Retail Research into Customer Switching and Supply Disintermediation

Final Report

Customer Switching and Disengaged Customers

July 2018

Contents

1. Introduction

1.1.1 Ofgem have engaged ESP Consulting, in consortium with VaasaETT, to review experience of how the challenges of disengaged electricity consumers are managed elsewhere in the world, with a specific focus on:

- Collective switching; and
- Alternative default supply arrangements.

1.1.2 Ofgem wants to ensure energy consumers that do not engage in the energy market are appropriately protected, and that those on default arrangements are not unduly disadvantaged. This is an area of increased attention in GB over recent years, particularly regarding disengaged and vulnerable customers, notably including:

- The CMA recommending that a price control be implemented to regulate the tariff charged to customers on pre-payment meters;
- The current UK Government looking for Ofgem to establish a retail price control covering domestic customers on Standard Variable and default tariffs;
- Opposition parties proposing the establishment of state-owned energy companies to supply domestic customers; and
- Former GB energy regulator, Stephen Littlechild, suggesting that an auction of disengaged consumers is a better remedy than a price control – noting the significant difficulties in establishing a price control that doesn't either set prices too high and so over-reward the regulated suppliers or set prices so low that competition and innovation is stifled.

1.1.3 This report provides a summary of the findings from this review, and is organised as follows:

- **Introduction:** This introduction;
- **Collective switching:** Arrangements where energy Suppliers compete (typically through auctions) to provide the lowest tariff to an identified group of customers;
- **Competitive Energy Procurement**: A hybrid approach, where the "default" tariff is regulated, but the "energy" element of that tariff is competitively procured;
- **Conclusions**: A short summary of our conclusions based on the analysis performed; and
- **Appendices:** Including an appendix that provides more detail on our analysis of wholesale market volatility to support arguments pertaining to risk allocation between supplier and consumers (covered in Section 3.4).

1.1.4 The method followed for this engagement has been a combination of desk research, and interviews with organisations relevant to selected case studies which have drawn on the global footprint of VaasaETT and ESP Consulting. Updating and taking feedback from Ofgem throughout the process, our approach has involved the following steps:

- Initial high-level scan to identify candidate case studies;
- Meeting with Ofgem to confirm case studies to analyse in detail;
- Detailed research on selected cases, including stakeholder interviews and market research (see appendix for full list of sources);

- Workshop with Ofgem to present findings and take feedback for further research and input into deliverables; and
- Finalisation and distribution of deliverables.

1.1.5 It should be noted that, in carrying out this research, ESP Consulting and VaasaETT identified a number of countries that adopt a further approach for the treatment of disengaged customers. This is a "penal default" approach, where the tariff for disengaged consumers is intentionally higher than that available elsewhere – to provide an incentive for those customers to find a better energy supplier. Following discussion with Ofgem, these cases were not investigated in detail, and are not discussed further in this report.

1.1.6 This report is one of two being produced by ESP Consulting and VaasaETT, with a separate report covering "disintermediation".

2. Collective Switching

2.1.1 Collective switching covers a series of cases based around auction events where prospective Suppliers bid to offer a tariff to a defined group of customers. There are two main variants of collective switching:

- **Opt In:** The Supplier that "wins" an auction is then able to offer its tariff to the relevant customers. The customers then have to make an active choice to accept that tariff; and
- **Opt Out:** Customers will be automatically transferred to a Supplier that has won an auction – unless they explicitly say they want to stay with their existing Supplier.

2.1.2 The review did not identify any cases of "Opt Out" switching, but did identify a number of cases of "Opt In" switching. We believe that there are no such cases, reflecting the difficulties in switching a customer's supplier without their active participation. In many of the cases, the auction and switching process has been managed by an organisation known as Pricewise. This includes the Which? 2012 Big Switch campaign in GB.

2.1.3 The following paragraphs discuss the experience gleaned from the Pricewise auctions, considering in turn:

- A "typical" process for a Pricewise Auction;
- The key benefits that have been observed from those auctions;
- Issues that may need to be addressed if this model were used as the basis of a regulatory remedy applied to all GB disengaged energy customers; and
- Possible alternatives to this model.

2.2 Typical Auction Process

2.2.1 In order to deliver a switching campaign in a particular market, Pricewise works alongside partners. These partners typically have an existing brand and reputation in a local market and are often consumer bodies such as Which? Each campaign is different, and the experience gained in each campaign has been used to inform future approaches. To date they have facilitated over 2.5 million

switches worldwide. Typically, an auction format is used to provide a competitive basis for switching to take place.

Figure 1: Example Opt-Out Auction Process

2.2.2 A "typical" auction process is illustrated in Figure 1 and discussed in the following paragraphs:

- **Identify Partner:** Pricewise operates through partners that are known and trusted by customers in that market. Partners tend to have a reach and understanding across a national market, and could be a consumer organisation, public administration or a media company (in Germany, Pricewise has partnered with n-tv, a television news channel). For example, in 2012 Pricewise operated the Which? Collective switch in GB;
- **Define Contract:** The terms of the customer contracts need to be developed and agreed with the partner. There will typically be a number of such contracts that will ultimately be offered as the lots in the Auctions, with the differences between those contracts reflecting:
  - The length of the price fix (e.g. 1 year, 2 year and 3 year); and
  - The type of energy (Electricity, Gas or Dual Fuel).
- **Recruit Customers:** Potential customers have to be attracted to the collective switching event. Marketing can be varied depending on the customer groups being targeted, with the choice of communication medium likely to include email, direct mailing, website notices and mass market advertising. In each case, a customer will have to identify which of the contracts they are interested in;
- **Qualify Suppliers:** There is a qualification process for Energy Suppliers before they are allowed to compete in the auction. This qualification process covers factors such as:
  - The Supplier's financial strength; and
  - An explicit review of the Supplier's ability to handle increased customer numbers (see Section 2.4 for further discussion) and "on-boarding" process for customers[1].
- **Auction:** Suppliers offer the price at which they are prepared to supply customers on one or more of the defined contracts. Key points relating to this auction are:
  - The "Lots" are the different contract types – with an example contract being "Dual Fuel, price fixed for 3 years". The "Winner" wins the exclusive right to offer that contract, with the winning price, to all the customers aligned with that lot;

[1] This varies from campaign to campaign but is intended to ensure that customers are protected from service disruption (e.g. by having a limit on time taken to contact an auctioned customer) and maintain an ability to opt-in only if they are comfortable.

- Multiple auction formats have been used successfully – including sealed bid auctions and descending clock auctions; and
- Information on the lots (e.g. outline details of customers, specification of the contracts, lot size) is made available to Qualified Suppliers in advance of the auction.

- **Opt In:** The "winners" of each lot in the auction make a contract offer to all customers associated with that lot – at the price resulting from the auction. Those customers then have to accept that offer (opt-in) actively to be switched; and
- **Customers Switch:** Those customers that accept the offer (resulting from the auction) are then switched to the new Supplier.

2.3 Benefits of "Opt In" Collective Switching

2.3.1 A review of the Pricewise campaigns indicate that customers have benefited. Notably:

- The prices obtained through the auction are reported to, at least over the initial contract term (see next section for discussion of whether savings are sustained), provide savings to customers. For some countries, these savings have been verified against independent sources – with savings of €300/year and more reported against customers' previous tariff rates or average market rates;
- Pricewise report a number of "first-time" switchers in each of their auctions; and
- There is evidence that customers remain satisfied after the auction. For example, a series of auctions have been held in Belgium, with customer participation rates increasing with successive auctions and subscription rates remaining high. Pricewise also mention that their rates for incoming service queries and complaints are low.

2.3.2 Two of Pricewise's recent campaigns are shown below, with final results given:

Auction	Type	Market Size (households)	Subscribers (Best Auction)	Switches (Best Auction)	Switch Rate amongst Subscribers	National Switch Rate	Average Savings[2]
Pricewise Austria	Public Auction	4,350000	288,190	73,864	25.63%	3.00%	€269
Pricewise Belgium (East and West Flanders)	Public Auction	1,115,307	148,000	82,117	55.48%	20,07%	€323

2.4 Issues as a regulatory remedy for disengaged energy customers

2.4.1 Despite these benefits, there are several drawbacks that should be noted, each of which represent barriers that may need to be overcome and are covered in more detail in the following paragraphs:

- **Are savings sustained:** Suppliers may hope they can increase tariffs after an initial period;

[2] Savings calculated either in comparison to the market average or the customer's previous tariff (if information was available).

- **Can small Suppliers participate?** If such an auction were applied to all the GB disengaged customers, the number of customers gained by winning one "lot" could be significantly greater than those already served by Small Suppliers; and
- **"Active" participation required to switch:** This mechanism relies on an Opt In model, which necessarily limits the reach of the remedy to those that can be engaged – it is possible that a "disengaged" customer will not even open the letter containing the relevant offer, let alone choose to switch.

2.4.2 The first two of the above are discussed further in the following paragraphs.

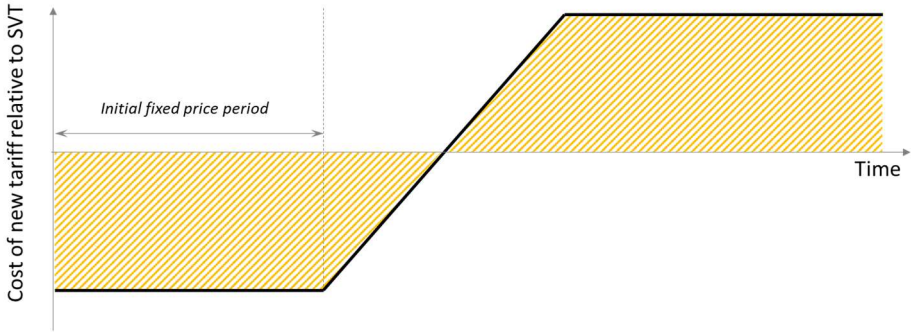
Are savings sustained?

