

# P379 COST/BENEFIT ANALYSIS (CBA) HIGH LEVEL APPROACH

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## INTRODUCTION

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At the March BSC Panel meeting, the Panel requested that ELEXON carry out a cost benefit analysis to determine the merits in continuing with Modification P379. More information about P379 can be found on the [P379 webpage](#) and in the Second P379 Interim Report presented to the Panel in March 2020 ([300/10](#)). This document sets out ELEXON's high level approach to conducting that cost benefit analysis. This should be read alongside the P379 Second Interim Report, which outlines the solutions developed by the P379 for appraisal, and the P379 business requirements which outline the detailed requirements for the P379 solution.

## RATIONALE

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The [P379 Proposal Form](#) provides rationale for establishing this electricity market change. In particular, this Modification will address a significant barrier to competition in the market rules which currently prevent multiple Trading Parties competing for behind the Meter energy volumes measured at the same Settlement Meter at the BSC Boundary Meter Point. The existing arrangements act as a barrier to the development of local energy markets and supply innovation, and effectively mean there is a monopoly of one party – the default Supplier – over a consumer's energy volumes behind a Settlement Meter at any given time.

Elsewhere projects are commercially disaggregating customers' volumes, e.g. through community energy schemes. However, this is only possible on the basis of agreement between those parties and a single default Supplier, and these activities are not recognised in the BSC market rules, with only the default Supplier being visible to BSC Settlement. Changing the market rules will facilitate third party supply activities and enable more effective competition for consumers' volumes.

## PLAN

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This Cost-Benefit analysis will be run according to the following timescales, noting that these are initial and subject to amendment.

- June – begin initial research where possible
- July – Inform BSCCo service providers of Change Request scope, clarify ask
- August – Submit formal Change Request to BSCCo Service Providers,
- September – launch 8 week public consultation on costs and benefits using detailed methodology templates
- November – begin analysis of consultation responses
- December – construct modelling
- January – construct final cost benefit report

## INFORMATION GATHERING

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Information on costs will be gathered in a public consultation specifically targeting organisation types we believe will be particularly affected, but also from organisations who are likely to be operating in the Secondary Supplier space, either as Suppliers or as service providers (for example potential future Customer Notification Agents, who could be key to delivering some of the benefits cases).

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We will be relying on voluntary responses from Parties, and attempting to extrapolate costs where there are gaps in the data provided. Responses should be provided in proforma which we will develop for each cost and benefit category providing more detail on the methodology underpinning each cost and benefit calculation.

## ASSUMPTIONS

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This section sets out what assumptions we are making in respect of the scope of the solution as it concerns issues outside of the control of the BSC. It is important that during the evidence gathering phase respondents are mindful of these assumptions when providing estimated costs and benefits.

### Customer participation

We are assuming that **all customers are able to participate** in Secondary Supply relationships. This will be dependent on a solution being developed for customers in the pre-payment sector.

The benefits cases and some of the cost cases will be dependent on what proportion of total customers participate in these arrangements, and whether those are customers by number or by volume (as domestic customers are particularly numerous but each consume relatively little volume).

Ideally consultation responses would consider sensitivities on customer numbers (for example if 0.1%, 1%, 10% of customers participated in Secondary Supply activities) however this may be overly burdensome on responders. If this is the case then responses should focus on a central estimate (e.g. 1%).

### Mandatory vs Optional

Many one off and operational costs will depend on whether existing Suppliers allow their customers to participate in Secondary Supply relationships. This has been a significant area of debate over workgroups, and the working assumption is that the solution will be **optional to participate** in until it becomes mandatory. This is because this is the default state unless Ofgem were to make a decision that the solution should become mandatory.

It would be useful if Suppliers in particular could indicate which, if any, of their costs vary depending on whether it were mandatory or not for them to permit their customers to take on a Secondary Supplier.

### Solution

The BSC solution should be taken as set out in the P379 business requirements. These business requirements relate to the settlement solution for enabling multiple Suppliers, and should not be taken as representative of the entire suite of development required for multiple Suppliers to be an effective solution. In particular, Suppliers will need to introduce appropriate processes to ensure they gather and provide required data into settlement, and react to the outputs of the splitting calculations in an appropriate way.

There are two options presented in the solution, and the differences are highlighted in the business requirements. The main difference is where the splitting calculations are performed, with Option 1 having the calculations performed by a central system and Option 2 by the Primary Supplier's Half Hourly Data Collector (HHDC). There are also changes to data provision timescales between the two options, which may affect Supplier costs. It would be useful if consultation respondents could indicate where cost assumptions differ for each option.

## SCOPE

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This cost-benefit analysis covers expected costs and benefits to the GB electricity industry from implementing and operating the necessary systems and processes to enable the solution designed in Modification P379. It should not take into account costs already incurred or benefits already anticipated from other industry initiatives, including

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Market-Wide Half Hourly Settlement. Where P379 can enhance benefits from other programmes these values should be included in the assessment.

## BENEFITS

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Benefits will, in general, be hypothetical as many of the business cases are unable to operate in the current market, due to the barriers the Modification is attempting to address. Benefits cases should be supported by technical reports, academic papers, consumer research and international studies where possible.

