

Addendum to provisional findings

Revised AEC relating to the
prepayment segment

16 December 2015

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The Competition and Markets Authority has excluded from this published version of the addendum to provisional findings information which the inquiry group considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure). The omissions are indicated by [X].

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Introduction

1. Following the publication of our provisional findings, we have further investigated the characteristics of the prepayment segments (PPS) of the GB domestic retail energy markets,¹ and have considered whether there are features of the GB energy markets relating to the PPS (other than those already identified in our provisional findings) that restrict competition in connection with the supply and acquisition of energy by customers on a prepayment meter (PPM).

The nature of competition in the prepayment segments

2. Mid-tier and small suppliers have, in the last three years, become an increasingly important presence in the direct debit (DD) segment of the GB domestic retail energy markets,² increasingly focusing on competitively priced fixed products (see our provisional findings report, paragraphs 7.101 and 7.148). The DD segment – and especially the online sub-segment of that – offers some of the most price-attractive tariffs for customers who can access them (see our provisional findings report, paragraphs 7.117 and 7.130 to 7.138, as well as our analysis in paragraphs 6 and 11 below). These tariffs are on offer in the DD segment from most of the Six Large Energy Firms³ and most of the mid-tier and smaller suppliers. Currently these are usually fixed-price, fixed-term tariffs.
3. This is not what we find in the PPS. The presence of, and number of customers acquired by, suppliers other than the Six Large Energy Firms (non-SLEFs) in the PPS is much lower than in the DD segment. The shares of non-SLEFs are 16% in the DD segment, and approximately 6% in the PPS.⁴ Furthermore, unlike in the DD segment, where a range of non-SLEFs have gained a material market share, a significant portion of non-SLEF PPS customers is accounted for by a single supplier, Utilita, which specialises in the PPS and serves the PPS with a smart meter offering. There are some indications that entry is picking up in this segment, but it is from a low level.

¹ For the purpose of this addendum to provisional findings, we distinguish the PPS from the other segments of the GB domestic retail energy markets which collectively comprise the supply of energy to domestic customers that are not on a prepayment meter, ie that are on a credit meter (eg restricted meters, smart non-prepayment meters and dumb non-prepayment meters).

² For the purpose of this addendum to provisional findings, we refer to the DD segment of the GB retail energy markets as comprising the supply of energy, either dual fuel or single fuel, to domestic customers on the basis of tariffs requiring payments by direct debit.

³ Centrica plc, EDF Energy plc, E.ON UK plc, RWE npower plc, Scottish Power and Scottish and Southern Energy plc.

⁴ CMA estimation based on SLEF, mid-tier suppliers and Utilita data.

4. In paragraphs 6 to 14 below, we examine the tariff offering in the PPS. We have found that the tariff offering in the PPS does not include the sorts of competitively priced acquisition tariffs⁵ that are available in the DD segment.
5. The significant difference in entry by non-SLEFs and the absence of acquisition tariffs priced as those in the DD segment imply that the nature of competition in the PPS is different from that in the DD segment.

Tariff availability in the prepayment segments

Comparison of the tariffs offered in the prepayment segments compared with the competitively priced tariffs offered in the direct debit segments

6. For the reasons set out below, it is our current view that no competitively priced acquisition tariffs (compared with the DD segment) are offered by suppliers to customers on a PPM (PPM customers).
7. In order to reach this view, we have compared the tariffs available in the PPS with the competitively priced acquisition tariffs available to DD customers, taking into consideration costs-to-serve differentials between the PPS and DD segment.

The cost to serve in the prepayment segments compared with the direct debit segment

8. In early 2014 Ofgem issued an information request to gather information from suppliers on the prices they charge domestic consumers for different payment methods. This request asked suppliers to describe their approach to setting price differences between payment methods and to explain why they considered that this ensured any differences were cost reflective. They also asked for suppliers' total annual costs for 2012 for the cost categories that differed by payment method. This was to enable Ofgem to check suppliers' compliance with Standard Licence Condition (SLC) 27.2A, which stipulates that any differential in tariffs between payment methods (eg direct debit, standard credit, prepayment) needs to reflect differences in costs.

⁵ When we refer to 'acquisition tariffs', we mean those tariffs that are priced in such a way as to attract the most price-conscious customers, usually for sale through price comparison websites (PCWs). See also our [provisional findings report](#), paragraph 7.117. We have not seen evidence to suggest that these acquisition tariffs are unsustainable, whether as regards the DD segment (see our [provisional findings report](#), paragraph 10.92), or the relatively higher priced acquisition tariffs we have observed in the PPS (see Figure 1 below). We do not mean to imply that there are no acquisitions of customers on non-acquisition tariffs. We acknowledge that these tariffs may have other features which lead some customers to choose them. However, for any segment in which firms are actively trying to acquire customers, we take the 'acquisition tariffs' to be the lowest-priced tariffs.