2.4.3 The existing "Opt In" auctions have been operated in a paradigm of voluntary participation – both from customers, and from the Suppliers that compete to supply those customers. To date, there has been some resistance from Suppliers for auctions to be held on a regular, periodic basis – as some Suppliers will typically look to recover costs over a longer time period than just the initial contract length offered in the auction. Therefore, the cost of acquisition and any initial discounts applied are at risk of not being met if newly acquired customers are switched again soon after (see following paragraph for more detail). This is compounded by the belief of some suppliers that a large proportion of the customer base switching through this auction are likely to switch again soon after, and therefore that it is a less valuable channel for customer acquisition.

2.4.4 There is a number of potential interpretations of this "fear" from Suppliers, and the extent to which it should influence any policy to impose such auctions:

- **Good deal for consumers?** It implies that Suppliers are discounting their initial tariff to win in the auction – and hope then to raise the tariff after an initial "fixed" period (see Figure 2). This has also been noted to take place in markets outside GB, for example in the Dutch market where we have heard anecdotally that the initial discounting has made large incumbents reluctant to participate. This is similar to the "teaser rates" used to attract customers to deposit accounts, cash ISAs and credit cards. Some suppliers have also noted that the standardised contract terms formulated have prevented them from tailoring their service, and as a result has led to a level of contract risk that has led to suboptimal results for consumers, including inflating auction bids to account for risk, or not bidding at all.

Figure 2: Potential "discounting" of initial offer



Whilst this behaviour is rational for Suppliers, it has implications for whether customers are being protected from high prices. Indeed, over a period of years, customers may need to keep switching to be any better off than had they stayed with their initial Supplier. In the extreme, this would discourage suppliers who work on a 3 to 5 year NPV customer model (such as large incumbents with higher cost bases) to participate, and indeed we have heard from such suppliers in GB and the Netherlands that this has discouraged their participation. The potential corollary to this is that collective switching becomes collective churning, with the same customers participating regularly, and the continuing existence of a pool of customers who remain inactive despite such campaigns; and

- **GB scale will be attractive:** Were this approach to be applied to GB disengaged energy customers in their entirety, the scale of potential customer gains and losses should be sufficient to attract active interest from Suppliers; albeit those Suppliers may have to price on the assumption they retain customers for a shorter period than otherwise.

Can small Suppliers participate?

2.4.5 The large number of GB disengaged customers could mean that the number of customers acquired by winning a "lot" could also be large. This is illustrated in Figure 3 based on simplified assumptions for the number of customers that could be acquired by winning an auction lot.

2.4.6 For the commercial switch events (such as those managed by Pricewise), this issue can (in part) be managed through the qualification of those Suppliers that participate. Pricewise is able to assess subjectively the capability of Suppliers, barring those Suppliers from competing if Pricewise are not satisfied they could handle the potential scale of customer acquisition. Applying a similar "qualification" process is more challenging for a regulated process, where qualification decisions can be challenged – and so typically have to be on an objective basis.

2.4.7 The difference between "subjective" and "objective" assessment is illustrated below, giving examples of things that might form part of a "check list" in assessing the capabilities of a Supplier to absorb a "lot" of customers:

- Has a Supplier licence: This is a "yes/no" question – so is objective;
- Max Customer Base over last 3 years at least 100%[3] of expected lot size: Again, this is an objective criterion which can be evidenced and measured; and

[3] Numbers are used for illustration of this example criterion only

- Management has plans that are credibly consistent with scaling the business to accept a lot: Whether there is a document called a plan is an objective criterion; however, the assessment of its strength and credibility is subjective. A decision to approve or reject that plan is based on the judgement (and prejudices) of the individual carrying out the assessment, for example including:
  - Do they believe that management have capability to deliver this plan?
  - Do they believe the billing and customer support systems will collapse under the weight of customers?

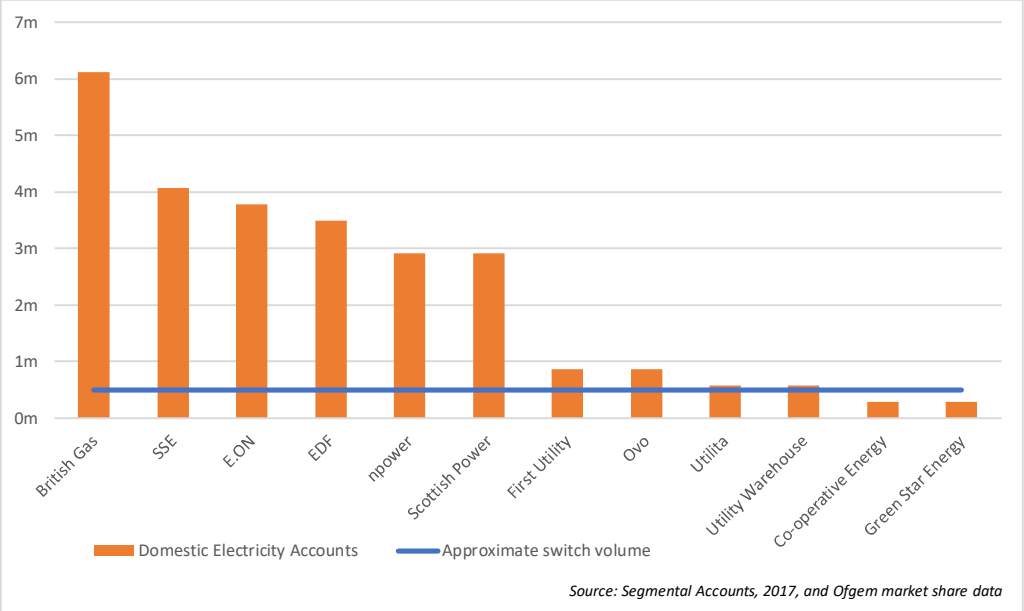
  Whilst a regulated process could try to incorporate such judgement, any decision to disqualify a candidate bidder is likely to be subject to dispute or appeal. This is not necessarily the case for a private organisation (like Pricewise) who can state that their decisions are binding.

Figure 3: Potential impact on small Suppliers

As an example of how small suppliers might be impacted in such a scenario, we can assume that of the 12 million SVT Customers in GB, these would be split into 6 lots as combinations of the following factors:

- **Fuel Type:** Electricity Only, Gas Only and Dual Fuel
- **Length of Fix:** One Year and Three.

Assuming an even split, that would mean each lot then has 2 million customers. With the 25% acceptance rate observed in the Pricewise Austrian auction mentioned previously, an auction winner would then acquire 0.5 million new customers. This is a large upscaling for many GB suppliers, as demonstrated in the graphic below, which shows that for all but the largest 11 electricity suppliers, such a lot size is bigger than their existing business.



Source: Segmental Accounts, 2017, and Ofgem market share data

Even if lots are reduced in size significantly, many GB suppliers would be faced with a challenge in acquisition. In the electricity market, for example, of the 59 electricity suppliers, only 15 serve more than 200k customers, and only a further 8 serve more than 100k. Even if the lot size is reduced to a level that makes acquisition smoother for such companies, many of them will be faced with tipping over the ECO requirement threshold of 250k accounts, and there will remain a large number of small suppliers faced with an acquisition challenge. This effect is even more pronounced in the gas market, where out of 62 suppliers only 14 serve more than 200k customers, and only a further 6 serve more than 100k.

2.5 Alternatives to a Bidding Process

2.5.1 There are some criticisms of the typical collective switching auction process:

- The process tends to be relatively drawn out as the campaign requires a substantial amount of coordination between all parties (e.g. signing up suppliers and securing their prices may be needed 6-8 weeks ahead of the auction event);

- Given the challenge noted above in simply coordinating all parties, the timing of the auction may be agnostic to any time-specific opportunities in the market, such as distressed sellers or other events leading to falls in forward prices; and
- While it does incorporate efforts by the auction operator to motivate the potential and active bidders, it is does not entail direct negotiation between the parties.

2.5.2 An alternative that addresses some of these criticisms is a process of aggregated negotiation of the kind offered by OneBigSwitch (OBS) in Australia. OBS is a free membership-based energy switching service with 900,000 subscribers which constantly negotiates with suppliers on customers' behalves, en masse. This builds in functionality similar to existing GB organisations (e.g. MoneySavingExpert's Cheap Energy Club), but with the additional option of a Power of Attorney service that automatically switches customers. OBS switch their members at regular intervals as opportunities to switch emerge and have already managed to switch up to 300,000 customers at a time. OBS switches tranches of customers every few months, rather than all at the same time. This facilitates potential benefits including:

- Simpler onboarding due to smaller volumes of customers, which allows for greater participation of small suppliers;
- Diversification of risk by greater splitting of customers so that they can be switched at times that are more suitable to suppliers;
- Better alignment to time-specific market opportunities, as they arise;
- Better alignment of switching to coincide with end of customers contracts; and
- Better alignment to customer segments (e.g. a regional segmentation can make it is easier to focus on one region at a time as the best opportunity in one region may come at a different time to another).

2.5.3 While there are potential benefits to this collective switching model, there is also a concern that such an approach reduces transparency regarding both the offers made by potential suppliers and the breadth of suppliers taking part in the negotiations.