### Increased competition for customer supply volumes

**Hypothesis:** Increased choice of Supplier within day will reduce energy costs for consumers.

Customers will be able to choose between Suppliers offering the cheapest within day energy volumes without the customer needing to switch Supplier. Switching Supplier has been identified as a barrier to competition. Eliminating the barrier by introduction the ability for Secondary Suppliers to supply electricity without needing to switch from a Primary Supplier should increase competition between Suppliers for energy volumes, driving costs of energy volumes to efficient levels for all customers (assuming they are not already at or below efficient levels). As switching between Primary Suppliers and between Secondary Suppliers are independent processes the P379 solution will add a new dimension to competition in the electricity retail market.

**Methodology:** Determine cheapest potential within day prices for wholesale energy volume supply to customers. This analysis could potentially borrow from Ofgem's price cap analysis. Add cost for volume risk from last-minute purchasing of energy. Multiply by assumed units supplied by Secondary Suppliers.

Alternatively, calculate arbitrage opportunity for customer who can switch between two different risk profile Supply amounts (e.g. one fully price reflective Supplier and one fixed price Supplier, or a cap and floor Suppliers).

Each methodology introduces different volume risk profiles for Suppliers, which will be taken into account in the final modelling.

### New service offerings for customers

**Hypothesis:** New business models will reduce energy costs for consumers.

P379 is expected to enable a range of new business models which currently experience barriers to operation. This includes, but is not limited to:

#### 1. Community energy schemes

**Sub-hypothesis:** Community energy schemes will become more viable as customers participating in them are not tied to a single Supplier, reducing costs for consumers.

Currently community energy schemes must be run within a Supplier's portfolio and all customers must receive 100% of their energy from that supplier, reducing competition for customers who wish to participate in the community energy. P379 will enable customers to participate in community energy schemes with one Supplier and continue to have the rest of their energy need met by the competitive Supply market.

**Methodology:** Use case studies on benefit of community energy schemes, combine with benefits from competition for provision of rest of supply.

#### 2. Peer to Peer trading

**Sub-hypothesis:** Peer to peer trading will become more viable as customers participating in it are not tied to a single Supplier, reducing costs for consumers.

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As with community energy schemes, peer to peer trading must operate within the portfolio of a single Supplier. P379 will enable customers supplied by different Suppliers to use common platforms (facilitated by a CNA and Secondary Suppliers) to trade energy with each other. This may improve the unit rate that customers can achieve for their exports, and reduce the unit rate that they pay for their imports.

**Methodology:** Use case studies on benefit of peer to peer trading, combining with benefits from competition for provision of rest of supply.

### 3. Third Party Access

**Sub-hypothesis:** Third Party Access for customers located on private wire networks will become easier, and customers located on these networks will have reduced costs for access to the competitive market.

Currently, customers located on private wire networks have a right to access the competitive electricity supply market. However, these arrangements frequently need to use differencing arrangements with the boundary meter between the private wire network and the total system. This entails bilateral agreements between the new Supplier and the private network Supplier for each customer. Removing the need for these agreements may increase the cost effectiveness of supplying customers on private wire networks, increasing competition for these customers and reducing costs.

**Methodology:** Avoided costs based on case study of cost of establishing supply for private network customers multiplied by estimated number of customers taking up option.

### 4. Specialist Suppliers

**Sub-hypothesis:** Some Suppliers will specialise in supplying certain assets, increasing their efficiency in serving that particular asset.

A Supplier might choose to only provide supply to electric vehicles, or battery storage. By focussing a business offering, sales strategy, hedging strategy etc. on one product they may be able to realise certain efficiencies in supply.

**Methodology:** Unclear how to value. Academic study, views from Suppliers.

### 5. Bundled electricity products

**Sub-hypothesis:** Bundling electricity with electricity using products will become possible and customers gain utility by bundling electricity with product purchase.

Bundled products are popular with consumers, for example line rental, internet access and TV channel packages or mobile phone loans with data and network usage. P379 will enable the bundling of electricity with products, for example selling an EV with a package of miles. Consumers may derive utility from this arrangements, although it will be difficult to assign financial value.

**Methodology:** Unclear how to value. Academic study on value of bundled products (e.g. markets for bundled tariff with EV chargepoint of sale of electric vehicle).

### Increased deployment of smart energy technologies at grid-edge

**Hypothesis:** Customers will increase investment in 'smart' energy technology at their premises

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P379 may lead to increases in types of smart technologies<sup>1</sup> being deployed at the grid edge, as there become more incentives and opportunities for customers to invest in and use these technologies.

## 1. Savings on network management

**Sub Hypothesis:** The increase in smart technology will lead to a reduction in the cost of managing the system.

Increased volumes of smart technologies made more attractive by bundled offers and specific plans for managing their usage may provide additional options for network companies requiring flexibility to manage their system according to their operation requirements, for example maintaining system frequency, voltage and reactive power.

**Methodology:** Analysis of academic resource on the benefits to networks of utilising flexible technology to manage network issues, scaled for varying consumer take-up scenarios.