9. In its own review of payment differentials,⁶ Ofgem found that since SLC 27.2A was introduced in 2009, cost differentials between PPM and direct debit have decreased from about £140 to £80 a year for dual fuel. It noted that the higher costs are largely the result of higher costs to serve (notably higher costs of renting and maintaining the meter and the necessary infrastructure). Looking ahead, Ofgem expects to see price differences fall with the roll-out of smart meters, for example because the meter can operate in both smart and prepayment mode, removing the need to install and maintain a PPM.
10. Our current working assumption based on Ofgem's analysis is that customers in the PPS are £80⁷ per customer more expensive to serve than those in the DD segment. This is a working assumption and we are continuing to investigate the appropriate number. However, we are confident that the costs-to-serve differential is not materially higher than our upper bound.⁸

Tariff choice in the prepayment segments compared with the direct debit segment

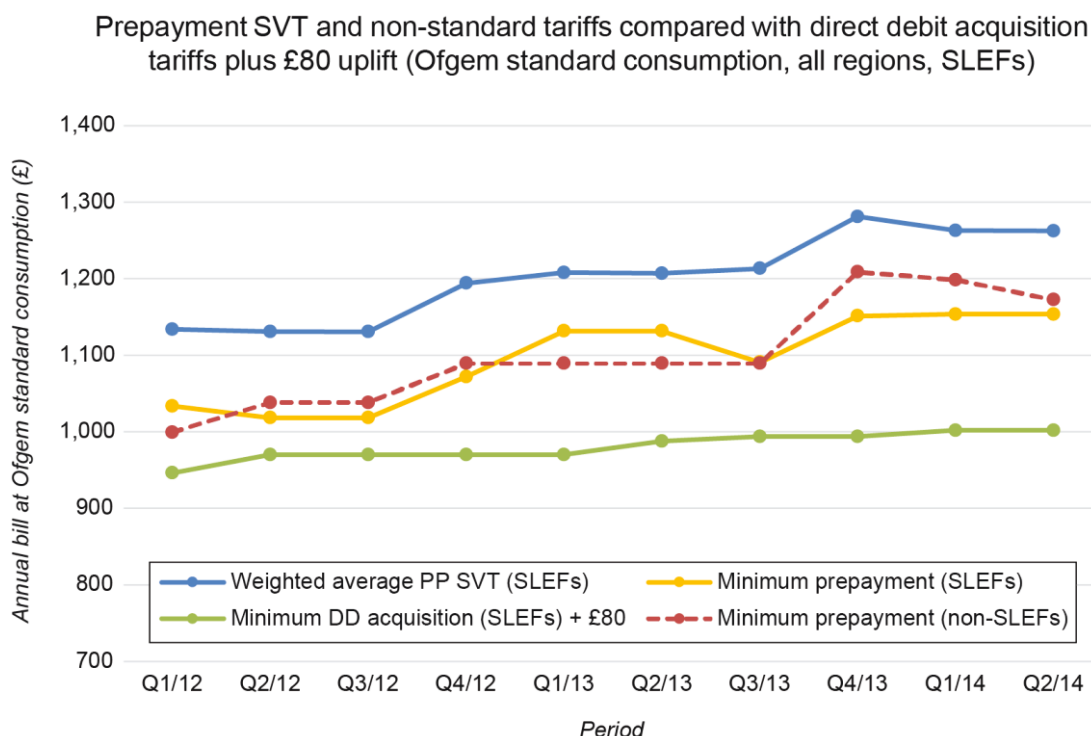
11. We have compared the range of prepayment tariffs (PP tariffs) offered by all suppliers with their acquisition tariffs offered in the DD segment, taking into account Ofgem's estimate of £80 as the additional costs to serve PPM customers. We found in our provisional findings report that domestic customers paying by direct debit are more likely to have switched in the past three years (see paragraph 8.55) and that a larger proportion of customers who are on discounted tariffs pay by direct debit (see paragraph 8.160). We therefore think that DD acquisition tariffs are more likely to represent the sorts of tariffs available in strongly competitive segments. The comparator is a benchmark for what a competitively priced acquisition tariff might look like in the PPS if competition were operating in this segment similarly to the way it operates in the DD segment. Figure 1 shows this comparison over time and is explained in further detail at Appendix A.

⁶ Ofgem open letter (20 May 2014), [Price differences between payment methods](#); Ofgem (26 March 2015), [Roundtable Report – Payment Differentials](#).

⁷ This is based on Ofgem's findings (Ofgem open letter (20 May 2014), [Price differences between payment methods](#); Ofgem (26 March 2015), [Roundtable Report – Payment Differentials](#)), noted in paragraph 7.77 of our [provisional findings report](#).

⁸ The Six Large Energy Firms, with the exception of EDF Energy, said that Ofgem's analysis was a reasonable basis for assessing the differential. They also provided further details on the discounts they give to their direct debit, dual fuel customers. These are in the range of £70–£90 a year.

Figure 1: PPS tariffs versus a competitive benchmark acquisition tariff



Source: CMA analysis (see Appendix B).

12. Figure 1 shows that the tariffs on offer in the PPS are not priced at a level consistent with the competitively priced acquisition tariffs available to DD customers (if we accept the incremental cost to serve customers in the PPS is £80). In the light of this data, we can make two substantial observations:
 - (a) The gains from switching in the PPS with current offers are small compared with that seen in the credit meter segment, and this is the case for all suppliers in the PPS (which we had observed already in paragraph 7.187 and 7.190 of our provisional findings).
 - (b) If competitively priced tariffs were offered in the PPS (ie equivalent to the lowest priced DD acquisition tariff plus cost-to-serve differential), PPM customers would be able to make substantial gains from switching – of the order of £150–£250.
13. Although we have observed that recently (compared with the data set out in Figure 1 above) more fixed-term tariffs have been introduced in the PPS by new entrants, mid-tier suppliers and the Six Large Energy Firms (see below), PPM customers would still be able to make substantially higher gains by switching from their current PP tariff to a competitively priced DD acquisition tariff rather than to the cheapest PP tariff.

