Appendix 3.1: Restricted meters

Contents

Introduction

1. Following the publication of our provisional findings report, we have investigated further the characteristics of the retail supply of electricity to domestic customers in GB with restricted meters. In particular, we have considered whether there are features of the GB retail domestic markets relating to such meters (in addition to those identified in the published provisional findings report) that contribute to the overarching feature of weak customer response that we provisionally identified as giving rise to an AEC in our provisional findings report.

2. For these purposes we have defined restricted meters to include any metering arrangements (excluding smart meters) whereby a domestic customer's electricity consumption at certain times and, in some cases, for certain purposes (for example, heating) is separately recorded. These meters allow for customers to be charged lower rates for electricity used at times when overall demand is lower (and hence the cost of electricity is lower).

3. In this appendix we first set out what we mean by restricted meters, the costs of supplying customers with these meters and the number of customers with these meters. We then look at submissions made in relation to restricted meters, in particular, those made in response to our provisional findings report. We then outline further information we have gathered in relation to restricted meters and the views of suppliers.

4. Finally we set out our analysis looking at whether customers on non-Economy 7 restricted meters would pay more or less by switching to the cheapest direct debit single-rate tariff available in the market.[1]

Background

5. There are around 4.3 million restricted meters in GB of which Economy 7 meters account for around 86%. Our provisional view is that market conditions for customers with Economy 7 meters are similar to those with unrestricted meters. In particular: each of the Six Large Energy Firms and the mid-tier suppliers offer Economy 7 fixed-term tariffs which are advertised by suppliers and supported by PCWs and suppliers' own online search facilities. This is consistent with a recent Ofgem statement that most customers with restricted meters are on Economy 7 meters for which the choice of tariff and suppliers is similar to that for customers on unrestricted meters (ie meters with a single register and through which energy is continuously provided).[2] In conducting our investigation we have therefore focused on restricted meters excluding Economy 7 meters (and henceforth refer to this group as 'customers on restricted meters' unless otherwise specified).[3]

Meter types

6. There are three broad categories of restricted meter arrangements:

   (a) One meter with two registers, ie one that records peak-time/day-time consumption and the other off-peak/night-time consumption (examples include Economy 7 and single MPAN Economy 10 meters).

   (b) A combination of an off-peak or restricted hour tariff meter connected to the space and water heating system which is only in operation at certain times and a separate meter, generally unrestricted but sometimes Economy 7 meter for general usage.

   (c) A dual MPAN restricted meter where one MPAN is connected to the space and water heating system and the other for all other use in the home. These MPANs can have one or more registers and may only be in operation at certain times of day (examples include dual MPAN Economy 10, SuperTariff and WarmWise meters).

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[1] We understand that these tariffs are available to customers with restricted meters, although depending on the supplier it may require their current meter to be changed (which may include some rewiring) or reprogrammed. The costs of this may be borne by the supplier or customer depending on the supplier in question.
[2] Ofgem presentation: Briefing on customers on restricted electricity meters for CMA, August 2015.
[3] For these purposes, White Meter 1 and White Meter 8 have not been included in Economy 7 meters. However, we note that Scottish Power told us that in Scotland these meters were equivalent to Economy 7 meters.

7. For customers with meter arrangements *(a)* or *(c)* above there may be a trade-off between paying lower off-peak rates and higher peak rates (compared with those available to customers with unrestricted meters). This is not the case for customers with meter arrangement *(b)*, since rates are not linked to the time of use.

8. Within these three broad categories, the installed base of restricted meters includes many different types of meter. These will include meters installed at different times in the past, to support different heating systems or to offer different periods of off-peak usage. Some of these meters may have been installed some decades ago. Currently suppliers are only installing a limited range of restricted meters (see paragraph 19).

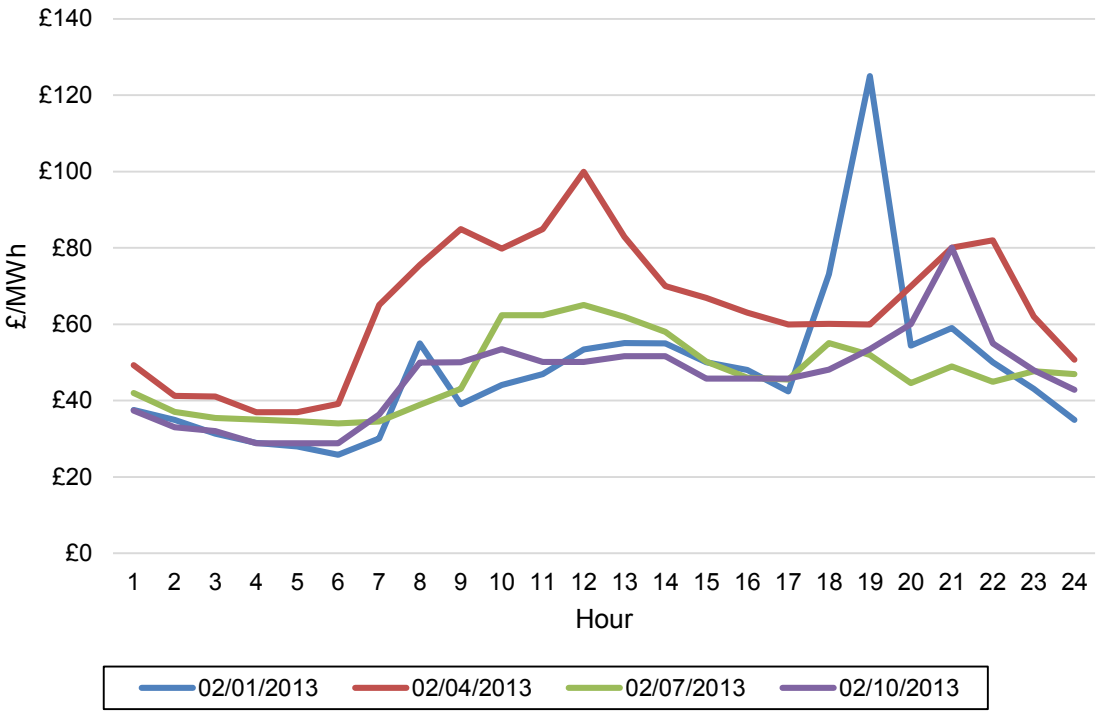
9. Where a restricted meter has more than one register the restricted meter has to be switched between recording usage on each register, similarly where a restricted meter only operates at certain times of the day the electricity supplied through that meter needs to be switched on and off. This switching process might be controlled remotely by radio signal (ie teleswitched) or locally (mechanically or electronically). Teleswitching can be either dynamic, static or semi-static. With dynamically teleswitched (DTS) meters the operational times might be changed – on the instructions of the host supplier[4] – in response to changes in market conditions. With static-teleswitching operational times will change infrequently, eg winter and summer. With local switching the operational times are programmed into the meter.

Costs to supply

10. Restricted meters are designed to support space and water heating systems that operate in off-peak hours when wholesale costs of electricity are lower (see Figure 1 below). For this reason we would expect the cost per kWh of supplying customers with these arrangements to be lower than those with unrestricted meters. Although we note that customers do not always use their heating systems efficiently and at least one supplier, E.ON, makes an effort to move Economy 7 customers to single-rate tariffs where this is the case.

[4] DTS meters are switched, on and off or between registers, using teleswitching codes where each code is controlled by a 'group code sponsor' or host where the incumbent supplier in a region is the host for DTS meters in that region. This means that in each region the incumbent supplier controls when DTS meters are switched on and off or between registers. Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.

Figure 1: Day-ahead wholesale electricity prices for a typical weekday in winter, spring, summer and autumn

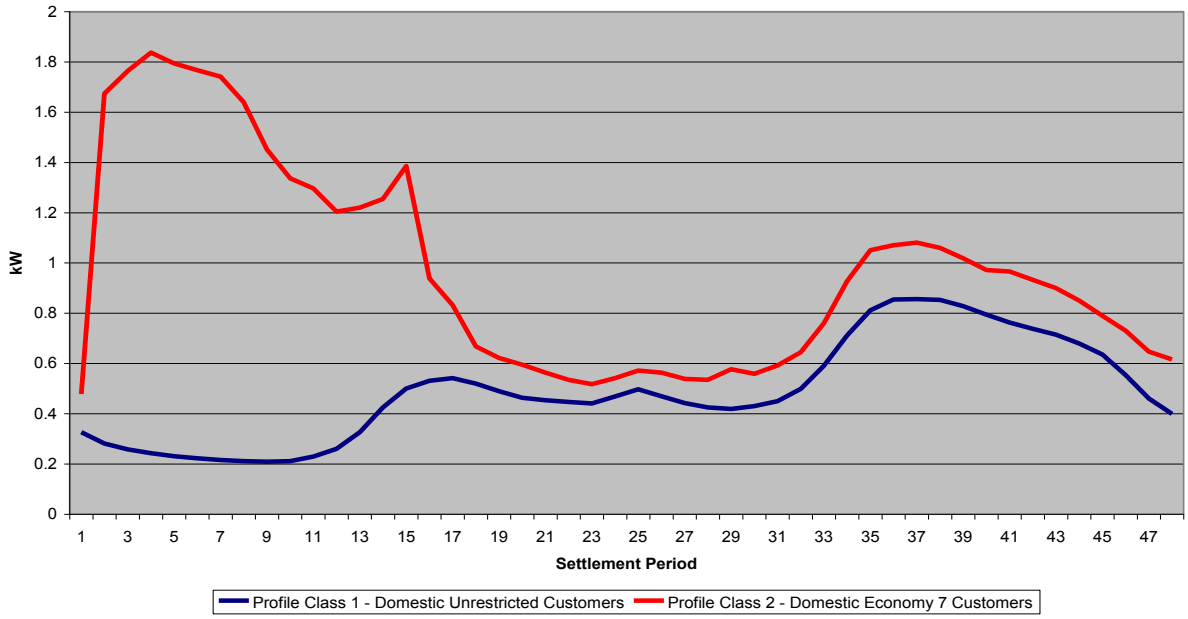


Source: CMA analysis of N2EX data.
Note: Auction prices for wholesale electricity in the UK.

