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Impact Assessment

Self-disconnection and self-rationing – final impact assessment

Division:	Retail Directorate	**Type of measure:**	Consumer protection
Team:	Retail Policy Team	**Type of IA:**	Not Qualified under Section 5A UA 2000
Associated documents:	Self-disconnection and self-rationing: decision	**Contact for enquiries:**	Daniel Roberts, Manager Arina Cosac, Senior Manager CDconsultations@ofgem.gov.uk
Coverage:	Full coverage		

This final impact assessment is an update to our draft impact assessment, published as part of our statutory consultation in June 2020. Please see 'Self-disconnection and self-rationing: decision' which accompanies this impact assessment for a summary of responses to our draft impact assessment and further context on the policy decision.

Some of the analysis presented has been updated to reflect the final decision on self-disconnection and self-rationing, as well as information and evidence provided to us by respondents to our statutory consultation. However, we do not consider these changes in costs material enough to change our preferred option for intervention (Option 4) particularly given the significant hard-to-monetise benefits for consumers the evidence presents.

Please note the analysis that underpins the impact assessment was carried out before the onset of the COVID-19 crisis. We have taken into account initial impacts of COVID-19.

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

Self-disconnection occurs when prepayment meter (PPM) customers go off supply because the credit on the meter has been exhausted. We have been concerned about the number of PPM customers self-disconnecting each year and the significant negative impacts that this can have on customers, particularly those in vulnerable circumstances. PPM customers are more likely to be vulnerable[1] and fuel poor[2] than customers on other payment methods.

The COVID-19 crisis has caused additional challenges for some PPM customers, particularly those who have experienced difficulty in topping-up their PPM whilst self-isolating and those who have been impacted financially as a result of the crisis.

We believe that Ofgem intervention is necessary given the number of PPM customers experiencing self-disconnection has failed to reduce since data recording began in 2014.[3] Our 2019 Consumer Engagement Survey indicated that 14% of PPM customers self-disconnected at least once a year, an increase on the previous year.[4] This equates to an estimated 479,000 gas and 607,000 electricity customers. It is important to note that there are likely to be some overlaps in these customer numbers as customers will have a PPM for both gas and electricity and may disconnect from both fuel types at one time. Consequently, the overall detriment experienced by one person would be high as they are likely to be self-disconnecting from two fuels.

We also believe intervention is necessary as the level of individual consumer harm experienced can be significant. While PPM customers self-disconnect for a number of reasons[5], our evidence suggests that the detriment experienced as a result of self-disconnection can be severe, ranging from the physical impacts of living in a cold home to the emotional impacts of dealing with financial stress and increased anxiety. Self-

[1] Citizens Advice consumer survey found 41% of all PPM customers reported health issues, including 15% reporting mental health issues.
[2] In England for both gas and electricity, twice as many fuel poor households pay their energy bills by prepayment compared to all households, with around 27% of households paying via PPM in fuel poverty in 2017. See BEIS (2019) Annual Fuel Poverty Statistics Report.
[3] Citizens Advice (2014) Topping-up or dropping-out: self-disconnection among prepayment users
[4] Ofgem (2020) Consumer Engagement Survey 2019
[5] See our policy consultation for more detail on key reasons for self-disconnection

disconnecting due to a lack of funds is a key reason why customers may self-disconnect, with Citizens Advice data showing 21% of households surveyed self-disconnecting for affordability reasons. It is particularly concerning that 88% of these households contained a child or someone with a long term health condition and 50% reported suffering from mental health issues. Moreover, PPM customers who are in debt are more likely to self-disconnect, showing the links between payment difficulties and self-disconnection. [6]

In addition, our review of the existing practices in the market indicated a variation in the levels of support offered by suppliers for these consumers and this was leading to consumer harm. Generally, we wanted to see suppliers providing more consistent support and doing more to raise awareness of support options available, for example in terms of offering and informing customers about access to emergency credit or by consistently assessing individual customers' ability to pay when agreeing debt repayment plans. Therefore, last year we consulted on policy proposals to drive up standards in identification of self-disconnection, provision of short-term support credit, and assessment of customers' ability to pay. In June 2020, we confirmed our proposals through our statutory consultation.[7]

We are now moving to the next stage towards introducing new rules, outlining our decision to introduce new protections for PPM customers who self-disconnect and self-ration, and customers who struggle to pay their bills. We believe this will ensure all suppliers are taking steps to identify and provide support to customers who are experiencing financial difficulties, including those who are at risk of self-disconnection.

What are the policy objectives and intended effects including the effect on Ofgem's Strategic Outcomes?

Our policy objectives are to reduce the level of self-disconnection by bringing a sustained reduction in the number of customers self-disconnecting each year and to reduce the detriment caused by self-disconnection.

[6] Citizens Advice (2018) Switched on: support for prepayment consumers who've self-disconnected
[7] Ofgem (2020) Self-disconnection and self-rationing final proposals – statutory consultation

While customers may self-disconnect for a number of reasons, the severity of the self-disconnection can vary with the length and frequency that the self-disconnection occurs. For the purposes of this work, we differentiate between self-disconnection as a result of short-term situations and self-disconnection as a result of ongoing situations. We believe that those experiencing self-disconnection on an ongoing basis will require a different type of support from those who self-disconnect as a one-off.

The intended effects of our policy are for customers to be identified quickly when they are self-disconnecting and be provided with the appropriate support depending on their circumstances. Customers who are self-disconnecting as a result of a short-term issue will be able to limit any physical and/or emotional impacts by preventing the risk of going off-supply or by returning to supply quickly should this occur, through access to credit facilities. These customers will also be provided with the necessary information to access short-term support, which is likely to reduce the risk of repeated instances of short-term self-disconnections.

As a result of Ofgem's intervention, we expect that customers who are self-disconnecting because of an ongoing vulnerable circumstance are not only able to get quickly back on supply to limit any physical or emotional impacts, but can avoid self-disconnection occurring through tailored plans that suit their individual needs, such as manageable repayment rates for existing debt on the meter. This sustainable support can minimise the risk of repeat self-disconnections in the future.

Our self-disconnection policy is aligned with our statutory duty and one of our three strategic priorities, that of protecting consumers, especially the vulnerable, as outlined in Ofgem's 2019-23 Strategic Narrative.[8] Energy is an essential service and we require all suppliers to treat consumers in vulnerable circumstances fairly. This effort is coordinated by our Consumer Vulnerability Strategy 2025, which considers the outcomes we want to see in the market in the near future.[9]

One of the key outcomes we want to see in the market as part of CVS 2025 is better support for consumers who are at risk of self-disconnecting and a decrease in the number

[8] Ofgem (2019): Strategic narrative: 2019-23
[9] Ofgem (2019) Consumer Vulnerability Strategy 2025

of self-disconnections. A closely linked outcome we want to realise is to ensure consumers in payment difficulty are proactively supported, including by being put on an affordable payment plan.

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

- Option 1: **Do nothing**
- Option 2: **Identification of self-disconnection and short-term support through mandated credit functions**
- Option 3: **Identification of self-disconnection and ongoing support through updated Ability to Pay principles**
- Option 4: **Identification of self-disconnection, short-term support through mandated credit functions and ongoing support through updated Ability to Pay principles (preferred option)**

We considered four policy options to improve outcomes for customers who are self-disconnecting. Option 1 considered keeping the status quo with no new regulatory requirements, which means a continuation of existing market practices.

Option 2 considered one aspect of the problem identified, aiming to address short-term self-disconnection through the identification of self-disconnection and provision of emergency credit, friendly-hours credit, additional support credit for consumers in vulnerable situations and increased awareness of these PPM credit functions. This would be achieved through introducing new regulatory requirements on suppliers.

Option 3 aimed to address the more frequent and prolonged self-disconnections by customers in vulnerable circumstances, through the identification of self-disconnection and the introduction and update to the Ability to Pay (ATP) principles for customers who are in financial difficulties. This would be achieved by introducing new regulatory requirements on suppliers.

Our preferred option (Option 4) is to introduce a set of targeted measures encompassing identification, short-term and ongoing support for customers. This would require suppliers to identify PPM customers who are self-disconnecting from their energy supply, accompanied by proposals to reduce the level and impact of temporary self-disconnection

through the formalisation of the emergency and friendly-hours credit for all PPM consumers and additional support credit for PPM consumers in vulnerable situations. Finally, to address the level and impact of ongoing self-disconnection, the updating and incorporation of existing ATP principles into the supply licence conditions is expected to strengthen current protections for all customers in payment difficulties.

We consider the pros and cons for each option in this impact assessment and believe that the broad package of proposals under Option 4 best satisfies our policy objectives and will most likely deliver our desired outcome of providing holistic protections to customers who experience self-disconnection.

Preferred option - Monetised Impacts (£m)

Business Impact Target Qualifying Provision	Non-qualifying
Business Impact Target (EANDCB)	N/A
Net Present Value (benefit to GB consumer minus industry costs)	- £1.3m to -£1.5m

The net benefit to GB consumers figure outlines the range of consumer savings over the five-year period between 2021-2025 as a Net Present Value (NPV), calculated with a discount rate of 3.5%. Based on our decision to update some of the quantative analysis and to transfer the previously hard-to-monetise cost of engagement to a quantitative assessment, the NPV figure has been updated (see Table 4). This NPV figure only considers the monetised consumer benefits associated with our credit function proposal and not the other policy areas as the impacts of these, although significant given the physical and emotional nature, are hard to monetise. The benefit for the consumer is quantified by the potential consumer savings made through no longer requiring alternative sources of financing to fund energy consumption, in this case we use payday loans as one of the possible sources of alternative financing.

This NPV figure also takes the average cost imposed on industry as a result of introducing the new requirements. We have set out a series of estimated costs for industry based on 2019 supplier Request for Information (RFI) data, consumer survey data, and standard cost modelling. For the purposes of this assessment, we assume that the ongoing costs of the new Ability to Pay principle will remain constant throughout the five-year period and consider this a likely overestimation of costs. We distinguish between ongoing costs and upfront cost in the assessment where applicable.

We have updated some costs from the draft impact assessment, for more information on this see section 3.3. We estimate that the direct costs on industry through implementing proposals to improve outcomes for consumers who experience self-disconnection to range between £500,000 – £700,000 per year, with the monetised consumer benefits ranging from £45,000 - £535,000 per year. Taking an average of the yearly costs and benefits over the five-year period for assessment, and adopting a mid-range and high-range estimate leads to a total NPV range of -£1.3m to -£1.5m.

All monetary values within this impact assessment are based on real 2019 values adjusted for inflation, unless otherwise stated. We have considered some of the potential wider costs for society as a result of implementing these policy proposals, such as estimating increased carbon costs. For more details, see paragraph 3.48.

Preferred option - Hard to monetise impacts

Describe any hard to monetise impacts, including mid-tem strategic and long-term sustainability factors following Ofgem IA guidance

The monetised figures do not represent the full benefits to consumers. In addition to the quantified monetised impacts, we expect that this package of reforms will have a significant impact on consumers' physical and emotional health. We also identified a number of hard-to-monetise impacts on suppliers.

The objective of the self-disconnection policy is to reduce the number of self-disconnections and the level of consumer detriment. There are a number of benefits to consumer welfare which we have considered under our hard to monetise assessment.

We expect that the implementation of our preferred option will reduce physical impacts of self-disconnection such as feeling cold, living in a damp home and/or not being able to wash. We believe this will both reduce the likelihood of customers developing a cold, respiratory and circulatory illnesses or poor physical health as a result of short and long-term protections and reduce the risk of exacerbating existing health problems as a result of the long-term protections. This will particularly have an impact on households with children and/or elderly as they are more likely to be negatively impacted by living in a cold home. We also consider that our preferred option will lead to a reduction in negative emotional impacts on consumers such as stress from practicalities of topping-up, financial stress, and feelings of shame or embarrassment. This will particularly have an impact on households experiencing financial difficulties and/or mental health problems as they are more likely to be negatively affected by living in a cold, dark home.

In terms of the hard-to-monetise impacts on suppliers, we have identified a number of impacts, which include:

- The one-off, upfront costs to updating IT systems to allow for real-time identification of self-disconnection for smart meters in PPM mode.

- The additional costs (and resulting benefits) of providing customers friendly-hours credit.
- The additional costs (and resulting benefits) of providing other suitable support to customers who are unable to benefit from the credit facilities due to the technical constraints of certain meter types.

We are aware that a number of suppliers have already put systems in place or were already planning to implement these changes as part of the smart meter rollout. We highlight these additional costs as a result of implementing these proposals and consider the benefits to consumers to outweigh the costs. The interdependent nature of these costs also mean that through time by achieving the policy objectives, we will see a stabilisation of costs relating to identifying and supporting these customers.

Key Assumptions/sensitivities/risks

- We estimate the anticipated reduction in the number of customers self-disconnecting as a result of this policy intervention and quantitatively assess cost and benefits based on these reductions.
- Based on historical data on the number of self-disconnections, we assume that without policy intervention the number of customers self-disconnecting will remain stable.
- We assume that suppliers will continue to provide the same amounts of emergency and additional support credit if it were to remain a voluntary practice, based on the data submitted in the 2019 RFI. All suppliers in the RFI already provide emergency and additional support credit on a voluntary basis.
- We rely on data provided by eight suppliers from the 2019 RFI to make assumptions on the average value of emergency and additional support credit provided per customer, per year.
- We assume for the purposes of the analysis that if customers do not access the supplier credit function facilities they would need to borrow credit from other sources in order to stay on supply – such as payday lenders, friends or family.
- We assume that the ongoing costs associated with the identification and Ability to Pay principles proposals remain constant year on year and believe this is an overestimation. We have not been able to factor in any potential decrease in the number of failed repayments given data limitations. We consider the update and introduction of this new principle is likely to increase support to customers who are facing financial difficulties.

Key risks

- The smart meter rollout progress will impact on effectiveness of real time identification.
- Inconsistent data may lead to some under-estimation or over-estimation of costs to industry.

Will the policy be reviewed?	**If applicable, set review date:**
Yes	By 2025, as part of our outcomes-based assessment of the Consumer Vulnerability Strategy 2025

In summary, we expect the main benefits of these proposals to fall on those customers who currently experience self-disconnection or are at risk of doing so. We expect them to gain greater access to the provision of repayable credit from suppliers and also through unquantified reductions in wider consumer detriment, such as health and social impacts. We believe that such customers are disproportionately likely to be in a vulnerable situation.

Through the estimates outlined in this assessment, we predict that the total net costs to suppliers across the industry by 2023 will be £1.6m. Based on stakeholder feedback, we have updated these figures. This update leads to a small change in increased bills. We discuss this approach further in section 5.8. There are currently 8.7m gas and 9.7m electricity customer accounts on fixed tariffs in GB.[10] If suppliers choose to pass on these costs promptly to the rest of their customer base rather than through an uplift in PPM tariffs at the end of the cap period, these figures suggest that the average bill of a fixed tariff customer could increase on average by £0.04p per account, per year (nominal value).

However, it should be noted that this customer segment is the most engaged and sensitive to price increases and is subject to the number of fixed tariff accounts in the market, so suppliers may be more cautious about adopting this strategy in isolation.

[10] Ofgem (2020) For details on the distribution of customers by tariff type for individual large and medium suppliers see gas and electricity

1. Problem under consideration

Section summary

In this section, we set out the problem under consideration and the justification for intervention providing information on scale of the problem, existing market practices and characteristics of the PPM market. We also outline relevant insights from the response to COVID-19 so far.

Context

1.1. This impact assessment (IA) focusses on proposals to address issues associated with PPM customers self-disconnecting from their energy supply. There are a reported 4.3 million and 3.4 million electricity and gas PPM consumers respectively.[11] We know that customers who use PPMs are more likely to be vulnerable[12] and fuel poor[13] than customers on other payment methods.

