Appendix 9.5: Restricted meters

Contents

Introduction

1. In this appendix we set out in more detail the analysis supporting findings related to restricted meters.

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 and provisional decision on remedies. 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]

[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.

Background

5. There are around 4.4 million restricted meters in GB of which Economy 7 meters account for around 84%. Our view is that the options available to customers with Economy 7 meters are broadly similar to those with single-rate 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.

6. 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 single-rate meters (ie meters with a single register and through which energy is continuously provided).[2]

7. Further, the factors that we have identified in Section 9 and set out in more detail in below in relation to restricted meters do not apply to Economy 7 meters. In conducting our investigation we have therefore focused solely on the position of customers on non-Economy 7 restricted meters (and henceforth refer to this group as 'customers on restricted meters' unless otherwise specified).[3] However, we note that the gains from switching (see Section 8) and detriment (see Section 14) for customers with Economy 7 meters are larger as a percentage of their bill than for customers with single-rate meters. This suggests that competitive pressures are not as strong for customers with Economy 7 meters when compared with customers with single-rate meters.

Meter types

8. 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 single-rate 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

[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.

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).

9. 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 single-rate meters). This is not the case for customers with meter arrangement *(b)*, since rates are not linked to the time of use.

10. 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 20).

11. 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

12. 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 single-rate 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.

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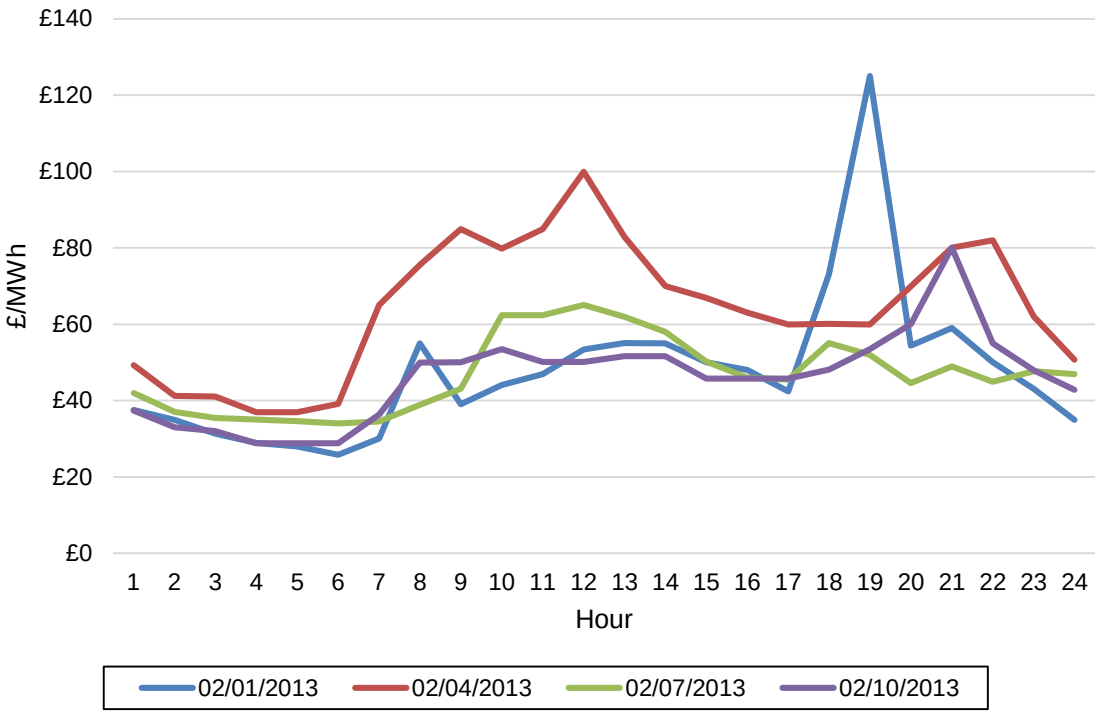
[4] DTS meters are switched, on and off or between registers, using teleswitching codes where each code is controlled by a 'group code sponsor' or host where the incumbent supplier in a region is the host for DTS meters in that region. This means that in each region the incumbent supplier controls when 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

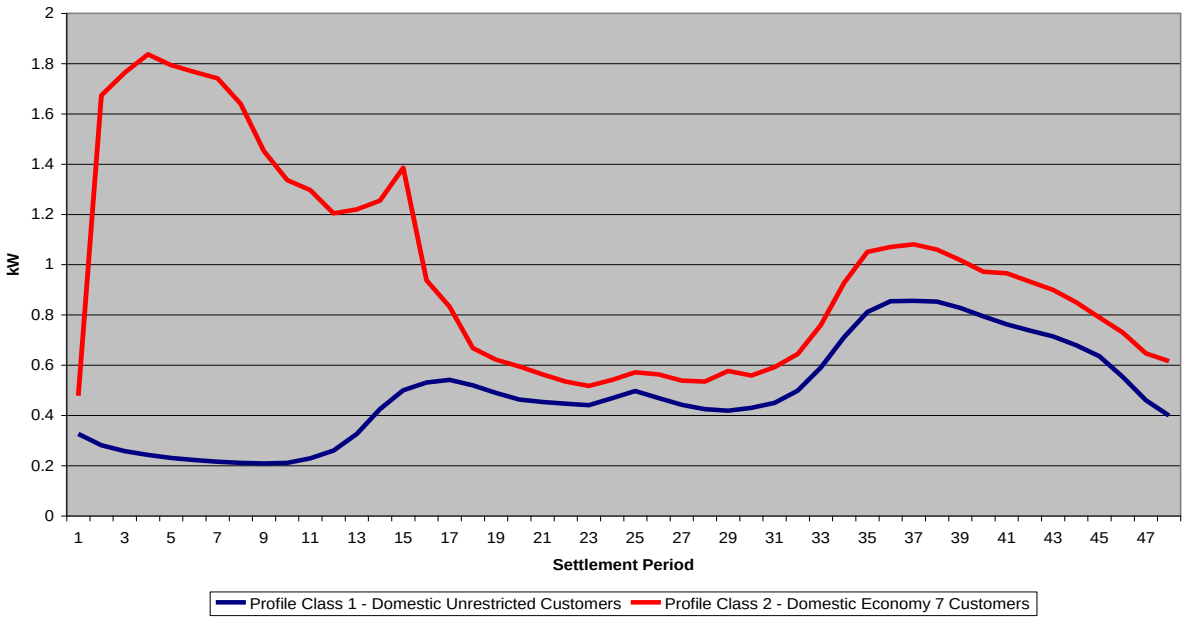


Source: CMA analysis of N2EX data.
Note: Auction prices for wholesale electricity in the UK.