11. Whether the costs to a supplier would actually be lower depends on the operation of the electricity settlement arrangement. Currently customers are grouped into load profile classes. The classes for customers with restricted meters will assume higher levels of usage during off-peak periods. The arrangements incentivise suppliers to shape electricity purchased to match these load profiles. If a supplier has a higher proportion of restricted meter customers (compared with other suppliers) this would be recognised in settlement arrangements and result in lower wholesale costs for that supplier.

12. For example, Figure 2 is an example of the typical shape of the load profile for class 1 (domestic unrestricted customers) and class 2 (domestic Economy 7 customers) on a weekday in winter. For the Economy 7 load profile, a significant amount of the load in this profile is between settlement periods 0 and 15 (that is, midnight and 7.30am) such that a significant amount of the electricity being supplied for customers on this load profile class has been shifted away from the peak period (that is, settlement periods 34 to 40 or 5pm to 8pm). Therefore the Economy 7 load profile allows the supplier to take advantage of periods of low wholesale prices.

Figure 2: Load profile class 2 for a typical weekday in winter – domestic Economy 7 customers



Source: Elexon.
Note: Each settlement period represents half an hour and settlement period 1 equates to 12am to 12.30am.

13. Although there are only eight standard profile classes, one of which is for domestic Economy 7 meters, restricted meters can be incorporated into the settlement process through a process called 'chunking'. To do this a supplier would need to set up 'standing data' in the settlement arrangement; this standing data would reflect the fact that the supplier has customers with a certain meter configuration. The supplier would then need to register the number of customers it has with that meter configuration.

14. When a supplier takes meter readings for customers the data is processed and aggregated across all the customers on the same configuration for that supplier. This data is then submitted to the settlement systems and is allocated to the load profile for all the supplier's customers on that meter configuration. The allocated volume will reflect the pattern of usage on that meter configuration such that if customers use more off-peak energy then this will be reflected in the overall settlement position for that supplier.

15. Therefore suppliers can incorporate restricted meters into the settlement arrangements to allow them to realise the wholesale cost savings outlined above. At present we understand that there are 734 meter configurations reflected in the settlement process.[5]

16. Apart from lower wholesale electricity costs incurred when supplying these customers as outlined above, we have not seen evidence that, for a given

[5] Each meter configuration has a unique standard settlement code with which it can be identified.

region and payment method, the direct and indirect costs of supplying customers with restricted meters are higher or lower than those for customers with an unrestricted meter.

Customer numbers

17. Table 1 provides information on the numbers of restricted meters including Economy 7. We found that around 17%[6] of customers have restricted meters including Economy 7. We also found that roughly 86% of these restricted meters are Economy 7 meters. There are roughly 700,000 restricted meters that do not belong to the Economy 7 category.

Table 1: Analysis of the number of restricted meters (June 2015)

Total number of accounts (2015)	24,600,000		
Of which:	Number of restricted meters (inc Economy 7)		As a proportion of all accounts (%)
	4,300,000		17
Split by meter type*:	Number of meter	As a proportion of all restricted meters (%)	As a proportion of all accounts (%)
Economy 7	3,700,000	86%	15%
Economy 10	100,000	2%	0%
Other	600,000	14%	2%

Source: CMA analysis of data from the Six Large Energy Firms and mid-tier suppliers.
Notes:
1. Figures have been rounded to the nearest 100,000.
2. Groupings of meters are based on information provided by suppliers and the meters in each group may differ depending on how each supplier categorises meters.
3. Figures for EDF Energy are based on data as at October 2015.
4. Figures for RWE npower are based on data as at September 2015.
5. Figures for SSE are based on data as at October 2015.

18. Table 2 below provides information on the number of restricted meters (both including and excluding Economy 7) broken down by supplier. This shows that of the Six Large Energy Firms, RWE npower has [✂] while the other five of the Six Large Energy Firms each have a share between 13 and 28%; mid-tier suppliers have a combined share of roughly 7%; and, excluding Economy 7, three of the Six Large Energy Firms ([✂]) between them have a 72% share of restricted meters.

[6] Note that this will be an overestimate. This is because this figure is the number of meters as a percentage of the total number of electricity accounts, but some customers will have two restricted meters as outlined in paragraph [6].

Table 2: Number of restricted meters by supplier (June 2015)

	Total number of restricted meters (inc Economy 7)	*As percentage of total*	*Total number of restricted meters (exc Economy 7)*	*As percentage of total*
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis of data from the Six Large Energy Firms and mid-tier suppliers.
Notes:
1. Figures for EDF Energy are based on data as at October 2015.
2. Figures for RWE npower are based on data as at September 2015.
3. Figures for SSE are based on data as at October 2015.

19. Some of the Six Large Energy Firms[7] told us that the number of restricted meters (excluding Economy 7 and Economy 10) was declining, which could potentially be due to changes in meters and/or heating systems (for example, with the extension of the gas network and a trend away from electric heating systems).[8] Further, all of the Six Large Energy Firms told us that, although practices varied by supplier, the majority of new restricted meters being installed were [✂],[9] [✂].

20. Ofgem said that, in 2015, there were around 160,000 DTS meters (down from 550,000 in 2012, due to the removal of dynamic functionality of E.ON's DTS meters in East Midlands).[10] These customers are almost equally split between South and North Scotland. The market shares of the incumbent suppliers (ie Scottish Power and SSE) have remained stable and above 90% in both regions.[11]

Responses to provisional findings

21. In an initial submission Fergus Ewing MSP raised concerns in relation to DTS meters in Scotland. Specifically it cited reports by Ofgem (discussed in more detail below) that indicated that, in relation to DTS meters, incumbent suppliers in North Scotland and South Scotland had very high shares of supply which had persisted over time. It noted that while Ofgem's research suggested that, in general, customers on DTS meters were not paying higher

[7] These were EDF Energy, [✂] and Scottish Power.
[8] Note that SSE only told us that this decline could potentially be due to a trend away from electric heating systems.
[9] Note that Centrica and [✂] told us that they only installed Economy 7 meters and SSE told us that it only installed Economy 7 or Economy 10, unless a restricted meter required to be replaced for technical reasons.
[10] See response to provisional findings and Remedies Notice from Ofgem.
[11] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.

prices there may be specific barriers to entry in relation to DTS meters and customer engagement was generally low for customers on DTS meters.[12]

22. In response to our provisional findings report, we received submissions in relation to restricted meters from the following consumer bodies: Changeworks,[13] Highlands & Islands Housing Associations Affordable Warmth Group (HIHAAWG),[14] and Energy Action Scotland.[15] We also held a hearing with Citizens Advice and Citizens Advice Scotland, and National Energy Action and Energy Action Scotland where restricted meters were raised.[16]

23. These submissions were largely concerned with SSE and Scottish Power customers in Scotland with DTS meters. Changeworks said that rural areas in Scotland had a high rate of fuel poverty and high usage given the climate.[17]

24. Changeworks said that SSE and Scottish Power had 'an effective monopoly' in Scotland in relation to customers on certain types of restricted and/or DTS meters. In particular: SSE was said to have two unique tariffs one of which was for customers with Total Heating Total Control (THTC) meters and Scottish Power a similar tariff for customers with ComfortPlus meters, we note that there are two ComfortPlus meter types each with separate tariffs, ComfortPlus Control and ComfortPlus White Meter.[18] The other tariff was said to be SSE's tariff for customers with Economy 10 meters[19,20] Changeworks said that customers on these tariffs paid more for their heating and lighting than those on standard tariffs.[21]

25. Similarly HIHAAWG said that SSE had 'an effective monopoly' in North Scotland in relation to the same two tariffs.[22] In particular, HIHAAWG told us that THTC meters were DTS meters and as such suppliers faced technical barriers in supplying customers with THTC meters (eg in relation to billing and when the heating meter was in operation).[23] Further, HIHAAWG told us that

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[12] See initial submission from Fergus Ewing MSP, Minister for Business, Energy and Tourism.
[13] See response to provisional findings and Remedies Notice from Changeworks.
[14] See response to provisional findings and Remedies Notice from Highlands & Islands Housing Associations Affordable Warmth Group.
[15] See response to provisional findings and Remedies Notice from Energy Action Scotland.
[16] See summary of response hearing with consumer bodies.
[17] See response to provisional findings and Remedies Notice from Changeworks.
[18] Note these are all dual MPAN meters.
[19] See response to provisional findings and Remedies Notice from Changeworks.
[20] Economy 10 meters can either be single MPAN or dual MPAN.
[21] See response to provisional findings and Remedies Notice from Changeworks.
[22] See response to provisional findings and Remedies Notice from Highlands & Islands Housing Associations Affordable Warmth Group.
[23] HIHAAW also said that 'the simplest solution might be for the telemeter functionality to remain passive in the background '.This is consistent with Changeworks' response which noted that similar issues occurred in relation to Scottish Power's ComfortPlus meters.

customers on THTC and Economy 10 meters faced barriers to switching. In particular, HIHAAWG told us that:[24]

(a) suppliers other than SSE generally did not offer tariffs designed for customers with THTC meters; and

(b) customers could not compare prices as those limited suppliers that did supply tariffs designed for THTC and Economy 10 meters did not actively advertise tariffs compatible with these two meters and they were not supported by PCWs.