1.2. Self-disconnection refers to the scenario where PPM customers experience an interruption to their electricity and/or gas supply because of a lack of credit on the meter. Strengthening protections for consumers who are self-disconnecting and for those who are in financial difficulties are key priorities for Ofgem as outlined in our Consumer Vulnerability Strategy 2025.[14]

Scale of self-disconnection

1.3. We are concerned about the number of customers self-disconnecting each year and the significant negative impacts this can have on customers, particularly those in vulnerable circumstances. Our 2019 Consumer Engagement Survey indicated that 14% of

[11] Ofgem (2019) Supplier RFI – data correct as of October 2019
[12] Citizens Advice consumer survey found 41% of all PPM customers reported health issues, including 15% reporting mental health issues.
[13] See BEIS (2019) Annual Fuel Poverty Statistics Report.
[14] Ofgem (2018) Consumer Vulnerability Strategy 2025

PPM customers self-disconnected at least once last year, an increase on the previous year where 10% of PPM customers identified as having self-disconnected.[15]

1.4. To build on this evidence, we asked suppliers for data on the number of customers who are self-disconnecting each year. While monitoring of self-disconnection remains limited and in most cases uses non-vending as a proxy for self-disconnection[16], supplier data shows similar and, in some cases, higher incidence of self-disconnection cases.

Reasons for self-disconnection

1.5. There are a number of reasons why a customer may self-disconnect and we have seen that an inability to top-up and stay on supply can relate to both customers' characteristics or circumstances as well to a supplier's delivery of its services. We have characterised these into five non-mutually exclusive risk factors: affordability, customer awareness (including forgetfulness and being unaware the meter is low on credit), accessibility, technical constraints and customer choice.[17]

1.6. While customers may self-disconnect for a number of reasons as discussed above, the severity of the self-disconnection can vary with the length and frequency that the self-disconnection occurs. For the purposes of this work, we differentiate between self-disconnection as a result of short-term situations and self-disconnection as a result of ongoing situations. We believe that those experiencing self-disconnection on an ongoing basis will require a different type of support from those who self-disconnect as a one-off.

Impacts of self-disconnection

1.7. The negative impacts of self-disconnection and self-rationing are well documented. Throughout our evidence gathering stage, stakeholders highlighted the significant physical and emotional impacts that self-disconnection and self-rationing can have on customers,

[15] Ofgem (2020) Consumer Engagement Survey 2019
[16] Non-vends are defined as whereby there is no record of the customer transferring credit to a prepayment meter through topping up. Customers who have not vended for a period of time may potentially be off supply.
[17] See our August 2019 policy consultation for more detail on key reasons for self-disconnection

with higher detriment experienced by those who are self-disconnecting or self-rationing regularly or for longer periods.

1.8. Citizens Advice research found that half of those who self-disconnected cited negative impacts on their physical and emotional wellbeing.[18] The main physical impact of feeling cold was experienced by 59% of all those reporting a negative impact. This was closely followed by having a dark home and not being able to wash.

1.9. In addition to physical impacts, customers have also cited negative emotional impacts. Citizens Advice research found that the main emotional impact was financial stress, experienced by 27% of all those reporting a negative impact, which was closely followed by stress from the practicalities of topping up and feelings of shame and embarrassment.[19]

Gaps in consumer protection

1.10. In our policy and statutory consultations, we highlighted our concern at the lack of consistency across suppliers when supporting PPM customers. Evidence of self-disconnection suggests existing protections aren't applied consistently or sufficient enough to prevent it from occurring. The type of support needed by customers who are self-disconnecting as a result of an ongoing situation is likely to be different from the support required by those who are experiencing temporary or short-term self-disconnection.

Identification of self-disconnection

1.11. Traditional meters still account for the majority of PPM's in the market[20], although we are seeing an increase in the number of smart meters being installed in PPM mode. Currently, suppliers can monitor traditional customers through non-vending patters (ie the period of time whereby there is no record of the customer topping up their PPM) which can

[18] Citizens Advice (2018) Switched on Improving support for prepayment consumers who've self-disconnected
[19] Ibid.
[20] See 2018 Social Obligations Reporting data: traditional PPMs account for 67% of gas and 68% of electricity PPMs in the market.

provide an indication of self-disconnection, allowing suppliers to contact customers when they have not vended for a period of time (eg 28 days).[21]

1.12. Smart meters have the ability to monitor customers' top-up activity in almost real-time, such as amounts vended and consumption quantities. Suppliers are able to monitor disconnection alerts, which are provided in on a half-hourly or daily basis when a meter disconnects. However, in early 2019 we identified only one supplier that was actively monitoring this. As part of our weekly COVID-19 request for information (RFI), at least nine suppliers have provided data on the number of smart meter self-disconnections suggesting that more suppliers have put processes in place to monitor and record smart self-disconnection data, which can be used to develop more permanent measures moving forward.

Short-term support

1.13. The type of meter can affect a consumer's ability to access certain functions and top-up channels. The credit functions available on a PPM (emergency, friendly-hours and additional support credit) vary between supplier, fuel and meter type. These credit functions are currently provided on a voluntary basis and are repaid by the customer. We note that due to technical constraints, friendly-hours credit is not available on traditional gas meters and some older electricity meters.[22] Smart meters provide customers with added functionalities, with smart PPM gas customers being able to access friendly-hours credit. Smart meters can also display high and low consumption alerts or audible alerts to indicate low credit.

[21] Our 2019 self-disconnection RFI suggests that suppliers can wait between 14-111 days before contacting a customer.
[22] According to data from our 2019 self-disconnection RFI, traditional gas PPM's do not provide the friendly-hours credit functionality. It was also reported that some of the older electricity meter types such as KBA and KBB, smartcard and token do not provide friendly-hours credit.

Ongoing support

1.14. For customers who are experiencing repeated and prolonged self-disconnections there need to be more sustainable, long-term solutions considered alongside the immediate remedy that the temporary credit functions provide.

1.15. Customers facing affordability challenges such as repaying debt through their PPM, customers with debts in other areas, as well as customers reliant on electric heating are likely to be at an increased and ongoing risk of self-disconnection and self-rationing over a longer period of time. In addition, customers who self-disconnect from their gas supply on a seasonal basis are more likely to do so because of an ongoing affordability issue.

Coronavirus (COVID-19) response

1.16. In light of the COVID-19 crisis, we have focused our efforts on protecting consumers, especially the vulnerable. This includes PPM customers who are at risk of self-disconnection. During the crisis, we have been working closely with government, industry and consumer groups to implement emergency measures to help these customers.

1.17. The potential risks and impacts on PPM consumers have been a priority for Ofgem's monitoring of the market. Our analysis of domestic suppliers' data through a weekly COVID-19 RFI shows that energy suppliers have stepped up to the challenge and have supported PPM customers to stay on supply during this period. We have seen an increase in financial support being provided to consumers through the extension of emergency and friendly-hours credit and through additional support credit by sending out pre-loaded keys or cards for customers who were unable to top-up their meter to ensure they remained on supply. This support peaked at the end of March-beginning of April 2020 and has since levelled out.

1.18. There have also been commitments to support customers who were impacted financially as a direct or indirect result of COVID-19. These measures have included considering reassessing, reducing or pausing debt repayment and bill payments for domestic customers in financial distress.

1.19. In April and May 2020, we ran consumer polls to understand customers' experiences in relation to energy usage and bills, which suggested that 22% of PPM customers surveyed

had used emergency credit on their meter.[23] Peak PPM financial support response to COVID-19 took place at the end of March 2020. The number of discretionary credits provided remained more stable while there was a greater increase in the number of preloaded keys and cards sent to customers. The vast majority of this financial support was provided as repayable credit, although we have seen instances of credit provided as a goodwill gesture.

1.20. In our draft IA and statutory consultation, we considered insights from the COVID-19 crisis where applicable. While we believe our final decision is appropriate to address the problems of self-disconnection and affordability that existed pre-COVID-19, as well as addressing some of the challenges during the lockdown period, we will continue to monitor the medium and long-term consumer risks associated with COVID-19 and take regulatory action where needed.

[23] Ofgem (2020) What are consumers' energy experiences during the Covid-19 pandemic? April/May 2020 update

2. Summary of options

Section summary

In this chapter we set out our options for assessment, separating our policies into different potential combinations for intervention and outline our estimates for a reduction in the levels of self-disconnection as a result of implementing each option. This section contains summary tables of all costs, benefits and consumer outcomes we assess.

Summary table for all options

2.1. As outlined in the summary of options table below (table 1), we have considered a number of different options for intervention. These options display different scenarios in which a combination of the three policy proposals could be implemented in an effort to achieve our policy objectives.

2.2. We have decided to include the identification proposal in each option, as we believe that regular monitoring and subsequent identification is necessary to allow suppliers to take the most appropriate action to support customers, whether this is short-term or longer-term support. We considered 'Credit functions + Ability to Pay principles' as an option but we do not think that this is appropriate given the reliance on the customer to trigger any impacts in this scenario.

2.3. As part of changes to the proposals at statutory consultation stage, we updated the terminology of the 'discretionary credit' definition to better reflect our policy intent and the obligatory nature of the requirement for customers in a vulnerable situation. We refer to this as 'additional support credit' throughout this document.

2.4. Each proposal and subsequent option for intervention has been assessed separately in Chapter 4 and the summary tables of expected consumer outcomes and of costs and benefits are presented below. We discuss the potential impacts of each intervention in the following section (see section 2.5).

Table 1: Summary of options

Option number:	Policy title:	Policy description:
1	Do nothing	Status-quo: The continuation of current market practices. An inconsistent approach to identifying customers who are self-disconnecting, voluntary short-term protections and inconsistent application of the Ability To Pay principles.
2	Identification + Credit functions	Suppliers are required to identify customers self-disconnecting and provide them with short-term support through the provision of credit functions.
3	Identification + Ability to Pay principles	Suppliers are required to identify customers self-disconnecting and strengthen existing Ability To Pay protections for customers in debt/financial difficulties to reduce risk of ongoing self-disconnections.
4 ***Preferred option***	Identification + Credit functions + Ability to Pay principles	Suppliers are required to identify customers self-disconnecting, provide them with short-term support through the provision of credit functions and strengthen existing protections for customers in debt/financial difficulties to reduce risk of ongoing self-disconnections.

Summary table: Monetised consumer benefits per year

The table below contains the annual monetised consumer benefits set out in this impact assessment, split by each option for intervention. All monetary values within this impact assessment are based on real 2019 values adjusted for inflation.

Table 2: Monetised annual consumer benefits

Description of monetised consumer benefits	**Option 1** ***Do nothing***	**Option 2** ***Identification + credit functions***	**Option 3** ***Identification + Ability to Pay principles***	**Option 4** **Identification + Credit Functions + Ability to Pay principles**
Consumer benefit of supplier financing emergency credit		£230,000 - £280,000		£260,000 - £350,000
Consumer benefit of supplier financing additional support credit		£5,000 – £10,000		£10,000 - £15,000
Total:	N/A	£235,000 - £290,000	N/A: Hard-to-monetise assessment	£270,000 - £365,000

Summary table: Hard-to-monetise consumer benefits

This table sets out the hard to monetise consumer benefits set out in this impact assessment, split by the potential options for intervention. We attribute a high, medium and low impact rating to each benefit.

Table 3: Hard to monetise consumer benefits

Description of hard-to-monetise consumer benefits	**Option 1** ***Do nothing***	**Option 2** ***Identification + credit functions***	**Option 3** ***Identification + Ability to Pay principles***	**Option 4** **Identification + Credit Functions + Ability to Pay principles**

Access to friendly hours credit, preventing or reducing duration of self-disconnection		High		High
Increased awareness of the credit functions, likely to lead to fewer repeat self-disconnections		Medium		Medium
Reduced short-term physical impacts (eg developing colds, respiratory illness)		Medium		High
Reduced long-term physical impacts (eg exacerbating existing health problems, poor physical health)			Medium	
Reduced short-term emotional impacts (eg financial stress, mental health problems)		Medium		High
Reduced long-term emotional impacts (eg social isolation)			Medium	

Summary table: Monetised industry costs per year

This table sets out the associated estimated annual costs faced by industry, split by each potential option for intervention.

Table 4: Monetised annual industry costs 2020-2021

Description of monetised costs to industry	**Option 1** ***Do nothing***	**Option 2** ***Identification + credit functions***	**Option 3** ***Identification + Ability to Pay principles***	**Option 4** **Identification + Credit Functions + Ability to Pay principles**
Ongoing costs associated with identification of self-	N/A	£35,000 - £60,000	£35,000 - £60,000	£35,000 - £60,000

disconnection (traditional and smart)				
Ongoing costs of follow-up engagement with self-disconnecting customers (traditional and smart)		£90,000 - £180,000	£90,000 - £180,000	£90,000 - £180,000
Additional cost of financing emergency credit	N/A	£115,000 - £130,000	N/A	£125,000 - £145,000
Additional cost of financing additional support credit	N/A	£5,000 - £7,000	N/A	£12,000 - £17,000
New Ability to Pay Principle: Re-engaging with customers	N/A	N/A	£241,000	£241,000
Total:		£245,000 - £375,000	£365,000 - £480,000	£500,000 - £625,000

Summary table: Hard-to-monetise costs to industry

This table outlines the hard-to-monetise costs faced by industry, split by potential options for intervention. These are likely to be dependent on current individual supplier practices. We attribute a high, medium and low impact rating to each cost.

Table 5: Hard to monetise costs to industry

Description of hard-to-monetise costs to industry	Option 1 *Do nothing*	Option 2 *Identification + credit functions*	Option 3 *Identification + Ability to Pay principles*	Option 4 Identification + Credit Functions + Ability to Pay principles
The additional costs of providing friendly-hours credit.		Low		Low
The one-off, upfront costs to updating IT systems to allow for smart meter identification of self-disconnection		Medium	Medium	Medium
The additional costs for providing customers with an alternative means of accessing short-term support where emergency or friendly- hours credit cannot be provided (eg wind-ons).		Medium		Medium
Additional costs as a result of updates to existing ATP principles			Low	Low

Summary table: Hard-to monetise supplier benefits

The table below describes the hard to monetise benefits suppliers are likely to experience as a result of implementing these proposals. We attribute a high, medium and low rating for each impact.

Table 6: Hard to monetise benefits to industry

Description of hard-to-monetise supplier benefits	**Option 1** ***Do nothing***	**Option 2** ***Identification + credit functions***	**Option 3** ***Identification + Ability to Pay principles***	**Option 4** **Identification + Credit Functions + Ability to Pay principles**
Decrease in customer contact as a result of greater consumer awareness in access of credit provisions		Low		Low
Better quality industry data assess trends and improve customer service.		Low	Low	Low

Impact of options

2.5. Figure 1 below outlines the estimated effectiveness of each option for intervention within this impact assessment. We measure the reduction through the percentage of the total PPM customer base self-disconnecting from their energy supply at least once a year and assess this over a five-year period. We assess the impacts over a five-year period as we believe this is an adequate amount of time to allow implementation of the policy and the intended effects to fully take place.

2.6. These projections are estimates based on historical data.[24] Through this data we know that the majority of self-disconnections are a result of short-term issues and therefore assume that the short-term focus through Option 2 will result in a faster rate of reduction than the longer-term remedies which are targeted on through Option 3. We

[24] Data collection on self-disconnection began in 2014, see our 2018 call for evidence and table 7 in this document for more information on the sources of data used in this impact assessment.

predict that the rate of reduction will be the most effective through Option 4, where solutions to the short-term and ongoing reasons for self-disconnection are combined. These projections are estimates and will enable us to review the effectiveness of the policy, should the indicative reductions not be achieved in the specified time period.

2.7. We acknowledge that it will be challenging to achieve a situation where there are zero self-disconnections, as there will always be an element of customer choice and unforeseen circumstances leading to a meter going off-supply (eg hospitalisation). We have not considered these figures as acceptable levels of self-disconnection but consider that stabilisation at 5% over time is a realistic assumption through our policy intervention. As noted, this assessment is based on historical data. We are aware that there will still be some unknown effects that could cause incremental increases or decreases to the number of self-disconnections which we have been unable to predict in this assessment.

2.8. We believe that by adopting the status-quo (Option 1) scenario of current market practices, there would be no reduction in the number of customers experiencing self-disconnection. We consider this a conservative estimate based on historical data dating back from 2014, from which we have failed to see a reduction in the number of self-disconnections. It is evident that current market conditions have not enabled a natural decrease in the number of customers self-disconnecting and highlights the importance of further intervention.