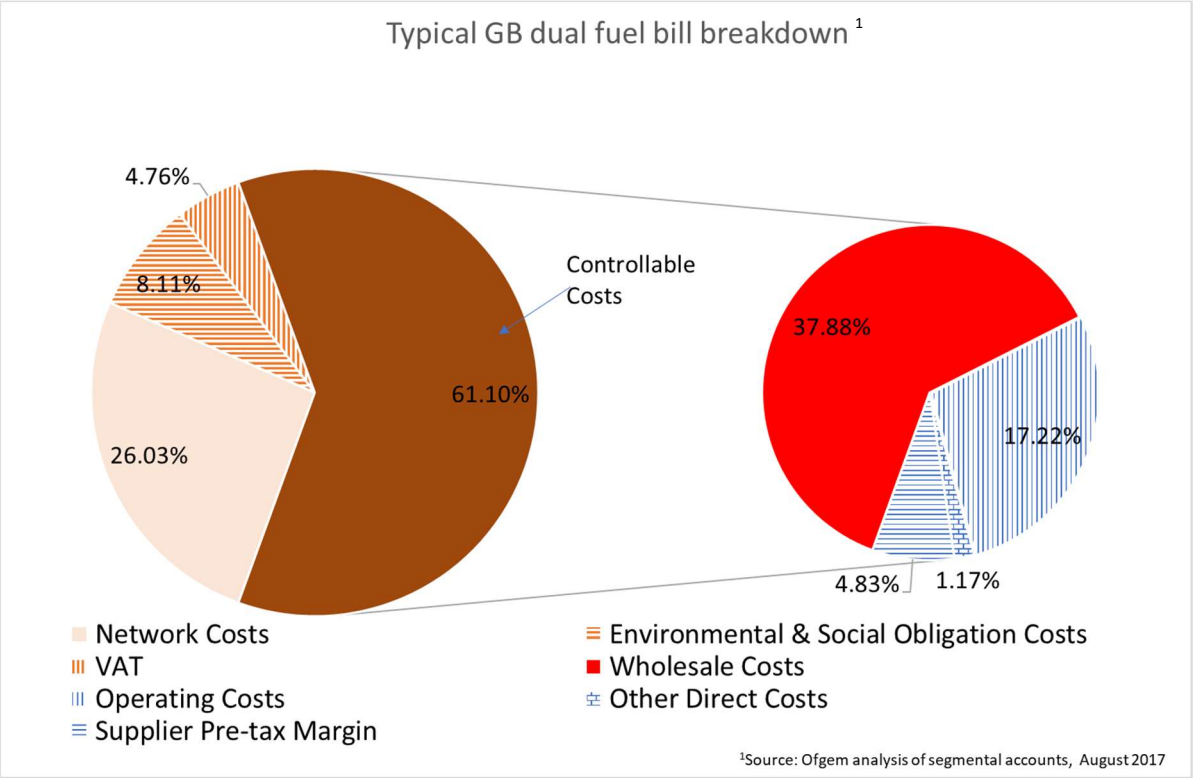
2.5.4 This model currently uses an opt in approach, but there is potential for this model to operate on an opt-out basis. Because customers have become members, and therefore the relationship is more enduring (as per a power of attorney model), the ability to operate under assumed or previous consent unless otherwise stated is possible. This means that although there is an initial hurdle in a consumer becoming a member, thereafter the model has an advantage that by being a member a customer has regular and possibly automatic access to switching events that can deliver more enduring price benefits.

3. Default commodity procurement

3.1.1 "Default commodity procurement" refers to a set of approaches where the energy component of a customer's tariff is competitively procured (e.g. through an auction). This uses competition to address the largest area of "controllable" costs in a customer's bill – as illustrated in Figure 4. Notably:

- Costs that can be controlled or influenced by a Supplier make up ~61% of a typical GB dual fuel bill; and
- Of these controllable costs, 62% is the cost of purchasing wholesale electricity or gas, making it 38% of the total bill.

Figure 4: Makeup of Typical GB dual fuel bill



3.1.2 This exposure of the consumer to energy costs has given rise to a number of international examples of tariffs based on an explicit pass through of wholesale energy costs. This has been observed for both competitive and regulated energy tariffs, with notable examples including:

- **New Jersey default tariffs**: In New Jersey, the "default" electricity tariff is provided by the operator of the local electricity distribution network. The energy component of this tariff is set in rolling annual auctions, with each such auction fixing the price for a third of the overall demand of relevant customers for each of the next three years;
- **Italian default tariffs**: In Italy, the "default" electricity tariff is provided by the operator of the local electricity distribution network (the DNO), or specific companies set up by local DNOs. All wholesale energy for such supplied customers is purchased by a Single Buyer (Acquirente Unico) in line with its own trading and hedging strategy. In recent years, this single buyer has moved to procuring energy closer to real time rather than a more diversified strategy including forward purchasing; and
- **Norwegian competitive offerings**: Many of the electricity Suppliers that compete for customers in the Norwegian market base their tariffs on an explicit passthrough of electricity wholesale costs based on day-ahead prices.

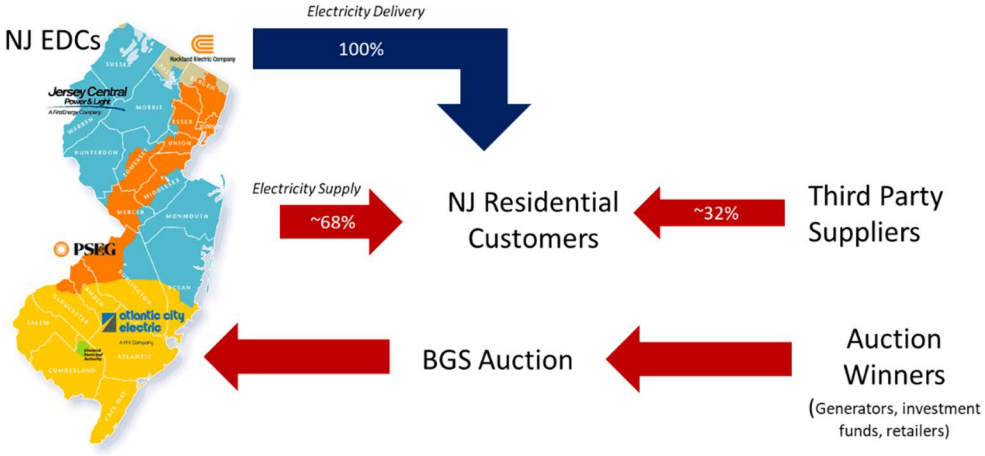
3.1.3 The first two of these cases, along with their benefits, are discussed in the following paragraphs. This is followed by a discussion of some of the issues and potential drawbacks that would need to be considered if similar approaches were adopted as a regulatory remedy to protect disengaged customers.

3.2 Auction-based procurement – BGS auction New Jersey

3.2.1 An alternative approach to the central purchasing model is one exemplified in several US markets that use an auction-based approach. The New Jersey Basic Generation Service (BGS) auction is a particularly relevant example, which is useful in understanding potential benefits to GB.

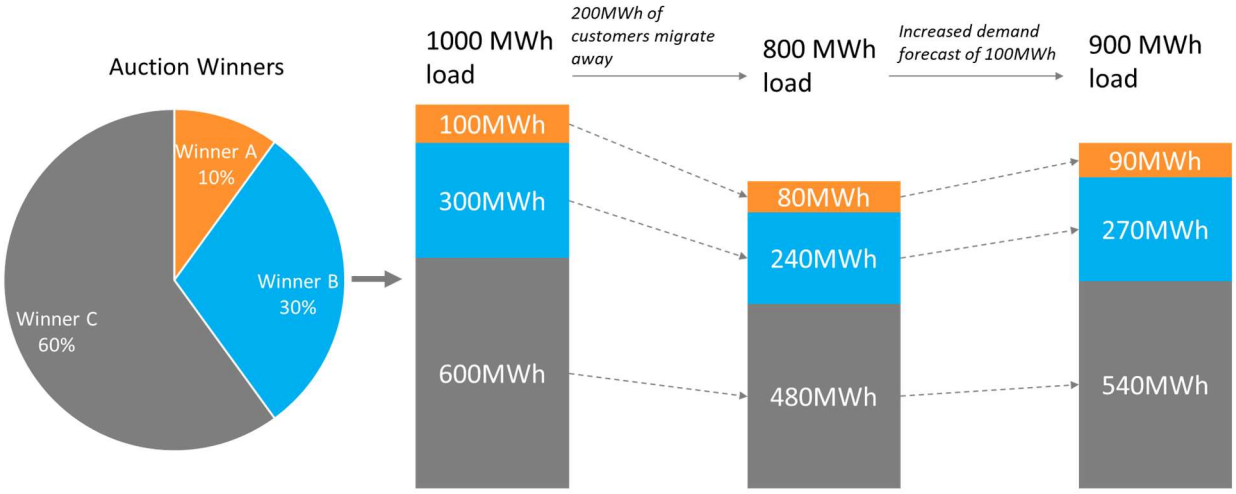
3.2.2 The New Jersey electricity market has been liberalised for nearly 20 years, but around 68% of domestic customers have not switched to a third party supplier and are served under a Standard Offer Service (SOS). They remain supplied by one of four local Electricity Distribution Companies (EDCs). EDCs bill all domestic consumers for the regulated costs of electricity delivery (equivalent to distribution costs in GB), which is an area where they maintain a monopoly. For SOS customers, the local EDC is obliged to purchase supply through an auction and bills customers for this.