26. At the hearing with Citizens Advice and Citizens Advice Scotland, and National Energy Action and Energy Action Scotland, the following points were made:[25]

(a) Around 400,000 customers in Scotland were on a DTS tariff and these customers had no suitable alternative to SSE and Scottish Power tariffs.

(b) The lack of options had persisted for so long that these customers were particularly disengaged.

(c) These customers faced an additional barrier due to the costs involved in switching away from a DTS meter (it required the house being rewired).

(d) Previously suppliers had indicated that their billing systems prevented them from providing certain tariffs.

(e) The lack of access to the codes controlling DTS was a barrier to suppliers offering DTS tariffs and smart meters were not a solution to the DTS issues as they would not necessarily provide suppliers with an incentive to compete for these customers.

27. In addition Citizens Advice and Citizens Advice Scotland told us that:

(a) DTS customers may face barriers to switching because:

(i) information on DTS tariffs could be difficult to access (for example, these tariffs did not appear to be on PCWs); and

(ii) customers needed to understand their usage patterns to enable them to understand the implications of switching to other tariffs such as Economy 7 tariffs.

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[24] This is consistent with Changeworks' response which noted that similar issues occurred in relation to Scottish Power's ComfortPlus meters.
[25] See summary of response hearing with consumer bodies.

(b) DTS tariffs were not well understood across the industry, which may lead to erroneous switching to the disadvantage of the customer.

28. Suppliers may be unwilling to compete for DTS customers due to the relatively small number of customers, the high market share of the incumbent suppliers and the complexity of the meters.

DTS tariffs

29. Changeworks told us that SSE's tariff for customers with THTC meters was one of the most expensive tariffs in the country.[26] In particular:

(a) as at 1 July 2015, customers with THTC meters on SSE's tariff were paying 9.84p/kWh for the heating element and 18.5p/kWh for other domestic use;

(b) as compared with SSE's SVT for dual fuel single-rate tariffs of 4.2p/kWh for gas and 14.86p/kWh for electricity; and

(c) consumers were therefore paying 134% more for the heating element and 25% more for their other domestic use.

30. Changeworks said that similarly SSE's tariff for customers with Economy 10 meters, as at 1 July 2015, had peak and off-peak rates of 11.8p/kWh and 17.78p/kWh respectively and so customers were paying 181% and 19.6% more.[27]

31. HIHAAWG told us that those customers effectively tied into Economy 10 and THTC meters were not able to access competitive market prices. In particular, HIHAAWG told us that:[28]

(a) the SSE unit rate was 'on balance around 16p per kw/hr';[29] and

(b) 'the competitive market price for a unit of standard electricity in the Highlands and Islands is 6p a unit less – at just over 10p per kw/r [sic].'[30]

32. Citizens Advice and Citizens Advice Scotland told us that absent barriers to switching DTS customers on SSE's THTC meter in North Scotland and Scottish Power's ComfortPlus Control meter in South Scotland could, based

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[26] See response to provisional findings and Remedies Notice from Changeworks.
[27] See response to provisional findings and Remedies Notice from Changeworks.
[28] The same analysis was submitted by Changeworks.
[29] This figure was based on a comparison between the rates paid on THTC (9.81 p/kWh for heating and 19.43 p/kWh for other usage), Economy 10 (12.02 p/kWh for off-peak and 18.14 p/kWh) and SSE's standard tariff rate of 15.61 p/kWh.
[30] This figure was based on the unit rates of four other suppliers, namely GB Energy (10.028 p/kWh), ExtraEnergy (10.288 p/kWh), Places for People (10.45 p/kWh) and Flow Energy (11.178 p/kWh).

on certain assumptions, make savings by switching to Economy 7 tariffs. In particular, this statement is based on:

(a) Ofgem's reported mean consumption for those with electric heating (providing a split between electricity usage on heating (7,516 kWh/year) and other usage (1,633 kWh/year));[31] and

(b) an assumption that all heating usage but no other usage would be on Economy 7 night rates.

33. Based on these assumptions Citizens Advice and Citizens Advice Scotland first estimated a bill based on SSE's tariff for customers with THTC meters in North Scotland.[32] They then estimated the equivalent bill based on SSE's domestic economy (Economy 7) tariff in North Scotland.[33] Finally they used a comparison website to estimate equivalent bills across Economy 7 tariffs in North Scotland.[34] They found that estimated bills were up to £132 to £275 cheaper on the cheapest available Economy 7 tariffs, dependent on payment method.

34. Citizens Advice and Citizens Advice Scotland followed the same process using Scottish Power's tariff for customers with ComfortPlus Control meters,[35] Scottish Power's Economy 7 tariff[36] and other Economy 7 tariffs in South Scotland. They found that estimated bills were up to £80 to £150 cheaper on the cheapest available Economy 7 tariffs, dependent on payment method.

35. Citizens Advice and Citizens Advice Scotland said that the exact outcome of a switch for any given customer would depend on that customer's pattern of energy usage.

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[31] A report for Ofgem by the Centre for Sustainable Energy (2013), *Beyond average consumption. Development of a framework for assessing impacts of policy proposals on different consumer groups*.
[32] At 26 November 2015 these rates were 9.81 p/kWh for the heating element and 19.43 p/kWh for other domestic use. The standing charge varied between 14.79 p/day for those on direct debit and paperless bills to 27.41 p/day for those on prepayment method or quarterly and paper bill.
[33] At 26 November 2015 these rates were 9.74 p/kWh for the night rate and 18.19 p/kWh for the day rate. The standing charge varied between 14.79 p/day for those on direct debit and paperless bills to 27.41 p/day for those on prepayment method or quarterly and paper bill.
[34] Citizens Advice and Citizens Advice Scotland used the following PCW: www.UKpower.co.uk.
[35] Reported rates were 7.557 p/kWh for the heating element and 13.084 p/kWh for other domestic use and the standing charge was 27.39 p/day for customers using direct debit. Reported rates were 8.314 p/kWh for the heating element and 13.841 p/kWh for other domestic use and the standing charge was 27.39 p/day for customers using prepayment method.
[36] Reported rates were 7.407 p/kWh for the night rate and 15.975 p/kWh for the day rate and the standing charge was 27.39 p/day for customers using direct debit. Reported rates were 8.164 p/kWh for the night rate and 16.732 p/kWh for the day rate and the standing charge was 27.39 p/day for customers using prepayment method.

Further analysis with respect to the supply of electricity to domestic customers with restricted meters

36. We have considered *(a)* the options available to customers with restricted meters in terms of tariffs and switching and *(b)* evidence in relation to whether customers with restricted meters are paying lower rates than they would do if on a single-rate tariff.

37. We have asked suppliers questions about their portfolio of restricted meters; the choices available to their restricted meter customers (including those with DTS controlled meters); and the likely impact of the ongoing roll-out of smart meters.

38. In addition, we have asked the Six Large Energy Firms:

    (a) if an existing customer with a restricted meter, excluding those with an Economy 7 meter, wanted to switch to a single rate tariff:

        (i) whether they would allow the customer to switch to a single-rate SVT or fixed-rate tariff;

        (ii) whether this would be conditional on their meter being replaced by an unrestricted meter; and

        (iii) whether there would be a cost to the customer;

    (b) if an existing customer with a restricted meter, excluding those with an Economy 7 meter, wanted to switch to an Economy 7 tariff:

        (i) whether they would allow the customer to switch to a single-rate SVT or fixed-rate tariff;

        (ii) whether this would be conditional on their meter being replaced by an unrestricted meter; and

        (iii) whether there would be a cost to the customer;

    (c) if a customer of a rival supplier with a restricted meter, excluding those with an Economy 7 meters, wanted to switch to them:

        (i) whether they would take them on or only those with certain meter types;

        (ii) whether this would be conditional on their meter being replaced with, say, an unrestricted or Economy 7 meter;

(iii) whether they would allow them to sign up to a single-rate SVT or fixed-term tariff; and

(iv) whether they would allow them to sign up to an Economy 7 SVT or fixed-term tariff; and

(d) whether PCWs are a useful tool for customers on restricted meters excluding those with Economy 7 meters.

39. We also requested from the Six Large Energy Firms information on tariff and consumption data and used mid-tier suppliers' tariff information in order to compare the actual bills paid with the hypothetical bills that customers would have paid had they switched to the more competitive tariffs available to direct debit customers with unrestricted meters.

40. Our findings are set out below. We consider first the evidence in relation to DTS controlled meters; then suppliers' submission on the extent of competition for customers with restricted meters; and finally evidence on how tariff rates compare with those available to customers with Economy 7 or unrestricted meters.

DTS meters

Ofgem's report on DTS meters

41. In 2013, Ofgem published its 'State of the market for customers with DTS' report. Ofgem found that: customers with DTS meters 'potentially face a narrow set of switching options' absent a change in meter or heating system; that suppliers do not actively advertise DTS tariffs; that non-DTS tariffs are likely to be more expensive for these customers; and that these customers are not aware of their choices and find it difficult to engage with PCWs and alternative suppliers due to the complexities of DTS meters.[37]

42. Ofgem said that when DTS meters were switched dynamically by the host supplier (ie the incumbent supplier),[38] non-incumbent suppliers may face a DTS-specific barrier to entry due to the risk of imbalance between their supply and demand positions. In particular, this risk arose because non-incumbent suppliers might not know in advance the timing and duration of supply to heating circuits for these DTS customers. Therefore if a non-incumbent

[37] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[38] See footnote 4.

supplier had DTS customers then it might face unexpected periods of high or low demand.[39]

43. Ofgem also said that when DTS meters were not used dynamically and effectively operated like meters with fixed switching times, customers may have more choice but may not obtain the potential benefits associated with dynamic switching.

