with demand throughout the day, in order to incentivise demand-shifting. Continuing to install smart meters will likely allow more consumers to have access to future smart energy tariffs, promoting effective competition within the energy market.

Smart meters provide consumers with more timely and detailed information about their energy usage. This allows consumer action leading to energy savings. Furthermore, wide penetration of smart meters has the potential to enable demand-shifting, potentially smoothing energy demand peaks. Both of these effects will reduce greenhouse gas emissions, leading to carbon savings and consequent environmental and air quality benefits. These benefits have been assessed in detail on page 57 of the 2019 Smart Metering Cost-Benefit Analysis and are factored into the analysis considered above.

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 Analysis. Since the purpose of the policy considered here is to maintain the momentum in the smart meter rollout to help ensure that it can be delivered to completion, the impacts

¹¹ These tariffs generally incentivise consumers to switch their energy usage away from peak times. The savings associated with these tariffs thus come from the reduced cost of energy at off-peak times, rather than at the expense of other consumers.

studied in that document are also applicable here. We do not consider that any of the social impact tests available are relevant to this assessment.

Summary

We have seen that this temporary measure is expected to help maintain the momentum of the smart meter rollout beyond the end of 2020, thereby delivering a strong net benefit to Great Britain. This temporary measure allows the existing all reasonable steps obligation on energy suppliers to be extended by six months to allow energy suppliers to resume installations following the impacts of the Covid-19 pandemic. This is intended to provide sufficient flexibility to allow energy suppliers to deliver their planned activities towards meeting their existing all reasonable steps obligation, while also helping to maintain the rollout's momentum ahead of a move to a more defined regulatory framework intended during 2021. This temporary extension will also allow us to take the impacts of Covid-19 into account when setting appropriate milestones and tolerance levels for this future framework – we intend to consult separately on these levels at the appropriate time. Our analysis has shown that this temporary measure will deliver a strong net benefit to society through delivering more smart meter installations and thereby allowing more consumers to access the benefits that smart meters offer.

This publication is available from: www.gov.uk/government/consultations/smart-meter-policy-framework-post-2020

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