13. 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.

14. For example, Figure 2 is an example of the typical shape of the load profile for class 1 (domestic single-rate 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 classes 1 and 2 for a typical weekday in winter – (note class 2 profile is for domestic Economy 7 customers)



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

15. 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.

16. 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.

17. 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]

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

Customer numbers

18. 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 84% 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)	26,400,000		
Of which:	Number of restricted meters (inc Economy 7)	As a proportion of all accounts (%)	
	4,400,000	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	84%	14%
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.

19. 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 the [✂] while the other five of the Six Large Energy Firms each have a share between 13 and 24%; 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.
4. Percentages may not sum to 100% due to rounding.

20. 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] [✂].[10]

21. 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).[11] 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.[12]

Responses to provisional findings and provisional decision on remedies

22. 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

[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] [✂].
[11] See response to provisional findings and Remedies Notice from Ofgem and Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[12] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.

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 prices there may be specific barriers to entry in relation to DTS meters and customer engagement was generally low for customers on DTS meters.[13]

23. In response to our provisional findings report, we received submissions in relation to restricted meters from the following consumer bodies: Changeworks,[14] Highlands & Islands Housing Associations Affordable Warmth Group (HIHAAWG),[15] and Energy Action Scotland.[16] 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.[17]

24. 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.[18]

25. 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.[19] The other tariff was said to be SSE's tariff for customers with Economy 10 meters.[20,21] Changeworks said that customers on these tariffs paid more for their heating and lighting than those on standard tariffs.[22]

26. Similarly HIHAAWG said that SSE had 'an effective monopoly' in North Scotland in relation to the same two tariffs.[23] 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

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[13] See initial submission from Fergus Ewing MSP, Minister for Business, Energy and Tourism.
[14] See response to provisional findings and Remedies Notice from Changeworks.
[15] See response to provisional findings and Remedies Notice from Highlands & Islands Housing Associations Affordable Warmth Group.
[16] See response to provisional findings and Remedies Notice from Energy Action Scotland.
[17] See summary of response hearing with consumer bodies.
[18] See response to provisional findings and Remedies Notice from Changeworks.
[19] Note these are all dual MPAN meters.
[20] See response to provisional findings and Remedies Notice from Changeworks.
[21] Economy 10 meters can either be single MPAN or dual MPAN.
[22] See response to provisional findings and Remedies Notice from Changeworks.
[23] See response to provisional findings and Remedies Notice from Highlands & Islands Housing Associations Affordable Warmth Group.

when the heating meter was in operation).[24] Further, HIHAAWG told us that customers on THTC and Economy 10 meters faced barriers to switching. In particular, HIHAAWG told us that:[25]

(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.

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

(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.

28. 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

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

(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.

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

(c) 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.

29. In response to the provisional decision on remedies Comhairle nan Eilean Siar (Comhairle)[27] told us that there were physical barriers to switching to some tariffs in North Scotland. In particular, Comhairle said that, in addition to the 15% locational overcharge, SSE's monopoly position, unique tariffs (THTC and Economy 10 which are not supported by price comparison websites), incumbent brand loyalty and weak customer response all contributed to excessively high electricity prices in the Outer Hebrides.[28] Further, these customers did not have access to mains gas and therefore could not access cheaper dual fuel tariffs.[29]

DTS tariffs

30. Changeworks told us that SSE's tariff for customers with THTC meters was one of the most expensive tariffs in the country.[30] 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.

31. 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

[27] See Comhairle response to provisional decision on remedies.
[28] Comhairle estimated that customers in the Outer Hebrides paid 26% more per kWh on average to heat their homes than the UK average.
[29] Comhairle provided an example of the difference between SSE's dual fuel tariff and the THTC tariff. As outlined at paragraph 56 below 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.
[30] See response to provisional findings and Remedies Notice from Changeworks.

17.78p/kWh respectively and so customers were paying 181% and 19.6% more.[31]

32. 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:[32]

(a) the SSE unit rate was 'on balance around 16p per kw/hr';[33] 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].'[34]

33. 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 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));[35] and

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

34. 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.[36] They then estimated the equivalent bill based on SSE's domestic economy (Economy 7) tariff in North Scotland.[37] Finally they used a comparison website to estimate equivalent bills across Economy 7 tariffs in North Scotland.[38] They found that estimated bills were up to £132 to £275

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[31] See response to provisional findings and Remedies Notice from Changeworks.
[32] The same analysis was submitted by Changeworks,
[33] 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.
[34] 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).
[35] 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*.
[36] 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.
[37] 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.
[38] Citizens Advice and Citizens Advice Scotland used the following PCW: www.UKpower.co.uk.

cheaper on the cheapest available Economy 7 tariffs, dependent on payment method.

35. Citizens Advice and Citizens Advice Scotland followed the same process using Scottish Power's tariff for customers with ComfortPlus Control meters,[39] Scottish Power's Economy 7 tariff[40] 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.

36. 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. In this respect Citizens Advice provided updated analysis in response to the provisional decision on remedies, and showed that their results held when adjusting the split between peak and off-peak such that peak usage was equivalent to 3,100 kWh, which is Ofgem's medium Typical Domestic Consumption Value for customers with single-rate meters.[41] See Section 13 for a discussion of this analysis in relation to our remedies for customers on restricted meters.

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

37. 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.

38. 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.

39. 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:

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[39] 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.
[40] 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.
[41] See Ofgem's Decision on revised Typical Domestic Consumption Values for gas and electricity.

(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 a single-rate 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 a single-rate 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, a single-rate 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.

40. 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 single-rate meters.

41. 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 single-rate meters.

DTS meters

Ofgem's report on DTS meters

42. 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.[42]

43. Ofgem said that when DTS meters were switched dynamically by the host supplier (ie the incumbent supplier),[43] 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 supplier had DTS customers then it might face unexpected periods of high or low demand.[44] However, Ofgem also said that the great majority of teleswitched meters are currently programmed following a static or semi-static regime and where this was the case, to the extent that potential competitors are aware of the static usage of a teleswitched meter and this usage is maintained over time, they will be able to anticipate at what time, and for how long, load would be switched, and thus face minimal or no risk of imbalance.[45]

44. 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.