44. Ofgem also found that, between 2009 and 2012, DTS tariffs generally compared favourably with other tariffs (namely, Economy 7, Economy 10, single rate single fuel and dual fuel) in the same areas.[40] Specifically Ofgem's analysis of tariffs found that:[41]

(a) In Northern Scotland of the two DTS tariffs offered by the incumbent, SSE, one of the tariffs (for customers with THTC meters) compared favourably against most alternatives (comparable with average Economy 7 and Economy 10 tariffs and cheaper than the cheapest single-rate and dual fuel tariffs). However, SSE's second tariff (for customers with Storage Heat Control meters) compared less favourably (above average Economy 7 and Economy 10 tariffs and at times above average single-rate and dual fuel tariffs).

(b) In Southern Scotland the DTS tariffs (for customers with ComfortPlus Control and ComfortPlus White Meter meters) offered by the incumbent, Scottish Power, compared favourably with other tariffs (comparable to the cheapest Economy 7 and Economy 10 tariffs).

(c) In the East Midlands the DTS tariff (for customers with Heatwise meters) offered by the incumbent, E.ON, compared favourably with other tariffs (comparable to the cheapest available Economy 7 tariffs). Further, Ofgem noted that a higher proportion of customers on DTS meters were on Economy 7 tariffs in the East Midlands, possibly because these meters were not being switched dynamically.

45. In November 2014[42] Ofgem published results of follow-up research on the experience of consumers who use DTS meters and tariffs. Ofgem said that the findings confirmed its view that DTS customers face more barriers to engagement in the retail energy markets than domestic consumers in general

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[39] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[40] ibid.
[41] However, we note that these results were based on 'typical' consumption levels for an average domestic customer on that meter type and therefore may not present an accurate representation for all customers on these tariffs.
[42] Ofgem (2014), *Dynamically Teleswitched meters and tariffs – Ofgem's views on the way forward*.

and, as a result, may be more exposed to poor outcomes. The main findings are that:

(a) many consumers have a low awareness and understanding of their DTS arrangements and tariff;

(b) people find this inherently complex heating system difficult to understand fully and operate efficiently;

(c) there is a perceived lack of interest by suppliers in explaining DTS arrangements to consumers and offering alternatives;

(d) the consumer base is often vulnerable and many find it difficult to access information and exercise supplier or tariff choice, even when this is available; and

(e) consumers may face additional barriers to exercising choice including a high cost for changing a DTS meter quoted to consumers who could least afford it.

Supplier views on DTS meters

46. Some suppliers told us that there may be difficulties in offering tariffs in relation to DTS meters. [✂]. E.ON said that there were some extra costs of supply in relation to DTS meters (although E.ON told us that when setting tariffs it did not distinguish between customers on this basis).

47. However, the Six Large Energy Firms[43] generally told us that the mechanism by which a restricted meter was controlled did not determine/limit the tariff choices available to customers.[44] For example, some Economy 7 meters are DTS meters.[45] However, SSE told us that although some Economy 7 meters were teleswitched (and could potentially be operated dynamically at some point in the future) they were not used in a dynamic way and were all operated statically as far as SSE was concerned. Rather, E.ON told us that it was a customer's type of restricted meter that determined the customer's choice set.

[43] These were EDF Energy, E.ON and RWE npower.
[44] For example, EDF Energy told us that tariff choice was determined by the meter's standard settlement code and whether its billing system was set up for that standard settlement code rather than how the meter was switched.
[45] Based on information provided by the Six Large Energy Firms (excluding E.ON) and the mid-tier suppliers, we have estimated that roughly 424,571 Economy 7 meters can be operated dynamically.

Restricted meters

Options available to customers

48. We have found that the options available to customers differ based on the exact meter type as some meters are supported by more suppliers than others.

49. For Economy 10 meters most of the Six Large Energy Firms offer tariffs to support these meters and accept new customers on these meters,[46] while some are also installing some new Economy 10 meters. However, as with other restricted meters, Economy 10 meters are not supported by PCWs nor do the mid-tier suppliers provide specific Economy 10 tariffs.

50. For other restricted meters we have received little, if any, evidence that either the Six Large Energy Firms as a group or the mid-tier suppliers as a group are actively competing to attract customers with restricted meters. In particular:

    (a) In relation to the Six Large Energy Firms:

        (i) Centrica told us that it offered Economy 7 terms to restricted meter customers as, given the small number of customers, the costs of designing and marketing bespoke tariffs for restricted meters outweighed the potential gains.

        (ii) [✂].

        (iii) E.ON told us that, given the small number of customers, it was not aware of suppliers actively competing to attract restricted meter customers (other than Economy 7 and, in some cases, Economy 10) given the costs of marketing and designing bespoke tariffs for these meters relative to the potential gains from attracting these customers. However, E.ON did highlight that its visibility of competitor activity was poor and hence it did not have a clear view of the overall market in this area.

        (iv) RWE npower told us that, given the small number of customers, [✂].

        (v) Scottish Power told us that, given the small number of customers, suppliers were not actively competing to attract restricted meter customers (other than Economy 7 and, in some cases, Economy 10)

[46] These were Centrica, EDF Energy, E.ON and SSE. For example, E.ON told us [✂]. However, RWE npower said that, with the exception of Economy 7, [✂]

given the costs of marketing and designing bespoke tariffs for these meters relative to the potential gains from attracting these customers.

(vi) SSE submitted that, given the small number of customers on restricted hours meters (other than Economy 7 and, in some cases, Economy 10), suppliers may have limited incentives to offer matching alternatives to the customer's current tariff given the complications and costs of marketing and designing bespoke tariffs for these meters.

(b) In relation to the mid-tier suppliers:

(i) [✂].

(ii) First Utility told us that it did [✂]. In particular, First Utility said, in part, [✂].

(iii) Ovo Energy told us that it did not specifically target customers with restricted meter types in its marketing campaigns.

(iv) Utility Warehouse told us that, due to the nature of its acquisition channel, it did not actively target any particular segments of customer and a customer's meter arrangement, among other information, was only identified once the quotation process had commenced.

51. We were also told that suppliers had a duty to supply restricted meter customers and that any restricted meter customer should therefore be able to switch to any supplier irrespective of that customer's meter type. However, the way suppliers met this obligation may differ, in particular:

(a) Of the Six Large Energy Firms:

(i) Centrica told us that it would take on any customer with a restricted meter but would offer them Economy 7 rates irrespective of their meter type.

(ii) EDF Energy told us that it supported certain meter types and offered bespoke tariffs for customers on those meter types while offering customers on unsupported meter types their single-rate tariffs (including fixed-term tariffs).

(iii) E.ON told us that it supported certain meter types and offered bespoke tariffs for customers on those meter types while offering customers on unsupported meter types their single-rate SVT tariff.

(iv) RWE npower told us that it required potential customers with restricted meters other than [✂].

(v) Scottish Power told us that it supported certain meter types and offered bespoke tariffs for customers on those meter types while those on unsupported meter types would be required to change meter to either an unrestricted or Economy 7 meter.

(vi) SSE told us that it would offer bespoke tariffs for customer on meter types that it supported while those on unsupported meter types would be required to change meter to either an unrestricted, Economy 7 or Economy 10 meter, if they switched to SSE.

(b) Of the mid-tier suppliers:

(i) [✂].

(ii) First Utility told us that it did not offer specific tariffs for customers with restricted meters and that single-rate tariffs were available to customers with these meters.

(iii) Ovo Energy told us that it did not offer bespoke tariffs to those on Economy 10 meters and these customers were offered Economy 7 rates. Alternatively it offered these customers single-rate tariffs conditional on a meter change.[47] For all other restricted meter customers it offered either single-rate or Economy 7 rates conditional on a meter change.

(iv) Utility Warehouse told us that all its current tariffs were available on restricted meters, including DTS meters.

52. We also asked suppliers for further information on the possibility for customers with restricted meters to switch to Economy 7 or single-rate tariffs, separately for existing customers and new customers. Two tables summarising the response to these questions are attached in Annex A.

53. Generally the Six Large Energy Firms told us that they faced no technical barriers in offering single rates or Economy 7 tariff rates to customers on restricted meters although they may require a change of meter. However, suppliers noted that this would generally lead to higher bills for the customer on these tariffs. In relation to this:

[47] This was free of charge if it was to a smart meter.

(a) EDF Energy told us that this was the case when comparing across its own tariffs.

(b) E.ON told us that this was the case only in relation to single-rate tariffs. In particular it considered offering Economy 7 tariffs to customers on restricted meters to be technically infeasible without a meter switch.

(c) RWE npower told us that [✂]. It also told us that it may lead to higher bills for customers rather than generally.[48]

(d) SSE told us that generally customers with electric heating systems would face higher bills if they switched to single-rate or Economy 7 tariffs rather than all customers with these meters.

54. In addition there may be one-off switching costs such as the need to re-programme or replace a customer's existing meter (which may or may not be covered by the supplier) and the need for internal rewiring, which would require a qualified electrician and be paid for by the customer. [✂] and E.ON told us that there were certain fixed costs, in terms of billing, involved in making single-rate tariffs available to those on restricted meters.