Tariff choices available to prepayment meter customers among the Six Large Energy Firms

14. We have analysed the tariff offerings that suppliers make in the PPS as of October 2015. We have categorised tariffs as being 'default' for the evergreen tariffs; 'non-price-acquisition' for non-evergreen tariffs that are not priced competitively when compared with acquisition tariffs in the DD segment (allowing for the cost-to-serve differentials);⁹ or 'acquisition' for tariffs that are priced competitively when compared with acquisition tariffs in the DD segment (allowing for the cost-to-serve differentials). We have found that all the Six Large Energy Firms offer a PP version of their standard variable tariff (SVT) as a default tariff, adjusted to reflect the cost-to-serve differential. In addition to this:
- (a) EDF Energy offers a PP-only fixed-term price tariff;
 - (b) Scottish Power offers a charity support tariff, which is one of its relatively more expensive fixed-price offers though cheaper than SVT (which we take to be a retention tariff) with a PP add-on option;
 - (c) Centrica offers a fixed tariff for PPM customers under its British Gas brand;
 - (d) E.ON has recently introduced Smart PAYG which allows customers access to all of E.ON's four core tariffs (and equivalent discounts) while using a prepayment method (available on a trial basis); and
 - (e) RWE offers a fixed-price tariff to PPM customers.
15. We consider that none of the tariffs set out in paragraph 14 are competitively priced acquisition tariffs (compared with the DD segment). This is because, as shown in Figure 1, the cheapest PP tariff offered by the Six Large Energy Firms to PPM customers has been historically (and is still) significantly more expensive (taking into account of the cost-to-serve differential) than the acquisition tariffs offered by suppliers to DD customers.
16. It is clear from the non-SLEF data in Figure 1 (the dotted line) that non-SLEFs were not, in this period, offering an acquisition tariff to PPM customers priced as competitively as competitively priced acquisition tariffs in the DD segment. As noted above in paragraphs 3 and 13, while we have observed that more recently non-SLEFs have increased their tariff offerings (and market share) in

⁹ Some of the non-evergreen tariffs that are not acquisition tariffs have other features that may increase their costs and/or their attractiveness, for example 'charity' tariffs or tariffs with sophisticated insurance characteristics. We acknowledge that suppliers do sometimes acquire on these tariffs customers looking for those specific non-price features.

the PPS, this has not materially reduced the substantial gains from switching that PPM customers would be able to make by moving from the cheapest PPM tariff to a competitively priced DD acquisition tariff (having taken into consideration the cost-to-serve differential).

17. We consider, therefore, that suppliers do not offer competitively priced acquisition tariffs in the PPS, which is in stark contrast to the situation in the DD segment, where a large number of competitively priced acquisition tariffs are offered by the Six Large Energy Firms and by independent suppliers.¹⁰

Switching to a credit meter

18. We have considered below whether PPM customers commonly switch to credit meters to enjoy the benefits of competition in the DD segment, as this could indicate that tariffs available in the DD segment may act as a constraint on suppliers' pricing strategies in the PPS.
19. Ofgem data shows that about 130,000 electricity and 103,000 gas PPM customers switched to credit meters in 2014, ie around 3% of all electricity and 3% of all gas PPM customers.¹¹ Ofgem also noted that 17,000 customers (in both gas and electricity) without debt who attempted to switch to a credit meter were refused in 2014.
20. In its prepayment review published in June 2015,¹² Ofgem indicated that likely reasons for suppliers refusing these switches were their request to PPM customers to pay a security deposit, or pass a credit check before being able to switch to a credit meter. It also noted that PPM removal charges (including cost of the meter, travel time, and the time for an engineer to exchange the meter for another meter type), which range between £46.94 and £160 per customer, were another factor that could explain the low switching rate from PPM to credit meters, despite gains available of up to £300.¹³
21. However, Ofgem's findings in this area highlighted that 13 out of 18 suppliers (including four of the Six Large Energy Firms) do not require security deposits when a PPM customer wishes to switch to a credit meter. Similarly, 8 out of 18 suppliers (including three of the Six Large Energy Firms) do not charge for the removal of PPMs (95% of such meters that were removed in 2014 were removed for free). Also, smart meters will enable remote switching between

¹⁰ See the provisional findings report, [Appendices 7.3, 7.4 and 7.5](#).

¹¹ Ofgem, [Domestic Suppliers Social Obligations: 2014 annual report](#), p37.

¹² Ofgem (23 June 2015), [Prepayment review: understanding supplier charging practices and barriers to switching](#).

¹³ This gains figure is as estimated by Ofgem. Figure 1 above suggests that average gains could be of this order of magnitude before taking into account the cost-to-serve differential.

prepay and credit modes (and vice versa) without needing an operator to physically exchange the meter. Ten out of 18 suppliers told Ofgem that they did not intend to charge for a switch between smart credit and prepay modes in any circumstances due to the cost saving to the supplier that would result from remote switching.¹⁴

22. We do not know how many PPM customers could benefit from a low cost switch to a credit meter and therefore to a competitive DD segment acquisition tariff. Some customers may be ineligible for creditworthiness reasons, and some customers may prefer a PPM for their own budgeting reasons. It seems, however, that switching to a credit meter is a choice available which might make financial sense (in that the benefits materially outweigh the costs of doing so) to a significant number of PPM customers, which would give them access to the benefits of competition. This option will be more widely available with the roll-out of smart meters. At the moment, however, we note that only a small number of PPM customers make that choice (3% in 2014, as noted above), which suggests that tariffs available to customers on credit meters do not represent a significant competitive constraint on the pricing strategy in the PPS, and that suppliers do not seem to actively (and successfully) encourage (existing or prospective) PPM customers to switch.