2.9. We recognise that the smart meter rollout is likely to be a factor in the declining self-disconnection rate. We consider the benefits of smart meters in relation to self-disconnections to fall particularly on the customer awareness and accessibility reasons for self-disconnecting. In June 2020, the government published its response to the 2019 consultation on the introduction of a new regulatory framework for energy suppliers to complete the smart meter rollout post-2020.[25] After a 6-month extension to the existing obligation, a new 4-year framework will be implemented from July 2021, which will set minimum annual installation targets for energy suppliers, subject to an annual tolerance level, to reach market-wide coverage of smart meters. This period aligns with our period of assessment in this impact assessment. We consider it reasonable to suggest that the

[25] BEIS (2020) Smart meter policy framework post 2020

benefits of the smart meter rollout will increase incrementally each year as the rollout continues and as the rate of self-disconnection declines through our estimates.

2.10. Option 2 focusses on the short-term incidence of self-disconnection, by improving identification of self-disconnection and providing additional credit to stay on supply. This is complimented by a policy of increased awareness of the credit functions provided by suppliers. Evidence suggests that a significant proportion of self-disconnections are related to short-term issues[26], which would be averted by provision of small amounts of further repayable credit to keep the meter on supply. Therefore, we suggest that through Option 2 over a period of five years, the number of self-disconnections could half, which equates to 303,000 electricity and 239,000 gas customers no longer experiencing self-disconnection. This is dependent on the duration of time it takes for all customers to become familiarised with the credit functions. However, this option does not account for customers experiencing ongoing affordability problems.

2.11. Option 3 places a focus on resolving the longer-term more frequent self-disconnecting customers by improving identification of self-disconnection and strengthening protections for those at risk of self-disconnection because of financial difficulties through the incorporation and update of the Ability to Pay (ATP) principles. Evidence suggests that this could account for approximately 21% of those who self-disconnected in 2018, equating to 127,500 electricity and 100,500 gas customers.

2.12. Whilst this intervention will have an effect on the more serious circumstances leading to a customer self-disconnecting, it excludes a large proportion of customers who would avoid self-disconnection should there be more robust short-term protections in place. We estimate that this option would create a steady decrease year on year but fail to address the entire self-disconnecting PPM population, stabilising at around 9%, a reduction of around 54,600 electricity and 43,000 gas customers. This option will have a greater impact on the level of consumer detriment, with longer and more frequent impacts carrying a significant risk of harm for customers off-supply.

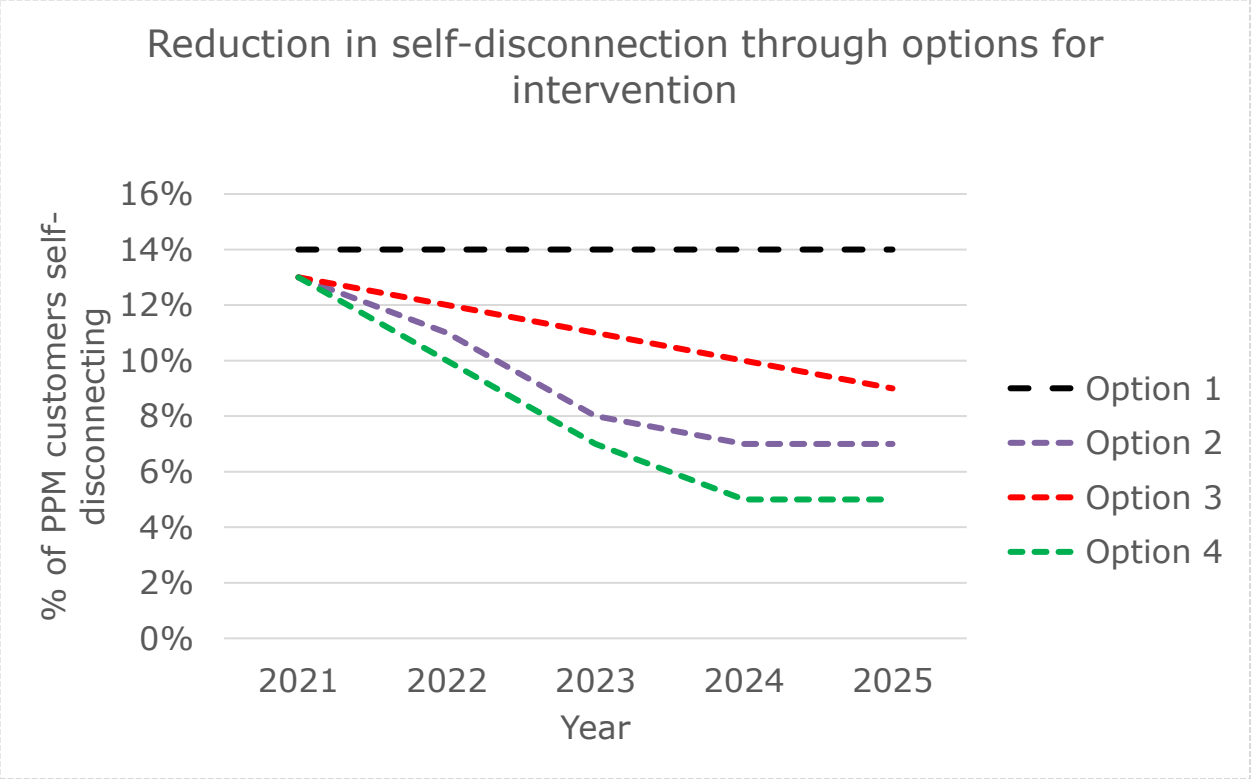
[26] Citizens Advice consumer survey suggests that 47% of customers forgot to top-up their PPM and were disconnected as a result and 32% did not realise that they were low on credit. 8% were waiting for benefit payments and could not top-up before this.

2.13. Our preferred option for intervention (Option 4) illustrates the largest estimated decrease in self-disconnection. We believe that this package of proposals will create a situation whereby both short-term instances and ongoing issues such as affordability, which can result in ongoing occurrences of customers self-disconnecting from their energy supply, reduce simultaneously. We expect to see a combination of the two preceding options with the short-term protections leading to a consistent reduction over the five years, complemented by a steady reduction in ongoing cases through consumers benefiting from engaging with sustainable support to reduce the risk of going off-supply. We estimate that this option would result in 396,000 electricity and 300,000 gas self-disconnections being avoided by 2025.

2.14. Our proposals through Option 4 are based on the spirit of existing voluntary requirements and minimum standards. We do not anticipate that our proposals and preferred option will have significant impacts on existing industry participants who already provide emergency, friendly and additional support credit and should already be adhering and taking costs into account in relation to the existing ATP principles.

2.15. One stakeholder commented on our estimated reductions in self-disconnections in response to the statutory consultation. As stated in this document and in the draft IA, we believe these are conservative estimates and are based on the majority of self-disconnection occasions being short-term in nature. The estimates allow us to make an assessment of the likley impacts on consumers and suppliers and we have retained our initial projections from draft IA.

Figure 1: Estimated reduction in the number of PPM self-disconnections per year through options for intervention



3. Methodology

Section summary

In this section we outline our guiding methodology and any associated risks or uncertainties associated with this intervention. We explain the methods used to calculate our estimates and any limitations with the data and outline any updates in our analysis from the draft impact assessment.

Overarching approach to the final impact assessment

3.1. This final impact assessment is an update to our draft impact assessment of the self-disconnection and self-rationing proposals published as part of our statutory consultation in June 2020.[27] Some of the analysis presented has been updated to reflect the final decision on self-disconnection and self-rationing, as well as information and evidence provided to us by respondents to this consultation.

Updates to reflect the final decision on self-disconnection and self-rationing

3.2. In addition to presenting the updates throughout the IA, we have also set out where the analysis has changed compared to the draft IA and why. A summary of the changes that have been made and where these are set out in the impact assessment, are detailed below.

3.3. We have added additional detail to our analysis on the impact of the introduction of new self-disconnection requirements in the following areas:

- We have decided to split the methods of identification between traditional PPM and smart PPM to provide added accuracy to our estimates and account for the clear differences in identification techniques. This updated analysis contributes to the increased estimated costs for the identification process, with the main driver being smart PPM identification, due to the frequency of the identification process. We

[27] Ofgem (2020) Self-disconnection and self-rationing final proposals – statutory consultation

believe this provides our analysis with added accuracy and set out more detail on these cost estimates in section 3.22 and 4.16.

- After considering stakeholder feedback, we have included a new monetised estimate on the costs of engagement with customers as a result of the identification process. We had initially included this impact as part of the hard-to-monetise assessment. This cost is separated for traditional and smart PPM, given the greater visibility of data available to monitor smart self-disconnections and therefore a more targeted approach to follow-up engagement with lower costs. Full details can be found in section 3.26 and 4.25

- Using the latest Social Obligations Reporting (SOR) data from 2019, we have updated the number of active PPM suppliers in the market (27).[28] This indicator is used in the Standard Cost Model (SCM)[29] scenarios we set out when estimating the costs of identification and follow-up engagement.

- Three stakeholders commented on the risk of bad debt accruing through the additional support credit function. We consider this risk and discuss this in further detail in sections 4.41 and 5.21.

- After considering stakeholder feedback, we have updated our assumptions when estimating the potential distributional impact of implementing these proposals. We look at the potential for suppliers to pass through these costs to their fixed tariff customer base. We have removed the calendar year 2021 in this assessment, as these prices may have already been set and cannot be changed. The new analysis considers the distributional impact of passing through these costs across 2022 and 2023 before the price cap is lifted. More information is available in section 3.46 and 5.8.

- We have included further analysis on the potential impact that these proposals may have on competition in the PPM market. We acknowledge that effects may be felt differently by different sized suppliers. We conclude that due to the scale of the

[28] Ofgem (2020) Social Obligations Reporting data
[29] The Standard Cost Model (SCM) provides a framework methodology for measuring administrative costs.

changes we are introducing, we consider it unlikely that the policy will have any material direct or indirect effects on competition. It is also likely that any limited impacts will lessen over time. See section 5.12 for further detail.

3.4. As a result of these updates, the total net costs to suppliers have increased and the NPV figure has been adjusted.

3.5. Further details on all of the responses received and how we have considered these can be found in the self-disconnection and self-rationing decision document, which accompanies this impact assessment.

Overarching principles of the impact assessment

3.6. We have conducted the impact assessment in accordance with Ofgem's Impact Assessment Guidance[30] and the HM Treasury Green book.[31]

3.7. Ofgem's approach to impact assessments draws upon the principles that underpin the Government's Better Regulation agenda. These principles recommend that an impact assessment should:

- concisely summarise the impacts, including the qualitative and quantitative costs and benefits
- keep the process transparent
- be comparable to other assessments, without unnecessary detail or duplication
- be consistent so that impacts can be compared across proposals
- follow government best practice guidance.

3.8. Throughout this impact assessment, we take a proportionate approach when assessing the intended benefits of each intervention. When presenting calculations for

[30] Ofgem (2016) Impact Assessment Guidance
[31] HM Treasury (2018) The Green Book: appraisal and evaluation in central government

estimated costs associated with each option, we outline our assumptions and limitations where applicable.

Consideration of policy options and scope

3.9. As outlined in the summary of options table in Chapter 2, we have considered a number of different options for intervention. These options display different scenarios in which a combination of the three proposals could be implemented. They consider the costs and benefits of each proposal. The monetised costs and benefits take the average value across five years and are presented with a range of high and low estimates where appropriate.

3.10. This impact assessment treats each option separately for the purposes of examining the impact of implementing the proposals outlined in the statutory consultation. We have decided to include the identification proposal in each option, as we believe that regular monitoring and subsequent identification is necessary to allow suppliers to take the most appropriate action to support customers, whether this is short-term or longer-term support. We don't consider it viable to assess an option which relies solely on proactive contact from the consumer, as this is considered in the baseline scenario.

Determining the baseline for assessment of impacts

3.11. Our impact assessment assesses the relative impact of a set of policy options that are considered against the baseline scenario where we do not implement any of the proposals or options set out here. For the purposes of the analysis, this would be considered the continuation of existing supplier practices. We refer to this as Option 1 in following chapters.

3.12. In relation to identifying customers who self-disconnect, suppliers would continue to use traditional meter non-vend reports with varying timeframes for initiating engagement. We are aware of only a few suppliers who are monitoring real-time smart self-disconnections. The emergency, friendly-hours and additional support credit functions would remain voluntary practices in the market. We outlined in our policy and statutory consultations that we believe not all suppliers are consistently applying the ATP principles or considering the customer's ability to pay when dealing with customers in financial difficulties or those repaying debt. The baseline scenario assumes that this would continue.

3.13. Where possible, we have assessed impacts against the baseline and therefore the existing costs for providing current arrangements are already accounted for and not included in this assessment. The costs illustrated in this impact assessment are those adding to the baseline scenario.

Key impacts and stakeholders identified

3.14. We examine the impact on consumers, businesses and wider market impacts where applicable. We have monetised these impacts where possible. Where not possible, we have used a logical assessment to determine which option would result in the greatest net benefit for consumers and have provided a high, medium or low weighting to the impact.

Sources of evidence

3.15. Our analysis of the impacts of the self-disconnection proposals are based on data and information gathered from a number of sources, including:

- Responses to our Call for Evidence in November 2018 [32] and August 2019 policy consultation [33] and June 2020 statutory consultation.[34]
- Data collected from suppliers through a formal information request[35]
- Consumer survey data collected from Ofgem[36] and Citizens Advice[37]
- Existing energy market data held by Ofgem[38]
- Other publicly available information
- In relation to COVID-19: data collected through a formal information request, regular consumer group engagement and survey data, and social media monitoring

[32] Ofgem (2018) self-disconnection and self-rationing: a call for evidence
[33] Ofgem (2019) Proposal to improve consumer outcomes of self-disconnection and self-rationing
[34] Ofgem (2020) Self-disconnection and self-rationing final proposals – statutory consultation
[35] In January 2019, we requested information from 19 suppliers serving the PPM market, which accounted for 99% of total PPM customers.
[36] Ofgem (2018) Consumer Engagement Survey
[37] Citizens Advice (2018) Switched On – Improving support for prepayment consumers who've self-disconnected
[38] Ofgem (2019) Social obligations annual data report

3.16. The evidence base above contains a variety of data samples and with it brings various strengths and weaknesses, which are summarised in the table below:

Table 7: Summary of evidence base

Source:	Strengths of data:	Limitations of data:
Citizens Advice Consumer Survey (2018)	Report explores the current experience of PPM users with particular focus on the experience of households who lack funds to keep their meters topped up.	Limited sample size: Data based on 1,226 survey responses
Ofgem Call for Evidence (2018)	Twenty confidential and non-confidential responses with information on scale, customer impacts and current supplier practices.	Anecdotal evidence provided by respondents. Limited quantitative evidence to support this.
Ofgem Consumer Engagement Survey (2018, 2019)	Information recorded on: • Self-disconnection occasions • Duration of self-disconnection • Reason for self-disconnection (provided as verbatim comments in 2019)	Limited sample size: Data based 556 survey responses.
Ofgem Policy Consultation (2019)	33 confidential and non-confidential formal responses, providing feedback on proposals and further qualitative information on supplier practices.	No cost estimates on potential implementation provided by suppliers.

Ofgem Self-disconnection Request for Information 'RFI' (2019)	RFI from nineteen gas and electricity suppliers who serve 99% of PPM market. Data provided on: number of customers self-disconnecting, value of emergency and discretionary credit provided to customers and explanation of current monitoring and identification methods Qualitative evidence on current market practices and processes	Inconsistent data: Only six suppliers provided traditional meter data by fuel type (37% PPM market). A further three suppliers were not able to separate between fuel types. Three of the largest suppliers did not provide data on the scale of self-disconnection. Data on self-disconnections mainly reflects non-vends given difficulty to monitor self-disconnection for traditional meters so may not reflect true numbers of customers self-disconnecting.
Ofgem Social Obligations Reporting - Annual data (2019)	Includes a variety of information provided by suppliers relevant to their dealings with domestic customers, including information about payment methods, levels of debt, debt repayments and prepayment meters. This information enables us to understand how suppliers are meeting the needs of consumers in vulnerable situations.	Proposed new indicator to assess scale of self-disconnection will be introduced from 2021.
Ofgem – statutory consultation (2020)	27 confidential and non-confidential responses formal responses, providing further feedback on proposals and six responses to initial draft impact assessment	Limited further supportive evidence on costs provided by suppliers.
Other publically available (various)	Sources of research on wider, indirect impacts associated with self-disconnection	Assumptions created to frame findings in context of self-disconnection project.