Figure 5: Overview of NJ Supply and Delivery



3.2.3 Unlike some US states where similar incumbent suppliers purchase electricity through an auction for specific wholesale products, New Jersey was the first state to adopt a “load slicing” approach. The lots of this auction do not relate to specific MW or MWh values, but rather to a proportion of the total load of the customer base. This is demonstrated in the Figure 6 below, where three auctions winners have an obligation to supply a fixed proportion of the total load. In the examples of customer migration and demand re-forecast events, the actual supply obligations change in absolute terms, but not in proportion.

Figure 6: Supply Obligation Example



Supply obligations of auction winners in response to volume changes

3.2.4 In this way, the EDC is never exposed to any volume risk as the auction winners supply whatever volumes are needed in accordance with the proportions won in the auction. An auction bidder must price in the risk that demand forecasts may change or customers may switch, creating a volume imbalance which they will be obliged to manage.

3.2.5 The BGS auction itself is a set of four simultaneous, interdependent auctions, one for each of the EDCs. It is based on a descending clock auction with multiple rounds, where in each year one third of the total volume is auctioned for a three year period. The EDC therefore will have three different prices at any one time which they must pay to procure each third of their default supply respectively. However, customers receive the blended price of all procured supply, so there is no price differentiation between default customers within an EDC.

3.2.6 Typically, auction participants tend to be made up of large upstream (generation) players, as well as financial institutions (presumably with an offsetting asset position) and some retailers (although many exist within a group of companies that include generators).

3.2.7 The remaining (non-wholesale cost) elements of the bill that the EDC charges remain subject to price control, which ensures that the bill as a whole is competitive.

Benefits

3.2.8 This mechanism has the benefit of not exposing the customer to the process risk of a switching journey between suppliers. It has an additional benefit of removing any volume risk from the retailer. The EDC is able to pass through its cost to serve alongside a tariff based on the auction clearing price, resulting in a high level of transparency and price certainty.

3.2.9 This model has been regarded as a success, with prices outturning at levels that are deemed consistent with market conditions by the auction monitor, and can be lower than those offered by third party suppliers. There appears to have been relatively little negative impact in terms of wholesale market distortions or abusive bidding behaviour. The model also transfers volume risk away from consumer and supplier, which means that customers are protected from any spot market

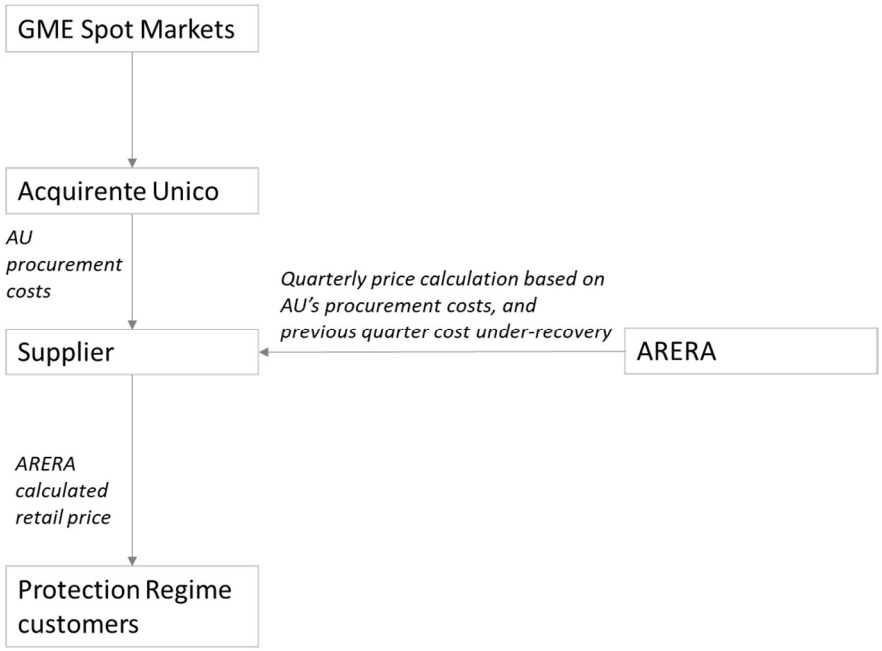
volatility; however, this raises a potential problem in terms of removing real time price signals for demand response.

3.3 Central Purchasing Body – Acquirente Unico

3.3.1 The Italian electricity market has been liberalising since 1999, with the domestic retail market liberalisation taking place in 2007. Since then, all customers have been free to choose a supplier from the market, rather than a default service from their legacy supplier, who is either their local DNO, or a company previously spun off from the DNO. Increasing numbers of customers have been switching away from these incumbents, but around 65% of all domestic customers have never switched and remain on a default service.

3.3.2 In order to ensure that these customers receive price protection, they were placed under the "maggior tutela" service, a Protection Regime. To ensure this protection, a central purchasing body was set up as a public regulated company, "Acquirente Unico". The suppliers of these protected customers must purchase electricity from Acquirente Unico to serve them. The end price applied to the customer is calculated by the regulator, ARERA, although this price remains reflective of spot market changes, so is not a fully regulated price.

Figure 7: Overview of Italian Default Supply Arrangements



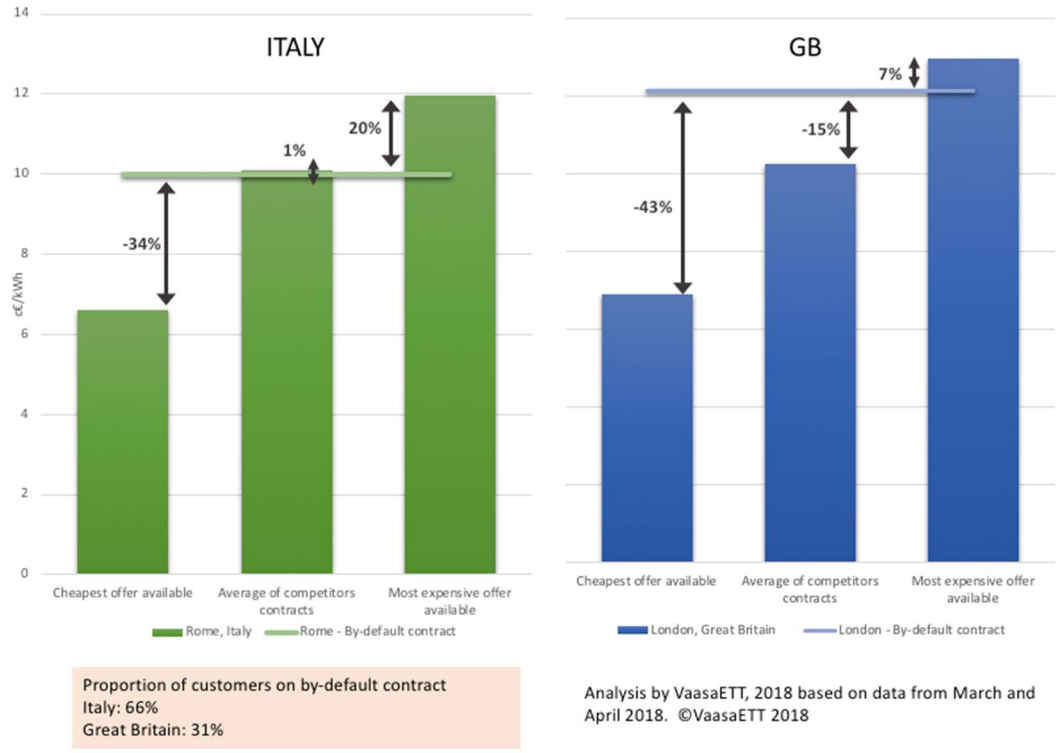
3.3.3 The retail price covers this ARERA-calculated energy element, as well as a cost to serve element that is based on a price controlled-assessment of the cost of new market entrance. Prior to the market liberalisation in 2007, this had been based simply on covering the costs of the DNOs, but since then the new entrant basis has allowed for a benchmark reflective of the market environment. We are unable to verify the reason behind this decision, but the usual reason for such a decision to use best new entrant cost is to prevent lower price setting, which could be seen as a barrier to new entry, whilst still providing an incentive for incumbent suppliers to reduce their cost to serve. In this way, the customer is charged for the commodity supply at a price that reflects the wholesale market and other controllable costs are minimised.

3.3.4 The Protection Regime is currently being phased out in response to incoming Italian competition law, with the intention being that all customers are exposed to the competitive market. This is being done specifically with the aim to enhance price reduction and service quality through increasing competition. The protection for customers will now be through their ability to switch to a lower cost energy Supplier.

3.3.5 In order to manage this transition, a Similar Protection scheme has been set up such that third parties can compete for default customers who engage with the market. Under this scheme, suppliers must offer standardised contract terms, but compete on the level of discount that they can offer. There is, however, a lack of clarity over the treatment of customers who do not make an active switch to a competitive supplier ahead of the abolition of the Protection Regime, scheduled for July 2019.

3.3.6 There is no publication of benchmarks to show how comparable the Protection Regime prices are to equivalent third party competitive offers, however VaasaETT calculations show that there is a 34% difference between the Protection Regime tariff and the cheapest in the market, leading to a price saving potential of ~€85/year. This is in keeping with the level of discount being offered under the Similar Protection scheme, where the greatest savings offered to customers are ~€100/year.

Figure 8: Default Tariffs and their Market Relativity in Italy vs GB[4]



3.3.7 As shown in Figure 8 above, the Protection Regime is lower than the equivalent GB default and also closer to the market average tariff. In GB, the potential for **total energy** savings is estimated at €142-

[4] In this graphic, "by-default contract" refers to customers who have *never* switched supply, rather than those who may also have reverted back to default arrangements.