Our assessment

23. The above analysis shows that:
- (a) entry/expansion by the non-SLEFs has been substantially more limited in the PPS than in the DD segment; and
 - (b) there is very limited switching by PPM customers to credit meters.
24. The outcome that we have observed in the PPS is that PPM customers are on tariffs that are not competitively priced compared with the acquisition tariffs available in the DD segment, adjusted for the cost-to-serve differential. This, in many ways, is an analogous outcome to the one we have observed in relation to SVT customers in the DD segment (see our provisional findings report, paragraphs 7.184 to 7.191).
25. The difference we have observed in the PPS is that competitively priced acquisition tariffs (as compared with those in the DD segment, having taken into consideration the additional costs to serve) are not on offer to PPM

¹⁴ ie a switch that does not require an engineer to physically intervene on the meter.

customers. It follows that, in the PPS, gains from switching for PPM customers are relatively low.

26. While gains from switching for PPM customers could potentially be much higher in the event that PPM customers could readily switch to one of the competitively priced tariffs in the DD segment, there may be actual or perceived impediments to switching (over and above those identified in the domestic retail energy markets as a whole). The low rate of PPM customers switching to the credit segment (3% in 2014) suggests that acquisition tariffs in the DD segment are not a significant constraint on the pricing of tariffs in the PPS.
27. We therefore consider that the nature of competition in the PPS is not the same as, and is less intense than, competition in the DD segment. In our view, the domestic retail AECs set out in our provisional findings report (in particular the AEC arising from the overarching feature of weak customer response and AEC arising from the 'simpler tariff' rules under Retail Market Review (RMR), fail to fully explain the lack of competitively priced tariffs in the PPS (compared with the DD segment).
28. We examine below whether there may be supply-side constraints on competition in the PPS which might explain this lack of competitively priced acquisition tariffs in the PPS compared with those offered in the DD segment.
29. In particular, we have investigated whether there may be:
 - (a) technical constraints in the prepayment infrastructure for 'dumb' PPMs that limit PP tariff offerings;
 - (b) softer incentives on suppliers to compete to acquire PPM customers; and/or
 - (c) possible regulatory barriers to competing in the PPS.

Possible constraints on competition

30. In the following section, we seek to identify factors that may explain our observations relating to the restricted level of tariff choice.

Technical constraints in the prepayment infrastructure relying on dumb meters¹⁵ imposes some limits on prepayment tariff proliferation

31. The prepayment infrastructure was built and designed in the 1990s. Its vintage, combined with the fact that it was not designed with a view to supporting the conditions prevailing in the current retail markets, means that it imposes limitations on the total number of tariff offerings that can be made by suppliers.
32. Appendix A provides a detailed description of the infrastructure and of the constraints that it imposes. We believe that the following summary is a fair high-level characterisation of these technical constraints:
- (a) All suppliers are somewhat constrained in offering a large number of new electricity tariffs to PPM customers who do not have a smart PPM;¹⁶ in particular (see Appendix A, paragraphs 27 to 33), we estimate that each electricity supplier may not offer more than a single SVT together with:
 - (i) up to seven tracker tariffs, each of them differentiated by region and for standard and Economy 7 meters;¹⁷ or
 - (ii) a single annual fixed price tariff whose rates would be updated every two months;¹⁸ this contrasts with the acquisition tariffs in the DD segment which are typically updated every month.
 - (b) Suppliers collectively are somewhat constrained in offering a large number of new gas tariffs to PPM customers who do not have a smart PPM (see Appendix A, paragraphs 12 to 18). However, gas tariff slots (or 'pages') do not appear to be an absolute constraint for the Six Large Energy Firms as they have varying degrees of unused capacity; one in particular has a large number of currently unused slots and has told us that its ability to offer more PP tariffs for gas was constrained by the electricity infrastructure and the desire to offer dual fuel products.
 - (c) New entrants are not currently constrained by the availability of tariff slots in the PPS for electricity beyond the general limitations set out above. They are, however, quite severely constrained from entering the PPS with

¹⁵ A 'dumb' PPM is all PPMs excluding smart PPMs.

¹⁶ The constraints in the electricity infrastructure relate to each 'Supplier Identifier', not, *per se*, to each supplier. We have not understood in detail whether there are costly constraints to each actual supplier having several Supplier Identifiers. If this were the case, then the severity of the constraint on electricity tariffs would be substantially reduced.

¹⁷ We note, however, that no supplier makes tracker tariffs available in any segment of the retail market, which suggests that there might be reasons unrelated to the PPS explaining the absence of such tariffs.

¹⁸ As noted above, five of the Six Large Energy Firms offer to PPS customers such a fixed-term tariff alongside their SVT.

a dumb meter offering for gas because of the low availability of unattributed tariff pages (see Appendix A, paragraphs 19 to 26). To the extent that an entrant should wish to enter with a dual fuel offering (which we consider to be likely), this gas tariff page constraint is binding. We also note that there is no clear mechanism for reallocating unused tariff pages, which might act as an additional disincentive to attempted entry.