Methodology: calculating costs and benefits

Assessing relevant supplier costs

3.17. We provide each cost as a total cost to industry, we do not split these costs by supplier. We have updated the total number of suppliers in the PPM segment from 31 to 27, based on the latest available market data we have.[39] For costs associated to the ATP principles, we have used the total number of suppliers operating in the market (61) at the time of this assessment (Q3 2019) to reflect total industry cost due the wider coverage of credit and PPM customers that this policy relates to.

Calculating ongoing administrative costs

3.18. To evaluate potential additional ongoing costs faced by suppliers, we have used the Standard Cost Model (SCM)[40] as a basis for measuring the administrative costs associated with identifying and monitoring self-disconnection and undertaking new engagement with customers as a result of introducing one new principle into the ATP principles.

3.19. All salaries referenced in this impact assessment were taken from Office for National Statistics (ONS) data on earnings[41] and include the 30% overhead factor as set out in the SCM. We have taken assumptions on the amount of time, quantified in minutes and hours for completing various administrative tasks. We believe these estimates are proportionate given the task required and examples from pre-existing requirements undertaken by suppliers.

Calculating identification costs

3.20. We have updated our analysis in relation to the ongoing costs associated with identification of customers who have self-disconnected. In our draft IA, we set out a total cost to industry taking an average between current practices on traditional PPMs and smart PPMs. We believe that we have enough evidence to warrant separating out these processes to clearly display the differences in identification processes, access and limitations to data

[39] Social Obligations Reporting (SOR) data: correct as of Q2 20.
[40] Cabinet Office (2005) UK Standard Cost Model Manual.
[41] ONS (2019) Earnings and hours worked

available, and our expectations on suppliers in regards to identification of self-disconnection.

3.21. We have also updated our previous hard-to-monetise assessment on the costs of subsequent engagement with customers who are identified as off-supply. See 3.26 for further detail.

Traditional meter identification

3.22. Traditional meter monitoring currently takes the form of monitoring "non-vends", whereby there is no record of the customer transferring credit to a PPM through topping up. Customers who have not vended for a period of time may potentially be off supply. Our 2019 self-disconnection RFI showed that the period of time that suppliers use as a non-vend threshold before they investigate the account and begin potential engagement with the customer varies greatly between suppliers. Evidence suggests this is between 7-111 days and is dependent on factors such as fuel type or vulnerability of the customer. The time delay between the transaction of top-ups being transferred to the PPM meter and the supplier receiving this data through industry data flows can prolong the ability to identify customers who have been off supply.

3.23. Therefore, in our analysis this creates a relatively low cost of undertaking the identification process but the subsequent engagement costs of contacting customers are higher, given the less targeted approach.

Smart meter identification

3.24. Smart PPMs have the capability to provide almost real-time data, allowing for much improved visibility on self-disconnections. This more frequent data also allows the supplier to identify whether a customer has returned to supply, without the need of further intervention from the supply side. However, at the time of our RFI, we found that most suppliers with a significant number of smart PPM customers tend to approach monitoring in the same way as for traditional PPM meters, missing the opportunity to harness the potential data available. We are aware of a few suppliers who are monitoring smart self-disconnections in real time. As part of our COVID-19 RFI, we have seen at least nine suppliers providing data on the number of smart meter self-disconnections, while data is much more limited on the number of traditional self-disconnections. This suggests that more suppliers have put processes in place to monitor and record smart self-disconnection data, which can be used to develop more permanent measures moving forward.

3.25. This is portrayed in our analysis through a higher cost of undertaking the identification process on smart PPM, but a lower cost of engagement given the more targeted approach and clearer understanding of which customers remain off-supply.

Calculating the costs of engagement with customers identified as off-supply

3.26. As set out above, we have introduced a new monetised cost of engagement in relation to contacting customers who have been identified as being off-supply. In our draft IA we considered this in the hard-to-monetise assessment. However, based on stakeholder feedback we have updated this analysis. This updated analysis intends to add further accuracy to the estimated costs of the identification proposal and does not take into account COVID-19 impacts, which we consider to be temporary.

3.27. We split this estimated cost of engagement for both traditional meter and smart meter processes. To estimate the number of customers who would be contacted through outbound engagement each year we use the proxy of the number of customers who are self-disconnecting for affordability reasons and combine this with our estimated reductions in the number of self-disconnections (as set out in Chapter 2).

3.28. For traditional PPM customers we assume that all customers who are self-disconnecting for affordability reasons (21% of total self-disconnections per year)[42] would be contacted by their supplier. We consider this a reasonable assumption as these situations are unlikely to be resolved by the short-term credit functions and therefore would require further engagement between the supplier and customer to provide the appropriate support. As the number of customers self-disconnecting per year is expected to decrease through our estimated reductions, the subsequent engagement costs required will also decrease year on year until 2025.

3.29. Smart PPM customers are likely to receive more targeted engagement, due to a greater ability to monitor self-disconnections more frequently, including where customers may have returned to supply, quicker than through traditional meter non-vend data. To estimate the number of smart PPM customers that would require follow up engagement, we use the same proxy of customers who have self-disconnected for affordability reasons. We

[42] Citizens Advice (2018) Switched on: Improving support for prepay customers self-disconnecting

then take the proportion of these customers who are off-supply for over seven hours from our latest Consumer Engagement Survey (9% of electricity customers, 18% of gas customers).[43] As the number of customers self-disconnecting each year decreases through our estimated reductions, the subsequent engagement required will also decrease.

3.30. The Ofgem consumer engagement survey data is not split by traditional and smart PPM data.[44] Therefore, in order to calculate the proportion of smart PPM customers being contacted, we need to assume that the type of meter does not reduce how long the self-disconnection occurrence will last for. However, we recognise that the more efficient and faster identification process through smart PPM's could lead to a lower proportion of smart PPM customers being off-supply for self-disconnection reasons for longer than 7 hours. Therefore, the costs associated to the subsequent engagement of smart PPM customers could be over-estimated.

3.31. For both traditional and smart PPM costs of engagement we set out a range, dependent on the duration of a call being 5 minutes (low range) and 10 minutes (high range) in length. We consider there to be some limitations to this approach. We quantify the estimated costs in outbound telephone calls, but we are aware that suppliers can often use alternative communication methods such as letters and SMS.

Calculating the additional costs of financing emergency credit per year

3.32. To calculate the additional financing cost for suppliers, we have assumed the cost of capital to be 10% (pre-tax nominal), using the Weighted Average Cost of Capital (WACC) from the CMA. The CMA estimated a range of values for the WACC in retail supply, between 9.3% and 11.5%.[45] We adopted this methodology in the Default Price Cap[46] and do not consider that there is a reason to depart from the approach taken by the CMA at this time.

3.33. To assess the costs to the supplier of financing this credit for additional customers, we refer to the projected self-disconnections estimated through each option for intervention

[43] Ofgem (2020) Consumer Engagement Survey 2019
[44] Ibid.
[45] CMA (2016) Energy market investigation: final report (appendix 9.12)
[46] Ofgem (2018) Default tariff cap – decision overview (appendix 9 - EBIT)

(see Chapter 2). We assume that this falling number of self-disconnections can be attributed to the increased take-up of the short-term credit functions.

3.34. From data submitted by suppliers in response to our RFI, we have calculated that on average customers were provided with £55 worth of electricity and £15 worth of gas in emergency credit per customer in 2018. The data also suggests that around 1.6 million electricity and 1.5 million gas customers accessed emergency credit in 2018.[47]

3.35. Using the average amount of emergency credit provided per customer in 2018, we spread this credit over 12 months to get an average of £4.60 worth of electricity emergency credit and £1.25 worth of gas emergency credit per customer, per month. For the purposes of this assessment, we assume that this sum will be repaid over 30 days to work out the additional financing cost faced by the supplier. We received one comment from stakeholders on the use of a 30-day assumption in response to the draft IA. The stakeholder considered the 30-day assumption to be questionable. We believe this is a fair assumption, given the vast majority of emergency and friendly-hours credit is repaid upon the customer's next top-up. We received no comments or further evidence on the costs outlined in the draft IA of emergency credit and friendly-hours credit and have decided to retain this 30-day assumption.

3.36. These estimates account for the additional customers who would now access emergency credit to avoid an off-supply situation only, and not the existing customers already receiving emergency credit, a cost which is already accounted for.

Calculating the additional costs of financing additional support credit per year

3.37. To calculate the additional cost for suppliers financing additional support credit, we adopt the same approach as above and assume the cost of capital at 10% using the WACC methodology. We also assume that this part of the policy will affect a smaller proportion of customers, given the nature of the additional support credit provision for consumers in vulnerable situations.

[47] Ofgem (2019) Supplier RFI

3.38. From data submitted by suppliers in response to our RFI, we calculated that the average amount of additional support credit provided per customer was £26.81 for electricity and £25 worth of gas credit, which equates to £2.23 electricity and £2.12 worth of gas credit per month. We assume that the customer will repay this amount monthly, to work out the additional financing cost faced by the supplier. This estimate does not include the costs to suppliers when writing-off debts where suppliers are unable to recover payment of additional support credits owed by a customer.

3.39. For the purposes of the analysis, we take a proxy of customers who reported self-disconnection as a result of financial difficulty who would require access to additional support credit[48] (100,594 gas and 127,519 electricity customers). To calculate the additional cost to suppliers of financing this credit, we refer to the projected self-disconnections estimated through each option for intervention (see Chapter 2). We assume that this fall in the self-disconnection rate can be attributed to the increased take-up of the short-term credit functions. However, given the relationship between affordability problems and the use of additional support credit, we assume that self-disconnections associated with affordability issues would fall at a slower rate than for those with short-term issues. In this scenario we account for a 1% decrease in affordability related self-disconnections year on year, to calculate the additional customers who would now have access to this credit.

3.40. The data used to calculate the average value of additional support credit provided is devised from suppliers who provided data as part of the RFI. The rate of self-disconnection comes from the 2019 Ofgem Consumer Engagement Survey. The proportion of customers who are self-disconnecting for affordability reasons and the number of customers contacting their supplier were sourced from a Citizens Advice Consumer Survey.[49] Due to limitations in the data, we believe that this is an under-estimation of the costs and benefits associated with additional support credit.

[48] Citizens Advice consumer survey reported that 21% of all self-disconnections in 2018 were due to affordability concerns.

Calculating the consumer benefit of using emergency and additional support credit

3.41. When calculating the consumer benefit, we assess the relative cost benefit of being able to access emergency/additional support credit as opposed to alternative sources of financing to fund energy consumption. The benefit is therefore quantified as an opportunity cost between the hypothetical case of self-disconnecting and obtaining more expensive credit. For the purposes of this analysis, we use payday loans as the alternative source of credit.

3.42. With short-term affordability pressures and a shortage of funds, consumers have little choice but to borrow or go without money and self-disconnect from their meter. Evidence from consumer groups and charities suggest that consumers are turning to short-term personal loans as a way to pay bills or living costs.[50] Research from Citizens Advice during the COVID-19 period suggests a higher incidence of consumers borrowing money from elsewhere than receiving financial support from their supplier.[51]

3.43. To calculate the alternative costs for consumers to avoid self-disconnection without availability or access to the credit functions, we use a borrowing rate of 0.8% per day to create the high range estimate.[52] We base our estimates on the projected rate of reduction in self-disconnection outlined in Chapter 2. In this scenario, instead of these customers being able to access short-term credit through their supplier, they would need to source alternative financing.

3.44. With fewer customers self-disconnecting per year, through our estimated predictions in the reduction rate, we assume that a greater proportion of customers are likely to be accessing the credit functions. This means that a greater proportion of customers are avoiding the need for higher cost credit, as they can access this from their supplier. The total benefit to the consumer increases year on year, as more consumer's access emergency or friendly credit, rather than alternative funding.

[50] See CAP (2020) Client Debt Report 2020: 39% of clients borrowed through a personal loan and 18% through short-term, high cost credit loans.
[51] Citizens Advice (2020) The end of the beginning: How the retail energy market needs to support people in the next phase of COVID-19
[52] The FCA updated its price cap on payday lenders. Borrowers pay no more than 0.8% of the amount borrowed per day. See new payday loan regulations

3.45. We note the limitations of this assumption and calculate a mid and high range to mitigate this. When calculating the high range, we use the maximum amount a payday lender is able to charge on a daily rate (0.8%). We reduce this charge to 0.6% per day when calculating the mid-range estimate.

Calculating the potential distributional impact of the proposed policy

3.46. We have updated our analysis of the potential distributional impact of the self-disconnection policy based on stakeholder feedback. We assess the potential likelihood of suppliers passing these costs onto their customer base. We focus this assessment on suppliers' fixed tariff customer base, with the assumption that suppliers may wish to absorb the costs before the end of the price cap period (2023 at the latest). However, we now disregard the year 2021 in this assessment, as many fixed tariff prices have been set and are unable to be changed, we consider 2022 and 2023 as years these costs may be absorbed by fixed tariff customers.

3.47. There are currently 8.7m gas and 9.7m electricity accounts on fixed tariffs.[53] We estimate that the total net costs on industry by 2023 will be £1.6m. Therefore, on average, the average bill of a fixed tariff customer could increase by 0.04p per account per year, should these total costs be absorbed by customers on fixed tariffs equally (nominal value). The distributional impact is discussed in more detail in Chapter 5.

3.48. This estimate is dependent on the number of fixed-tariff accounts in the market, which has seen a slight increase since we published our draft IA. With more fixed-tariff customers, possibly as a result of the implementation of the energy price caps, the distributional impact on each customer will be less impactful.

Carbon costs of the proposed policy

3.49. As part of our policy process, we have investigated the impact on carbon costs as a result of our proposals. In principle, energy consumption comes with carbon emissions. We naturally expect an increase in carbon emissions as a result of a decrease in self-disconnections. It is uncertain how much less energy is used as a result of each self-

[53] Data correct as of July 2020. See Ofgem retail market indicators

disconnection occurrence. We assume that 50% of the energy that could have been consumed during the disconnection incident is on hold, until the customer returns to supply.

3.50. Our estimates for the period of assessment (2021-2025) equates to a carbon cost of around 3,100 MWh (both fuels included). These carbon costs are as a result of a reduction in customers self-disconnecting and therefore no longer being off-supply. The social cost of this carbon ranges between £9,000 (low estimate) and £28,000 (high estimate). We assume a scenario where consumers postpone 50% of their typical usage when off supply and that 50% of this usage is never consumed upon returning to supply. The social cost of carbon range is based on the latest published assumptions for carbon prices as outlined in BEIS' carbon cost methodology.[54] The estimates do not consider the various implications of self-disconnection, which could cause the consumer to ultimately increase energy usage to levels higher than previous, had they avoided self-disconnecting in the first place.

Key risks and uncertainties

Data limitations

3.51. As noted in the key assumptions at the outset, due to limited data provided by industry we have applied a number of evidence-based assumptions in the analysis when attempting to provide an indicative quantification of the potential direct and indirect impacts. These are detailed throughout our analysis of the options below.

3.52. We acknowledge that each of the sources on the scale of self-disconnection has certain limitations. Consumer surveys may have weaknesses due to their sample size or selection bias and are unlikely to include the disconnections due to vacant homes. At the same time, supplier non-vend data will not account for disconnections for less than the period set by suppliers and are unlikely to identify cases where customers are forgetting to top-up. It also useful to note that we are using data from different sources of information to make estimates and assumptions in some calculations, these are highlighted where necessary.

[54] BEIS (2019) Valuation of energy use and greenhouse gas

3.53. Whilst we do not expect the provision and further uptake of credit functions to eradicate the need for payday loans entirely and recognise there are wider financial pressures that could require a consumer to take out a payday loan[55], we focus our analysis on the proportion of credit taken to pay for energy consumption. We acknowledge there may also be other unknowns such as the use of energy credit functions leading to an additional credit facility being used by some consumers in addition to other sources of funding and the potential indirect effect that this may have on the customer's management of any outstanding debt.