## 2. Savings on network reinforcement

**Sub hypothesis:** The increase in smart technology will lead to a reduction in the cost of network reinforcement.

Increased volumes of smart technologies may reduce the resilience required in parts of the network to manage energy flows, deferring or avoiding network spend and reducing the cost of network reinforcement.

**Methodology:** Analysis of academic resource on the benefits to networks of utilising flexible technology to avoid network reinforcement, scaled for varying consumer take-up scenarios.

## 3. Increased renewable technology usage

**Sub hypothesis:** Customers will install more renewable energy generation technology and smart technology will enable greater penetration of renewable technology on the network.

Customers may be provided offers that increase the attractiveness of renewable energy technology. Additionally, smart technology may enable network operators to process more connection requests from renewable generators by shifting consumption and generation patterns to match. This may not have an obvious financial benefit, but it should be considered as it contributes towards the government's Net Zero target.

**Methodology:** Analysis of academic resource on improved investment as a result of community energy schemes and the effect they have on renewables uptake.

## 4. Increased smart meter take-up

**Sub hypothesis:** More customers will install smart meters, contributing towards Government smart meter targets.

The proposal will link having a smart meter (or other half-hourly capable boundary metering) to new consumer proposition, as they will have to install a smart meter (or other half-hourly capable boundary metering) to access the new services. This may lead to an increased take-up of smart metering, contributing towards the smart metering targets and the benefits that they provide.

**Methodology:** Use a deemed percentage of customers participating in Secondary Supply arrangements who wouldn't otherwise have opted to install a smart meter (percentage of smart meter refused who will now install a smart meter). Multiply that number of customers by the benefits of installing smart meters from the government smart metering CBA. This calculation is sensitive to consumer uptake – for example if only a small number of very engaged customers participate in multiple supply arrangements most of those customers are likely to have installed

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<sup>1</sup> Smart technologies includes, but is not limited to, electric vehicles, home energy storage (electrical and thermal), heating control system and programmable appliances.

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smart meters anyway. If there is much wider uptake then the percentage of participating customers who would not otherwise have installed smart meters would be higher. .

## 5. Increased Half-Hourly Settlement volumes

**Sub hypothesis:** More customers will be settled Half-Hourly, delivering benefits from Settlement accuracy

The solution requires that customers are settled on a Half-Hourly basis. This means that as customers seek new services and products enabled by the Modification there may be early transitions to Half-Hourly Settlement of some customers.

**Methodology:** Assign share of Market Wide Half-Hourly Settlement (MWHHS) benefits based on anticipated customer number, pro-rated to the amount of time between customer take up (profiled over time) and the start of MWHHS<sup>2</sup>.

## Increased consumer engagement

**Hypothesis:** Customers will feel more engaged with their electricity supply

New offerings to customers such as peer to peer or local energy may result in greater engagement with electricity supply, and more likely to take advantage of other energy industry offerings which improve efficiency such as time of use tariffs. These may improve customer's feelings about the energy market in general as well as providing more quantifiable benefits.

**Methodology:** Unclear how to assess. Receive estimates of benefits based on academic studies, consumer engagement surveys if available.

## Other benefits

It is likely there will be other benefits not identified in this high level approach. During the benefit consultation we will arrange at least one workshop to gather benefits cases and determine additional categories, to feed into the analysis. The consultation will encourage submission of 'other' benefits cases.

## COSTS

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### Methodology

This document presents a series of hypotheses, whereby the Modification may impose a particular cost on a Party. These hypotheses are to be tested, with the results quantified. The quantified results will be validated and fed into a model to deliver 'whole of market' costs.

We will request costs under each of these categories from the relevant market participants. Costs should be provided taking into account existing and anticipated systems and processes and additional costs over and above these that would be imposed by multiple Suppliers. For examples, Suppliers may already be utilising Elective Half-Hourly Settlement processes, in which case they may report a reduced additional cost under this cost category.

### Supplier costs

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<sup>2</sup> This benefit is likely to be relatively small as the number of customers initially taking up new propositions is likely to be small and the Modification will not be implemented for long before MWHHS is implemented, if at all.

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## 1. Primary Supplier

### 1.1 Cost to serve

**Hypothesis:** Primary Suppliers will face additional costs to provide terms and conditions, as well as customer service to a customer with more than one Supplier.

Customers with Secondary Suppliers are unlikely to be served under the terms of existing standard supply contracts, because of the impact of various other costs (including those highlighted below) on the tariff structure that a Primary Supplier can provide to these customers. Suppliers will incur costs to develop these tariff structures in order that they can provide competitive offers to customers wishing to engage a Secondary Supplier. There may be a one off cost to develop these tariffs, and then a continuous cost to keep them under review in the context of the competitive market and cost to serve.

Additionally, customers with Secondary Supplier will have more complicated supply arrangements, and are likely to have a new set of queries and issues that their Suppliers will need to address. Developing responses to these questions and maintaining an operational response to them will create costs for the Supplier. There may be a one off cost to develop the processes and a continuous cost to review and improve the customer service provided, in addition to the ongoing cost of operating the customer service processes.