45. Ofgem also found that, between 2009 and 2012, DTS tariffs generally compared favourably with other tariffs (namely, Economy 7, Economy 10,

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[42] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[43] See footnote 4.
[44] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[45] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.

single rate single fuel and dual fuel) in the same areas.[46] Specifically Ofgem's analysis of tariffs found that:[47]

(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.

46. In November 2014[48] 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 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;

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[46] ibid.
[47] 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.
[48] Ofgem (2014), *Dynamically Teleswitched meters and tariffs – Ofgem's views on the way forward*.

(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

47. 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).

48. However, the Six Large Energy Firms[49] generally told us that the mechanism by which a restricted meter was controlled did not determine/limit the tariff choices available to customers.[50] For example, some Economy 7 meters are DTS meters.[51] 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.

Restricted meters

Options available to customers

49. 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.

50. For Economy 10 meters most of the Six Large Energy Firms offer tariffs to support these meters and accept new customers on these meters,[52] while some are also installing some new Economy 10 meters. However, as with

[49] These were EDF Energy, E.ON and RWE npower.
[50] 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.
[51] 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.
[52] 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, [✂].

other restricted meters, Economy 10 meters are not supported by PCWs nor do the Mid-tier Suppliers provide specific Economy 10 tariffs.

51. 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.[53] 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) 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.

[53] Flow Energy noted that it was difficult as a small supplier to establish the operating hours of the heating load on restricted meters and this in turn made it difficult to offer a competitive price to customers with restricted meters. See Flow Energy's response to provisional decision on remedies, p2.

(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.

52. 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 Economy [✂].

(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 a single-rate 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 a single-rate, 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.[54] 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.

53. 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.

54. 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:

(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.

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

(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.

55. 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

56. 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 single-rate meters. We have some reservations about this analysis. Specifically:

(a) Changeworks compared off-peak electricity rates with standard gas rates.[55] 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.

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

58. 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

[55] See response to provisional findings and Remedies Notice from Changeworks.

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

59. 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.[56]

Incumbency share of supply

60. As outlined above (see paragraph 51) 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.

61. Table 3 shows the incumbent share of supply by PES region for restricted meters as at September 2015[57] 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.

62. We have found that within each of the PES regions the incumbent electricity supplier, as at September 2015,[58] supplied between 40 and 91% of electricity customers on restricted meters,[59] with the incumbent share at over 70% in ten of the 14 regions.[60] 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.[61]

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[56] Scottish Power response to CMA supplemental notice of possible remedies, Question 2(a).
[57] Note that information provided for SSE is as at June 2015.
[58] Note that information provided for SSE is as at June 2015.
[59] 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 explored the extent to which these low incumbency shares may be due to the Six Large Energy Firms, other than EDF Energy, installing significant numbers of restricted meters in the South East and/or South West regions. However, we have not seen any evidence that these low incumbency shares are due to the installation of restricted meters by the other Six Large Energy Firms. Therefore it is not clear why the incumbency shares in these regions are materially lower.
[60] CMA analysis based on data from the Six Large Energy Firms.
[61] Figures for electricity and gas are based on Cornwall data covering Q1 and Q2 2015.

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.

63. In addition, for certain types of restricted meters, we have been able to identify the percentage of customers who, as at September 2015,[62] 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,[63] RWE npower's SuperTariff meter[64] and EDF Energy's WarmWise meter.

64. 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 [✂].[65] 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

[62] Note that information provided for SSE is as at June 2015.
[63] 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.
[64] 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.
[65] For WarmWise the incumbent share was [✂], for Heatwise [✂], for SuperTariff [✂], for ComfortPlus Control [✂], for ComfortPlus White Meter [✂], for THTC [✂] and for SuperDeal 96%.

offers bespoke tariffs for these meters and each has [✂] of the respective share of supply.[66]

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

66. 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 the evidence we have received we consider that a substantial number of customers who had SuperTariff meters in 1998 have either had that meter replaced with an Economy 7 or single-rate meter or had it removed because they have had gas central heating installed.

Supply-side constraints

67. We have observed high incumbent shares of supply in relation to customers on restricted meters when compared to all electricity customers, see paragraphs 60 to 66. We have considered whether this could be due to the existence of supply-side constraints, see paragraphs 42 to 48 and 51. In this regard, we have explored two hypotheses:

    (a) that the fixed costs of developing new tariffs and the small number of customers on individual types of restricted meters means that it is not cost effective for suppliers to develop bespoke tariffs for them; and

    (b) that, for meters operated in DTS mode, suppliers may be reluctant to offer tariffs for customers for whom certain operating parameters are controlled by another supplier.

68. In relation to the first hypothesis, we recognise that suppliers would incur additional costs in developing bespoke tariffs for customers on certain types of restricted meter and may not find it profitable to do so (and/or to market such tariffs proactively) if there are sufficiently low numbers of customers on those meters, see paragraph 51. However, this does not in itself explain the lack of switching to cheaper single-rate tariffs, as we would expect the incremental costs of making such tariffs available to restricted meter

[66] 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 ([✂]).

customers to be negligible.[67] Most of the Six Large Energy Firms and the Mid-tier Suppliers submitted that they did allow existing or new customers to switch to single-rate tariffs, although some required the replacement of the customer's existing meter.

69. We have also received submissions that DTS technology constitutes a supply-side constraint on competition. For example, in its 2013 'State of the market for customers with DTS' report, Ofgem said that when DTS meters were switched dynamically by the host supplier (ie the incumbent supplier), 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 arises because non-incumbent suppliers may not know in advance the timing and duration of supply to heating circuits for these DTS customers. Therefore if a non-incumbent supplier has DTS customers then it may face unexpected periods of high or low demand.[68] Although we note that Ofgem also said that the great majority of teleswitched meters are currently programmed following a static or semi-static regime and where this is the case, to the extent that potential competitors are aware of the static usage of a teleswitched meter and this usage is maintained over time, they will be able to anticipate at what time and for how long load will be switched, and thus face minimal or no risk of imbalance.[69]

70. Particular concerns have been raised in relation to DTS meters in Scotland, specifically those on the THTC meter in North Scotland and the ComfortPlus meters in South Scotland where the incumbent supplier in each region (SSE and Scottish Power respectively) appears to be the only supplier offering bespoke tariffs for these meters and has [✂] of the share of supply.[70]

71. However, while some suppliers told us that there may be difficulties in offering tariffs in relation to DTS meters, the Six Large Energy Firms[71] generally told us that the mechanism by which a restricted meter was controlled did not determine/limit the tariff choices available to customers.[72] For example, Scottish Power told us that not all customers on its ComfortPlus White Meter tariff used DTS meters. Further, there are other non-Economy 7 restricted

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[67] For example, we would expect suppliers to be able to either sum consumption across different registers when calculating the bill or to be able to apply the same unit rate to different registers when calculating the bill.
[68] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[69] Ofgem (2013), *The state of the market for customers with dynamically teleswitched meters*.
[70] 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 ([✂]).
[71] These were EDF Energy, E.ON and RWE npower.
[72] For example, EDF Energy told us [✂].

meters that are not DTS meters where the incumbent suppliers have similar shares.[73]

72. Further, many Economy 7 meters are classed as DTS meters[74] – although we note in this regard that they do not appear to currently be operated dynamically – and this does not appear to be an impediment to competition.