33. The above analysis of technical constraints makes it clear that it is not possible for suppliers to reproduce the current structure and type of acquisition tariffs available in the DD segment in the PPS on dumb meters. As noted above, five of the Six Large Energy Firms and a few independent suppliers offer to PPS customers both an SVT and one fixed-term tariff at any one time.
34. These technical limitations contribute in our view to the paucity of tariff offerings, especially from the non-SLEFs. However, we believe that these are not the sole explanation for the differences between the nature of competition in the PPS and credit meter segments that we have observed above. First, we have not found that the dumb prepayment infrastructure is currently being operated at its technical limits, except possibly for new entrants. We would expect a well-functioning market to offer competitive tariffs close to the limits provided by the technical infrastructure, which we do not see. Secondly, these technical limitations may be circumvented through smart meters, as discussed below.

Smart metering as a solution to these technical constraints

35. From a technical point of view, smart PPM – whether Smets 1 or Smets 2 – can side-step all aspects of the dumb prepayment infrastructure, including the payment system. Utilita, an entrant, has an offering that is focused entirely on the smart PPS. Utilita told us that it had found that the PPS was profitable even when the cost of renting smart meters was included. Moreover, we were told by Utilita that it found that any new prepayment account was cheaper to serve with a smart PPM than a dumb PPM. Although the capital cost of keeping a customer on dumb PPM might be lower compared with installing a smart PPM, dumb PPM need to be replaced by smart meters before 2020 as per the gas and electricity SLCs.
36. In spite of this, the penetration of smart PPM is low, at around 11% of the PPS,¹⁹ and in most cases the appearance of PP tariffs is recent. We believe

¹⁹ In order to arrive at this estimate of smart PPM penetration, we have assumed that all Utilita customers are on smart PPMs and that Centrica's customers are on smart PPMs in the same proportion in the PPS as in the market as a whole. We have assumed that these two companies account for almost all smart PPMs.

that suppliers ought to be able to profitably offer smart PPM tariffs that are lower than the current PP tariffs based on dumb prepayment infrastructure, both because of lower costs to serve and because of the currently high margins available in the PPS.²⁰ We understand that the cheapest PP offerings include the installation cost (if not already installed) of a smart PPM.

37. We note therefore that, although it is possible to circumvent the technical constraints of the PPI through smart meters, only very few suppliers (and none of the Six Large Energy Firms²¹) have focused their strategy in the PPS on installing smart meters with a view to offering cheaper tariffs. Even where an independent supplier pursues a strategy based on smart PPMs, this strategy is not underpinned by PP tariffs that are competitively priced compared with the competitively priced acquisition tariffs in the DD segment.
38. Our view is that there must be other features of the PPS which contribute to the reduced level of competition to acquire PPM customers that we have observed in the PPS.
39. We therefore examine below whether the following features reduce the level of competition in the PPS:
 - (a) Softer incentives on suppliers to compete to acquire PPM customers (and in particular concerning new entrants for which, as noted in paragraphs 32 above, the technical constraints are greater) such as:
 - (i) higher acquisition costs of PPM customers, capital and other growth constraints on independent suppliers; and
 - (ii) outstanding debt for a portion of the PPM customers; and
 - (b) regulatory constraints.

Softer incentives to compete to acquire prepayment customers

Higher acquisition costs of PPM customers and independent suppliers' constraints on growth rates

40. It is in our view plausible that competition between suppliers is stronger in segments of a market where the cost of acquiring customers are lower. Such difference in costs may depend on the costs to serve a new customer, on the

²⁰ Our reasoning is that tariffs based on dumb PPI currently appear to have relatively high margins, margins that could profitably accommodate the rental cost of a new smart A1PP meter.

²¹ Subject to E.ON's recent trial.

costs to carry out marketing and sales activity (compared with the prospects of success), and on the likelihood of successfully completing a switch.

41. We consider below the hypothesis that higher costs of acquiring PPM customers may reduce incentives to compete to acquire PPM customers and lead in particular to new entrants and/or mid-tier suppliers, constrained in their growth rates by access to capital or organisational complexity, to focus their limited rate of customer-acquisition growth towards the larger credit meter segments (despite the potential gains from the higher tariffs observed in Figure 1 above). This might then be a reason for the apparently low levels of competition in the PPS.
42. Our review of parties' responses to our information requests suggests that PPM customers, in particular when currently using a dumb meter, may be more expensive to acquire (in particular through a smart PP tariff) to the extent that more capital is required upfront. This can be due, for instance, to the need to install a smart PPM in order to circumvent the technical constraints noted above, or because of the additional costs of (and low prospect of successfully) acquiring customers with an outstanding debt (as discussed below). Moreover, PPM customers may be accessible only through more expensive marketing channels targeted to a smaller customer base. We do not believe, for example, that suppliers could readily identify prospective PPM customers who already have a smart PPM installed (and therefore have lower acquisition costs) and target their marketing efforts on them.
43. These are factors that in our view reduce suppliers' current incentives to compete to acquire PPM customers. New entrants, for which technical constraints are greater, are more likely to be affected and therefore more likely to base their strategy on smart PPMs.
44. We have also been told by successful new suppliers that they are capital-constrained in their growth rates: each new customer requires capital, and that this is a major limitation to their growth rate. It is plausible that, in light of the higher costs in the PPS (due to the fact that most PPM customers have a dumb meter), entrants have mostly focused on the relatively easier and still profitable prospects in the DD space (and in particular the online sub-segment). We would expect that over time, and especially with the full roll-out of smart meters, new entrants will increase the number of competitive offerings in the PPS. However, it might take some years for entrants to invest sufficient resources to challenge incumbents sufficiently to lead to the sorts of low prices that have been seen in the competitive portion of the DD segment (and in particular the online sub-segment).