**Methodology:** Supplier provided estimated costs for each uptake scenario. Scaled for whole of market estimate. Anticipate costs will scale depending on size of Supplier.

### 1.2 Billing systems

**Hypothesis:** Primary Suppliers will face additional costs to update and operate billing systems to provide bills to customers with more than one Supplier.

Primary Suppliers should only bill customers for the volumes that they supply, subject to the terms of the Primary Supplier's contract with the customer. Currently, customer bills are usually based on the volume of energy consumed at the Boundary Point, except in cases where the customer is subject to Shared SVA Metering Arrangements (see [BSCP502](#)) or has a Virtual Lead Party (VLP) operating an asset on their premises.

Suppliers will need to update their customer billing systems such that customer bills can be adjusted based on the volumes supplied by the customer's Secondary Suppliers, subtracting them from the Boundary Meter reading. Suppliers may need to make updates above those needed for TERRE and Shared SVA Metering arrangements if they already have a bill adjustment mechanism in place.

**Methodology:** Supplier provided estimated costs for each uptake scenario. Scaled for whole of market estimate. Anticipate costs will not scale significantly depending on size of Supplier.

### 1.3 Ongoing settlement operation

**Hypothesis:** Primary Suppliers will face additional settlement operation costs for customers with more than one Supplier.

The P379 Option 1 solution will require Suppliers to submit daily meter readings via an elective Half-Hourly Settlement process, until Market-Wide Half Hourly Settlement is implemented. Meter readings must be provided on a daily basis to the entity performing the splitting calculations in order that the calculations can be run as soon as possible and up to date information provided to the customer. This is more frequent than the current requirements, and also more frequent than the requirements anticipated under MWHHS. Increasing the frequency of these collections may impose additional costs on Suppliers.

It would be useful if Suppliers could indicate their views of differences in these costs if P379 implementation occurred after the adoption of Market-Wide Half Hourly Settlement

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**Methodology:** Multiply additional per customer costs of elective Half-Hourly Settlement by anticipated customer uptake, until introduction of MWHHS (2023). Add one-off set up cost for HHS scaled by Suppliers who do not currently have elective HHS capability.

## 1.4 Risk

**Hypothesis:** Primary Suppliers will be exposed to the cost of managing additional risks in respect of customers with more than one supplier.

Suppliers will no longer be able to rely on supplying 100% of a customer's energy volumes in any given Settlement Period. This could significantly affect a Supplier's Settlement position, in particular if large volumes of customers elect to be supplied by Secondary Suppliers at late notice. While the whole of market effect should balance (as the Secondary Suppliers in that scenario would also need to adjust their position) individual suppliers may face large volume risks. This risk carries costs for Suppliers, and responses should indicate estimates of how much it would cost to manage this risk.

**Methodology:** Collect estimates of cost of additional volume risk from Suppliers and scale to each customer uptake scenario and number of customers. Volume risk may vary from Supplier to Supplier so a wide range of data collection would be useful.

## 1.5 Compliance

**Hypothesis:** Primary Suppliers will be exposed to additional costs in respect of maintaining compliance with codes and licences in respect of customers with more than one Supplier.

Certain customer obligations may be more challenging to fulfil if the customer has more than one Supplier (for example provision of information, Guaranteed Standards of Service). Each Supplier supplying a customer will need to ensure that they continue to meet the obligations they have in respect of that customer. Responses should indicate which existing Supplier obligations may be more challenging to fulfil where a customer also has a Secondary Supplier and the estimated cost of fulfilling them in a world where customers have more than one Supplier.

**Methodology:** Collect estimates of cost of compliance from Suppliers and scale to each customer scenario and number of customers.

## 1.6 Supplier Failure

**Hypothesis:** Increased market participation by Secondary Suppliers will lead to increased levels of Supplier failure, imposing costs on the rest of industry

Increased competition and the new market segment (Secondary Supply) could lead to increased levels of Supplier failure among both Primary and Secondary Suppliers. The costs of these supplier failures would be borne by both Primary and Secondary Suppliers.

**Methodology:** Calculate increased baseline rate of Supplier failure, estimate costs per event.

## 1.7 Other

**Hypothesis:** Primary Suppliers will be exposed to other costs not falling within any other category identified

Suppliers should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect estimates from Suppliers of other costs they might be exposed to. Scale to whole of market as appropriate.

## 2. Secondary Supplier

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As Secondary Supply businesses do not currently exist it will be challenging to establish many of the cost bases. It would be useful to receive estimates from business cases of organisation exploring the idea of becoming Secondary Suppliers.

### 2.1 Cost to serve

**Hypothesis:** Secondary Suppliers will face costs to provide terms and conditions, as well as customer service to a customer they supply.

Secondary Supply business models will not operate in the same way as electricity Suppliers operate today, and they will need to develop new business models for customers. These models will be based on more complex service offerings for customers, and may also lead to additional customer service demands as customers have more questions. Developing these offerings and maintaining customer service for them may introduce additional costs above standard Supply offerings.

**Methodology:** Supplier provided estimated costs for each uptake scenario. Scaled for whole of market estimate. Anticipate costs will scale depending on size of Supplier.