73. Finally we note that, based on the analysis set out below, the gains from switching for those customers with DTS meters who would have had lower bills on the cheapest single-rate tariff were not systematically higher than those for other restricted meters. For example, at Q2 2015 while the average gains for those on [✂] meters, £[✂] per customer, were higher in absolute terms than the average gains for all on restricted meters, £154 per customer, the average gains were lower for those customers on [✂] meters, £[✂] per customer, and [✂] meters, £[✂] per customer. Further, relative to their average bill the gains were lower for customers on [✂] meters ([✂]%),[✂] meters ([✂]%) and [✂] meters ([✂]%) than those for all on restricted meters (17%).

74. Therefore, based on the assessment above, we think that the problems we have identified as affecting customers on restricted meters, see below, relate primarily to the demand side, and in particular derive from the existence of barriers to accessing and assessing information, and barriers to switching, which are additional to those faced by customers on single-rate meters concerning the Domestic Weak Customer Response AEC.

Restricted meter bills analysis

75. We looked at how the bills paid by customers on restricted meters, roughly 93%[75] of whom are on an SVT bespoke to their specific type of restricted

[73] 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 [✂]. CMA analysis of data from the Six Large Energy Firms.
[74] Based on information provided by the Six Large Energy Firms, excluding E.ON, and the Mid-tier Suppliers we estimate that roughly 424,571 Economy 7 meters can be operated dynamically.
[75] For Centrica [✂] of observations in our 2015 dataset were on an SVT, for EDF Energy [✂], for E.ON [✂] of observations in our 2015 dataset were on an SVT, for RWE npower [✂] of observations in our 2015 dataset were on an SVT, for Scottish Power [✂] of observations in our 2015 dataset were on an SVT and for SSE [✂] of observations in our 2015 dataset were on an SVT. Based on the 2014 dataset 93% of observations across all of the Six Large Energy Firms are on an SVT.

meter at Q2 2015,[76] compare with those that they would pay had they been on the cheapest single-rate tariffs in the market.[77]

76. The results informed, first, our assessment of customer engagement in relation to customers on restricted meters and second our estimate of detriment for customers on restricted meters.

77. For the purposes of assessing customer engagement the analysis is based on the tariffs that these customers could actually switch to. In contrast, for the purposes of assessing detriment the analysis is based on a competitive benchmark, taking into account payment type, and therefore does not necessarily reflect the options available to the customer.

78. The analysis is conducted at two points in time, end Q2 2015 and end Q2 2014, based on tariffs in the market and estimated annual consumption by meter as at each point in time. Our methodology and the high-level results of this analysis are set out here and more detail can be found in Annex B.

Customer engagement

79. 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 54.

80. We estimated the gains available to direct debit and standard credit customers on restricted meters from switching to the cheapest single-rate direct debit tariffs, not taking into account one-off switching costs such as the cost of changing meter or rewiring. This is equivalent to Scenario 5 from the main gains from switching analysis, see Appendix 9.2.

81. We have found that, for Q2 2015, 67% of direct debit and standard credit 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. Similarly for Q2 2014 we found that 50% of these customers would have

[76] 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 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.
[77] 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.

lower bills if they were on the cheapest single-rate tariffs from across the Six Large Energy Firms and the Mid-tier Suppliers.[78]

82. For both points in time, the results differ significantly depending on the supplier in question, see Table 4.

Table 4: Percentage of MPANs where the single-rate bill was lower, by supplier

	Q2 2015	*Q2 2014*
Centrica	[✂]	[✂]
EDF Energy	[✂]	[✂]
E.ON	[✂]	[✂]
RWE npower	[✂]	[✂]
Scottish Power	[✂]	[✂]
SSE	[✂]	[✂]
All	67%	50%

Source: CMA analysis of the Six Large Energy Firms' data.
Note: Bills were calculated excluding VAT.

83. The distribution of gains for customer who would have had lower bills on the cheapest single-rate tariff, as at Q2 2015, is set out in Figure 3 by supplier. On average the gain from switching was around £154 per customer or 17% of their average bill as at Q2 2015.[79]

Figure 3: Distribution of gains from switching for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2015, by supplier

[✂]

Source: CMA analysis.
Notes:
1. 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.
2. Bills were calculated excluding VAT.

84. The distribution of gains for customer who would have had lower bills on the cheapest single-rate tariff, as at Q2 2014, is set out in Figure 4 by supplier. On average the gain from switching was around £120 per customer or 14% of their average bill as at Q2 2014.[80]

[78] We note that bills were calculated excluding VAT.
[79] Note that bills were calculated excluding VAT. In addition 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.
[80] Note that bills were calculated excluding VAT. 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.

Figure 4: Distribution of gains from switching for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2014, by supplier

[✂]

Source: CMA analysis.
Notes:
1. 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.
2. Bills were calculated excluding VAT.

85. We note that in both periods a material proportion of customers, over half, could gain from switching to the cheapest single-rate tariff. Further, the increase over time in the proportion of customers who would have gained from switching to single-rate tariffs and the size of the gains to be had reflects wider trends seen in the market, see Appendix 9.2.

86. Apart from those customers with low usage where results were driven by differences in the standing charge, we found that where current bills were higher than those customers would have had, had they been on the cheapest single-rate tariff in the market, this was for one of two reasons:

    (a) **Tariff unit rates** – 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** – 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.[81]

87. 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.