[55] Over half of borrowers (52%) said they had to take out a payday loan because they suffered an unexpected increase in expenses or outgoings whilst almost 1 in 5 (19%) said it was due to an unexpected decrease in income. See Payday loan statistics

4. Assessment of options

Section summary

In this section we present our assessment of each option for intervention. Within this, we outline the monetised and hard-to-monetise costs and benefits of each and provide a justification of our preferred option.

Option 2: Identification + Credit functions

4.1. This section assesses the costs and benefits of Option 2, which includes placing new requirements on suppliers to take all reasonable steps to identify customers who are self-disconnecting and provide short-term support through provision of emergency, friendly-hours and additional support credit. Please note, at statutory consultation stage we updated the terminology from 'discretionary credit' to 'additional support credit, to better reflect our policy intent and the obligatory nature of the requirement for customers in a vulnerable situation.

4.2. We expect that as a result of implementing Option 2, customers who are self-disconnecting will be identified quickly and provided with appropriate short-term support as a result of new requirements on suppliers. This includes information and provision of emergency, friendly-hours and additional support credit for vulnerable consumers as well as other support where it is not technically feasible to offer one of these options.

4.3. We expect this will have an impact on all PPM customers who are self-disconnecting or at are at risk of self-disconnecting, and particularly those who are in vulnerable situations. These protections will be of particular benefit to those in short-term financial difficulties who are more likely to be on low incomes, disabled or experiencing mental health problems, minimising consumer detriment that they would otherwise experience. As a result of the new information provision requirements placed on suppliers, customers (and third party consumer representatives) will have a better awareness of credit functions and will be able to access these quickly or automatically and in some cases before an event of self-disconnection occurs. We expect this will have an impact in particular on those who are self-disconnecting due to lack of awareness or forgetfulness.

4.4. On the supply side, we expect Option 2 will impact the majority of suppliers in relation to upfront system change costs for smart meter self-disconnection identification.

We know that a small number of suppliers already have these systems in place and that a number of suppliers were already planning to implement changes prior to the policy implementation. For a smaller subset of suppliers there will be additional costs through the requirement to provide customers friendly-hours credit.[56] Option 2 will also impact on engagement with customers following identification of self-disconnection. If this is not part of existing supplier practices, this could potentially increase operational costs. We are aware that the majority of suppliers already trigger engagement with the customer through monitoring periods of non-vend on traditional PPMs.

Monetised impacts

4.5. The table below displays the estimated annual costs and benefits as a result of implementing Option 2. For each cost we provide a range (mid to high estimate) and take an average of these values over the five-year period to arrive at the estimates shown.

Table 8: Option 2 Average annual costs and benefits

Option 2: Average annual costs and benefits (2021 – 2025)			
Cost (to industry)	**Value per year (£)**	**Benefit (consumer)**	**Value per year (£)**
Ongoing costs associated with identification and monitoring of self-disconnection (traditional and smart)	£35,000 - £60,000	Benefits from accessing additional emergency credit from suppliers	£230,000 - £280,000
Ongoing costs of follow-up engagement with self-disconnecting customers	£90,000 - £180,000		

[56] 2 of the 19 suppliers who provided data in our request for information confirmed they did not provide friendly-hours credit.

(traditional and smart)		Benefits from accessing additional support credit from suppliers	£5,000 –£10,000
Additional cost of financing emergency credit	£115,000 - £130,000		
Additional cost of financing additional support credit	£5,000 - £7,500		
Average annual cost to industry	£245,000 - £375,000	**Average annual monetised benefits**	£235,000– £290,000
NPV 2021 – 2025	-£295,000 to -£635,000		

Benefit: Consumers can access additional emergency credit from suppliers

4.6. We have quantified the consumer benefit of accessing additional emergency credit provided by suppliers through assessing the relative cost of alternative options available to the customer if this provision was not introduced. We assume that the customer would face the option of going off-supply or borrowing money from elsewhere to use for energy consumption. There are unquantifiable options, such as borrowing funds from friends or family (which we discuss under our hard to monetise analysis). For the purposes of this analysis we use the option of seeking funds through payday lenders.[57] Research suggests that 53% of payday loans are taken out to cover expenditure such as groceries and utility bills.[58]

4.7. With suppliers providing their customers credit to remain on supply, there is an indirect benefit of removing the need for any potential payday loan to include amounts for

[57] Figures from June 2018 suggest that over 5.4 million payday loans were taken out in the first half of 2018.
[58] Finder (2018) Payday loan statistics

energy consumption. The total value of the loan could decrease, which we quantify through the consumer benefit in our assessment.

4.8. As outlined in previous chapters, through Option 2 we estimate that we will see a reduction in the self-disconnection rate to 7% of PPM customers by year five of the self-disconnection policy being in place. We attribute this reduction in the rate of self-disconnection due to the increased access of the short-term protections the credit functions provide. We acknowledge that this does not account for other potential incremental increases or decreases in the self-disconnection rate.

4.9. We suggest that the number of customers using the emergency credit facilities will increase at the same time that the rate of self-disconnection and take-up of alternative sources of finance (such as payday loans) decreases. We calculate the consumer benefit through taking the customers who will now no longer self-disconnect by having access to the credit functions. This equates to around an additional 390,000 electricity and 308,000 gas customer customers now accessing the credit functions in total by year five.

4.10. Over the five-year period, we estimate an average annual consumer benefit between £230,000 - £280,000 per year through access to cheaper energy credit through their supplier.

4.11. We acknowledge that although energy spend may be a contributing factor for taking payday loans, this may not necessarily remove the need for payday loans in other areas.[59] In this assessment we focus on the energy specific benefits of the customer being able to stay on supply, which payday loans are sometimes used for. We have calculated a high and mid-range benefit based on these assumptions, to account for the proportion of customers self-disconnecting, who would use this source of financing.

Benefit: Consumers can access additional support credit from suppliers

4.12. Similar to emergency credit, we have quantified the benefit of consumers being able to access additional support credit from suppliers. We have replicated the methodology

[59] Other reasons include car or vehicle expenses, general shopping such as clothes or household items and paying off a loan they have previously taken out.

above, assessing the relative cost of alternative options available to the customer should the credit facility not be provided by the supplier.

4.13. The increased uptake in the additional support credit provision is lower than the emergency credit function due to a total number of customers requiring this type of support to be a smaller proportion of the self-disconnecting population. We assume that only customers who have disconnected for affordability reasons would require this type of support and predict a slower rate of reduction assigned to the additional support credit function, as the requirement on suppliers will be to provide this additional support credit to customers identified as vulnerable.

4.14. We suggest that the number of customers using the additional support credit facility will increase at the same time that the rate of self-disconnection and take-up of alternative sources of finances decreases. Over the five-year period, we estimate a consumer benefit between £5,000 - £10,000 per year through access to cheaper energy credit as a result of the credit function facilities. This estimate is based on limited supplier data provided through the 2019 self-disconnection RFI and therefore is likely to underestimate the number of consumers who will access the additional support credit function.

4.15. As noted above, we acknowledge that payday loans are not always taken out to cover just energy related costs. In this assessment we focus on the energy specific benefits from sourcing cheaper credit through their energy supplier to stay on supply. We have calculated a high and mid-range to account for the proportion of customers self-disconnecting who would use this as alternative source of financing.

<u>Cost: Additional ongoing costs for associated with identification of self-disconnection</u>

4.16. In order to implement the proposal of taking all reasonable steps to identify PPM consumers who are self-disconnecting, we expect suppliers will be undertaking ongoing monitoring and identification of PPM customers. As part of the final IA, we have updated our analysis and include a new cost relating to the subsequent engagement with customers who have self-disconnected.

Traditional meter identification

4.17. We are aware that the vast majority of suppliers have traditional meter non-vend identification processes that are already in place, we assume that this practice will remain

unchanged with the costs already accounted for. [60] As part of our decision to separate the process between traditional and smart PPM identification, we have updated the frequency of the non-vend process to once a month, based on supplier RFI responses.

4.18. For the purposes of the analysis, we assume that it would take one member of staff, three hours to run the non-vend process with traditional meter data. In response to the draft IA, one stakeholder commented on this assumption and provided further detail on their existing processes. We did not receive sufficient data from other stakeholders to warrant updating these variables from our initial analysis, but note the proportionately effect this might create between different sized suppliers. However, we do not expect this to materially change the results of this calculation.

4.19. We assume that the member of staff will be in either an 'administrative' role or a 'business associate professional' role to provide a low and high estimate. We have assumed an administrative role has an hourly salary of £15.28 and a business associate professional role has an hourly salary of £22.24 based on the SCM methodology described in earlier chapters.

4.20. Therefore, the total estimated costs to industry for the identification process on traditional meters is between £10,000 - £20,000 per year. This activity cost needs to be considered with the follow up activities it creates, such as the cost of follow up engagement with customers which is outlined below.

Traditional meter engagement

4.21. We have included a new monetised cost of follow-up engagement to add further accuracy to our analysis. To calculate the costs of engagement with traditional meter customers, we use the proxy of customers who are self-disconnecting for affordability reasons (21% of all self-disconnecting customers). We use our estimated annual reduction in the rate of self-disconnection to project these costs across the five-year assessment, with a reduction in the number of self-disconnections and those customers requiring outbound engagement decreasing year on year. There is a high likelihood that a large

proportion of customers will return to supply relatively quickly through use of the credit functions on the meter or by topping-up with more credit, but given limitations with data flows, a larger proportion of customers may be contacted than necessary on traditional PPM, which we expect to be solved through the smart-meter framework by 2025.

4.22. We assume that the members of staff will be in a customer service role with an hourly salary of £13.52 based on the SCM methodology. To produce an estimated cost range, we calculate the costs based on different call length times, with a low range of 5 minutes and new updated high range of 10 minutes.

4.23. The estimated average annual cost to industry for engagement with customers who have been identified as self-disconnected on traditional PPMs will start between £150,000 and £300,000 in 2021 and is estimated to decrease to £44,000 - £90,000 in 2025, given the estimated reduction in the number of self-disconnection.

4.24. Taking the identification activity cost and cost of the potential subsequent engagement together, we estimate the total average industry costs for traditional meter PPM identification proposal will start at £167,000 - £325,000 a year across industry in 2021 and could decrease to £55,000 - £110,000 by 2025, with the average costs decreasing year on year due to less customers self-disconnecting and potentially more customers having a smart PPM installed, bringing the benefits of greater visibility of data to monitor self-disconnections and more targeted follow-up engagement with customers who require additional support.

Smart meter identification

4.25. For smart meter identification we know from supplier responses to our consultation that identification could take place through off-supply alerts, which are provided in on a half-hourly or daily basis when a meter disconnects if a supplier has the correct systems in place.

4.26. As part of the update to split smart meter identification from traditional meter identification we have updated the frequency of the task of monitoring the smart meter off-supply process to once a week. We maintain our draft IA analysis on the other cost variables and assume that it will take one member of staff, three hours, to complete this task to monitor self-disconnection incidents and trigger any subsequent engagement with customers suspected of self-disconnecting. For the purposes of the analysis, we assume

that the member of staff will be in either an 'administrative' role or a 'business associate professional' role to provide a low and high estimate.

4.27. The estimated annual costs across industry for the identification process on smart meters is calculated at £60,000 - £95,000. The higher cost accounts for the greater frequency of the task being undertaken, with off-supply alerts and data reports that can be generated through smart technology more frequently than the traditional meter identification process.

Smart meter engagement

4.28. We have included a new monetised cost of engagement with smart meter customers identified as off-supply. Smart meters allow for more regular, accurate data and therefore we assume that a supplier will have a greater understanding of the proportion of customers who have returned to supply without the need for additional engagement. Similar to the traditional PPM calculation, to estimate the number of customers contacted, we assume that customers self-disconnecting for affordability purposes will require further engagement. However, we use additional data from the Ofgem Consumer Engagement Survey on the duration of self-disconnections to provide a more targeted view that is available through smart meter identification – we take the proportion of customers off-supply for over seven hours and assume that this proportion of customers will be contacted.

4.29. We assume that the members of staff will be in a customer service role and have an hourly salary of £13.52 based on the SCM methodology and again calculate a low and high range based on a 5 minute and 10-minute customer call length.

4.30. The estimated annual cost to industry for engagement with smart PPM customers who have been identified as self-disconnected on smart PPMs will start at £11,500 - £25,000 in 2021 and reduce to £3,500 - £7,000 by 2025, given the estimated reduction in the rate of self-disconnection and the more targeted engagement given greater visibility of data.

4.31. Combining the costs of smart meter PPM identification and subsequent engagement with a subset of these off-supply customers, we estimate a cost range between £70,000 - £105,000 per year across industry, with average costs decreasing year on year.

4.32. In summary, we have updated our analysis and cost estimates of the identification proposal and provide a snapshot of the estimated costs relating to follow up engagement with customers. The new range of monetised costs range associated with the identification proposal on industry is calculated at £165,000 - £300,000. Table 9 sets out the estimated cost range of the identification proposal across industry for smart and traditional meters combined across the five-year period.

4.33. The differences in costs between traditional and smart meter identification and engagement highlight the justification for us to split the methods in the final IA analysis. It also reinforces our view on the benefits of smart metering, for both suppliers and consumers. With more smart meters installed in PPM mode, suppliers will have better quality data, which should lead to a more targeted approach to follow up engagement, reducing costs in the process.

4.34. It is worth noting that we consider these costs to likely be an overestimation, as they focus solely on the outbound telephone contact method. Evidence from our supplier RFI suggests that suppliers could contact customers through a variety of methods, such as letter correspondence or SMS. In addition, some suppliers will not face costs amounting from both traditional and smart methods, given the type of meters their customer base are on. As set out in the analysis, we would also expect the cost of engagement to decrease year on year, and with the introduction of more smart meters replacing the costlier process of traditional meter identification/engagement.

Table 9: Summary of estimated cost range of identification proposal across industry (traditional and smart combined)

Updated cost range from identification process	Traditional PPM	Smart PPM
Range of costs associated with identification process	£10,000 - £20,000	£60,000 - £95,000
Range of costs associated with subsequent engagement with customers after identification	£80,000 - £170,000	£5,000 - £13,000
Range of costs for identification and subsequent engagement combined (traditional and smart 2021 – 2025)	£160,000 – £300,000	

Cost: Additional upfront costs of financing emergency credit

4.35. We estimate the additional costs of financing emergency credit for suppliers. It is reasonable to assume that a proportion of customers will be repaying credit at the same time as suppliers are providing credit to others.

4.36. The average amount of emergency credit provided per customer in 2018 was £55 for electricity and £15.05 for gas.[61] We assume that these are credited to the customer across the year, resulting in amounts of £4.60 and £1.25 for electricity and gas per month respectively. For the purposes of the analysis, we predict that a customer would repay this monthly amount provided over a 30-day period, at a daily financing cost of 0.01% to the supplier. This allows us to provide an estimate of the total costs of financing the additional credit per year of £115,000 - £130,000 across industry.

4.37. This cost focusses on the subset of additional customers who are now accessing emergency credit. This does not include existing costs of providing emergency credit to suppliers' current customers. Whilst suppliers' cost is increasing due to an increase in the amount of people accessing the credit facilities, the net benefit for the consumer is increasing, due to fewer customers needing to seek more expensive alternative finance.

Cost: Additional upfront cost of financing additional support credit

4.38. To calculate the additional costs of financing additional support credit, we assume the supplier is financing this at a rate of 10% using the CMA's weighted average cost of capital in retail supply.[62]. It is also reasonable to suggest that some customers will be repaying the credit at the same time as suppliers are providing extra credit to other customers requesting this.

4.39. This estimate is based on average values of additional support credit provided per customer, per year from data submitted by suppliers in response to our RFI. These equate

[61] Ofgem (2019) Supplier RFI
[62] The CMA estimated a range of values for the WACC in retail supply, between 9.3% and 11.5%. We adopted this methodology in the Default Price Cap and do not consider that there is a reason to depart from the approach taken by the CMA at this time.

to £26 for electricity and £25 for gas[63], which results in an average of £2.25 for electricity and £2.15 for gas credit per month respectively. We assume that the customer will repay this monthly amount provided over a period of 30 days, at a financing cost to the supplier of 0.01% per day.