### 2.2 Billing systems

**Hypothesis:** Secondary Suppliers will face additional costs to update and operate billing systems to provide bills to customers they supply

Organisations operating as Secondary Suppliers will not be able to utilise straightforward Boundary Meter readings to bill their customers. Customer billing will instead be based on a combination of behind the meter metering (so called Asset Metering to be adopted from [P375](#)), scaling adjustments and calculated Contract Volume Notification (CVN) volumes., Existing Suppliers may need to adjust their billing systems to account for this (or create new ones), and new Secondary Suppliers entering the market will need to develop new billing systems that can bill customers accurately using this data.

**Methodology:** Supplier provided estimated costs for each uptake scenario. Scaled for whole of market estimate. Anticipate costs will not scale significantly depending on size of Supplier.

### 2.3 Metering

**Hypothesis:** Secondary Suppliers will face costs to install metering for behind the meter assets.

The solution requires Suppliers to install metering for assets behind the meter if they are to separate the Supply for that asset from the rest of the household. These meters must be CoP11<sup>3</sup> compliant to be used for the Settlement solution, and the Electricity Act may also require them to be Approved<sup>4</sup> if they are used for billing. There is likely to be some cost to Secondary Suppliers for purchasing, installing and maintaining these meters.

**Methodology:** Multiply CoP11 compliant Approved metering costs by estimate number of asset installations with Secondary Supply per uptake scenario.

### 2.4 Ongoing Settlement operation

**Hypothesis:** Secondary Suppliers will face Settlement operation costs for customers with more than one Supplier.

Secondary Suppliers will need to submit daily HH meter readings from their behind the meter assets, which is more frequent than currently required. This may introduce costs for Secondary Suppliers.

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<sup>3</sup> Please note CoP11 has not been approved and is not yet in operation. It is proposed under P375 and will be utilised by P379. Draft versions of CoP11 are available on the [P375 webpage](#).

<sup>4</sup> Approved as per requirements in the [Electricity Act 1989](#)

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**Methodology:** Calculate cost of daily meter readings, multiply by estimated behind-the-meter meter uptake.

### 2.5 Risk

**Hypothesis:** Secondary Suppliers will be exposed to the cost of managing additional risks in respect of customers with more than one Supplier.

Secondary Suppliers who are supplying customers based on behind the meter meter readings will need to factor in the effect of scaling (as described in the P379 Business Requirements) on the volumes they eventually Supply. Additionally, CVN determined volumes will vary depending on what the customer actually consumes/produces at the Boundary Meter, and how much of that is attributable to the Primary Supplier of the meter. These factors are likely to introduce volume risks, which may introduce additional costs for Secondary Suppliers.

**Methodology:** Collect cost estimates from potential Secondary Supplier, scale for whole of market estimates.

### 2.6 Compliance

**Hypothesis:** Secondary Suppliers will be exposed to costs in respect of maintaining compliance with codes and licences in respect of customers with more than one Supplier.

Certain customer obligations may be more challenging to fulfil if the customer has more than one customer (for example provision of information, Guaranteed Standards of Service). Responses should indicate which existing Supplier obligations may be more challenging to fulfil and the estimated cost of fulfilling them in a world where customers have more than one Supplier.

**Methodology:** Collect estimates of cost of compliance from Suppliers and scale to each customer scenario and number of customers.

### 2.7 Customer mis-use

**Hypothesis:** Some customers will mis-use the products and services offered by Secondary Suppliers, leading to a net cost to them from using the product/service.

The analysis should model potential costs from a certain percentage of customers being mis-sold products or mis-identifying products as beneficial to them and incurring costs as a result.

**Methodology:** Use a baseline level of mis-selling and poor product choice from market evidence and apply to population of Secondary Supply customers, reversing benefits into costs.

### 2.8 Supplier Failure

**Hypothesis:** Increased market participation by Secondary Suppliers will lead to increased levels of Supplier failure, imposing costs on the rest of industry

Increased competition and the new market segment (Secondary Supply) could lead to increased levels of Supplier failure among both Primary and Secondary Suppliers. The costs of these supplier failures would be borne by both Primary and Secondary Suppliers.

**Methodology:** Calculate increased baseline rate of Supplier failure, estimate costs per event.

### 2.9 Other

**Hypothesis:** Secondary Suppliers will be exposed to other costs not falling within any other category identified.

Suppliers should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect estimates from Suppliers of other costs they might be exposed to. Scale to whole of market as appropriate.

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## Supplier Agent costs

### 3. Half Hourly Meter Operator Agents (HHMOA )

#### 3.1 Systems and process development

**Hypothesis:** HHMOAs will face costs in order to maintain meters for customers with more than one Supplier.

P379 is unlikely to introduce additional costs on HHMOAs over and above the current cost of performing their role, as physical boundary metering arrangements are unchanged. However, it would be useful to confirm during the consultation.

**Methodology:** Collect cost estimates from HHMOAs.

#### 3.2 Other

**Hypothesis:** HHMOAs will be exposed to other costs not falling within any other category identified

HHMOAs should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect cost estimates from HHMOAs

### 4. HHDC

#### 4.1 Systems development (Meter reads)

**Hypothesis:** HHDCs will face costs in order to receive, process and provide meter readings at a higher frequency than is currently required.