88. We note that the results differ significantly across meter types and while the majority of customers on one type of restricted meter may be better off on a meter-specific tariff the majority of customers on another type may be better off on a single-rate tariff. We consider that this in addition to the importance of

[81] We note that this is consistent with evidence submitted by Scottish Power. In particular, Scottish Power looked at a sample of customers on direct debit SVTs in South Scotland, splitting customers into those with low off-peak usage (less than 50%) and those with high off-peak usage (more than 50%). Scottish Power looked at the extent to which each group would be better off on the 'best competitor single rate tariff' and showed that while the majority of customers with low off-peak usage would be better off on the 'best competitor single rate tariff' the majority of customers with high off-peak usage would be worse off on the 'best competitor single rate tariff'. See Scottish Power's response to the provisional decision on remedies, paragraphs 11.7 to 11.13.

a customer's usage split contributes to the uncertainty customers face in determining the best option for them as set out in Section 9.

Detriment

89. For this purpose we have included all restricted meter customers, including prepayment customers. When selecting our benchmark single-rate tariffs for this detriment calculation we have used direct debit tariffs available to all customers on single-rate 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.

90. A different competitive benchmark has been used to estimate detriment for customers on restricted meters when compared to the benchmark used to assess detriment for customers with single-rate and Economy 7 meters. In particular, the competitive benchmark used for customers on single-rate and Economy 7 meters is based on all tariffs offered by First Utility and Ovo Energy (see Appendix 10.2) whereas for customers on restricted meters we have used the cheapest single-rate meter tariff available in the markets.

91. We consider this to be a reasonable approach for customers on restricted meters as we would expect, for the reasons set out in paragraphs 12 to 17 above, the wholesale energy cost per kWh incurred by suppliers in supplying customers on restricted meters to be materially lower than for customers on standard meters. In a well-functioning market we would expect these cost differences to be reflected in the prices of tariffs offered to customers on restricted meters. We would therefore expect tariffs available to customers on restricted meters to be cheaper than those available to single-rate meter customers (even if we would not expect bespoke tariffs for different meter types). For this reason, we consider the cheapest single-rate tariffs in the market provide a reasonable basis for estimating detriment.

92. Using this benchmark, adjusted appropriately for payment type, 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.

93. The distribution of detriment for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2015, is set out in Figure 5 by supplier. On average the difference was around £158 per customer or 17% of

their average annual bill as at Q2 2015.[82] This gives a total detriment, for Q2 2015, in the order of £42 million.[83]

Figure 5: Distribution of detriment for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2015, by supplier

[✂]

Source: CMA analysis.
Note:
1. 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.
2. Bills were calculated excluding VAT.

94. The distribution of detriment for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2014, is set out in Figure 6 by supplier. On average the difference was around £123 per customer or 14% of their average annual bill, as at Q2 2014. This gives a total detriment, for Q2 2014, in the order of £28 million.[84]

Figure 6: Distribution of detriment for customers who would have had lower bills on the cheapest single-rate tariff, as at Q2 2014, by supplier

[✂]

Source: CMA analysis.
Note:
1. 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.
2. Bills were calculated excluding VAT.

95. We note that in both periods the level of detriment is material. Further, the increase in the total level of detriment over time reflects wider trends seen in the market where the estimated detriment has increased over time, see Appendix 10.2.

96. Table 5 below shows, for each of the Six Large Energy Firms the mean bill difference for those where the single-rate bill was lower and the bill difference as a percentage of the current bill for Q2 2015 and Q2 2014. We note that differences between suppliers in the aggregate level of detriment will, in part, reflect differences in the size of their customer base and the type of restricted meter they support.

[82] 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.
[83] We note that bills were calculated excluding VAT.
[84] We note that bills were calculated excluding VAT.

Table 5: 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, by supplier

	Q2 2015			*Q2 2014*		
	*Mean bill difference**	*Bill difference as a percentage of restricted bill**	*Detriment**	*Mean bill difference**	*Bill difference as a percentage of restricted bill**	*Detriment**
Centrica	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EDF Energy	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
E.ON	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
RWE npower	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Scottish Power	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
SSE	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

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. In Q2 2015 this led to the exclusion of 4% of observations and the highest saving observed was £2,209. In Q2 2014 this led to the exclusion of 1% of the observations and the highest saving observed was £3,193.
Note: Bills were calculated exclusive of VAT.

Parties' comments

97. In response to the provisional decision on remedies, parties made comments in relation to the following:

    (a) The results being used as an estimate of detriment.

    (b) The results being based on one quarterly snapshot.

    (c) Comparability across suppliers due to exclusions.

    (d) Customers might have preferences that will limit choices available to them.

    (e) The results do not take into account switching costs.

98. We consider each of these in turn.

Detriment

99. Centrica said that our analysis of detriment calculated gains from switching and that gains from switching could not be relied upon to measure aggregate welfare loss associated with domestic customers not switching to cheaper tariffs, as suppliers offering the cheapest tariffs may not find it sustainable to have a large proportion of customers switching to them.

100. As noted above (see paragraphs 90 and 91), we have used the cheapest single-rate meter tariff available in the markets as a competitive benchmark when estimating the detriment.

101. We consider this to be a reasonable approach for customers on restricted meters as we would expect, for the reasons set out in paragraphs 12 to 17 above, the wholesale energy cost per kWh incurred by suppliers in supplying customers on restricted meters to be materially lower than for customers on standard meters. In a well-functioning market we would expect these cost differences to be reflected in the prices of tariffs offered to customers on restricted meters. We would therefore expect tariffs available to customers on restricted meters to be cheaper than those available to single-rate meter customers (even if we would not expect bespoke tariffs for different meter types). For this reason, we consider the cheapest single-rate tariffs in the market provide a reasonable basis for estimating detriment.

Quarterly snapshot

102. SSE noted that the analysis was inadequate as it was based on a snapshot in time such that any estimated savings may not have been available before or after that snapshot. For a general discussion of the use of snapshots see Section 8.

103. In relation to the restricted meters we have extended the analysis to include Q2 2014 as a sensitivity test. As outlined above we have found that, although the results for Q2 2014 are lower than those at Q2 2015, the level of savings and therefore estimated detriment is material at both points in time. We also note that the difference in savings available between the two snapshots is consistent with general trends (in particular, the increasing gap between SVT and cheapest tariffs in the market, see Section 8).

104. Further, we note that no parties have provided any evidence to suggest that these two quarterly snapshots are not representative.

Exclusions

105. Centrica noted that the results were not comparable across suppliers due to the large (and variable) number of excluded accounts (see Table 1 in Annex B below).

106. We have excluded records where there is missing or incorrect data or data provided suggested extremely high consumption levels. Overall we excluded 7.07% of the initial sample at Q2 2015 and 5.09% at Q2 2014. We have no reasons to expect that this would lead to a systematic bias in our results.