Suppliers' pricing

55. As reported above, consumer bodies estimated that SSE and Scottish Power customers with certain restricted meter tariffs were paying higher rates than customers with Economy 7 and unrestricted meters. We have some reservations about this analysis. Specifically:

(a) Changeworks compared off-peak electricity rates with standard gas rates.[49] Our view is that this is not an appropriate comparison as the wholesale energy, distribution and obligation costs incurred by retail energy suppliers for gas and electricity are different.

(b) HIHAAWG compared the unit rates of a tariff with peak and off-peak electricity rates to the unit rates of a single-rate electricity tariff. Our view is that this is not an appropriate comparison as it does not take account of usage patterns or standing charges.

(c) [✂] noted that its estimated savings would be sensitive to assumptions on usage patterns, in particular, because they assumed that all heating, but no other usage, would be on Economy 7 night rates.

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[48] We note that some suppliers also require a meter change in relation to single-rate tariffs, for example, [✂].
[49] See response to provisional findings and Remedies Notice from Changeworks.

56. Nevertheless we agree that, in principle, comparisons with the cheapest available Economy 7 tariffs is informative.

57. Centrica, [✂], E.ON and RWE npower said that [✂]. In particular:

(a) Centrica said that all customers on restricted meters paid the same peak and off-peak rates as Economy 7 customers, which meant that customers with meters offering more than 7 hours at off-peak rates would benefit from this arrangement;

(b) [✂]; and

(c) RWE npower said that the pricing of its restricted meter tariffs [✂].

58. SSE told us that in relation to restricted meters, including Economy 7 meters, there would be high reputational risks associated with pricing these customers on a different basis to the way in which customers on standard meters were priced. [✂].Scottish Power told us that in relation to restricted meters the main safeguard for customers at present was that suppliers recognised that they had a responsibility not to charge unreasonable prices, and the fact that prices were regularly monitored by Ofgem.[50]

Switching

59. As outlined above (see paragraph 50) we have received limited, if any, evidence that either the Six Large Energy Firms or the mid-tier suppliers actively compete to acquire customers with restricted meters. We have looked at the extent to which customers on restricted meters are with the incumbent supplier in their region.

60. Table 3 shows the incumbent share of supply by PES region for restricted meters as at September 2015[51] and separately for electricity (for all electricity meters including restricted meters) and gas as at July 2015. We note that the figures for restricted meters are only based on data for the Six Large Energy Firms while the figures for electricity and gas include all suppliers.

61. We have found that within each of the PES regions the incumbent electricity supplier, as at September 2015,[52] supplied between 40 and 91% of electricity customers on restricted meters,[53] with the incumbent share at over 70% in ten

[50] Scottish Power response to CMA supplemental notice of possible remedies, Question 2(a).
[51] Note that information provided for SSE is as at June 2015.
[52] Note that information provided for SSE is as at June 2015.
[53] We note that the incumbency shares in the South East and South West regions are materially lower than in other PES regions. EDF Energy, the incumbent supplier in both of these regions, told us that, without access to the volumes of these meters from other suppliers and by region, it was not clear why the incumbency shares in these regions would be materially lower than in others. [✂]. We will explore the extent to which the Six Large

of the 14 regions.[54] Across GB the incumbent share of supply in restricted meters is 79% which is significantly higher than the equivalent figure for all electricity (33%) and gas (37%) customers.[55]

Table 3: Incumbent share of supply by PES region

Region	*Non-Economy 7 restricted meters*	*Electricity (all)*	*Gas*
Great Britain	[✂]	[✂]	[✂]
East Anglia	[✂]	[✂]	[✂]
East Midlands	[✂]	[✂]	[✂]
London	[✂]	[✂]	[✂]
Merseyside and North Wales	[✂]	[✂]	[✂]
Midlands	[✂]	[✂]	[✂]
North East	[✂]	[✂]	[✂]
North Scotland	[✂]	[✂]	[✂]
North West	[✂]	[✂]	[✂]
South East	[✂]	[✂]	[✂]
Southern	[✂]	[✂]	[✂]
South Scotland	[✂]	[✂]	[✂]
South Wales	[✂]	[✂]	[✂]
South West	[✂]	[✂]	[✂]
Yorkshire	[✂]	[✂]	[✂]

Source: CMA analysis.
Notes:
1. Figures for non-Economy 7 restricted meters are based on data provided by the Six Large Energy Firms for September 2015, except for SSE which is as at June 2015.
2. Figures for electricity and gas are based on Cornwall Energy data covering Q1 and Q2 2015.
3. Figures for electricity cover all types of electricity meter and therefore include non-Economy 7 restricted meters.
4. The incumbent gas supplier is British Gas. The incumbent electricity supplier is E.ON for East Midlands, East Anglia, North West; EDF for London, South East, South West; RWE for Midlands, North East, Yorkshire; Scottish Power for South Scotland, Merseyside and North Wales; SSE for North Scotland, Southern, South Wales.

62. In addition, for certain types of restricted meters, we have been able to identify the percentage of customers who, as at September 2015,[56] continued to receive electricity from the same incumbent supplier that installed their restricted meter. These customers have meter types, and are on supporting tariffs, that when installed were unique to an incumbent electricity supplier. In particular, we have investigated SSE's THTC and SuperDeal meters, Scottish Power's ComfortPlus meters, E.ON's Heatwise meter,[57] RWE npower's SuperTariff meter[58] and EDF Energy's WarmWise meter.

63. For customers on these types of restricted meter, the original incumbent supplier still supplies nearly [✂] of such customers. In particular, the lowest incumbent share was [✂] while for four of the seven meters the share was

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Energy Firms have installed non-Economy 7 restricted meters outside of their incumbency areas. In particular, if the Six Large Energy Firms have installed non-Economy 7 restricted meters outside of their incumbency areas incumbency shares could overestimate the level of switching.
[54] CMA analysis based on data from the Six Large Energy Firms.
[55] Figures for electricity and gas are based on Cornwall data covering Q1 and Q2 2015.
[56] Note that information provided for SSE is as at June 2015.
[57] E.ON told us that Heatwise meters were installed by E.ON specifically in the East Midlands region, however, it had no visibility in relation to whether other suppliers had installed Heatwise meters in any region.
[58] RWE Npower told us that SuperTariff was a 'brand' tariff name used by Northern Electric, now part of the RWE group, in the North East. RWE Npower noted that a [✂] offered their own tariffs with similar characteristics to SuperTariff.

over [✂].[59] For example, in relation to THTC meters in North Scotland and ComfortPlus meters in South Scotland the incumbent supplier in each region (SSE and Scottish Power respectively) appears to be the only supplier that offers bespoke tariffs for these meters and each has [✂] of the respective share of supply.[60]

64. We note that RWE npower told us [✂].

65. In relation to this we note that when looking across the North East other suppliers have [✂] customers on restricted meters. If all these customers had SuperTariff meters then the incumbency share in the North East region for SuperTariff would be [✂]. However, we understand, based on data collected for our restricted meter bills analysis (see Annex B), that not all of these customers at other suppliers are on SuperTariff meters. Therefore based on current evidence we consider that a significant number of customers who had SuperTariff meters in 1998 have either had that meter replaced with an Economy 7 or unrestricted meter or had it removed because they have had gas central heating installed. However, we will look to explore other potential explanations.

Summary

66. In response to our provisional findings we received submissions in relation to restricted meters from several consumer bodies. These submissions stated that customers on these meters faced barriers to switching and that the specific tariffs offered for these meters did not compare favourably to tariffs available to those with single-rate or Economy 7 meters.

DTS meters

67. Particular concerns have been raised in relation to DTS meters in Scotland, specifically those on the THTC meter and the ComfortPlus meters, and Ofgem has reported that there may be specific barriers to entry in relation to these meters for non-incumbent suppliers. In relation to THTC meters in North Scotland and ComfortPlus meters in South Scotland the incumbent supplier in each region (SSE and Scottish Power respectively) appears to be the only

[59] For WarmWise the incumbent share was [✂], for Heatwise [✂], for SuperTariff [✂], for ComfortPlus Control [✂], for ComfortPlus White Meter [✂], for THTC [✂] and for SuperDeal [✂].
[60] We understand that E.ON has some customers [✂]) on these three meterswith the majority on E.ON's single-rate SVT tariff as E.ON do not offer a bespoke tariff for all these meters. However, E.ON does offer a bespoke tariff to a subset of the ComfortPlus meters, referred to as "Weathercall" meters, and has [✂] customers with these meters on a tariff called "Electrical Heating Comfort Extra Control". SSE has [✂] customer on ComfortPlus meters all on a bespoke SVT tariff, however, we understand that this tariff is not available to new customers. RWE Npower also has some customers on these meters ([✂]).

supplier offering bespoke tariffs for these meters and has [✂] of the share of supply.[61]

68. However, while some suppliers noted that there may be some extra costs associated with supplying customers with DTS meters, the Six Large Energy Firms generally told us that the mechanism by which a restricted meter was controlled did not determine/limit the tariff choices available to customers.[62] For example, Scottish Power told us that not all customers on its ComfortPlus White Meter tariff used DTS meters. Further, there were other non-Economy 7 restricted meters that were not DTS meters where the incumbent suppliers had similar shares.[63]

69. We have also been told that many Economy 7 meters are DTS meters, although we note in this regard that they do not appear to currently be operated dynamically, and yet Ofgem has concluded that market conditions for customers with Economy 7 meters are similar to those for unrestricted meters.

70. In light of this it appears to us that how a meter is controlled is not a factor in determining a customer's ability to switch supplier.