190/year[5]. There are several difficulties in comparing the two markets, however, in assessing the protection from high prices offered by the Protection Regime: which on first sight appears to suggest that the level of saving potential in Italy is lower and therefore that the Italian default arrangements are offering protected consumers an enhanced level of price protection. However, there are several contextual differences that are relevant:

- The analysis for GB includes savings for gas as well as electricity. That means that the Italian figure **underestimates** the total saving potential that could exist;
- Because the GB figure relates to gas and electricity, it includes dual fuel tariffs, which cannot simply be split into commodity components as a part of the saving will relate to the scale benefit that arises from taking two commodities on one product. This scale benefit would increase the Italian figures, which means that the figure **underestimates** the total saving potential that could exist; and
- Italian electricity consumers typically consume around 62% the amount that GB consumers do. This means that the figure **underestimates** the total saving potential that could exist in GB, in pure £/year terms.

Benefits

3.3.8 This level of relative price protection represents the main benefit of the scheme. It maintains a level of stability to the market and transparency through more regular price determination, as well as retaining the ability to respond to demand management signals. However, the negative impacts on competition have been a criticism for many years and ultimately are behind the future abolition of the scheme.

3.4 Issues as a regulatory remedy for disengaged energy customers

3.4.1 There is a number of potential issues in adopting this default procurement approach as a remedy for GB disengaged customers. These are summarised below and discussed in more detail in subsequent paragraphs.

- **Extent of Protection:** These solutions use market mechanisms to determine an efficient price for the energy component of a customer's bill; however, additional measures will still be required to protect customers from excessive charges for other areas of their bill;
- **Who is the "Default" Supplier?** In cases we have observed where this approach has been used for disengaged customers, the default Supplier has been a Distribution Network Operator that does not otherwise compete in the energy retail market. Moving away from this basis would (at least in the New Jersey case) impact the risks taken by those selling energy – which may in turn impact its effectiveness;
- **Impact on risk allocation and incentives for demand side management**: The cases illustrate various approaches to buying the energy for customers – from buying up to three years ahead, through to buying close to real time. The exact approach will impact the level of certainty a customer has over the price it will pay, as well as their incentives to manage their demand at times of high spot prices;

[5] This is based on an estimate of 12million SVT customers, the CMA finding that £1.5-2 billion could be saved if disengaged customers switched to competitive suppliers and a market reflective £/€ exchange rate.

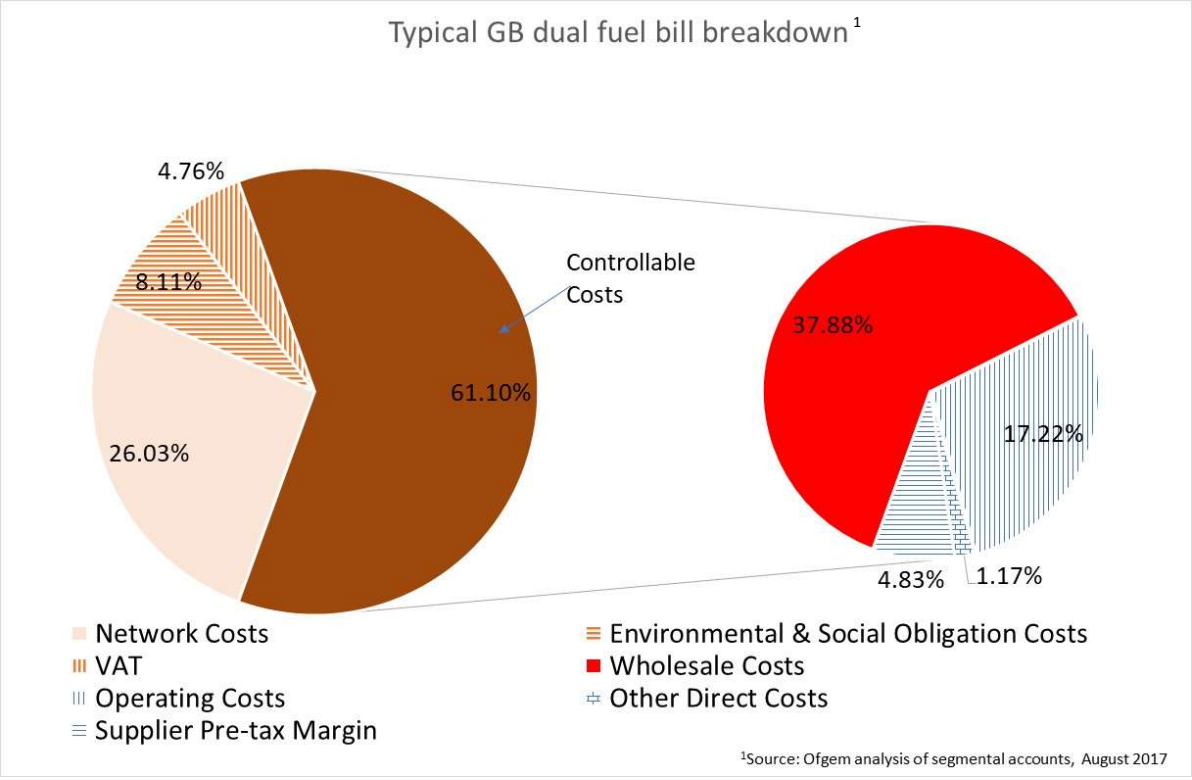
- **Impact on demand side management**: When energy is purchased forward using this approach, it is consistent with tariffs that are fixed for a period (e.g. a year), reducing impacts for demand side management. One commentator has suggested an alternative approach that may address this;
- **Impact on wholesale markets:** The number of GB disengaged customers is large – leaving the potential that the procurement of energy for those customers could impact the wholesale energy prices; and
- **Impact on competition**: In these examples there is evidence that competition has reduced in the retail market.

3.4.2 These are discussed further in the following paragraphs

Extent of protection

3.4.3 As illustrated in Figure 9, the competitive procurement of wholesale energy will address 37.9% of a typical customers bill, representing 62% of the controllable costs within that bill.

Figure 9: Makeup of Typical GB dual fuel bill



3.4.4 Whilst this approach requires that the remaining controllable costs are regulated, it will potentially address most of the issues of high default tariffs, notably:

- **Default tariffs elsewhere are competitive:** Our research indicates that the default tariffs in New Jersey and Italy are comparable with or better than average tariffs in the free market; and
- **Potentially addresses most of the scope for savings:** The remaining controllable costs make up 23.2% of the customer's bill. This equates to ~£264/year for an average customer on a

variable tariff[6]. These costs cannot be avoided; however, a price control should ensure that customers are only charged for an efficient level of costs.

To illustrate the extent to which costs have been managed, consider a case where a price control "over estimated" the efficient level of costs by 5%. In this case:

- the impact on customers would be no more that £13.2/customer/year[7];
- With 12 million customers on Standard Variable tariffs, this equates to ~£160million a year; and
- Whilst this is still a large number, it is between 8% and 10.5% of the £1.5 billion to £2 billion detriment to customers estimated by the CMA[8].

3.4.5 An important point to note relating to the implementation of such a mechanism in GB is that in these examples the protection is only applied to one commodity, electricity. If a remedy is applied in GB to either gas alone or electricity alone, there is a risk that any price hedging effect of taking a dual fuel offering will be lost, and the tariff rate for the other commodity will increase.

Who is the default Supplier?

3.4.6 In both the New Jersey and Italian cases, the default energy Supplier is a network or stand-alone company that does not otherwise compete in the energy retail market. For the "load slice auction" approach taken in New Jersey, this has a significant impact on the risks faced by those that sell energy.

3.4.7 In New Jersey, those that sell energy in the auction will take the "shape risk" of the retained customers. That is, they do not know how much energy they are going to sell in each hour of the next three years – as that depends on the quantity of energy consumed by those customers at those times. This "shape risk" then is driven by a number of factors, with the key ones being:

- Systemic[9] change in behaviour of customers as a whole – such as the adoption of energy efficiency measures;
- "Normal" weather driven changes in customer demand; and
- Changes in the mix of customers supplied on default tariffs – as some move to competing Suppliers.

3.4.8 In the New Jersey case, none of the above factors are either controlled or influenced by the Distribution Company – in its role as default Supplier or otherwise. This would not be the case if this approach were used to manage the "default" tariff of an existing GB energy Supplier. An existing GB energy Supplier could influence customers (e.g. through direct marketing of its own competing

[6] Based on an average annual bill (in February 2017) for duel-fuel customers on a variable tariff of £1,135. Source Ofgem.
[7] 5% of £264/year of other controllable costs.
[8] https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf
[9] Changing behaviour by one, or a small number of customers will have little impact on the load shape of default customers as a whole.

tariffs) to move to competing tariffs that it, itself, offered. This difference then has two impacts that would need to be considered before mandating this as a remedy with existing suppliers as the "default" supplier:

- The incentive on those Suppliers to offer competitive tariffs to their "default" customer base may be seen as positive; however
- The cost of energy for the eventual "default" customers will increase, as those offering energy through load-slice auctions adjust their bids to reflect this increased risk that the default customer base will shrink.

Risk allocation between Supplier and Customer

3.4.9 The cases we have seen exhibit significant differences in the overall purchasing strategy for energy, notably:

- **Multi annual:** New Jersey purchases energy annually – with each contract being for the following three years;
- **Monthly:** The approach taken in Italy has changed over time, with (at least some) energy initially being procured in forward markets a number of months ahead of delivery moving to the current approach where energy is purchased in Spot Markets; and
- **Spot:** The relevant competitive tariffs in Norway are based on a monthly-average of outturn hourly prices as applied to a customer's demand (be that profiled or metered). In addition, the Italian tariffs have increasingly moved to be based on spot prices for energy.