107. We also excluded observations where there is no usage on at least one off-peak register (8.62% of the initial sample at Q2 2015 and 8.84% at Q2 2014). We note that it is not clear whether this is because the customer is not using

that register or due to missing data. We would expect exclusion of these records to result in lower estimates of gains and detriment as these customers would be most likely to benefit from switching to a single-rate tariff.

108. Finally there is exclusion relating to specific meters at SSE where relevant consumption information related to those meter types that were not within the scope of our analysis. This exclusion only affects one supplier (14% of their observations in the initial sample at both Q2 2015 and Q2 2014).

Preferences

109. Centrica noted that the analysis did not take into account preferences, for a particular supplier, tariff type or payment method, as the analysis did not account for the fact that the vast majority of customers on restricted meters had chosen an SVT.[85] In particular, Centrica noted that it was not clear that the cheapest single-rate tariff would be considered an equally attractive alternative by the customer, and therefore whether the comparison was valid.

110. Centrica also raised this point in relation to the gains from switching and it is considered in detail in Section 9. We would note further to the points made in Section 9 that, as outlined above, customers on restricted meters face specific barriers to accessing and assessing information on the options available to them and to switching supplier. Further, customers on restricted meters face a more restricted choice set as not all suppliers support their restricted meter type and at two of the Six Large Energy Firms all restricted meter specific tariffs are SVT tariffs.[86] Therefore restricted meter customers are even less likely to have chosen their supplier and tariff type.

111. SSE noted that customers on restricted meters who switched to a single-rate tariff risked losing the functionality associated with a restricted meter and facing higher bills in the future. SSE stated that customers on restricted meters must trade-off this risk against the potential gains from switching to a single-rate tariff. Based on this trade-off it may be rational for customers to not switch to single-rate tariffs even in the presence of gains from switching.

112. We note that this point does not impact on the estimates of detriment as for these purposes the cheapest direct debit single-rate tariff is used as a benchmark of a competitive restricted meter tariff rather than an actual tariff customers would switch to.

[85] 93% at Q2 2015 and at Q2 2014.
[86] These are [✂] and [✂]. For the avoidance of doubt this does not apply to Economy 7 meters. [✂].

113. We also note that there are certain customers who are on tariffs where the unit rates they pay, including those for off-peak usage, are higher than those on the cheapest single-rate direct debit tariffs.[87] For these customers there appears to be little risk of switching to single-rate tariffs as, except for a minority where standing charge determines the outcome, they are better off on the cheapest single-rate tariff irrespective of their off-peak usage.

114. There are also a material number of customers on restricted meters whose usage patterns are such that they do not, and may not expect to, take advantage of cheaper off-peak electricity (in particular, 15% of customers on restricted meters in our final sample, in both periods, had less than 20% of annual usage in off-peak times). For these customers it is their fundamental usage patterns that lead to the differences in bills observed and we observe material differences in bills for these customers. Therefore for these customers we would expect the risk of potentially losing functionality is low, given that they do not use it, and the benefits of switching are high.

115. Further, we note that a certain level of engagement is necessary for customers on restricted meters to be able to make a trade-off between the benefits of a single-rate tariff and the risks associated with a loss of functionality. However, evidence from Ofgem's research outlined above, see paragraph 46, suggests that this is not the case. Therefore we do not think that these results can be explained by customers trading off the risks and benefits of switching to a single-rate tariff.

Switching costs

116. SSE noted that the analysis was inadequate as two of the tariffs used as a benchmark for the Q2 2015 analysis required a meter exchange at a cost of £70 to the customer and therefore the analysis overestimated detriment.

117. We note that switching costs do not have an impact on the estimates of detriment as for these purposes the cheapest direct debit single-rate tariff is used as a benchmark of a competitive restricted meter tariff rather than the actual tariff customers would switch to.

118. Further, we note that, to the extent this has an impact on the gains from switching as an indicator of engagement, when taking into account the costs of exchanging meters, 53% of customers at Q2 2015, with average gains of £128, and 50% of customers at Q2 2014, with average gains of £120, 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. This indicates that even

[87] For example, [✂].

when taking into account these one-off switching costs the number of customers, who could save, and the size of those savings, is material.

119. EDF Energy identified three different groups of customers with restricted meters:[88]

(a) Customers who can currently access single-rate tariffs, including non-standard tariffs, on their restricted meter through totalised billing.

(b) Customers who can access single-rate tariffs on their primary meter but have a secondary off-peak restricted meter whose SVT rates are significantly lower than any single-rate tariff, including non-standard tariffs.

(c) Customers who are unable to access single-rate tariffs on their current restricted meter due to constraints in the billing system.

120. EDF Energy said that we should differentiate between these groups in our analysis, in particular, as for some customers our analysis may be evidence of weak customer engagement while for others it may be reflect technical constraints.

121. As above, we note that this point does not impact on the estimates of detriment for the reasons outlined at paragraph 112.

122. In relation to our assessment of gains from switching we note that we consider technical constraints, such as billing system functionality, to be barriers to switching as it requires some restricted meter customers to switch meter in order to access single-rate tariffs. As noted at paragraph 118, even when taking into account the costs of exchanging meter the number of customers, who could save, and the size of those savings, is material.

[88] At EDF Energy the first group comprises roughly [✂]% of its customers, the second group comprises roughly [✂]% and the third group roughly [✂]%.

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 single-rate 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.
§ [✂].
¶Effective during April 2016 RWE npower will not charge a customer a fee to change a restricted meter to a single-rate meter.

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. This annex sets out the methodology and results of our analysis into outcomes for restricted meter customers and the extent to which these customers would benefit from being on single-rate tariffs. 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 single-rate tariff available in the market.[89] Points raised by the Parties in relation to this analysis are set out in the main body of the appendix above (see paragraphs 97 to 118).

2. We have used our analysis in two ways, first, as an assessment of customer engagement in relation to customers on restricted meters and second as an estimate of detriment for customers on restricted meters.

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

Data

5. We collected three sets of data for the Q2 2015 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 July 2014 to 30 June 2015 and the meter type. This information was provided by region subject to the following criteria:[90]

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[89] 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.
[90] For Q2 2015 we note that for Centrica this covered approximately 80% of its non-Economy 7 restricted meters, for EDF Energy approximately 94%, for E.ON approximately 80%, for RWE Npower approximately 75%, for Scottish Power approximately 99% and for SSE approximately 98%.