Restricted meters

71. For restricted meters we have provisionally found that customers with these meters face specific barriers to accessing and assessing information on the options available to them and to switching supplier.

72. In particular, we have provisionally found that many customers on restricted meters do not have a choice of supplier offering meter-specific tariffs for their meter. They can in principle switch to a single-rate or an Economy 7 tariff offered by their supplier or rival suppliers, but some suppliers would require their existing meter to be replaced with an unrestricted, Economy 7 or Economy 10 meter at a cost to the customer. Changing meters might also involve some rewiring in the home. In addition, non-Economy 7 restricted meter tariffs are not currently supported by PCWs or suppliers' online search tools. All this almost certainly means that, for these customers, understanding

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[61] We understand that E.ON has some customers ([✂]) on these three meters with the majority on E.ON's single-rate SVT tariff as E.ON does not offer a bespoke tariff for all these meters. However, E.ON does offer a bespoke tariff to a subset of the ComfortPlus meters, referred to as 'Weathercall' meters, and has [✂] customers with these meters on a tariff called 'Electrical Heating Comfort Extra Control'. SSE has [✂] customer on ComfortPlus meters all on a bespoke SVT tariff, however, we understand that this tariff is not available to new customers. RWE npower also has some customers on these meters ([✂]).
[62] For example, EDF Energy told us [✂].
[63] For example, for the Heatwise meter the incumbent share was [✂], for the SuperTariff meter the incumbent share was [✂] and for the SuperDeal meter the incumbent share was [✂].

the options available to them is more difficult and switching supplier is more onerous, than it is for customers with other meter types.

73. Similarly Ofgem has also found that retail customers with restricted meters face additional barriers to engagement in the retail energy markets than consumers in general.[64] In particular it found that:

(a) many consumers have a low awareness and understanding of their DTS arrangements and tariff;

(b) people find this inherently complex heating system difficult to understand fully and operate efficiently;

(c) there is a perceived lack of interest by suppliers in explaining metering arrangements to consumers and offering alternatives; and

(d) the consumer base is often vulnerable and many find it difficult to access information and exercise supplier or tariff choice, even when this is available.

74. With regard to outcomes for restricted meter customers, consumer bodies said that certain Scottish Power and SSE customers in Scotland were paying higher prices than customers with unrestricted and Economy 7 meters. We estimate that roughly [✂] customers are on the meters identified by these bodies. However, suppliers indicated that customers with restricted meters could pay higher prices if they were to switch to Economy 7 or unrestricted meters. We explore this in more detail below.

Restricted meter bills analysis

75. As outlined above, generally the Six Large Energy Firms told us that customers on restricted meters would generally pay higher bills if they switched from a meter-specific tariff (ie a tariff tailored to their meter type) to a single-rate or Economy 7 tariff, subject to the caveats outlined in paragraph 53. We have undertaken analysis to test this claim.

76. We compared the bills paid by customers on restricted meters, roughly 89%[65] of whom are on an SVT bespoke to their specific type of restricted meter,[66]

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[64] November 2014 Ofgem published results of research on the experience of consumers who use DTS meters and tariffs. Ofgem (2015), *Dynamically Teleswitched meters and tariffs – Ofgem's views on the way forward.*

[65] For Centrica [✂] of observations in our dataset were on an SVT, for EDF Energy [✂], for E.ON [✂] of observations in our dataset were on an SVT, for RWE npower [✂] of observations in our dataset were on an SVT, for Scottish Power [✂] of observations in our dataset were on an SVT and for SSE [✂] of observations in our dataset were on an SVT.

[66] Note that: Centrica offers its Economy 7 tariffs to all restricted meter customers and therefore for Centrica when we refer to a meter-specific tariff we are referring to an Economy 7 tariff; and where E.ON does not support

with those that they would pay had they been on the cheapest single-rate tariffs in the market.[67] When selecting our benchmark single-rate tariffs we have used direct debit tariffs available to all customers on unrestricted meters adjusted to take account of the differences in the cost to serve these customers, but not for any one-off switching costs such as the cost of changing meter or rewiring.

77. This analysis uses tariffs in the market end Q2 2015 and estimated annual consumption by meter as at Q2 2015. Our methodology and the high-level results of this analysis are set out here and more detail can be found in Annex B.

78. We have found that 69% of customers would have lower bills if they were on the cheapest single-rate tariffs from across the Six Large Energy Firms and the mid-tier suppliers. However, it should be noted that the results differ significantly depending on the supplier in question, see Table 4. For example, while for [✂] would have been better off on the cheapest single-rate tariff, for [✂] were better off on their current meter-specific tariffs.

79. We have used the difference in the estimated bills as an estimate of detriment for those customers who would have lower bills on the cheapest single-rate tariff (see Section 3).

80. The distribution of detriment for customers who would have lower bills on the cheapest single-rate tariff is set out in Figure 3 by supplier. On average the difference was around £161 per customer or 18% of their average annual bill.[68] This gives a total detriment in the order of roughly £43 million.

Figure 3: Distribution of detriment for customers who would have lower bills on the cheapest single-rate tariff, by supplier

[✂]

Source: CMA analysis.
Note: SLEF stands for the Six Large Energy Firms, BG is Centrica, EDF is EDF Energy, EON is E.ON, RWE is RWE npower, SP is Scottish Power and SSE is SSE.

81. Table 4 below shows, for each of the Six Large Energy Firms, the percentage of observations where the single-rate bill was lower, the number of observations where the single-rate bill was lower, the mean bill difference for

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a meter with a bespoke tariff these meters are categorised by E.ON as 'other' and are offered the single-rate SVT tariff and therefore for E.ON customers with a meter labelled as 'other' when we refer to a meter-specific tariff we are referring to E.ON's single-rate SVT tariff. E.ON also has some customers who are on restricted meter tariffs not bespoke to their restricted meter type.

[67] In particular, our tariff information covered the Six Large Energy Firms, Sainsbury's Energy, M&S Energy, Ebico, Co-operative Energy, First Utility and Ovo Energy.

[68] There were some observations where customers could have made extremely large savings and these results were skewing the mean savings. Therefore when calculating the mean saving we excluded observations where the savings were over £500.

those where the single-rate bill was lower, the bill difference as a percentage of the current bill and the total detriment.

82. As outlined above we were looking at the extent to which customers on restricted meters would generally pay higher bills if they switched from their current meter-specific tariff to a single-rate tariff. In doing this our key results are as follows:

(a) [✂].

(b) [✂].

(c) [✂].

Table 4: Percentage of MPANs where the single-rate bill was lower, number of MPANs where the single-rate bill was lower, mean difference between single-rate bill and the current bill for those where the single-rate bill is lower, difference between single-rate bill and current bill as a percentage of current bill for those where the single-rate bill is lower and total detriment, by supplier

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Percentage where single-rate bill cheaper	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Number where single-rate bill cheaper*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Mean bill difference*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Bill difference as a percentage of restricted bill*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Total detriment*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis.
*There were some observations where customers could have made extremely large savings and these results were skewing the mean savings. Therefore when calculating the mean saving we excluded observations where the savings were over £500. This led to the exclusion of 4% of observations and the highest saving observed was £2,233.

83. Apart from those customers with low usage where results were driven by differences in the standing charge, we found that current bills were higher for one of two reasons:

(a) **Tariff unit rates** – in some cases the off-peak rates offered on the meter-specific tariff were roughly the same or above the unit rate on the single-rate tariff such that generally all customers on that meter would be better off on the single-rate tariff.

(b) **Customer's usage split** – in some cases the rates offered on the restricted tariff were such that a customer's split between peak and off-peak usage would determine the best tariff such that customers with low off-peak usage relative to total usage would be better off on the single-rate tariff.

84. These reasons are both consistent with weak customer engagement. That is, in both cases an engaged customer basing a decision on price and with an understanding of their usage pattern would, subject to one-off switching costs, switch from their current meter-specific tariff to the cheapest single-rate tariff.

Annex A: Six Large Energy Firms' switching policies

Table 1: Summary of responses in relation to the scope for customers with restricted meters to switch to tariffs available to customers with Economy 7 or unrestricted meters

	Centrica	*EDF Energy*	*E.ON*	*RWE npower*	*Scottish Power*	*SSE*
1a) Allow existing customers to move SVT single rate	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
1b) Would they need to change their meter?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
1c) Would there be a cost for the customer?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
2a) As above but to single-rate fixed-term tariffs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
2b) As above but to Economy 7 tariffs (SVT and fixed-term)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Six Large Energy Firms.
*Where a customer has two meters, non-heat supply can normally be separately moved to fixed-rate single-rate tariffs.
†White meters and older Economy 10 meters are Economy 7 compatible.
‡If rewiring is required when a meter is changed a customer may need to pay for an electrician to do this.
§[✂].
¶[✂]

Table 2: Summary of responses in relation to the options for customers of a rival supplier with a non-Economy 7 restricted meter to switch

	Centrica	*EDF Energy*	*E.ON*	*RWE npower*	*Scottish Power*	*SSE*
a) Would you take them?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
b) Would this be conditional on a meter change?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Could they sign up to your: c) single-rate SVT	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
d) single-rate fixed-term tariff?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
e) Economy 7 SVT tariff?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
f) Economy 7 fixed-term tariffs?	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
g) Would certain meters be limited to single-rate/ Economy 7 tariffs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Six Large Energy Firms.
*Where a customer has two meters, non-heat supply can normally be separately moved to fixed-rate single-rate tariffs.
§[✂].