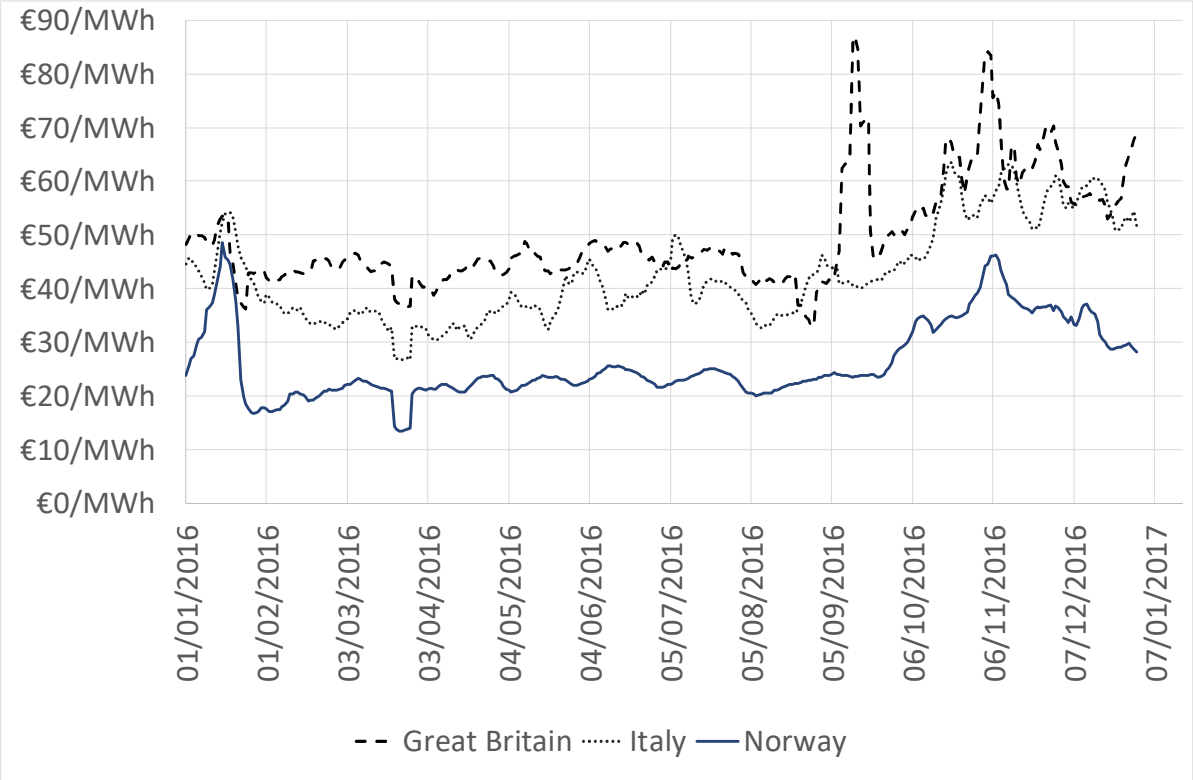
3.4.10 These approaches have different implications for the allocation of wholesale market risk to the Consumer. Notably:

- Multi-annual:
  - All movements in wholesale price are "hedged" by the party that sold in the "load slice" auction;
  - The customer has a stable tariff, and can use this to budget for energy costs; and
  - The customer has reduced incentives to manage its load in response to movements in wholesale prices.
- Monthly Spot Average:
  - The customer is fully exposed to any movements in wholesale price;
  - The customer's tariff will change from month to month; and
  - The customer has stronger incentives to reduce load at times of high wholesale price.

3.4.11 We have considered whether the Norwegian adoption of spot-price pass-through tariffs is explained by differences in the nature of Norwegian wholesale prices compared with those elsewhere. Our analysis is presented in Appendix A, with the key conclusions being:

- Wholesale Price Volatility in Norway is similar to or greater than that observed in GB and Italy; however
- Wholesale price levels in Norway are significantly lower than those observed in GB and Italy – as illustrated in Figure 10.

Figure 10: 2016 Day Ahead Prices - 7 Day Rolling Average[10]



Impact on demand side management

3.4.12 The preceding paragraphs discussed, at a high level, some of the impacts of the balance of procurement (between forward and spot markets) by the default buyer. In discussing these cases more widely, one commentator[11] has suggested that a "hybrid" approach is needed to balance the need for price certainty, with the need to provide efficient economic signals for customers to manage their load.

3.4.13 The relevant commentator notes that, in an ideal world, the marginal price observed by each customer should be the spot price – so they see the full benefit or cost of any changes to its demand. A potential example of how this can work is:

- **Monthly Forward Procurement**: The default-supplier buys energy 1 month forward for a forecast of the (peak) demand of the relevant customers;
- **Balance on Spot**: Any difference between the "outturn" demand of the relevant customers and the monthly forward purchase is bought (or sold) in the spot markets; and

[10] Data sourced from the ENTSOE Transparency Platform
[11] Peter Cramton, Professor of Economics at University of Cologne and University of Maryland

- **Customer tariffs have forecast and spot elements**: Each Customer's tariff will have a forward element – reflecting their contribution to the forecast of demand that was procured forward, with the balance being purchased spot.

3.4.14 We note that there are several issues that would need to be considered in taking these ideas through to effective implementation, including:

- **Smart metering:** The benefits of this policy could only be realised if the demand of customers can be accurately determined for specific time periods (e.g. hourly)
- **Demand Response or forecast error:** To fully deliver the perceived benefits, we have to say that:
  - **Forecast Delta:** The load of a specific customer at a given time is lower (or higher) than forecast; and
  - **Delta is Energy Management:** That the "Forecast Delta" is the result of customer load management, rather than an error in forecast.
- **Customer Acceptance:** This approach will lead to a tariff that varies month-by-month, and where part of it will not be known until close to real time, or after the event. This may be unpopular with disengaged customers – that are used to tariffs that are easier to understand. We do not have a view on whether this would be more or less popular than the current default arrangements – that are perceived as leading to higher costs to those consumers.

Impact on wholesale markets

3.4.15 The number of GB disengaged customers is large – leaving the potential that the procurement of energy for those customers could impact the wholesale energy prices.

3.4.16 The experience from international cases does not suggest that this is a significant issue. Notably:

- **Italy – 65% of domestic customers**: In 2016, 65% of Italian domestic consumers were supplied subject to the protected regime – and so had their energy procured by Acquirente Unico. In reviewing this case, we have found no mention of concerns that the purchases by Acquirente Unico are adversely impacting the wholesale market (e.g. by moving the market); and
- **New Jersey – 68% of domestic customers, 5% of PJM demand**: Although a large number of customers in New Jersey are on the default tariff, New Jersey is a small part of the overall PJM market. In practice, the New Jersey default customers represent ~5% of the total demand across the PJM Interconnection, with a third of that (1.7% of PJM Demand) procured through each auction. This means that the BGS auction has little ability to move the market.

Impact on competition

3.4.17 We have observed that the default procurement regimes output tariffs that are consistent with market conditions, and as such are lower than a large number of third party offers in the respective markets. To the extent that competition facilitates lower overall costs to consumers, this could be a drawback of the default procurement mechanism.

3.4.18 In markets like Italy, the default tariff is very competitive and leads to downward pressure on the margins of third party suppliers, which in turn has limited the number of third suppliers in the market and increased their concentration. Additionally, in some US states where New Jersey-style auctions are used to protect default customers, third party retailers have to looking for opportunities in highly time-specific wholesale market changes in order to compete. This limits the ability of third parties to compete consistently.

4. Conclusions

4.1.1 Ofgem has a duty to protect the interests of consumers, where appropriate through competition, and it is against this obligation that the measures discussed in this paper should be assessed. From this perspective, the cases that we have examined could be used to assist Ofgem in their duties, as both default procurement and collective switching result in lower prices for some customers (for default procurement, this refers to the disengaged customer base, and for collective switching this refers to opted-in consumers). However:

- It is debatable whether the lower prices achieved for some customers is consistent with lower overall costs for all consumers in the long run; and
- Retail energy markets using the default procurement approach have fewer competing suppliers than observed in GB.

4.1.2 The benefits of achieving lower prices for some customers cannot therefore be taken in isolation. Whether the points mentioned above constitute an issue (given Ofgem's obligation to promote effective competition wherever appropriate in order to protect the interests of consumers) depends on the extent to which retail competition drives tangible benefits that could lead to lower overall costs to consumers.

4.1.3 To answer this point, we turn to the different models in this report in turn:

- **Collective switching regimes using an opt-in model**: These can deliver lower prices for consumers, as seen in the case studies that we have looked at. However, this is not the best remedy for reaching all disengaged customers because the model requires customers to opt in. Therefore, the price benefits felt by participating customers do not result in lower prices for all disengaged customers, or necessarily lower costs for consumers overall;
- **Collective switching regimes using an opt-out model**: As in the opt-in model, this can deliver lower prices for consumers, but has the additional benefit of reaching all disengaged customers. It therefore has potential to be an effective remedy in delivering lower prices for a wider group of customers. However, this is an unprecedented remedy in any market that we know of and would be a significant challenge to implement. As a result, there may be a level of additional cost incurred during and following implementation that would counteract the lower price benefits to customers; and
- **Default procurement**: This remedy delivers low price for disengaged customers in all examples that we have looked at. It therefore has the potential to assist Ofgem in managing its primary objective of protecting customers, including the use of a competitive process. However, it does reduce the number of energy retailers; the downward margin pressure on

third party suppliers seen, for example in the Italian market, has led to a limitation on the number of retailers able to participate. To the extent that competition is able to deliver lower overall customer costs, some benefits may therefore be lost to consumers from applying this remedy.