45. First Utility, a mid-tier supplier, told us that the PPS would remain an expensive area to target until there was a smart PP solution that it was happy with (a mass-market solution able to challenge the domestic markets). At the current time it offered a Smart prepay solution on its SVT to PPM customers (which is not an acquisition tariff). Considering that the non-SLEFs only have, collectively, some 200,000 PPM customers, most of whom have been acquired by just one new entrant, it seems likely that many of the independent suppliers that offer competitively priced tariffs in the DD segment may not actively compete in the PPS until a sufficient number of smart PPMs have been rolled out.
46. As the proportion of customers (including in the PPS) having a smart meter increases, we would expect that the actual and/or perceived higher costs for suppliers to acquire and engage with PPM customers would significantly decrease (as the need to engage with the dumb PPM and/or install PPM will decrease and eventually disappear).

Additional barriers to acquiring indebted prepayment customers

47. Approximately 15% of customers in the PPS are in debt to their supplier. The prepayment infrastructure is used to collect the payments that eventually pay-off that debt. Very often, customers are moved onto prepayment meters when they are in debt precisely in order to facilitate debt collection.
48. The intensity with which suppliers can be expected to compete to acquire new customers in this segment may therefore be dependent on what happens when a competing supplier persuades an indebted customer to switch.
49. The Debt Assignment Protocol (DAP) is the industry process used to assign debt when indebted PPM customers try to switch supplier. It is based on SLC 14 for the supply of gas and electricity, on Schedule 9 of the Supply Point Administration Agreement (for gas) and section 30 of the Master Registration Agreement (for electricity).²²
50. We understand that very few switches occur when PPM customers are in debt – the figure is around 1%.²³ We consider below the hypothesis that if it were the case that such switches are unavoidably costly for the acquiring party, then it might be that the mere risk of finding an indebted PPM customer would be a deterrent from prospecting at all (ie engaging in marketing and sales

²² Including [MAP13 v1.8 - Procedure for the Assignment of Debt in Relation to Prepayment Meters](#).

²³ See Ofgem (22 September 2014), Open letter: [Reforming the switching process for indebted prepayment meter customers – the Debt Assignment Protocol](#).

efforts). This might then be a reason for the apparently low levels of competition in the PPS.

Process for switching indebted PPM customers

51. Our current understanding of the procedure with regards to switching indebted customers is the following:
- (a) The indebted customer might or might not have told the acquiring supplier that they are in debt.
 - (b) The acquiring supplier makes a change of supplier request to the incumbent supplier.
 - (c) The incumbent supplier raises an objection to the switch on the grounds of the debt owed; there are then outcomes depending on whether the debt is less than £500 or more than £500 per fuel:
 - (i) If the debt is less than £500 per fuel, the customer is informed of this objection by mail, and if the customer responds to the objection by mail and appeals under the DAP, then the customer's debt is automatically (and entirely) assigned to the acquiring supplier (which must pay within 28 days 90% of the debt to the incumbent supplier as full settlement)²⁴ and the switch completes.²⁵ The customer is also informed that they need to give the incumbent supplier permission under the Data Protection Act 1998 to share debt details with the acquiring supplier.²⁶
 - (ii) If the debt is more than £500 per fuel, the incumbent supplier has the right to refuse the transfer.
52. From the point of view of an **acquiring** prepayment supplier, this does not appear to be excessively onerous. In particular:
- (a) there is no prohibition on charging interest on the acquired debt;

²⁴ Note that the level of indebtedness of the customer is not adjusted downwards by 10%.

²⁵ We are not clear why there needs to be a pre-agreed level of debt reduction for switching to occur; it is not clear what is the impact of this requirement, combined with parties' obligations set out in SLC 14, on (incumbent and new) suppliers' incentives within the context of the switching process.

²⁶ Ofgem notes that it does not believe that this is actually mandated by the Data Protection Act and asked the industry to waive this requirement in September 2014. Ofgem open letter (22 September 2014), [Reforming the switching process for indebted prepayment meter customers – the Debt Assignment Protocol](#).

- (b) PPM customers are dependable payers – they incur debt before they are on prepayment meters, not after (and start to pay back the debt in order to purchase energy²⁷); and
- (c) the customer still owes the entirety of the sum, but it is purchased by the new supplier at a 10% discount, providing a positive incentive to acquire such customers.
53. Therefore, we do not consider that the DAP as it stands should be *per se* a disincentive to prospecting in the PPS.
54. However, we note that the DAP makes it particularly burdensome for a customer to switch. In particular, they need to assert their rights in the correct way, some period of time after they have had contact with the acquiring supplier, and in the context of the incumbent supplier having stated that they are objecting to the switch.
55. Ofgem reviewed the DAP in 2012 and suppliers committed²⁸ to improve it through various initiatives, such as generating greater awareness and increasing the debt threshold necessary in order to qualify for a switch – from £200 to £500.
56. Ofgem again reviewed the DAP in 2014 to assess these commitments made by suppliers in 2012, evaluate the impact of any changes, and ascertain whether more needed to be done.
57. While Ofgem welcomed the progress by suppliers in increasing awareness about the DAP and increasing the switching threshold to £500, it concluded that indebted PPM customers still face unnecessary barriers to switching and complexity in the switching process, which could explain the small number of indebted PPM customers completing a switch. For instance, Ofgem found that not all independent suppliers were honouring the £500 threshold and may be preventing their customers from switching in circumstances below this amount. Additionally, Ofgem found that the ‘objection letter’ sent by incumbent suppliers to their customers stated that customers may still switch if their new supplier was willing to assume the debt, but that customer consent was required in order for the former supplier to share details of the debt with the new supplier. Unless customers provided this consent, switches were