Currently HHDCs are required to collect and submit meter readings in order to meet Supplier performance targets, which typically correlates to a reading required every 2 weeks. For customers with Secondary Suppliers HHDCs would be required to read (or process, validate and estimate in the case of Supplier Serviced meters) both Boundary Meters and asset meters on a daily basis. This may introduce additional operational costs for HHDCs.

**Methodology:** Collect cost estimates from HHDCs

#### 4.2 Systems development (calculations)

**Hypothesis:** In the Option 2 solution, HHDCs will face costs to develop systems which can perform the calculations necessary to carry out meter splitting calculations.

In the Option 2 solution, HHDCs will need to have systems capable of receiving meter readings and Customer Volume Notifications (CVNs) from multiple parties on a continuous basis and in real time, validating the data received, providing acknowledgements, sharing received data with the relevant parties, running splitting calculations based on the data received and sharing the outputs of those calculations with the relevant parties. They will also need to provide support to customers in respect of operating those calculations, and be able to deal with errors in the process quickly.

**Methodology:** Collect cost estimates from HHDCs.

#### 4.3 Qualification costs (calculations)

**Hypothesis:** HHDCs will incur costs during the qualification process for performing meter splitting

In the Option 2 solution HHDCs will be required to qualify in respect of their role as the calculation entity. This process is likely to incur some cost on each HHDC.

**Methodology:** Collect cost estimates from HHDCs working in coordination with ELEXON's market entry team.

#### 4.4 Operational costs

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**Hypothesis:** HHDCs will be subject to ongoing operational costs to maintain meter reading frequency and meter splitting calculations (in Option 2)

HHDCs will need to provide meter reads at a high frequency on an ongoing basis. This may result in increased system running and maintenance costs, as well as increased staffing costs (total volume and e.g. shift work). Running calculations will require 24/7 operation (to ensure all Suppliers receive up to date information as and when it is available) and is therefore may further increase operational costs. Transferring additional data volumes to BSCCo will require additional operational resource and there may be additional effort to address errors and missing data.

**Methodology:** Collect cost estimates from HHDCs.

## 4.5 Other

**Hypothesis:** HHDCs will be exposed to other costs not falling within any other category identified.

HHDCs should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect cost estimates from HHDCs.

## 5. HHDA

### 5.1 Systems development

**Hypothesis:** HHDA will face costs in order to receive, process and provide aggregated meter readings at a higher frequency than is currently required.

The solutions do not place additional requirements on HHDA, as the HHDC will be providing boundary point data. Therefore, we do not anticipate additional costs on HHDA, however it would be useful to confirm during the consultation.

**Methodology:** Collect cost estimates from HHDA

### 5.2 Other

**Hypothesis:** HHDA will be exposed to other costs not falling within any other category identified.

HHDA should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect cost estimates from HHDA

## 6. Contract Notification Agent (CNA)

### 6.1 Setup cost

**Hypothesis:** CNAs will face costs in order to establish their business in the newly created role of CNA.

P379 introduces a new type of Agent, the Customer Notification Agent (CNA). The CNA will submit records of Secondary Supply arrangements to the entity performing the meter splitting calculation. There will be costs involved in setting up the business (if the role is not being performed by an existing business).

**Methodology:** Collect cost estimates from Potential CNAs, compare to set-up costs for existing agent types and qualification costs

### 6.2 Systems development

**Hypothesis:** CNAs will face costs to develop systems which enable them to perform the role of can.

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CNAs are required to go through CVA and SVA testing in respect of this new role, to ensure their systems and processes are robust. This registration and testing requirement will introduce some costs for the CNA. BSCCo should be able to advice on timescales and costs in respect of current qualification requirements but they will vary from party to party.

**Methodology:** Collect cost estimates from Potential CNAs, compare to set-up costs for existing ECVN/MVRN systems.

### 6.3 Other

**Hypothesis:** CNAs will be exposed to other costs not falling within any other category identified.

Parties who are interested in becoming CNAs should indicate any other costs they anticipate they will face in respect of becoming and operating as a CNA.

**Methodology:** Collect cost estimates from Potential CNAs.

## Ofgem costs

### 6.4 Licences

**Hypothesis:** Ofgem will incur costs to update licences to take into account the effect of having more than one Supplier operating at a premises

**Methodology:** Collect cost estimates from Ofgem if able and willing.

### 6.5 Compliance

**Hypothesis:** Ofgem will incur costs to develop and operate new processes to ensure customers with more than one Supplier are being treated fairly.

**Methodology:** Collect cost estimates from Ofgem if possible.

### 6.6 Other costs

**Hypothesis:** Ofgem will be exposed to other costs not falling within any other category identified.

Ofgem should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Collect cost estimates from Ofgem if possible.

## BSCCo costs

### 6.7 System Development (calculations) Option 2

**Hypothesis:** BSCCo will incur costs to develop Settlement systems that process data from Suppliers to enable meter splitting.