Appendix A Wholesale Volatility – and impact on retail tariffs

A significant proportion of Norwegian domestic customers choose to buy their electricity on a tariff that "passes through" the spot price (based on a monthly average of day-ahead prices). Any move for GB tariffs to be set on a similar basis may face resistance – as actual tariffs would then vary month-by-month depending on out-turn wholesale prices. This appendix considers whether the uncertainty over GB prices would be greater than those observed in Norway and Italy.

We have carried out three types of analysis as follows:

- A comparison of the actual price levels observed in 2016;
- A comparison of normalised price levels from 2015 to date; and
- A measure of the level of certainty over the prices for each month.

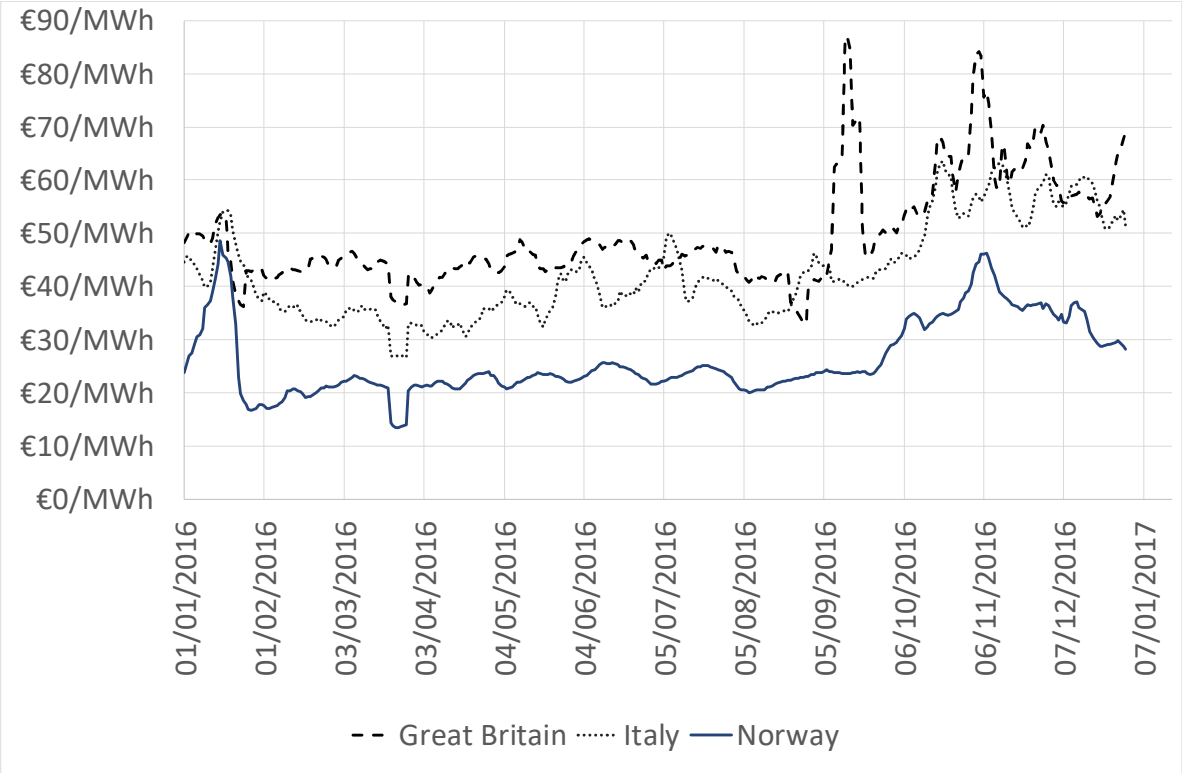
In each case, this analysis is based on a data for Day-Ahead prices taken from the ENTSOE Website. This data covers the following Price Regions:

- Norway is Represented by the "NO1" Region;
- Italy is represented by the Italian North-Central Region; and
- GB only has one region; however, the price has been taken from the France-GB market coupling.

A.1 Comparison of actual price levels in 2016

Figure 11 below shows a comparison of the absolute levels of wholesale prices in GB, Norway and Italy during 2016. The price trends for this year are similar to those observed for other years with Norwegian prices, on average, being 61% of those observed in GB and Italy.

Figure 11: 7 Day Rolling Average of 2016 Day Ahead Prices



A.2 Comparison of "Normalised" prices

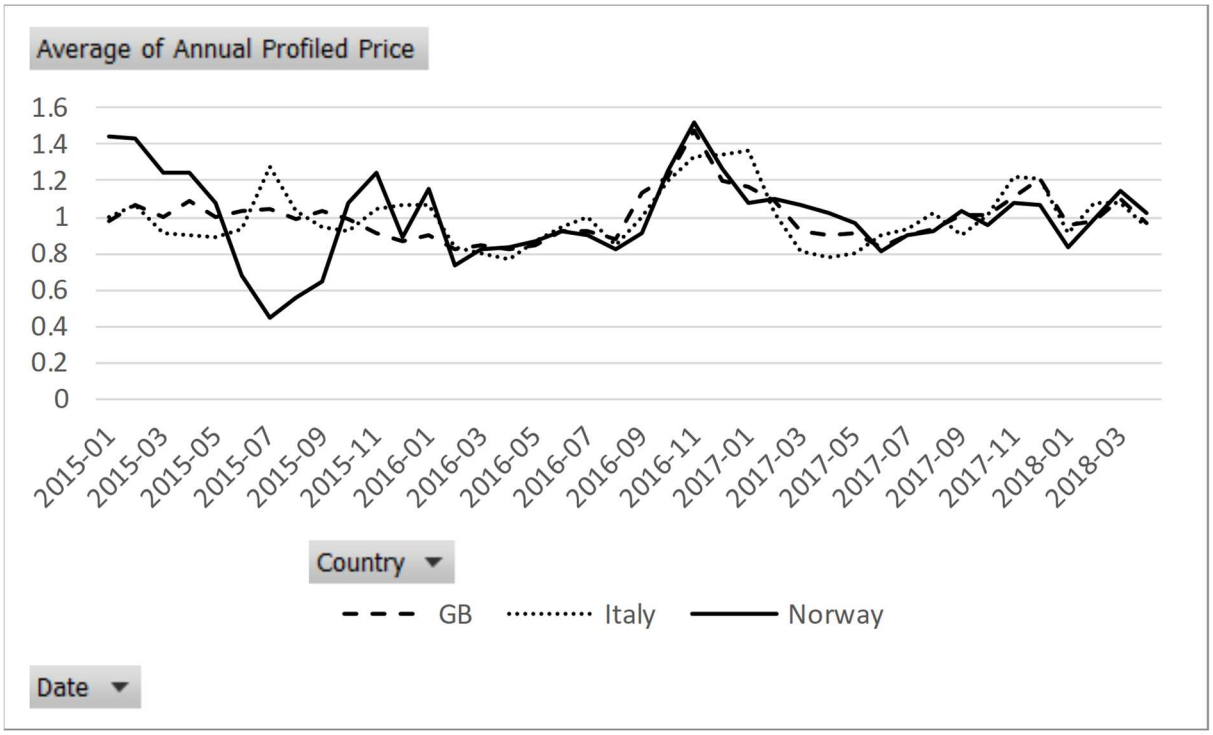
The pattern of prices across a year will change from year to year, in the main reflecting inter-annual changes in weather. To explore whether how this effect impacts GB relative to Italy and Norway, we have compared the normalised monthly average prices for each country. For this analysis:

- Prices for each month are "averaged" using a typical monthly domestic usage profile[12]
- Prices are normalised to the overall average price for the relevant calendar year. That is:
  - $$NormalisedMonthlyPrice = \frac{ProfileWeightedAverageMonthlyPrice}{AnnualAverageProfileWeightedPric}$$

This analysis is illustrated in Figure 12. This shows a similar movement in the relative level of prices for all three of the countries. If anything, the Norwegian prices exhibit a greater movement than those observed elsewhere.

[12] Domestic profile is derived from "Figure 1" in "Load Profiles and their use in Electricity Settlement" © 2013, Elexon.