4.40. This allows us to provide an estimate average of the total costs of financing the additional credit per year of £5,000 - £7,000 on industry as a result of a fall in the self-disconnection rate through the increased availability and awareness of additional support credit. The cost to the consumer is decreasing as the benefit of accessing the supplier's credit facilities is increasing, preventing the consumer from further financial detriment.

4.41. As part of the final IA, we have considered views raised by three stakeholders on the risk of bad debt when providing customers additional support credit. Stakeholders particularly raised this would be an issue with the provision of further discretionary credit during COVID-19.

4.42. When suppliers provide PPM customers with credit, it is possible that a proportion of the credit is not repaid and written-off as a result. Additional support credit, given the amount of credit is higher than emergency and friendly-hours credit and the nature of it being repaid through instalments, is likely to carry a greater risk than the other credit functions. However, the ability for customers to build up debt for longer periods of time on a PPM is reduced. Given the nature of the additional support credit function, the level of arrears should be within the supplier's control (ie suppliers decide whether to provide further additional support credit based on customers' best interest). It is common practice and a policy position that suppliers need to put a repayment plan in place for consumers to repay this credit in line with a customer's ability to pay, which means that the working capital exposure is reduced.

4.43. We note that, separately, we have committed to assess the materiality of COVID-19 impacts on the price cap, including the materiality of bad debt incurred by suppliers in the price-capped part of the market for the April 2021 price cap level and we have recently

[63] Ibid.

published a policy consultation setting out our initial thinking on how costs might have been impacted.[64]

Hard-to-monetise impacts

4.44. We have identified a number of impacts on consumers and suppliers which we were unable to monetise. These are included in the table 10 and table 11 below followed by a written assessment in sections 4.46 onwards.

Consumer impacts

Table 10: Option 2 Hard-to-monetise consumer impacts

Option 2 policy objectives	Consumer impacts	Hard-to-monetise assessment
- Customers are identified quickly and provided with appropriate short-term support. This includes emergency, friendly-hours and additional support credit as well as other support when not technically feasible to offer one of these options. - Customers (and	Access to friendly-hours credit preventing self-disconnection for longer durations such as overnight, at weekends and public holidays. This will particularly have an impact on households who forget to top-up or those who have affordability challenges in topping-up.	Consumer benefits - High
	Awareness of credit functions likely to lead to fewer repeat self-disconnections and give customers confidence in using these functions more often. This will particularly have an impact on customers who self-disconnect because lack of awareness	Consumer benefits - Medium

[64] Ofgem (2020) Reviewing the potential impact of COVID-19 on the default tariff cap: September 2020 policy consultation

third party consumer representatives) have better awareness of credit functions and can access these quickly	of extra support available as well as those experiencing short-term financial issues.	
	Reduced short-term physical impacts such as feeling cold and/or not being able to wash and/or not having hot meals. Reduced likelihood of customers developing a cold, respiratory illnesses or poor physical health. This will particularly have an impact on households with children and/or elderly.	Consumer benefits - Medium
	Reduced short-term emotional impacts such as stress from practicalities to top-up, financial stress and feelings of shame or embarrassment. This will particularly have an impact on households experiencing financial difficulties and/or mental health problems.	Consumer benefits - Medium

Supplier impacts

4.45. As part of our final IA, we have removed the hard-to-monetise cost of follow-up engagement with self-disconnecting customers and monetise this supplier impact instead based on stakeholder feedback.

Table 11: Option 2 hard-to-monetise supplier impacts (costs and benefits)

Option 2 policy objectives	Supplier impacts	Hard-to-monetise assessment
- Customers are identified quickly and provided with appropriate short-term support. This includes emergency, friendly-hours and	The additional costs of providing friendly credit. This will particularly have an impact on a small number of suppliers who do not currently offer friendly-credit provision. All suppliers also likely to benefit from increased consumer awareness.	Supplier costs & benefits - Low

additional support credit as well as other support when not technically feasible to offer one of these options. - Customers (and third party consumer representatives) have better awareness of credit functions and can access these quickly	The one-off, upfront costs to updating IT systems to allow for smart meter identification of self-disconnection. This is likely to have an impact on the majority of suppliers in the market, although to varying levels.	Supplier costs - Medium
	The additional costs for providing customers with an alternative means of accessing short-term support where emergency or friendly credit cannot be provided (eg wind-ons).	Supplier costs – Medium
	Awareness of credit functions may lead to fewer contacts from consumers and fewer customers to be contacted if they are not self-disconnecting. This will likely impact the majority of suppliers.	Supplier benefits – Low
	Better quality industry data assess trends and improve customer service.	Supplier benefits - Low

Consumer benefits: Reduced short-term physical impacts

4.46. Our latest Consumer Engagement Survey shows that the majority of customers who reported having self-disconnected at least once a year from their electricity supply did so for under 3 hours (79% of those reporting to have self-disconnected).[65] For gas supply 70% reported having self-disconnected for under 3 hours, as evidence shows that people self-disconnect from heating for longer than electricity.

4.47. Whilst the duration of each self-disconnection occurrence will impact the detriment that a household experiences, the fuel type also plays a role. For example, should a consumer disconnect from both fuels simultaneously, impacts are likely to be exacerbated and could include a combination of living in a cold home through no central heating (gas)

[65] Ofgem (2020) Consumer Engagement Survey 2019

amongst other short-term impacts such as being unable to store food safely in fridges and freezers (electricity).

4.48. We expect Option 2 to bring consumer benefits by reducing physical impacts in the short-term, such as feeling cold, being in a dark home, not being able to wash or cook hot meals due to living in a home with no access to heating, lighting and/or hot water for a few hours or over the weekend.

Table 12: Length of customer self-disconnections

For how long are ELECTRICITY PPM users self-disconnecting?	
(Among those who have self-disconnected)	
Less than an hour	64%
One - three hours	15%
Three - seven hours	8%
Seven - twelve hours	0%
More than twelve hours	9%
Don't know	4%
For how long are GAS PPM users self-disconnecting?	
(Among those who have self-disconnected)	
Less than an hour	58%
One - three hours	12%
Three - seven hours	10%
Seven - twelve hours	7%
More than twelve hours	11%
Don't know	2%

Source: Ofgem Consumer Engagement Survey 2019

4.49. The physical, negative impact of feeling cold was reported by 59% of people reporting negative impacts of self-disconnection in the Citizens Advice survey. The impact of having a dark home reported by 43% of those reporting negative impacts and not being able to wash by 35% of the respondents. [66]

4.50. A reduction in the direct effects of short-term disconnection can in turn reduce the likelihood of customers developing a cold, respiratory illnesses or poor physical health, all

[66] Citizens Advice (2018) Switched On – Improving support for prepayment consumers who've self-disconnected

associated with living in a cold home.[67] For Option 2 which will target the short-term self-disconnections, this will be particularly of benefit to households who are more likely to be affected by living in a cold home (eg households with children, older adults).

4.51. We expect the impact of these benefits to be medium, as a result of implementing Option 2. This is because access to emergency credit, additional support credit and friendly-hours credit for a few hours or days will keep customers on supply. However, we note that those who experience more regular and longer events of self-disconnection are more likely to be at risk of developing these physical impacts and they may not see the same benefits in the long-run, unless more sustainable solutions are not provided.

Consumer benefits: Reduced short-term emotional impacts

4.52. We expect Option 2 to bring consumer benefits by reducing short-term emotional impacts, such as alleviating stress from the practicalities of topping-up, achieved through an increased awareness of credit functions and reduced financial stress through access of credit functions. Financial stress was reported by 27% of people reporting negative impacts of self-disconnection and stress from practicalities to top-up was reported by 21% of those reporting negative impacts.[68] This in turn can reduce the likelihood of exacerbating existing mental health problems.

4.53. We also expect Option 2 to have an impact on reducing short-term emotional impacts of feeling ashamed or embarrassed which was reported by 15% of those reporting negative impacts of self-disconnection. In this instance, we believe the policy intervention can also have some impact on reducing informal borrowing, which is likely to have a positive impact on those experiencing mental health problems.

4.54. Research has shown that people experiencing mental health problems are more likely to be in financial difficulties[69] and are one and a half times as likely to borrow from friends, family and acquaintances as people not experiencing poor mental health.[70] While there are both positive and negative impacts to informal borrowing, we expect the

[67] Ibid.
[68] Ibid.
[69] Money and Mental Health Policy Institute (2018) Informal Borrowing and Mental Health Problems
[70] Ibid.

identification of self-disconnection by suppliers and access to short-term credit functions to reduce the negative impacts associated with informal borrowing. This includes reducing feelings of guilt and shame which can exacerbate mental health problems, as well as reducing the risk of emotional pressure which can sometimes be experienced through violence and coercion.[71]

4.55. We consider the impact of these benefits on consumers to be medium as a result of implementing Option 2. This is because the identification and short-term support will likely reduce emotional impacts for those groups of consumers who are facing short-term one-off financial crisis. However, this may not effectively target those who need more sustainable solutions to their financial problems.

Consumer benefits and supplier costs: Access to friendly-hours credit

4.56. Alongside the emergency credit and additional support credit provision, consumers will also have access to friendly-hours credit as part of proposals under Option 2. We have not been able to monetise the benefits of this feature given the limited data. However, we believe it will have a direct, positive impact on consumers by preventing self-disconnection at inconvenient times. Our evidence suggests that the friendly credit feature is not provided by all suppliers in the market currently so compared to Option 1, this proposal would directly reduce the number of customers self-disconnecting by having this provision mandated.[72] Friendly-hours credit could also reduce the duration of a self-disconnection and the associated customer impacts, averting a situation which could see a consumer off-supply for a long Bank Holiday weekend.

4.57. With the majority of suppliers already providing this feature voluntarily, we expect to see an increase in upfront costs to a subset of industry participants, which will vary across suppliers. In terms of ongoing costs, similar to the emergency credit function, we envisage ongoing costs to suppliers to remain minimal as customers are required to repay the credit used upon their next top-up in most cases.

[71] Ibid.
[72] Ofgem (2019) Supplier RFI

Consumer and supplier benefits: Provision of information for credit functions

4.58. An important part of Option 2 is raising awareness of the credit functions by introducing a new requirement for suppliers to ensure that customers are given adequate information about the credit functions including what these are, when they can be used and how credit is repaid by the customer. For customers in financial difficulties, where suppliers become aware of a customer's situation, they will be required to take into account that customer's ability to pay when repaying the emergency and friendly-hours credit. For additional support credit, they will be required to provide this extra credit to those in vulnerable circumstances and take into account customers' ability to pay the credit once it has been exhausted.

4.59. Credit functions are already widely available to consumers, however evidence suggests that customers (and third party consumer representatives) are often unaware of availability and functionalities across different suppliers.[73] In addition, evidence suggests that customers in financial difficulties avoid using emergency and friendly-hours credit as they believe they might be charged more while in emergency credit.[74]

4.60. The direct benefit for consumers here is that consumers (or their third party representatives) will be provided with better information and become aware of the functions available, know how to access these, understand the implications of accessing extra credit and any eligibility criteria. This in turn should lead to fewer customers self-disconnecting in the short-term. It should also help avoid situations where customers in financial difficulties self-disconnect directly after topping-up following use of additional support credit, as their ability to pay will be taken into account when repaying this credit. We believe the impacts on consumers to be medium, as an increase in consumer awareness of credit functions may take some time to be embedded across the PPM population.

4.61. Suppliers will need to take steps to better communicate the availability of the credit functions and how these work. We expect them to do this throughout the consumer journey, including once they have identified that someone is self-disconnecting. We expect

[73] Ofgem (2019) See policy consultation
[74] CAP UK (2020) A Dark Place - unaffordable energy costs and how low income households cope

this will lead to some costs, however we believe these to be of low impact. Through increased consumer awareness, suppliers are also likely to benefit indirectly in the long-term by seeing reduced contact from some customers enquiring about the availability and qualifying criteria of the credit functions. We consider the supplier benefit to be of low impact as we cannot fully predict the levels of engagement this will generate.

Supplier costs: Implementation costs of identifying smart self-disconnection

4.62. We are unable to provide a monetary value on the potential system changes that suppliers will need to implement to identify self-disconnection on smart meters, due to the limited data and different suppliers requiring varying levels of implementation based on their current practices.

4.63. We are aware of a small number of suppliers who are already operating smart meter identification and therefore in these instances the costs will be negligible. Suppliers are already required to identify customers in vulnerable circumstances and respond to their needs accordingly. We expect suppliers' compliance with the Standards of Conduct[75] and the vulnerability principle to act as the foundations for the changes to the systems. In summary, we consider that these costs will be of medium impact, due to their one-off nature and long-term viability.

Supplier and wider benefits: Better quality industry data

4.64. By ensuring that there is an ongoing process of identifying self-disconnections, we expect industry data will improve significantly. This is likely to be beneficial for all stakeholders, but in particular for suppliers. Consumers will benefit from targeted and accurate identification, suppliers will be able to observe trends and periods of high or low self-disconnections which might prompt changes in practices (eg the decision to increase friendly credit hours in periods of poor weather). Ofgem will be able to assess the scale of

[75] Supply Standard Licence Condition 0: Treating Domestic Customers Fairly

self-disconnection across the industry with more accuracy and precision when reporting on progress of this policy intervention.

Option 3: Identification + Ability to Pay principles

4.65. This section assesses the costs and benefits of Option 3, which consists of placing new requirements on suppliers to take all reasonable steps to identify customers who are self-disconnecting and provide customers more sustainable and ongoing support for occasions of frequent and more prolonged self-disconnections, through the incorporation and update of the Ability to Pay (ATP) principles in the supply licence. Option 3 does not focus on the short-term solutions outlined in Option 2.

Policy objectives and groups affected

4.66. Incorporating and updating the ATP principles into the supply licence conditions is intended to emphasise the need for targeted support for all consumers facing payment difficulty, this includes PPM customers who may be at risk of self-disconnection and/or self-rationing.

4.67. In 2018, the overall number of customers in debt increased by 4.2% in electricity and 4.8% in gas in 2018 (1.3m for electricity and 1.04m for gas). Within this, there was an increase in the number of customers in arrears without a repayment plan, which indicates that more customers are falling behind on their bills who are not being engaged with effectively or where there is a delay in contact.[76] PPM customers who are repaying debt are more likely to self-disconnect, with Citizens Advice's survey showing that of those whose meters were used to collect debt had self-disconnected compared to 13% of all other PPM users.[77]

4.68. By agreeing an affordable repayment plan with a customer who needs it, the risk of self-disconnection due to not being able to balance between debt repayment and ongoing consumption will be reduced. In the statutory consultation, we proposed to update a

[76] Ofgem (2019) Vulnerable consumers in the energy market: 2019
[77] Switched On – Improving support for prepayment consumers who've self-disconnected

number of principles to better reflect existing debt management practices and to introduce one new principle around customer re-engagement after a failed repayment arrangement.

4.69. We expect that as a result of introducing Option 3, customers who are self-disconnecting would be identified quickly and those in payment difficulties provided with ongoing support related to their ability to pay. This will particularly impact PPM customers in financial difficulties and those who are self-disconnecting due to affordability challenges. Updating the ATP principles will also have an impact on credit meter customers in payment difficulties, as the principles apply to customers on all payment methods.

4.70. On the supply side we expect, as with Option 2, impacts on the majority of suppliers with regards to the identification of self-disconnection for smart PPM customers. We also expect the updates to the ATP principles to impact the majority of suppliers.

Monetised impacts

4.71. We have identified a number of costs associated with the implementation of Option 3, presented in the table below and followed by a written assessment. As this option includes the identification provision which is the same as in Option 2, we have used the same costs here and have not repeated the assessment.