Annex B: Restricted meter bills analysis

1. As outlined above, generally the Six Large Energy Firms told us that customers on restricted meters would generally pay higher bills if they switched from a meter-specific tariff (ie a tariff tailored to their specific type of restricted meter) to a single-rate or Economy 7 tariff, subject to the caveats outlined in paragraph 53 of the appendix.

2. This annex sets out the methodology and provisional results of our analysis of this statement. In particular, we have compared the bills paid by customers with restricted meters with those that they would pay had they been on the cheapest direct debit single-rate tariff available in the market.[69]

3. This annex is structured as follows:

   (a) First, we describe the data used for this analysis.

   (b) Second, we set out the methodology.

   (c) Finally, we present our results.

4. We provide further detail in the annexes below:

   (a) Annex C describes in detail the data used for this analysis and the steps taken to clean it.

   (b) Annex D presents additional detailed results.

Data

5. We collected three sets of data for this analysis, as follows:

   (a) For each of the Six Large Energy Firms, a list of electricity tariffs available for sale on 30 June 2015 (both restricted and single rate) and information on the characteristics of each tariff, such as its price, payment method and the meter types compatible with that tariff.

   (b) For each of the Six Large Energy Firms and for each MPAN with a restricted meter the estimated annual consumption (EAC) separated by usage (ie peak usage, off-peak usage, heating usage, etc.) for the year 1

[69] In particular, our tariff information covered the Six Large Energy Firms, Sainsbury's Energy, M&S Energy, Ebico, Co-operative Energy, First Utility, Ovo Energy and Utility Warehouse.

July 2014 to 30 June 2015 and the meter type. This information was provided by region subject to the following criteria:[70]

(i) Economy 7 meters were excluded.

(ii) Restricted meters types where the supplier had less than 1,000 customers on that meter type were excluded.

(iii) Regions where the supplier had less than 1,000 customers on non-Economy 7 restricted meters were excluded.

(c) For each of the Six Large Energy Firms and subject to the criteria at (b), a list of electricity tariffs that restricted meter customers were on but which were no longer available for sale on 30 June 2015 and information on the characteristics of each tariff, such as its price, payment method and the meter types compatible with that tariff.

6. We also used tariff information for the Mid-tier Suppliers, this was taken from the Energylink dataset used in the analysis of the potential gains from switching, see Appendix 7.4 to the provisional findings report for more detail.

7. We excluded some of the data for the reasons outlined in Annex C. Table 1 below shows the total number of MPANs included in the data submitted by the Six Large Energy Firms and the proportion of MPANs affected by our exclusions.[71] To the extent possible we will look at how to reduce the number of observations that have been excluded.

8. The proportion of excluded accounts is highest for Scottish Power, this is due to a large number of MPANs where no usage was recorded at all or no usage was recorded for the specific off-peak or heating time-of-use register for the meter type associated with that MPAN. In addition, SSE has a significant number of exclusions because some of its meter types could not be incorporated within the analysis (see Annex C) and Centrica has a significant number of exclusions due to a large number of MPANs where no usage was recorded for the specific off-peak or heating time-of-use register for the meter type associated with that MPAN. To the extent possible we will look at how to reduce the number of exclusions and refine our identification of outliers.

Table 1: Total number of MPANs included in the consumption data and proportion of these accounts excluded from the analysis, by supplier

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

[70] [✂].
[71] Note that where a customer has two MPANs and those MPANs relate to the same meter and the same tariff applies to both MPANs those MPANs were combined and treated as one MPAN in our dataset.

Total number of observations	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Percentage excluded	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis of the Six Large Energy Firms' data
Note: Where a customer has two MPANs and those MPANs relate to the same meter and the same tariff applies to both MPANs those MPANs were combined and treated as one MPAN in our dataset.

Methodology

9. The aim of this restricted meter analysis was to test whether customers on restricted meters would pay more on the cheapest single-rate tariff when compared to their current meter-specific tariff. To do this our analysis took a snapshot view of the market as at 30 June 2015 where annual bills were estimated based on actual tariffs and EAC.

10. The implicit assumption in this analysis was that, for a given region and payment method, the direct and indirect costs of supplying these customers were not higher than those for unrestricted meter customers. For reasons given in paragraphs 10 to 16 of the appendix, we consider this to be a conservative.

11. We have not been able to test this in relation to Economy 7 tariffs. This is due to the difficulty of calculating Economy 7 bills based on restricted meter consumption data. In particular, for each meter type the consumption data from each time-of-use register has to be apportioned to either peak Economy 7 consumption or off-peak Economy 7 consumption in order to calculate bills. This is difficult due to differences in: (i) the length of time each time-of-use register is in operation; and (ii) when each time-of-use register is in operation.[72] These differences are generally driven by different customer needs based on different customer heating systems.[73]

12. Therefore certain assumptions would need to be made about the split of usage between Economy 7 peak and off-peak windows. Given that the results

[72] For example, the Economy 10 meter is a meter where a customer receives 14 hours of 'peak' electricity and 10 of 'off-peak' electricity. Further, while Economy 7 off-peak electricity is, generally, provided in a window overnight Economy 10 off-peak electricity is, generally, provided in three different time slots one overnight, one in the afternoon and one in the evening.
[73] For example, imagine a customer has a specific restricted meter – Meter A. This meter is specific to the electric heating system the customer has and enables the customer to have more consistent heating throughout a 24-hour period. In particular, Meter A, and therefore the heating system, only operate for a total of 10 hours a day split into three windows – an afternoon window, an evening window and a night time window. Currently this customer is on a tariff specific to Meter A and receives an 'off-peak' rate for all 10 hours of electricity. If this customer switched to an Economy 7 tariff where there is one off-peak window that occurs overnight it is not clear how much of the customer's consumption under Meter A would fall within the Economy 7 off-peak window. In particular, although the customer may be able to shift some usage to Economy 7 off-peak window from the Meter A afternoon and evening windows it is not clear that a customer would be willing and able to shift all usage to the Economy 7 off-peak window.

of any such analysis would largely be driven by these assumptions we do not consider the results of any such analysis would be robust and have therefore not tested this.

Calculation steps

13. No discounts are applied other than direct debit discounts where relevant. Further, the bills have been calculated based on the tariffs available in that region. Below we outlined how the bills have been calculated for each tariff type in more detail.

Step 1: calculating the current bill

14. First, we calculate each MPAN's current bill; that is, the annual bill of a customer based on their current meter-specific tariff and EAC for the past 12 months.[74]

15. The calculated bill is based on the tariff characteristics as at 30 June 2015. Further, as these tariffs are specific to the meter type the bills are calculated by multiplying the consumption by the unit rate for each time-of-use register these totals are then summed and added to the standing charge.

Step 2: calculating the bill for the cheapest single-rate tariff

16. Second, we calculate each MPAN's single-rate bill. That is, the annual bill of a customer based on the cheapest direct debit single-rate tariff and EAC for the past 12 months. Where an MPAN is currently on a standard credit or direct debit tariff the single-rate bill has been adjusted to take account of the differences in the cost to serve these customers (for more information see Appendix 3.6).

17. Due to the number of single-rate tariffs available we first used a filter to identify the four 'cheapest' direct debit single rate tariff for each region based on four consumptions levels. In particular, to do this, separately for each region:

    (a) we identified four consumption levels (the mean and median and the 25th and 75th percentile);

[74] Note that: Centrica offer their Economy 7 tariffs to all restricted meter customers and therefore for Centrica when we refer to a meter-specific tariff we are referring to an Economy 7 tariff; and where E.ON does not support a meter with a bespoke tariff these meters are categorised by E.ON as 'Other' and are offered the single-rate SVT tariff and therefore for E.ON customers with a meter labelled as 'Other' when we refer to a meter-specific tariff we are referring to E.ON's single-rate SVT tariff.

(b) we calculated bills based on these four consumption levels for all single-rate tariffs available on 30 June 2015 from the Six Large Energy Firms and Mid-tier Suppliers; and

(c) we identified the four 'cheapest' single rate tariffs for each of the four consumption levels (note these could be the same for one or more of the consumption levels).

18. Overall there were three tariffs that came out as the cheapest single-rate tariff. These were:

(a) two Centrica white label tariffs:

(i) 'SE Fixed Price July 2016'

(ii) 'SE Price Freeze August 2016'

(b) a First Utility tariff – 'isave fixed July 2016'

19. These two tariffs were all available to new customers, however, it should be noted that Centrica required a change of meter which would cost the customer £70.

20. We then calculated a bill for each MPAN based on that MPAN's actual usage and the four 'cheapest' single-rate tariffs available in that region. As these are single-rate tariffs we have summed the consumption across all time-of-use registers and then multiplied it by the relevant unit rate for each tariff. This was then added to the standing charge. If the MPAN is currently on a standard credit or prepayment tariff the single-rate bill has been adjusted to take account of the differences in the cost to serve these customers. Once this was done the lowest bill across the four was identified for each MPAN and used as a basis of comparison.

Step 3: Comparing the bills

21. For each MPAN we have looked at the difference between the current bill from step 1 and the single-rate bill from step 2 to assess the extent that customers would pay more or less on their current meter-specific tariff when compared to the cheapest single-rate tariff.

Caveats

22. We note that there are several caveats to the results outlined below. In particular:[75]

    (a) The analysis is based on a snapshot period in time and therefore does not capture the extent to which the results outlined below are due to the tariffs in place on 30 June 2015 or have been the case over time.

    (b) The analysis does not allow for one-off switching costs such as the cost of a meter change.