(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 collected the same information for Q2 2014.

7. 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 9.2 for more detail.

8. 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.[91]

9. 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.

[91] 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.

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

	Q2 2015		*Q2 2014*	
	Total number of observations	*Percentage excluded*	*Total number of observations*	*Percentage excluded*
Centrica	[✂]	*21.2%*	[✂]	*14.5%*
EDF Energy	[✂]	*7.4%*	[✂]	*7.3%*
E.ON	[✂]	*11.1%*	[✂]	*10.9%*
RWE npower	[✂]	*11.9%*	[✂]	*13.5%*
Scottish Power	[✂]	*37.9%*	[✂]	*34.1%*
SSE	[✂]	*20.8%*	[✂]	*20.1%*

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

10. The aim of this restricted meter analysis was twofold. First to assess the gains from switching to the cheapest single-rate tariff for customers on restricted meters and second to assess detriment for restricted meter customers. To do this our analysis took a snapshot view of the market at two points in time, 30 June 2015 and 30 June 2014, where annual bills were estimated based on actual tariffs and EAC.

11. 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 single-rate meter customers. For reasons given in paragraphs 12 to 17 of the appendix, we consider this to be a conservative.

12. We have not been able to conduct this analysis 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.[92] These differences are generally driven by different customer needs based on different customer heating systems.[93]

[92] 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.
[93] 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

13. 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 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

14. No discounts are applied other than direct debit discounts where relevant and bills are calculated exclusive of VAT. 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, this is done first for gains from switching and then for detriment.

Gains from switching

15. We note that for the purposes of gains from switching we have excluded customers on prepayment meters.

Step 1: calculating the current bill

16. 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.[94]

17. The calculated bill is based on the tariff characteristics as at the end of the 12-month period.[95] 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.

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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.

[94] 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.

[95] That is, for Q2 2015 consumption data we use the tariffs as at 30 June 2015 and for Q2 2014 consumption data we use the tariffs as at 30 June 2014.

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

18. 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.

19. 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);

    (b) we calculated bills based on these four consumption levels for all single-rate tariffs available at the end of the 12-month period[96] 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).

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. 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.

Detriment

22. We note that for the purposes of detriment we have included customers on all payment methods.

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[96] That is, for Q2 2015 consumption data we use the tariffs as at 30 June 2015 and for Q2 2014 consumption data we use the tariffs as at 30 June 2014.

23. The steps taken to calculate the detriment are the same as those involved in calculating the gains from switching set out above with one key difference. In particular, in relation to Step 2 (see paragraphs 18 to 20 above) where the single-rate bill tariff is calculated. For the purposes of calculating detriment the single-rate bill is used as a competitive benchmark and therefore there is an adjustment for those on standard credit and prepayment to reflect differences in costs to serve when compared to direct debit, see Appendix 9.8.

Cheapest single-rate tariff

24. There were three tariffs that came out as the cheapest single-rate tariffs in Q2 2015. These were:

    (a) two Centrica white label tariffs:

        (i) 'SE Fixed Price July 2016'; and

        (ii) 'SE Price Freeze August 2016'; and

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

25. These 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.

26. There were four tariffs that came out as the cheapest single-rate tariff in Q2 2014. These were:

    (a) a Centrica tariff – 'Fixed Price August 2015':

    (b) an RWE npower tariff - 'Online Price Fix April 2016'

    (c) a First Utility tariff – 'isave fixed august 2015'

    (d) an SSE white label tariff – 'EquiPower'.

27. These 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, RWE npower told us it would require customers on restricted meters [✂] and SSE told us that, depending on the type of restricted meter, customers may be required to switch to a single-rate meter at no cost to the customer unless rewiring is required in which case a customer may need to pay for an electrician to do the rewiring.

Caveats

28. We note that there are two caveats to the results outlined below.[97]

29. First, the analysis does not allow for one-off switching costs such as the cost of a meter change. Although we note that this does not have an impact on our assessment of detriment as outlined above and we have tested the sensitivity of our gains from switching to the inclusion of the costs of changing meter, see paragraph 118 in the main body of the appendix.

30. Second, RWE npower 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 a single-rate, but sometimes Economy 7, meter. In particular, RWE npower 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.[98]

31. 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.[99] 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: gains from switching

32. In presenting our results in relation to gains from switching 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.

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[97] 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.
[98] [✂].
[99] [✂]. When customers have this arrangement Centrica and SP offer tariffs covering both the heating meter and the general usage meter and consumption has been provided for both meters. When customers have this arrangement SSE have separate tariffs for each meter, but also tariffs covering both the heating meter and the general usage meter, these customers have not been included in the analysis as outlined in Annex C below.

33. This is done first for the results for Q2 2015 and then for Q2 2014.

Q2 2015

34. Table 2 below shows, across all regions and separately for Scotland and outside of Scotland, the total number of observations, the percentage of observations where the single-rate bill was lower, the mean bill difference for those where the single-rate bill was cheaper and the bill difference as a percentage of the current bill, as at Q2 2015.

35. As can be seen overall when looking across suppliers the majority of customers (67%) would have paid less on the market's cheapest single rate tariff. In Scotland this figure is slightly higher at 80%.[100]

Table 2: Total number of MPANs, percentage where single-rate bill was lower, mean difference between single-rate bill and current bill for those where the single-rate bill was lower and difference between single-rate bill and current bill as a percentage of current bill for those where the single-rate bill was lower for all regions, Scotland and outside of Scotland, as at Q2 2015

	All regions	*Scotland*	*Outside of Scotland*
Total observations	322,515	118,744	203,771
Percentage where single-rate bill lower	67%	80%	60%
Mean bill difference*	£154	£161	£149
Bill difference as a percentage of current bill*	17%	16%	19%

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 3% of observations and the highest saving observed was £1,970.
Note: Bills calculated exclusive of VAT.

36. Table 3 below shows the results for each of the Six Large Energy Firms as at Q2 2015.

37. The key results are as follows for Q2 2015:[101]

(a) [✂].

(b) [✂].

(c) [✂].

(d) [✂].

[100] We note that bills were calculated excluding VAT.
[101] We note that bills were calculated excluding VAT.

Table 3: 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, as at Q2 2015

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

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 3% of observations and the highest saving observed was £1,970.
Note: Bills were calculated exclusive of VAT.