In the Option 2 solution BSCCo will need to send HHDCs information on MSIDs with VLPs operating assets so they can adjust the adjusted Supplier. There will need to be systems which can communicate the affected MSIDs to HHDCs and adjustments made to the SVAA system to change the logic of VLPs Supplier adjustments.

**Methodology:** BSCCo will submit a Change Request (CR) to our service provider to assess costs for this system development.

### 6.8 System Development (calculations) Option 1

**Hypothesis:** BSCCo will incur costs to develop Settlement systems that process data from Suppliers to enable meter splitting.

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In the Option 1 solution, BSCCo will need to have systems capable of receiving meter readings and Customer Volume Notifications (CVNs) from multiple parties on a continuous basis and in real time, validating the data received, providing acknowledgements, sharing received data with the relevant parties, running splitting calculations based on the data received and sharing the outputs of those calculations with the relevant parties. They will also need to provide support to customers in respect of operating those calculations, and be able to deal with errors in the process quickly.

**Methodology:** BSCCo will submit a CR to our service provider to assess costs for this system development.

### 6.9 System operation (calculations) Option 1

**Hypothesis:** BSCCo will incur costs to operate the calculation system utilised in Option 1 for meter splitting.

In particular, the systems will need to allocate consumption data and line losses to a BM Unit according to Consumption Component Class allocations. There will also be commissioning and audit costs, notifying Parties and Agents of irregular data.

**Methodology:** BSCCo will submit a CR to our service provider to assess costs for this system operation

### 6.10 System Development (registration)

**Hypothesis:** BSCCo will incur costs to develop a registration system to record details of Secondary Supplier – customer – secondary metering relationships.

The system should be based on existing systems used to record VLP – secondary metering relationships per P375. The response should indicate whole cost and cost attributable to P379 only. The database will need to record customer – Supplier relationships and be able to process changes to the relationships in the same timescales as possible for normal customer – Supplier relationships in the MRA (CSS) database. The database will also need to maintain a record of each customer's Primary Supplier to ensure the Settlement activities are delivered in respect of the correct Parties. This means the database will require a constant link with the MRA (CSS) and SMRA databases.

**Methodology:** BSCCo will submit a CR to our service provider to assess costs for this system development.

### 6.11 Operational

**Hypothesis:** BSCCo will incur ongoing operational costs in respect of providing services to Secondary Suppliers and Primary Suppliers with customers served by more than one Supplier.

BSCCo will need to process market entry requests from CNAs, and qualify HHDCs in the role of calculation entity in the Option 2 solution. Additional volumes of metering devices may lead to more demand from BSCCo expertise, and greater volumes of Suppliers may lead to increased operational support and assurance requirements.

**Methodology:** BSCCo will perform an internal impact assessment to gather costs including for assurance, market entry and metering expertise.

### 6.12 Other costs

**Hypothesis:** BSCCo will be exposed to other costs not falling within any other category identified.

BSCCo should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** BSCCo will perform an internal impact assessment to gather costs including for market entry and metering expertise.

## DCC Cost

### 6.13 Data volumes

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**Hypothesis:** SmartDCC will incur costs in ensuring and facilitating the flow of greater volumes of data from Smart Meters.

The DCC network is used to gather meter readings from smart meters. Currently smart meters are read around every 2 weeks and only register reads are required for non-Half Hourly customers. P379 will require domestic smart meters of participating customers to be read on a daily basis, with the half-hourly data provided. This could represent a significant increase in DCC network usage, which may entail additional costs to ensure the network can cope with the required volumes

**Methodology:** Apply DCC costs to estimated additional volumes resulting from Secondary Supply arrangements.

### 6.14 Other costs

**Hypothesis:** SmartDCC will be exposed to other costs not falling within any other category identified.

DCC should indicate any other costs they anticipate they will face in respect of customers who have more than one Supplier.

**Methodology:** Receive DCC estimates of other costs they may face.

### Licensed Distribution System Operators (LDSOs) cost

#### 6.15 New charging methodology development

**Hypothesis:** There will need to be an update to distribution charging rules to enable network companies to charge Suppliers where they are not the registered Supplier for a connection point, incurring costs on network codes.

Distribution companies may only be able to charge a customer's Primary Supplier under current charging arrangements. The Workgroup have indicated a preference for sharing network charges between Suppliers operating at a Boundary Metering Point. Rules may need to be updated to allow distribution companies to charge all Suppliers. Applying charges on a volumetric basis should be relatively straightforward, with charges levied based on data of actual supplied units. However, a new charging methodology may need to be developed to split fixed (per MPAN) costs between more than one Supplier, and avoid double-charging.

**Methodology:** Review costs for previous network charging changes, apply to anticipated scale of required change for multiple Suppliers.

#### 6.16 New charging methodology operation.

**Hypothesis:** Distributors will incur costs to operate the new charging methodology.

The new charging methodology may require alternative data processes with addition costs of operation.

**Methodology:** Review costs for previous network charging changes, apply to anticipated scale of required processes for multiple Suppliers.