Table 13: Option 3 average annual costs and benefits

Option 3: Average annual costs and benefits (2021 – 2025)			
Average industry cost	**Value per year (£)**	**Average consumer benefit**	**Value per year (£)**
Ongoing costs associated with identification and monitoring of self-disconnection (traditional and smart)	£35,000 - £60,000	N/A: no monetised consumer benefit analysis	
Ongoing costs of follow-up engagement with self-disconnecting customers (traditional and smart)	£90,000 – £180,000		
New Ability to Pay principle: Re-engaging with customers after a failed repayment	£241,000		
Average annual cost to industry	£365,000 - £481,000		

NPV (2021 – 2025):	-£1.8m to -£2.4m

Supplier costs: Re-engaging with a customer after a failed repayment as part of new ATP principle

4.72. We expect that suppliers will incur costs from making proactive contact with customers when they identify that a repayment has failed. If the plan fails and the supplier then engages with the customer, they can to propose a more sustainable repayment rate. This engagement reduces the risk of falling further into debt whilst making some payment towards their energy costs. This benefits both the consumer and the supplier.

4.73. To assess the ongoing cost of engaging with customers following a failed repayment, we have assumed it will take one member of staff five minutes to contact and engage with a customer. The five-minute time estimate is based on an average handling call time key performance indicator (KPI) of five minutes for call times. For the purpose of this assessment, we have assumed the member of staff will be in a customer service role with an hourly salary of £10.70.

4.74. The ongoing cost across industry calculated is £241,000 per year. This is based on an activity cost of £1.13 per occasion. There were 214,632 instances of repayment failures in 2018 for electricity accounts[78] and for the purposes of this analysis, we take this figure to avoid the risk of double-counting electricity and gas accounts.

4.75. We believe that this ongoing cost is an over-estimation, as we have no predictability of how the number of customers with failed repayments will fluctuate over the period of this policy. With stronger protections in place for customers in financial difficulty, we expect that this number may decrease and therefore the annual cost used here may not be reflective over the five-year period.

4.76. It is also important to recognise that these engagements are likely to be dependent on factors such as whether this engagement will be made in isolation or as part of a wider conversation with the customer around their ability to pay through other elements of the principles. As explained in the statutory consultation, the new principle does not necessarily

[78] Ofgem (2019) Monitoring social obligations – 2018 annual data report

require engagement with the customer through phone calls, there are other types of engagement available to suppliers (eg letter/email/SMS). Therefore, this is only one method to estimate costs.

Hard-to-monetise impacts

4.77. We have identified a number of benefits which we were unable to monetise, but will provide a direct positive benefit to consumers as a result of identification of self-disconnection by suppliers and proactive ongoing support through the ATP principles. The table below illustrates the expected hard-to-monetise costs and benefits of introducing Option 3, followed by a written assessment.

4.78. Some of the hard-to-monetise cost and benefits of the identification of self-disconnection have been captured in the assessment under Option 2, so these have not been repeated in the assessment below.

Table 14: Option 3 hard-to-monetise consumer benefits

Option 3 policy objectives	Consumer impacts	Hard-to-monetise assessment
- Customers who are self-disconnecting are identified quickly and those in vulnerable circumstances are provided with ongoing support. This refers to engagement and support from their supplier through for example reassessment of debt repayments.	Reduced long-term physical impacts such as feeling cold and/or not being able to wash. Reduced likelihood of customers developing a cold, respiratory and circulatory problems or poor physical health which could exacerbate pre-existing health problems. This will particularly have an impact on households with children and/or elderly.	Consumer benefit - Medium
	Reduced long-term emotional impacts such as financial stress and social isolation. This will particularly have an impact on households experiencing financial difficulties and/or mental health problems.	Consumer benefit - Medium

Supplier impacts:

Table 15: Option 3 hard-to-monetise supplier costs

Option 3 policy objectives	Supplier impacts	Hard-to-monetise assessment
- Customers who are self-disconnecting are identified quickly and those in vulnerable circumstances are provided with ongoing support.	The one-off, upfront costs to updating IT systems to allow for smart meter identification of self-disconnection. This is likely to have an impact on the majority of suppliers in the market, although to varying levels.	Supplier costs - Medium
	Additional costs as a result of updates to existing ATP principles. This will affect all suppliers.	Supplier costs - Low

Consumer benefits: Reduced long-term physical impacts

4.79. We expect Option 3 to bring consumer benefits by reducing long-term physical impacts, such as feeling cold, living in a dark home, not being able to wash or cook a hot meal due to living in household without access to gas and/or electricity.

4.80. While Option 2 showed that the majority of self-disconnections occur for short periods of time, evidence suggests that 9% of electricity customers and 18% of gas customers self-disconnected for longer than 7 hours, with 11% of gas customers self-disconnecting for longer than 12 hours.

4.81. A reduction in the direct effects of lengthy or ongoing self-disconnection, through an assessing customers' ability to repay debt or whether it is still safe and reasonably practicable to have a PPM, can reduce the likelihood of consumers developing a cold, respiratory illnesses or poor physical health, particularly those who are self-disconnecting from heating.[79] More specifically, when self-disconnecting or being at risk of self-disconnection during the colder winter months due to financial difficulties, this can increase the risks of respiratory and circulatory problems and exacerbate existing health problems.[80]

[79] Citizens Advice (2018) Warm homes, affordable fuel and healthy people
[80] Public Health England, UCL Institute of Health Equity (2014) "Local action on health inequalities:

4.82. The introduction of Option 3 will be particularly of benefit to households who are more likely to be affected by living in a cold home (eg households with children, older adults). As with short-term impacts in Option 2, we consider the implications of disconnecting both fuels simultaneously. The longer term effects of this are likely to have a larger material impact on a physical health.

4.83. Another potential benefit that may be derived from implementation of Option 3 is around impact on excess winter deaths due to living in a cold home. Each year the ONS publishes statistics on "excess winter deaths" (EWD).[81] There are studies that suggest that 30% of EWD can be directly linked to cold homes.[82] While such estimates should be treated with a degree of caution, in particular as they were undertaken a number of years ago, they do highlight the risk of consumers not receiving appropriate support or understanding the protections that are available to them, particularly when exposed to long periods without gas and/or electricity in the winter months. Assuming that these estimates remain applicable, Ofgem analysis has shown that in 2017-18 just under 16,500 EWDs can be linked to people living in cold homes.[83]

4.84. We expect the impact of these benefits to be medium as a result of implementing Option 3. This is because the identification of self-disconnection and customer engagement in relation to a customer's ability to pay should lead to a reduction in frequent and lengthy self-disconnections. However, long-term impacts are more difficult to assess and this option does not address challenges faced by customers in the short-term, like access to additional support credit which could provide them with vital support during a few hours or days by being able to stay on supply and have access to heating.

Consumer benefits: Reduced long-term emotional impacts

4.85. We expect Option 3 to bring consumer benefits by reducing long-term emotional impacts such as financial stress through engagement on ability to pay. Financial stress was

Fuel poverty and cold home-related health problems.
[81] This captures the extra number of deaths that occur during the winter period (December to March) relative to the average of the surrounding four months of April to July and August to November.
[82] Rudge, J. (2011) "Indoor cold and mortality", In Braubach, M., Jacobs,. D., and Ormandy, D. (2011) "Environmental burden of disease associated with inadequate housing: A method guide to the quantification of health effects of selected housing risks in the WHO region", World Health Organisation
[83] Ofgem (2019) State of the Market Report 2019

reported by 27% of people reporting negative impacts of self-disconnection.[84] This in turn can reduce the likelihood of exacerbating existing mental health problems.

4.86. There is also an indirect benefit for consumers on their wider financial situation, by seeing a reduction in financial stress, they are able to cope with other essential areas. Reports suggest that financial stress does impact wider life, especially when consumers are not able to keep up with debts or meet monthly expenses.[85]

4.87. We consider the impact of these benefits on consumers to be medium as a result of implementing Option 3. This is because the identification and ongoing support with ability to pay will likely reduce emotional impacts for those groups of consumers who are facing financial difficulties.

Supplier costs: Increased costs as a result of existing ATP principles updates

4.88. We expect that the proposed updates to the rest of the existing ATP principles will have some impact on suppliers' upfront and ongoing costs. These costs are likely to include training or re-training of staff through updates to training packs to reflect the updated principles. For example, we are proposing to reflect that debt advice is provided at this stage. It will also likely have an impact on customer service, as we are proposing to ensure suppliers are using every contact as an opportunity to gain more information about the customers' ability to pay once a customer in payment difficulty is identified.

4.89. However, we believe these costs are required and can be absorbed. Suppliers are already expected to adhere to the principles and we expect the supplier costs of refreshing existing training for staff to be low.

Option 4: Identification + Credit functions + Ability to Pay principles

4.90. Option 4 considers all of the proposals combined and sets out the benefits of a holistic approach. We focus here on the impacts of including all three proposals together

[84] Citizens Advice (2018) Switched on: support for prepayment consumers who've self-disconnected
[85] See 2019 UK Financial Wellbeing Survey

and why this is our preferred option, aiming to combat both short-term and ongoing instances of self-disconnection.

Table 15: Option 4 average costs and benefits

Option 4: Average annual costs and benefits (per year 2021 – 2025)			
Industry cost:	**Value per year (£)**	**Consumer benefit:**	**Value per year (£)**
Ongoing costs associated with identification of self-disconnection	£35,000 - £60,000	Benefits from accessing emergency credit from suppliers	£260,000 - £350,000
Ongoing costs of follow-up engagement with self-disconnecting customers (traditional and smart)	£90,000 - £180,000		
Additional cost of financing emergency credit	£125,000 - £145,000	Benefits from accessing additional support credit	£10,000 - £15,000
Additional cost of financing additional support credit	£12,000 - £17,000		
Re-engaging with customers with failed repayment plans	£241,000		
Average annual total cost to industry	£500,000 - £645,000	**Total monetised benefits**	£270,000 - £365,000
NPV 2021 – 2025:	-£1.3m to -£1.5m		

4.91. Option 4 presents consumers with the most holistic approach regarding protection from self-disconnection and self-rationing. Below we outline the interlinking aspects of the policy and how they would effectively come together in practice.

4.92. Identification is a vital first step in assessing the customer's situation and enabling the appropriate support to be provided. Without this initial step, consumers will have difficulty accessing existing support in place, which will be strengthened by the proposals in this assessment. Referring to the status quo scenario, the voluntary emergency and friendly-hours credit may kick in if offered, but further support would often be accessed through consumer-led engagement. Through Option 4, the likelihood of detriment and/or repeated self-disconnections is reduced. There is also a case that by proactively identifying customers, the duration that the customer is off-supply, in the unavoidable event of a self-disconnection occurrence, would be minimised.

4.93. The provision of the credit functions is intended to address the immediate short-term situation; it is not intended as a sustainable solution. The priority is to always return the customer to supply or prevent them from going off-supply in the first instance. By providing emergency, friendly-hours and additional support credit, customers are provided with an additional layer of protection when faced with an off-supply situation. The credit functions achieve progress towards both policy objectives – reducing the likelihood of going off-supply and reducing the time spent off-supply and therefore any associated negative impacts of self-disconnection.

4.94. The second element of Option 4 is to raise awareness of the features that are available. As detailed in earlier chapters, these are existing voluntary protections which are widely offered in the market already. Increasing the awareness around the availability and operational aspects of the functions will not necessarily increase costs significantly, as we know that customers are already accessing these features. As noted above, for the effective use of these credit functions it is important that customers are identified promptly. Without the identification aspect of the proposals, the off-supply situation may already have been prevented through access of alternative support or more likely, may have caused increased consumer harm that these protections could have avoided.

4.95. Additional support credit works in relation with both the short-term support and potential ongoing financial situation of both Option 2 and Option 3. Once a customer has been identified as in financial difficulty, they can be provided with credit to reduce the risk of self-disconnection. The additional support credit function provision also complements the introduction of the ATP principles (Option 3 and Option 4), with customers in financial difficulties able to reduce the risk of repeated self-disconnection occasions by agreeing manageable repayment rates.

4.96. Updating and introducing the ATP principles aims to strengthen protections for customers in financial and debt repayment difficulty. It will ensure that those who are unable to clear credit in the first instance are not penalised or omitted from using the important short-term functions. More importantly, it provides a suitable time to reassess the customer's personal circumstances and allow the supplier to make an appropriate decision on the next course of action, which is beneficial to both the supplier in setting realistic payment rates and the customer for engaging and accessing the support that they are in need of.

4.97. The justification above demonstrates the interlinking and dependent nature of these policy options to ensure that all customers can benefit from the protections planned. By introducing just one of the proposals which look to tackle an off-supply situation (Option 2 or Option 3) the policy runs the risk of only helping a proportion of consumers who require protection. In order for the policy to be effective and reach the wide range of customers in vulnerable circumstances, it is necessary to introduce all three proposals combined through our preferred option (Option 4). There is an added value to ensure that both customers experiencing short-term and long-term situations of self-disconnection can benefit from the new proposals.

4.98. We have summarised the total monetised and hard-to-monetise impacts into two tables below for reference.

Monetised impacts

4.99. The table below summarises the total costs and benefits of the proposals combined and sets out the NPV of implementing these proposals. The benefits are quantified as the costs for consumers when accessing alternative sources of credit should suppliers not provide emergency, friendly and additional support credit. The NPV value only monetises the benefits for consumers for the credit function proposal, as the impact on identification and ATP principles cannot be monetised. Due to some updates in the final IA, we have updated the table with the adjusted NPV below.

Table 16: Option 4 Net Present Value (NPV)

Option 4	2021 Y1	2022 Y2	2023 Y3	2024 Y4	2025 Y5	NPV 2021 - 2025
Benefits (gas and elec)	£47,000	£179,000	£310,000	£400,000	£400,000	
Costs (gas and elec)	£510,000	£530,000	£565,000	£590,000	£590,000	**-£1.3m**
Net Benefit	-£460,00	-£350,000	-£250,000	-£190,000	-£185,000	

4.100. Table 16 displays the NPV of the preferred option's monetised assessment. The consumer benefits derived from the implementation of the self-disconnection policy increase year on year, as more customers have access to the supplier financed credit functions (as opposed to more expensive alternatives). The costs imposed on industry increase year on year to account for the take up of the credit functions, alongside the ongoing costs related to identifying customers and the introduction of the new ATP principle. The monetised net benefit is increasing each year, as consumer benefits continue increase alongside the rate of self-disconnection decreasing year on year based on our estimated projections.

Hard-to-monetise impacts

4.101. Under Option 4, we have assessed the combined impacts of Option 2 and 3 and have set this out in the table below. Option 4 clearly shows there are significant consumer benefits in introducing this package of proposals, in terms of reduced physical and emotional impacts both in the short and long-term.

Table 17: Option 4 hard-to-monetise consumer benefits

<table>
<tr><th>Option 4 policy objectives</th><th>Consumer impacts</th><th>Hard-to-monetise assessment</th></tr>
<tr><td rowspan="2">- Customers who are self-disconnecting are identified quickly and provided with the appropriate support, either through short-term credit provision or ongoing support on customers' ability to pay for those in vulnerable circumstances.</td><td>Access to friendly-hours credit preventing self-disconnection for longer durations such as overnight, at weekends and a public holiday. This will particularly have an impact on households who forget to top-up or those who have affordability challenges in topping-up.</td><td>Consumer benefit - High</td></tr>
<tr><td>Awareness of credit functions likely to lead to fewer repeat self-disconnections. This will particularly have an impact on customers who forget to top-up or who don't top-up due to other organisational issues.</td><td>Consumer benefit - Medium</td></tr>
</table>

	Reduced short-and long-term physical impacts such as feeling cold and/or not being able to wash. Reduced likelihood of customers developing a cold, respiratory and circulatory illnesses, poor physical health and reduced risk of exacerbating existing health problems. This will particularly have an impact on households with children and/or elderly.	Consumer benefit - High
	Reduced short-and long-term emotional impacts such as stress from practicalities to top-up, financial stress and feelings of shame or embarrassment. This will particularly have an impact on households experiencing financial difficulties and/or mental health problems.	Consumer benefit - High

Supplier impacts

Table 18: Option 4 hard-to-monetise supplier costs

Option 4 policy objectives	Supplier impacts	Hard-to-monetise assessment
- Customers who are self-disconnecting are identified quickly and provided with the appropriate support, either through short-term credit provision or ongoing support on customers' ability to pay for those in vulnerable circumstances.	The additional costs of providing friendly-hours credit. This will particularly have an impact on a small number of suppliers who do not currently offer the friendly credit provision.	Supplier costs - Low
	The one-off, upfront costs to updating IT systems to allow for smart meter identification of self-disconnection. This is likely to have an impact on the majority of suppliers in the market, although to varying levels.	Supplier costs - Medium

	The additional costs for providing customers with an alternative arrangement where top-up points are inaccessible and meters do not have technical feasibility to provide emergency or friendly credit (eg wind-ons).	Supplier costs – Medium
	Awareness of credit functions may lead to fewer contacts from consumers and fewer customers to be contacted if they are not self-disconnecting. This will likely impact the majority of suppliers however it is more difficult to predict.	Supplier benefit - Low
	Additional costs as a result of ATP principles updates. This will affect all suppliers.	Supplier costs - Low

5. Risks

Section summary

In this chapter we highlight any relevant risks that we have considered as a result of this policy intervention. We separate these into wider policy implications and risks associated to individual options or proposals, providing a summary of how we intend to mitigate these risks.