²⁷ Each time a customer makes a payment to top up their PPM electricity key or gas card, a percentage is used to repay the outstanding debt according to the existing repayment plan. The remainder is used to purchase energy.

²⁸ See Ofgem’s open letter (24 September 20102). [Debt Assignment Protocol Review: the process for prepayment meter customers switching with a debt.](#)

stopped. This was despite the fact that such consent was, in Ofgem's view, not required under the Data Protection Act 1998.

58. Ofgem has already taken some steps to address these barriers to switching. It has amended SLC 14.6²⁹ to reflect the threshold of £500 under which suppliers have the obligation to facilitate a customer's switch. It has also identified in an open letter published on 22 September 2014³⁰ areas for improvement that required actions by Ofgem and the industry:³¹
- (a) The 'objection letter' sent by an incumbent supplier should not confuse customers as to their right to switch, making clear that the switch will continue; further 'objection letters' should only be sent to customers who are unable to switch.
 - (b) The 'complex debt' aspect of the DAP should be revisited in order to diminish the instances in which the switch is disallowed.
 - (c) Issues relating to multiple registrations should be addressed in order to avoid multiple objection letters being sent to the customers, causing unnecessary confusion for them and adding cost.
59. In its Forward Work Programme 2015-16,³² Ofgem indicated that it would put in place a new regime for the DAP to reduce barriers to switching for indebted PPM customers. In order to ensure 'safe and efficient switching', it also noted that a key consideration in reviewing the arrangements by which suppliers may object to customers switching would be whether current arrangements are conducive to customers in debt being able to get the best deal, while simultaneously ensuring that suppliers are able to take appropriate steps to have debt repaid.
60. In the course of 2015, Ofgem collected evidence relating to the supplier objections mechanism. It is currently in the process of analysing the information received, and has also commissioned external experts to examine the costs and benefits in more detail as input to its wider consideration of the issue. Ofgem expects to issue a further update in early 2016.³³

²⁹ Ofgem (12 May 2015), [Decision to make modifications to the gas and electricity supply licences to reform the switching process for indebted prepayment meter customers – the Debt Assignment Protocol](#).

³⁰ Ofgem open letter (22 September 2014), [Reforming the switching process for indebted prepayment meter customers – the Debt Assignment Protocol](#).

³¹ Ofgem asked the industry to revisit its procedures in 2014 and to have a new DAP by April 2015. Ofgem noted that suppliers were largely in agreement with Ofgem's proposal but raised concerns that amending the DAP in this respect would require significant system and processing changes. We understand that the industry has not approved the changes suggested by Ofgem yet.

³² Ofgem, [Forward Work Programme 2015-16](#), Section 2.14 and 3.10.

³³ See Ofgem's website: [Suppliers' objections](#).

Impact of the DAP on suppliers

61. Although the DAP does not seem to restrict suppliers' incentives to prospect in the PPS in general, it may significantly contribute to the small number of switches attempted, and successfully completed, by indebted PPM customers. However, the cost for suppliers is only the lost sales effort; it is not any additional cost relating to winning such customers. With around 15% of PPM customers in this category, this does not seem likely to provide a significant disincentive for suppliers to prospect in the PPS as a whole. Utilita told us that it had filtering mechanisms in its sales process, although only used in limited circumstances and in accordance with the licence conditions, aimed at minimising the time spent on prospective customers with low-probability success because of debt issues. We therefore conclude that the DAP is not likely to make the whole of the PPS unattractive to acquiring suppliers.
62. The DAP arguably makes it unattractive for the incumbent supplier to lose an indebted PPM customer, since it can only assign 90% of the debt value to the acquiring supplier. Moreover, once on a PPM, an indebted customer is likely to be good at paying off their debt (as noted above).
63. However, the fact that it is unattractive to lose such customers should not reduce the attractiveness of gaining these customers, which is the motivation that ought to create competitive pressure in the PPS in the first place.
64. Nevertheless, we believe that the debt protocol probably makes it unattractive to prospect **specifically** for indebted customers because it makes the probability of sales completion very low. However, in our view, customer debt should not significantly reduce the general attractiveness of prospecting PPS customers because only 15% of the PPS has outstanding debt. This may contribute to some extent to the softening of suppliers' incentives to compete to acquire PPM customers as described in paragraphs 40 to 44.

Our assessment

65. We consider that, with respect to customers who still have a 'dumb' PPM installed, there are technical constraints on the number of tariffs that can be offered by suppliers. This is particularly relevant for new entrants who have limited access to tariff codes for gas. We note that it is not possible to reproduce the current structure and type of acquisition tariffs available in the DD segment in the PPS on dumb meters. We also note the low penetration rate in the PPS of smart PPM (around 11%) and of the non-SLEFs (around 6% of all PPM customers).