Q2 2014

38. Table 4 below shows the same results as Table 2 as at Q2 2014.

39. As can be seen overall when looking across suppliers around half of customers would have paid less on the market's cheapest single-rate tariff.[102]

Table 4: 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, as at Q2 2014

	All regions	*Scotland*	*Outside of Scotland*
Total observations	351,642	127,939	223,703
Percentage where single-rate bill lower	50%	49%	51%
Mean bill difference*	£120	£113	£124
Bill difference as a percentage of current bill*	14%	12%	16%

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 1% of observations and the highest saving observed was £3,240.
Note: Bills were calculated exclusive of VAT.

40. Table 5 below shows the same results for each of the Six Large Energy Firms as at Q2 2014.

41. The key results are as follows for Q2 2014:[103]

    (a) [✂].

    (b) [✂].

    (c) [✂].

[102] We note that bills were calculated excluding VAT.
[103] We note that bills were calculated excluding VAT.

(d) [✂].

Table 5: 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, as at Q2 2014

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

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 1% of observations and the highest saving observed was £3,240.
Note: Bills were calculated exclusive of VAT.

Results: detriment

42. In presenting our results on detriment 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; and

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

43. This is done first for the results for Q2 2015 and then for Q2 2014.

Q2 2015

44. Table 6 below shows, across all regions and separately for Scotland and outside of Scotland, the total number of observations, the percentage of observations where the single-rate bill was lower, the mean bill difference for those where the single-rate bill was cheaper, the bill difference as a percentage of the current bill and the detriment, as at Q2 2015.

45. On average the bill difference was around £158 per customer or 17% of their average annual bill as at Q2 2015.[104] This gives a total detriment, for Q2 2015, in the order of £42 million.[105]

[104] 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.
[105] We note that bills were calculated excluding VAT.

Table 6: Total number of MPANs, percentage where single-rate bill was lower, mean difference between single-rate bill and current bill for those where the single-rate bill was lower and difference between single-rate bill and current bill as a percentage of current bill for those where the single-rate bill was lower for all regions, Scotland and outside of Scotland, as at Q2 2015

	All regions	*Scotland*	*Outside of Scotland*
Total observations	414,478	178,639	235,839
Percentage where single-rate bill lower	68%	78%	60%
Mean bill difference*	£158	£160	£156
Bill difference as a percentage of current bill*	17%	16%	19%
Detriment*	£41.9m	£21.1m	£20.8m

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 £2,209.
Note: Bills were calculated exclusive of VAT.

46. Table 7 below shows the results for each of the Six Large Energy Firms as at Q2 2015.

Table 7: 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, as at Q2 2015

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Percentage where single-rate bill cheaper	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Number where single-rate bill cheaper*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Mean bill difference*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Bill difference as a percentage of restricted bill*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
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 £2,209.
Note: Bills were calculated exclusive of VAT.

Q2 2014

47. Table 8 below shows the same results as Table 6 as at Q2 2014.

48. On average the difference was around £123 per customer or 14% of their average annual bill as at Q2 2014.[106] This gives a total detriment, for Q2 2014, in the order of £28 million.[107]

[106] 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.
[107] We note that bills were calculated excluding VAT.

Table 8: 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, as at Q2 2014

	All regions	*Scotland*	*Outside of Scotland*
Total observations	449,261	187,359	261,902
Percentage where single-rate bill lower	51%	49%	52%
Mean bill difference*	£123	£113	£131
Bill difference as a percentage of current bill*	14%	12%	16%
Detriment*	£27.5m	£10.2m	£17.4m

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 1% of observations and the highest saving observed was £3,193.
Note: Bills were calculated exclusive of VAT.

49. Table 9 below shows the same results for each of the Six Large Energy Firms as at Q2 2014.

Table 9: 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, as at Q2 2014

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Percentage where single-rate bill cheaper	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Number where single-rate bill cheaper*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Mean bill difference*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Bill difference as a percentage of restricted bill*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
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 1% of observations and the highest saving observed was £3,193.
Note: Bills were calculated exclusive of VAT.

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 for Q2 2015 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. Similarly there were two datasets for Q2 2014, based on the same information as at 30 June 2014.

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 and the end of Q2 2014 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. There are two consumption datasets, the first includes information on estimated annual consumption (EAC) of electricity for each MPAN for the year 1 July 2014 to 30 June 2015 and the second includes the same information for the year 1 July 2013 to 30 June 2014.

10. These consumption datasets were subject to the following criteria:[108]

    (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.

11. 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

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

    (a) MPANs where there was no usage recorded across all time-of-use registers (5.11% of observations in Q2 2015 and 3.05% in Q2 2014).

    (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 (8.62% of observations in Q2 2015 and 8.84% in Q2 2014).

    (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 in Q2 2015 and 0.07% in Q2 2014).

[108] For Q2 2015 we note that for Centrica this covered approximately 80% of its non-Economy 7 restricted meters, for EDF Energy approximately 94%, for E.ON approximately 80%, for RWE Npower approximately 75%, for Scottish Power approximately 99% and for SSE approximately 98%.

(d) There were customers with a dual MPAN meter, but information for only one of those MPANs was available (0.12% of observations in Q2 2015 and 0.12%% in Q2 2014).

(e) MPANs that were on a tariff for which the tariff information was not available (0.09% of observations in Q2 2015 and 0.14% in Q2 2014).

(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). In Q2 2015 these meters had consumptions levels over 23,945.1 kWh of energy in total, and accounted for 1.63% of observations. In Q2 2014 these meters had consumption levels over 23,341 kWh of energy in total and account for 1.66% of observations.

13. [✂].

14. [✂].

15. [✂].[109]

16. [✂].

17. Overall this means that we were able to analyse roughly 80% of the original observations provided by the Six Large Energy Firms for Q2 2015[110] which equates to a sample of approximately 414,000 observations in Q2 2015. We were able to analyse roughly 81% of the original observations provided by the Six Large Energy Firms for Q2 2014[111] which equates to a sample of approximately 449,000 observations in Q2 2014.

[109] We note that where duplicate MPANs were consistent in information (ie tariff, meter type and recorded consumption) one was retained within the dataset.
[110] In relation to each of the Six Large Energy Firms this relates to 79% of Centrica's observations, 93% of EDF Energy's observations, 89% of E.ON's observations, 88% of RWE's observations, 62% of Scottish Power's and 79% of SSE's observations.
[111] In relation to each of the Six Large Energy Firms this relates to 85% of Centrica's observations, 93% of EDF Energy's observations, 89% of E.ON's observations, 86% of RWE's observations, 66% of Scottish Power's and 80% of SSE's observations.