Figure 12: Comparison of Normalised Prices - May 2015 to Date



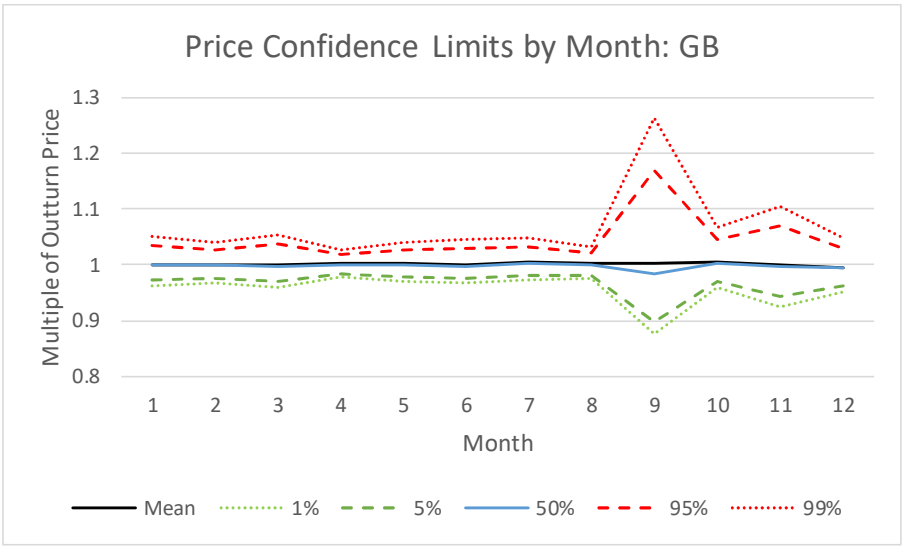
A.3 Price Certainty by Month

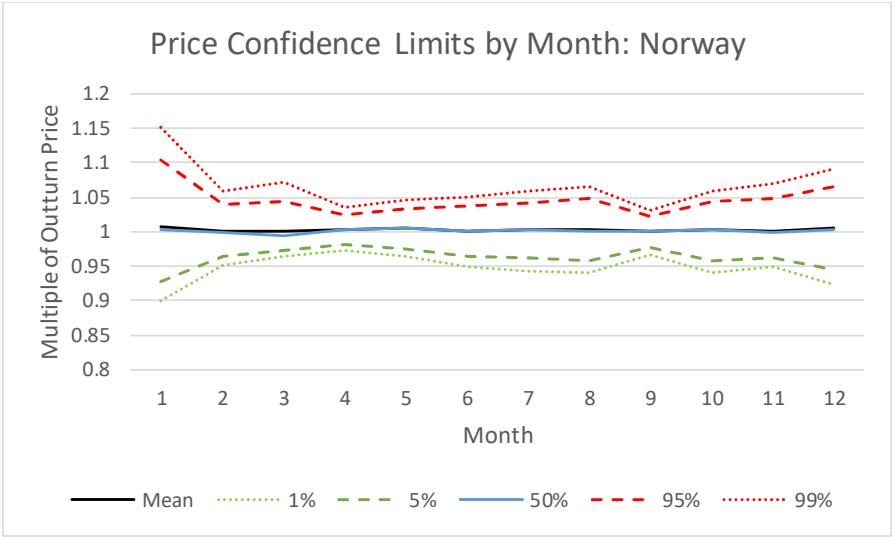
We have considered the extent to which the wholesale spot price for a month can be forecast at the outset of that month. In all countries, the spot prices will vary within a month – with some days being more expensive than others. Our analysis is based on simulation to create 120,000 simulated months (10,000 simulations for each of the 12 months). Each simulated month is based on a random selection of relevant days from the ENTSOE Data, covering 2015 to date.

This analysis suggests that prices in GB are, with the exception of September and November, more certain than those observed in Norway and Italy. This is illustrated below in two ways:

- **Annual:** Figure 13 shows graphs of the 1%, 5%, 95% and 99% confidence limits on the monthly prices for each country; and
- **Monthly:** Figure 14 shows graphs of the cumulative probability distribution for outturn prices by month.

Figure 13: Monthly Confidence Limits





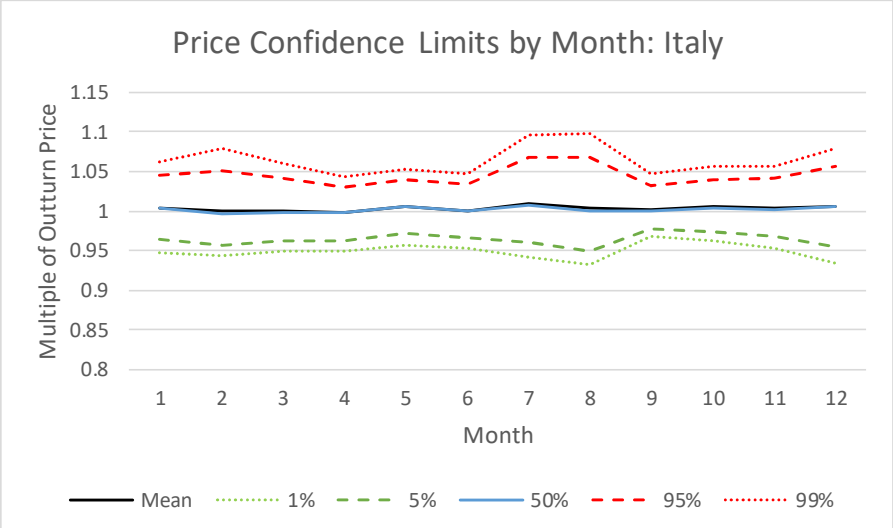
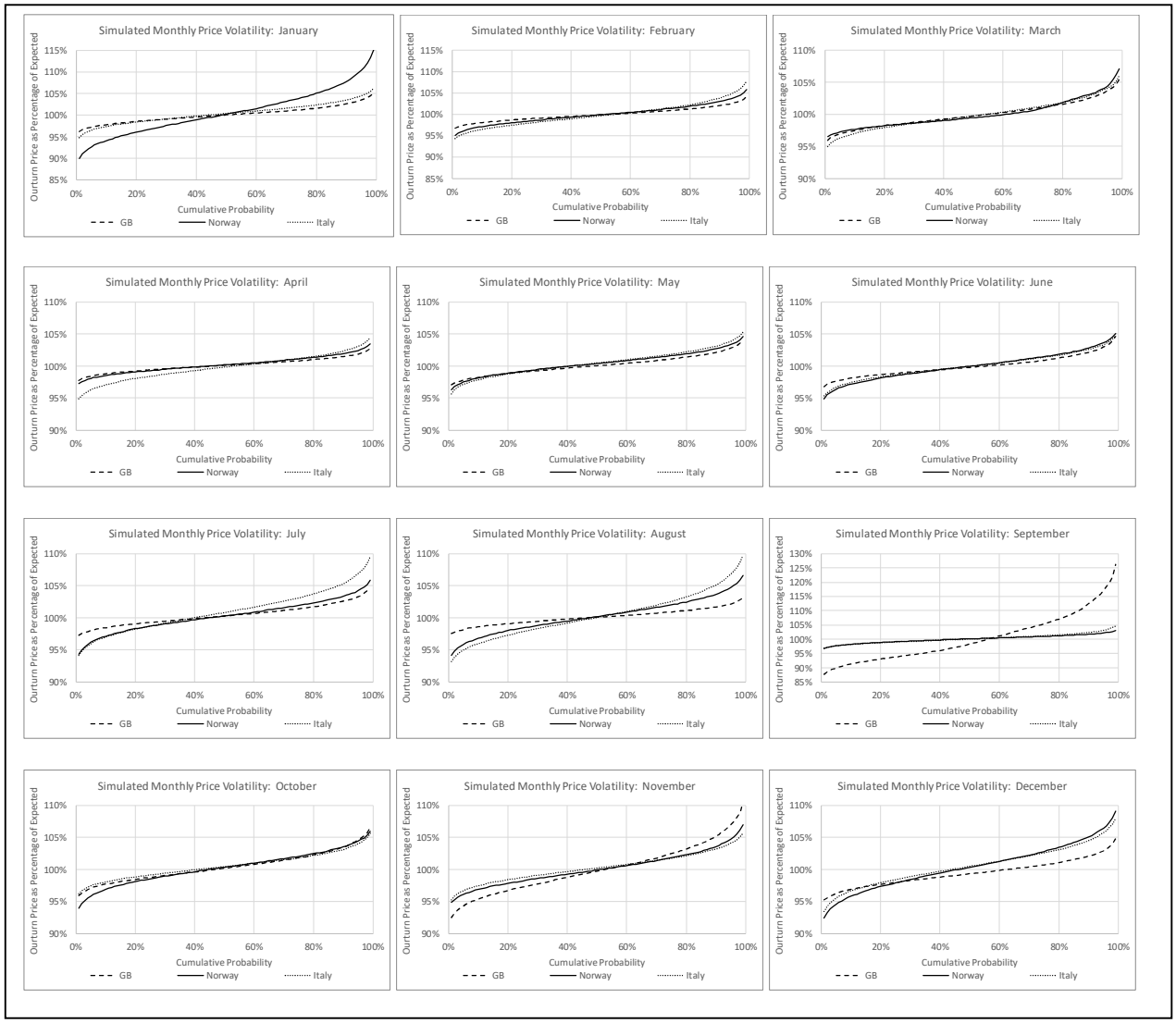


Figure 14: Cumulative Probability Distributions for Each Month



Appendix B Sources

In the following table, we set out the sources external to ESP Consulting, VaasaETT and Ofgem used in obtaining the information in this report.

Collective Switching
Interview with Pricewise Managing Director and UK and ROI Market Development Manager
Interview with OBS CEO
Interviews with incumbent suppliers (GB and NL)
Documentation supplied by Pricewise
Default Procurement
Interview with leading US energy academic
http://www.bgs-auction.com/bgs.auction.overview.asp
http://www.bgs-auction.com/bgs.dataroom.asp
http://www.state.nj.us/bpu/about/divisions/energy/bgs.html
http://www.bgs-auction.com/documents/Final_2018_BGS-RSCP_SMA_11_DEC_2017.pdf.pdf
http://www.bgs-auction.com/bgs.auction.prev.asp
http://www.bgs-auction.com/documents/Final_2018_BGS-RSCP_Auction_Rules_11_DEC_2017.pdf
Paper by leading economist: https://www.eprg.group.cam.ac.uk/wp-content/uploads/2018/03/S.-Littlechild_28-Feb-2018.pdf
Correspondence with Italian regulator (ARERA)
Documentation supplied by ARERA
https://www.arera.it/it/inglese/index.htm
http://www.acquirenteunico.it/
https://www.arera.it/allegati/docs/17/801-17.pdf
https://www.portaletutelasimile.it/offerte/offerte-domestici