23. Finally, RWE raised concerns about customers who have two meters where one of the meters is an off-peak or restricted hour tariff meter connected to the space and water heating system and the other meter is for general usage and is generally an unrestricted, but sometimes Economy 7, meter. In particular, RWE noted that these customers have to switch both meters to a new supplier at the same time and as our dataset would not cover the general usage meter any analysis in relation to these meters would not fully capture whether customers would be better off by switching.

24. This is correct for three of the Six Large Energy Firms where customers with these arrangements have separate tariffs for each meter and therefore our dataset does not cover their general usage meter.[76] However, we believe that our results underestimate the difference in bills for these customers as it ignores the benefits the customer would derive from their single-rate meter being on the cheapest available tariff.

Results

25. In presenting our results we focus on the high-level results across all regions, meters and suppliers. In particular, we focus on:

    (a) the percentage of observations where the customer would have paid a lower bill on the cheapest single-rate tariff.

    (b) the differences in the bills, for those for whom the cheapest single-rate bill is lower, as an estimate of detriment.

    (c) the driver of the results.

---

[75] We note that when looking in detail at our results we had to make certain assumptions about what constituted off-peak usage. This was done based on information provided by suppliers and does not affect the overall results of our analysis.
[76] [✂].

26. In Annex D we look at the results in more detail focusing on the results for meter/region combinations where a supplier has 10,000 or more MPANs in our final dataset (these accounted for 62% of our final dataset).

27. Table 2 below shows, across all regions and separately for Scotland and outside of Scotland, the total number of observations, the number of observations where the single-rate bill was lower and the percentage of observations where the single-rate bill was lower.

28. As can be seen overall when looking across suppliers the majority of customers (69%) would have paid less on the market's cheapest single rate tariff. In Scotland this figure is slightly higher at 81%.

Table 2: Total number of MPANs, number where the single-rate bill was lower and percentage where single-rate bill was lower for all regions, Scotland and outside of Scotland

	All regions	*Scotland*	*Outside of Scotland*
Total observations	412,781	178,727	234,054
Number where single-rate bill lower	286,654	144,643	142,011
Percentage where single-rate bill lower	69%	81%	61%

Source: CMA analysis

29. Table 3 below shows, across all regions and separately for Scotland and outside of Scotland, the number of observations where the single-rate bill was cheaper, the mean bill difference for those where the single-rate bill was cheaper and the bill difference as a percentage of the current bill.

30. We found that 69% of customers on restricted meters would have paid less on the market's cheapest single rate tariff by, on average, £161 or 18% of their average annual bill.

Table 3: Number of MPANs where the single-rate bill was lower, mean difference between single-rate bill and current bill for those where the single-rate bill was lower, difference between single-rate bill and current bill as a percentage of current bill for those where the single-rate bill was lower and total detriment for all regions, Scotland and outside of Scotland

	All regions	*Scotland*	*Outside of Scotland*
Number where single-rate bill lower*	269,713	136,439	133,274
Mean bill difference*	£161	£161	£160
Bill difference as a percentage of current bill*	18%	16%	20%
Total detriment*	£43.3m	£22.0m	£21.3m

Source: CMA analysis.
*There were some observations where customers could have made extremely large savings and these results were skewing the mean savings. Therefore when calculating the mean saving we excluded observations where the savings were over £500. This lead to the exclusion of 4% of observations and the highest saving observed was £2,233.

31. Table 4 below shows, for each of the Six Large Energy Firms, the percentage of observations where the single-rate bill was lower, the number of observations where the single-rate bill was lower, the mean bill difference for those where the single-rate bill was lower, the bill difference as a percentage of the current bill and the total detriment.

32. The key results are as follows:

(a) [✂].

(b) [✂].

(c) [✂].

Table 4: Percentage of MPANs where the single-rate bill was cheaper, number of MPANs where the single-rate bill was lower, mean difference between single-rate bill and current bill, difference between single-rate bill and current bill as a percentage of current bill for those where the single-rate bill was lower and total detriment , by supplier

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Percentage where single-rate bill cheaper	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Number where single-rate bill cheaper*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Mean bill difference*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Bill difference as a percentage of restricted bill*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Total detriment*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis.
*There were some observations where customers could have made extremely large savings and these results were skewing the mean savings. Therefore when calculating the mean saving we excluded observations where the savings were over £500. This lead to the exclusion of 4% of observations and the highest saving observed was £2,233.

Annex C: Data cleaning

1. This annex summarises the structure of the supplier data (tariff and consumption datasets) and the steps we took in cleaning these datasets for the analysis.

Tariff data

The Six Large Energy Firms

2. There were two tariff datasets from the Six Large Energy Firms, the first tariff dataset includes information on all electricity tariffs available for sale on 30 June 2015 (both restricted and single-rate). The second tariff dataset includes information on all electricity tariffs that restricted meter customers were on, but which were no longer available for sale, on 30 June 2015.

3. The datasets were constructed such that each row contains the tariff name, the payment method, the standing charge, the unit rates for each time-of-use register, if relevant whether that time-of-use register equates to peak or off-peak usage and, for each meter type, an indicator of whether that meter type is compatible with that tariff. Each tariff is listed in multiple rows to accommodate the following:

   (a) Separate rows for each payment method associated with a product (standard credit, direct debit or prepayment) and the associated standing charges and unit rates.

   (b) Separate rows for each variant of a tariff compatible with a different set of meters.

4. The dataset only includes direct debit discounts.

The Mid-tier Suppliers

5. The tariff data for the four mid-tier suppliers: Co-Operative Energy, First Utility, Ovo Energy and Utility Warehouse was extracted from the Energylinx dataset created for Analysis of the potential gains from switching.

6. Only single fuel electricity tariffs available to customers paying by direct debit at the end of Q2 2015 snap shot were extracted.

7. Online tariffs were included in this data.

Exclusions

8. Economy 7, bundle, green, social and DTS tariffs were excluded from the data as were tariffs that provided a paperless billing discount.

Consumption data

9. The consumption dataset includes information on estimated annual consumption (EAC) of electricity for each MPAN for the year 1 July 2014 to 30 June 2015, subject to the following criteria:[77]

   (a) Economy 7 meters were excluded.

   (b) Restricted meters types where the supplier had less than 1,000 customers on that meter type were excluded.

   (c) Regions where the supplier had less than 1,000 customers on non-Economy 7 restricted meters were excluded.

10. The datasets were constructed such that each row contains a unique identifier for each MPAN, the meter type, the MPAN's current tariff, the payment method and the usage for each time-of-use register.

Exclusions

11. We have excluded the following MPANs from our analysis:

   (a) MPANs where there was no usage recorded across all time-of-use registers (5.94% of observations).

   (b) MPANs where there was no usage recorded for the specific off-peak or heating time-of-use register for the meter type associated with that MPAN (8.63% of observations).

   (c) There were customers with more than one dual MPAN meter and the MPANs for each meter could not be matched (0.07% of observations).

   (d) MPANs that were on a tariff for which the tariff information was not available (0.12% of observations).

   (e) MPANs where the customer was on a tariff not compatible with their recorded usage and meter type (0.35% of observations).

[77] [✂].

(f) The recorded usage was classified as extremely high and therefore unlikely to be a true domestic customer (this was classified as users within the 98th percentile after taking into account other exclusions. These meters had consumptions levels over 23,955.5 kWh of energy in total, and accounted for 1.62% of observations).

12. [✂]:

    (a) [✂].

    (b) [✂].

13. [✂].

14. [✂].[78] [✂].

15. Overall this means that we were able to analyse roughly 79% of the original observations provided by the Six Large Energy Firms.[79] This equates to a sample of approximately 413,000 observations.[80]

16. To the extent possible we will look at how to reduce the number of exclusions and refine our identification of outliers.

[78] [✂].
[79] In relation to each of the Six Large Energy Firms this relates to [✂].
[80] We note that at two suppliers a small number of customers with dual MPAN meters were recorded as having different tariffs on each MPAN. These MPANs are currently included, subject to other exclusions, based on one tariff and we will look to resolve this before the final decision.

Annex D: Additional detailed results of restricted meter bills analysis

1. In this annex we set out more detailed results in relation to meter/region combinations where a supplier has 10,000 or more MPANs in our final dataset (these accounted for 62% of our final dataset).

2. This includes the meter types identified by the consumer organisations as set out in paragraphs 21 to 32 in the appendix.

Centrica

3. Centrica has [✂].

Figure 1: Centrica meters and regions with over 10,000 MPANs

[✂]

Source: CMA analysis.

4. [✂].

5. For those [✂].

EDF Energy

6. EDF Energy has [✂].

Figure 2: EDF Energy meters and regions with over 10,000 MPANs

[✂]

Source: CMA analysis.

7. [✂].

E.ON

8. E.ON has [✂].

Figure 3: E.ON meters and regions with over 10,000 MPANs

[✂]

Source: CMA analysis.

9. [✂].

10. [✂].

11. [✂].

12. [✂].

13. [✂]:[81]

(a) [✂];

(b) [✂]; and

(c) [✂].

Scottish Power

14. Scottish Power has [✂].

Figure 4: Scottish Power meters and regions with over 10,000 MPANs

[✂]

Source: CMA analysis.
Note: [✂].

15. [✂].

16. [✂]:[82]

(a) [✂]; and

(b) [✂].

SSE

17. SSE has [✂].

Figure 5: SSE results for meters and regions with over 10,000 MPANs

[✂]

Source: CMA analysis.

18. [✂].

19. [✂].

20. [✂]:[83]

(a) [✂];

[81] [✂].
[82] [✂].
[83] [✂].

(b) [✂]; and

(c) [✂].