### Other code cost

## 7. RECCo

### 7.1 System development (CSS)

**Hypothesis:** CSS integration with Secondary Supplier Registration System will introduce costs.

The Secondary Supplier Registration System needs to be updated whenever a registered customer's Primary Supplier changes. This can be achieved in a number of ways, including a daily scrape of CSS, a push from CSS, or total integration with CSS. Each of these is likely to result in costs for CSS.

**Methodology:** Receive development cost estimates from RECCo (with Ofgem participation if willing and able).

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## 8. Other Codes

### 8.1 Other costs

**Hypothesis:** Other code administrators may be exposed to other costs not falling within any other category identified

#### Other costs

It is likely there will be other costs not identified in this high level approach. The consultation should also encourage submission of 'other' costs cases from parties not explicitly identified.

## VALIDATION

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### Outliers

When analysing the responses to the CBA consultation, consideration will be made in respect of responses significantly outside the ranges provided by other respondents. In some cases these answers may be justified in specific scenarios, and it may also be appropriate to apply the volumes to the whole of market extrapolation. This will depend on circumstances and the analysis will need to take into account rationale provided.

## MODELLING

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### Forecasting

Some costs will be applicable over the duration of a secondary supply relationship, and may increase or decrease (both in aggregate and on a per-customer level) as processes embed and more or less customers avail themselves of the opportunities created by multiple Suppliers. The CBA may want to make some allowance for these changes. Ongoing costs and benefits are open ended, as there is no end date by which the arrangements become redundant. Therefore the CBA may need checkpoints for assessing these longer term impacts, for example 2025, 2035, and 2050.

### Whole of market extrapolation

It is unlikely that all impacted parties will be able to respond to the CBA consultations. The CBA process will need to include some function to extrapolate the responses provided to cover the whole of the market. This will need to be done taking into account elements of fixed costs and benefits that do and do not scale depending on number of customers (for example one off IT system development costs for varying scales of systems, ongoing operational impacts of serving an individual customer, benefits of scale). Additionally, the modelling will account for selection bias on assessment of submitted responses (e.g. accounted for different sized Suppliers, underlying systems, market segments).

## APPRAISAL

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### Counterfactual

The Modification is being assessed against the current baseline. However, a more realistic assessment would consider the effects of the Faster Switching SCR, the TCR SCR, MWHHS, and any information that comes to light

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regarding the Future Retail Market Review. Costs should be considered as a differential against changes already being made as a result of these initiatives.

It should be assumed that some of the new customer propositions are operationally limited without the Modification, and that any customers participating in them do not also have access to the competitive Supply market. This is because without the Modification Suppliers would have to enter into blanket agreements to enable meter splitting for each of their customers, which in theory would need to be re-applied for each customer.

**Question:** Will anticipated future market context enable some of the business models without requiring this change to Settlement?

Given Suppliers must be settled based on electricity they have supplied and many of the use cases result in electricity being supplied by a different Supplier, it is unlikely that use cases can proceed without a corresponding Settlement change.

Many of the use cases can be facilitated by a customer's Supplier at the moment (for example bundled charging tariffs, community energy schemes, peer to peer trading). However, this requires that all customers participating in the scheme must also have all of their electricity supplied by the same supplier. This reduces competition in the market, preventing switching for customers who also wish to participate in the schemes.

### Timeframe

The benefits case will be appraised over a timeline of 10 years. Multiple Suppliers will be an enduring change and should continue to deliver benefits to consumers until it is superseded by other arrangements. Discounting will be applied at the Treasury Green Book standard rate (3.5%) over the period to give net present value of costs and benefits.

10 years is consistent with other policy development timelines in the GB energy market, for example the Pool operated from 1990 to 2001, the initial RIIO price control lasted for eight years, and the market making obligation for six years.

### Treatment of non-financial costs/benefits

We will not be able to attach a financial comparator to all costs and benefits, for example consumer confidence or the availability of renewable electricity. Where possible we will attempt to assign a financial value in line with Treasury Green Book principles.

### Optimism Bias

Costs tend to be understated, and best practice suggests they should be modified based on experience from previous cost-benefit exercises. We will identify comparator projects through the Cost Benefit Analysis period to use as cost adjusters and follow the Treasury Green Book on optimism bias.

### Distributional impacts

**Hypothesis:** All customers and customer groups will be exposed to equal costs and receive equal benefits as an outcome of the Modification.

The analysis will need to take into account how different groups may be more or less able to avail of the benefits, and where the costs will fall, to ensure equity or to redress issues of inequity. In particular the analysis should make reference to vulnerable consumers. The Modification is, in reality, likely to concentrate benefits on engaged customers while costs are socialised.

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## MONITORING

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### Realised benefits

It is important to monitor outcomes of programmes, in order to inform further policy decisions and improve future cost benefit analyses.

Metrics used to assess costs and benefits could include;

- Per kWh charges for customers with and without Secondary Suppliers
- Average daily standing charges for customers with and without Secondary Suppliers
- Switching rates among customers with and without Secondary Suppliers
- Use of renewable and smart technologies among customers with and without Secondary Suppliers

BSCCo does not have the data to monitor outcomes and compare against expected costs and benefits.