5.1. We have considered the potential wider implications of implementing this policy. In particular, we have focused on the risk of suppliers passing through any additional costs that they may face on to groups of consumers that have resulted in the increase in costs, or to their wider customer base.

5.2. The Prepayment Meter Price Cap came into force in April 2017. Further price protection was introduced for customers on standard variable tariffs and fixed term default tariffs on 1 January 2019.[86] The two price caps provide consumers protection from overcharging and minimise the likelihood of these costs being passed on to customers who are on tariffs qualifying from protection under the cap.

5.3. After considering the costs imposed on suppliers as a result of the proposed policy interventions discussed in this final IA, we do not consider them material enough to warrant an adjustment of the cap level. The current cap has sufficient headroom to enable suppliers to account for these cost increases. We could expect some of these costs to be passed through by marginal increases in prices for customers on fixed tariffs. We consider the likelihood of pass-through costs on the customer base benefiting from this policy intervention during the period of the price cap to be low.

5.4. Price protection will be in place until 2023 at the latest. We have recently published our decision on protecting energy consumers with prepayment meters, with the cap due to

[86] See energy price caps web pages

expire on 31 December 2020. We are extending protection for PPM customers with default tariffs by including a new cap level within the default tariff cap specifically for PPM customers.[87]

5.5. Section 9 of the Tariff Cap Act 2018 makes a separate provision for Ofgem to carry out a review to consider whether there are categories of domestic consumers that require protection against excessive charges in a post-price cap market. We outline two scenarios which we think may be applicable in post 2023:

- The energy market is deemed to have improved such that the conditions are in place for effective competition and the caps are lifted; or

- Ofgem decide it is required to develop a successor regime to the current default tariff price cap.

5.6. Therefore, the distributional impacts as a result of the self-disconnection policy would only fall on the entire customer base and tariff types upon the end of the price protection period (2023 at the latest). Pass-on prior to this period is likely to be dependent on how much suppliers are willing to increase their tariffs in the given market context. At this point, we would expect any pass through to fall on the entire customer base and tariff types, or to those on tariffs where the additional costs have fallen.

5.7. There are typically fewer suppliers active in the PPM segment compared to the overall domestic retail market, with a select number of PPM specialists. As a result, price competitiveness in this segment may not be as strong as it might be with more suppliers. Hence, some suppliers may be reluctant to pass through these costs directly to their customer base.

Assessing potential distributional impacts

5.8. As referenced in the methodology section, we have updated our assessment of potential distributional impacts. The estimates outlined in this assessment predict that the total net costs to suppliers across the industry by 2023 will be £1.6m. There are currently

8.7m gas and 9.7m electricity customer accounts on fixed tariffs in GB.[88] If suppliers choose to pass on the cost promptly to the rest of their customer base, rather than through an uplift in PPM tariffs at the end of the cap period, these figures suggest that the average bill of a fixed tariff customer could increase, on average, by £0.04p per account, per year (nominal value). In the final IA, we have taken into account stakeholder feedback and disregarded the calendar year of 2021, given that many fixed tariff prices have been set and cannot incorporate these costs given the implementation timeline. We assess the total net costs in 2022-2023 in this distributional analysis.

5.9. However, it should be noted that this customer segment is the most engaged and sensitive to price increases, so suppliers may be more cautious about adopting this strategy in isolation. By implementing consumer protections for those disproportionately likely to be in a vulnerable situation, we consider this cross-subsidisation to be least impactful to consumers, smearing these marginal costs across the ablest in society.

5.10. The distributional impact of these costs being passed through to fixed tariff customers were estimated by calculating the total costs of these proposals on industry, therefore the number of PPM customers and the average amount of emergency and additional support credit provided to these customers will impact the scale of the potential pass-on costs. The number of customers a supplier has on fixed tariffs is also a key variable that will determine the level of pass on, with more customers on fixed tariffs meaning less cost per customer. Suppliers with a larger PPM customer base are likely to face larger costs associated with the credit function proposal and are therefore more likely to pass on this cost to their fixed tariff customer base.

5.11. Our recently updated Ofgem Consumer Archetypes help to assess how policy impacts are distributed across all GB households.[89] The archetypes serve as a tool to enhance understanding of the diverse characteristics, capabilities and likely market experiences across the population of energy consumers. Whilst we are not using the tool in its entirety here, given these proposals focus on consumer protection rather than income redistribution, we have identified two archetypes who are likely to benefit from these proposals: consumer archetypes C5 and D6. The main attributes of both these consumer

[88] Ofgem (2020) For details on the distribution of customers by tariff type for individual large and medium suppliers see gas and electricity
[89] Ofgem, CSE (2020): Ofgem energy consumer archetypes: Final report

groups including low income and PPM customers which these interventions aim to strengthen protections for.

Effects on competition

5.12. The promotion of competition is a core part of our purpose as the energy market regulator and this helps protect consumer interests. The CMA recognise the impact that new policy proposals can have on competition by framing the assessment of competition through four questions[90]:

- Will the measure directly or indirectly limit the number or range of suppliers?
- Will the measure limit the ability of suppliers to compete?
- Will the measure limit suppliers' incentives to compete vigorously?
- Will the measure limit the choices and information available to consumers?

5.13. Whilst we do not consider the introduction of these proposals to have a material impact on any of the considerations above, we consider our policy primarily in relation to questions 1 and 2. The existing PPM segment is shared by a range of suppliers including the largest suppliers and PPM specialists that vary in size. With the introduction of these regulatory requirements we expect all suppliers serving PPM customers to be affected in the same way, proportionally to their customer base.

5.14. Firstly, in relation to market entry, we acknowledge that any potential new entrants to the PPM market will face some increased start-up costs, such as the one-off set up costs to put self-disconnection identification systems in place but consider that these costs are unlikely to impact significantly any potential entry or enlargement of the PPM segment. In addition, suppliers with less than 50,000 customers are not obligated to offer PPM tariffs. Therefore, we do not expect that the increase in costs through the implementation of this policy will constitute a barrier to entry in the retail market as a whole.

5.15. With the price caps in place across the market it is likely that all suppliers will need to absorb these costs for the duration of the cap. As a result, PPM tariff prices are unlikely to increase due to this policy being in place. Therefore, we do not expect suppliers to see

[90] CMA (2015) Competition impact assessment

their PPM customer base change in volume and do not consider that the implementation of this policy will affect the current market structure or the number of suppliers able to operate in the PPM market. Furthermore, in a non-price cap market scenario, with the costs as a result of implementing this policy per PPM account not being material, we do not expect a difference in pricing strategies to create competition concerns, whereby some suppliers would struggle to compete, potentially resulting in a more concentrated market.

5.16. We consider these costs to be variable and increasing proportionally depending on a supplier's customer base, we do not expect the introduction of the policy to slow down the expansion of a supplier or for larger suppliers to expand at the expense of PPM specialists. As highlighted in the latest State of the Energy Market Report, analysis of PPM accounts and market share trends suggests that PPM specialists have grown in size and that there are more active suppliers operating in the PPM market than in 2015.[91] This expansion in supplier numbers suggests that there is a good level of competition within the sub-sector.

5.17. These changes can also have positive impacts on competition. A more consistent offering across the market, such as through credit function provision gives consumers confidence when switching, knowing a minimum standard of support will be provided across the market. Having processes in place to identify customers who are self-disconnecting and a better understanding of a customer's potential vulnerability will encourage suppliers to better tailor their interactions with that consumer, to maintain market share.

5.18. In a competitive market we are likely to see more innovation. A recent of example of this can be seen through the increasing number of PPM tariffs with innovative features in the market (smart 'pay-as-you-go' tariffs, with easier access to top-up and emergency credit).[92] These features, combined with the ability to offer unique credit amounts and tailored offerings to customers in relation to credit amounts, allow customers to have the flexibility to choose the offering which best suits their individual circumstances. These features suggest that suppliers will continue to have an incentive to compete on product offering and that the choice and information available to consumers will increase their ability to make informed decisions.

[91] Ofgem (2019) State of the Energy Market 2019
[92] Ibid.

5.19. The PPM segment will change with the transition to smart meters, with the potential for some of the costs outlined in this assessment to be reduced through the efficiencies that these are likely to bring. For example, smart meter data can be accessed more easily and quickly compared to traditional meters, as highlighted in the cost differentials set out in earlier chapters. Through installation of smart meters, innovation and competition increase, and the costs of the policy should continue on a downward trend. The transition to smart meters will bring advantages to customers who are in vulnerable situations in relation to the proposed new requirements on suppliers to identify self-disconnection and to offer credit facilities.

5.20. In summary, we have considered the points made in relation to the impacts of competition and conclude that due to the scale of the changes we are introducing, we consider it unlikely that the policy will have any material direct or indirect effects on competition. It is also likely that any limited impacts will lessen over time.

Risks of bad debt through credit provision

5.21. As set out in earlier chapters, we acknowledge that when suppliers provide PPM customers with credit, it is possible that a proportion of the credit provided is not repaid and is written-off as a result. This is the main source of bad debt incurred on PPM. However, we expect this to be relatively small when compared to standard credit bad debt costs where a customer can continue to build up debt for longer periods of time. If suppliers provide more credit facilities as a result of these proposals, there could be an increase in the amount of bad debt (ie a portion of the additional credit is not repaid).

5.22. We believe that the level of arrears should be within the supplier's control (ie suppliers decide whether to provide further additional support credit based on customers' best interest). It is common practice and a policy position for a supplier to put a repayment plan in place when repaying additional support credit, which means that the working capital exposure is reduced.

Unintended consequences

5.23. As highlighted in earlier sections of this assessment, we acknowledge that it will be challenging to achieve a scenario where there are no self-disconnections in the market. In contrast, there is a perceived risk that this policy will benefit those who do not require additional protection, such as those who self-disconnect once for a short-period of time due to choice. We consider that all self-disconnection occasions will benefit from the support

proposed in this assessment. Although frequency and duration of the self-disconnection can vary, all instances can cause some consumer detriment. In addition, customers who rarely self-disconnect and are not identified in financial difficulty are likely to repay any credit provided by the supplier instantly when returning to supply.

5.24. It is also important to add that whilst forgetting to top-up is often associated with busy lifestyles, some customers may forget to top-up as a result of an ongoing situation such as a mental health issue or a lack of mental capacity (such as people with dementia). These customers are likely to self-disconnect more frequently and display another reason to ensure that all consumers are protected equally from self-disconnection.

5.25. We also acknowledge that this policy intervention will not solve all financial difficulties for all consumers. We envisage that there is likely to be a proportion of customers who will continue to self-disconnect as a result of affordability problems. Whilst we expect that the interventions outlined above will significantly reduce the detriment and frequency of self-disconnections for these customers, we believe that actions primarily intended to redistribute substantial costs are a matter for government, as outlined in our in our Strategic Narrative for 2019-2023[93] and we will continue to work with government as part of the Consumer Forum to clarify the boundaries between regulatory and social policy.[94]

Risks associated with policy proposals

5.26. We note that the smart meter rollout progress will impact on the effectiveness of real-time identification of customers who are self-disconnecting. Government has recently introduced a new regulatory framework for energy suppliers to complete the smart meter rollout post-2020.[95] After a 6-month extension to the existing obligation, a new 4-year framework will be implemented from July 2021, which will set minimum annual installation targets for energy suppliers.

5.27. Our evidence shows that COVID-19 has brought home to consumers the considerable benefits of smart meters over traditional meters. In particular, smart PPM

[93] See Ofgem, Our strategic narrative for 2019 - 2013
[94] Department for Business, Energy & Industrial Strategy (BEIS) Consumer Forum
[95] BEIS (2020) Smart meter policy framework post 2020

customers can top-up and track credit without leaving home and in turn avoid the risk of going off supply that some traditional PPM customers experience if their top-up shop is closed or if they are shielding.

5.28. Significant progress has been made in resolving technical issues which previously limited the ability of suppliers to deploy SMETS2 prepayment meters in the north of England and Scotland.[96] In light of this increasing eligibility, it is important that energy suppliers should consider how they could prioritise their smart services to PPM consumers so that they can realise the significant benefits of having a smart meter as soon as possible. We will continue to work closely with government, energy suppliers and consumer groups to promote the benefits of the rollout of smart meters to PPM customers. This means, working with industry to monitor and address emerging issues and ensuring that energy supplier customer journeys are appropriately tailored for prepayment and vulnerable customers and actively promoting smart meters.

5.29. We also considered the risk raised by stakeholders around consumers becoming dependent on the credit functions as a source of income or the increase in their usage due to raising the awareness of their availability. However, as noted in our preferred option, the likelihood of consumers becoming dependent on the credit functions is reduced as more sustainable approaches to approach self-disconnection are discussed with the customer, which become viable alternatives through the introduction of the new protections.

5.30. As with any new licence obligation, we have taken into account the potential for non-compliance with the requirements by suppliers. We will consider taking compliance or enforcement action where current requirements are not adhered to and such action is the appropriate response.[97]

[96] SMETS2 prepayment meters are already widely available for consumers in other parts of Great Britain.
[97] See Ofgem enforcement guidelines

6. Conclusion and next steps

6.1. The options outlined above present a variety of methods aimed at strengthening protections for customers at risk of or experiencing self-disconnection. The preferred option is **Option 4:** Suppliers identify PPM customers who are experiencing self-disconnection, provide them with short-term support through the provision of credit functions and strengthening existing protections for customers in debt/financial difficulties to reduce risk of ongoing self-disconnections.

6.2. Our proposals are based on the spirit of existing voluntary requirements and minimum standards. We do not anticipate that our proposals and preferred option will have significant impacts on existing industry participants who already provide emergency, friendly and additional support credit and should already be adhering and taking costs into account in relation to the Ability to Pay principles. We do acknowledge some additional implementation and ongoing costs as a result of the new principles that have been added and have provided estimates to these in earlier chapters.

6.3. In addition, suppliers are required to identify customers in vulnerable circumstances and respond to their needs. We expect suppliers' compliance with the Standards of Conduct and vulnerability principle SLC 0 and the Priority Services Register (under SLC 26.5)[98] to help target support for customers in vulnerable situations who are at risk of self-disconnection and self-rationing. We expect suppliers to use this as a foundation to build on these systems to account for identification of self-disconnection.

6.4. The accompanying decision document outlines that after careful consideration of stakeholder views, we have decided to proceed with the proposals set out in the statutory notices, with some minor changes to the supply licence conditions to clarify our policy intent and correct typographical errors. The changes set out in the modification notices, published alongside this document, will take effect on and from **15 December 2020.**

[98] Ofgem (2019) Standard conditions of electricity supply licence

Appendices

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Appendix 1 – Data tables for graphs

Figure 1: Estimated reduction in the number of PPM self-disconnections per year through options for intervention

Year	Option 1: % of PPM customers self-disconnecting	Option 2: % of PPM customers self-disconnecting	Option 3: % of PPM customers self-disconnecting	Option 4: % of PPM customers self-disconnecting
2021	14%	13%	13%	13%
2022	14%	11%	12%	10%
2023	14%	8%	11%	7%
2024	14%	7%	10%	5%
2025	14%	7%	9%	5%