66. These technical constraints do not seem to be binding on the Six Large Energy Firms. Moreover, they can be circumvented by all (including new entrants) by installing smart meters. We consider that certain further features of the PPS soften competition by softening incentives for customer acquisition. In particular, we noted that some of the reluctance on the part of suppliers to compete aggressively for the PPS may be explained by:
- (a) suppliers, and in particular new entrants, facing actual and/or perceived higher costs to engage with, and acquire PPM customers compared with DD customers; and, to a more limited extent,
 - (b) the limited prospect of successfully acquiring customers with existing debt (which, as identified by Ofgem,³⁴ may be driven by barriers to switching and complexities faced by indebted PPM customers and by suppliers).
67. Both these features may make sales efforts targeted to PPM customers unattractive, in particular for new entrants whose growth may be constrained by capital or organisational constraints and which may have limited experience in the PPS.

Possible regulatory barriers to competition in the prepayment segments

68. We have considered whether there are any regulations which may hamper competition for reasons that are specific to the PPS.

The 'simpler choices' component of the Retail Market Review rules

69. In our view, the maximum number of tariffs that a supplier may offer to customers at any one time under the 'four-tariff rule', which applies to both credit meters and PPMs, may make it more costly to offer a tariff aimed specifically at the PPS in the sense that such a tariff could take up one of a supplier's four slots.
70. We have analysed the tariff choices (as of November 2015) that suppliers have made available with a particular focus on how they fit offers to the PPS within their four-tariff offering (see above paragraph 14).

³⁴ Ofgem open letter (22 September 2014), [Reforming the switching process for indebted prepayment meter customers – the Debt Assignment Protocol](#).

Our assessment

71. The question we ask is whether this configuration of four-tariff choices suggests that a normal competitive process has been impeded by the existence of the four-tariff constraint.
72. First, we note that there is no evidence that suppliers offered greater tariff choice in the PPS before the RMR rules. In Q1 2012, before the introduction of the RMR rules, there were no fixed and 15 SVT PP tariffs on offer. By Q2 2015, there were three fixed and over 30 SVT PP tariffs on offer. The evidence we have is that tariff choice in the PPS has been increasing, not falling, over the period of investigation (although at a very slow pace compared with the DD segment). It seems likely, therefore, that even if the RMR rules constrain the number of tariffs on offer in the PPS, they are not the principal cause of PPM customers facing PP tariff choices that are not competitively priced compared with the DD segment.
73. The four-tariff rule does introduce some additional costs to prospecting in particular niches, though this is a general issue we have observed with the RMR rules rather than anything specific to the PPS (and was provisionally identified as an AEC in our provisional findings report).
74. Parties have confirmed that they were able in principle to offer the same tariffs to PPM customers as to other customers. However, some parties noted that designing a tariff specifically for PPM customers had an opportunity cost by taking up one of the four slots of the four-tariff rule (therefore reducing the number of tariffs that may be offered to non-PPM customers). This is therefore consistent with the AEC we have provisionally found with respect to the simpler choices component of the RMR rules, and suggests that innovation in the PPS may be restricted by the choice of suppliers not to dedicate a tariff slot specifically to this segment.
75. We have then considered whether, as a result, the four-tariff rule had a stronger impact in the PPS to the extent that it would constitute an absolute barrier to competition. If we focus on Scottish Power and EDF Energy, because these are two of the Six Large Energy Firms offering non-SVT dumb PPM tariffs, it seems clear that the four-tariff rule does not constitute an absolute barrier to competition between the two of them (although, as noted above, it may restrict the parties' ability to compete through innovation). A process of successive undercutting could occur as follows: EDF Energy could lower the price on its PP-only tariff to attract customers; Scottish Power could either lower the PP uplift on the 'charity fixed'³⁵ PP tariff, or switch its PP

³⁵ The non-SVT tariff that Scottish Power currently offers in a prepayment version is the [Help Beat Cancer tariff](#).

offering to its lower-priced fixed acquisition tariff (with relevant cost-to-serve adjustment) in order to engage in competition with EDF Energy's undercutting.

Provisional conclusion on competition in the prepayment segments

76. Our provisional analysis of the PPS suggests the following.
77. Competition in the PPS is significantly weaker than in the wider GB domestic retail energy markets. Entry and expansion by the non-SLEFs has been substantially slower, and entry is limited to fewer suppliers. The range of tariffs available to PPM consumers is significantly more limited than those available in the credit meter segments. In particular, consumers in the PPS do not appear to be offered the same acquisition tariffs as are available to non-PPM customers. The lowest tariffs that are offered by suppliers to PPM customers are significantly higher (after taking into consideration differentials in the costs to serve) compared with the competitively priced acquisition tariffs in the DD segment. This gives rise to customer detriment.
78. Above, we have considered in detail a number of characteristics of the PPS that might account for the outcomes we have found. We noted the low penetration of smart meters in the PPS. We have considered the following features:
- (a) technical constraints in the PPI;
 - (b) higher costs of acquiring customers in the PPS, and especially so for new entrants;
 - (c) the complexities involved in the assignment of customer debt in some PP switches; and
 - (d) the opportunity costs that the four-tariff rule imposes on suppliers seeking to target particular segments of the market with competitive offerings.
79. We have found that each of these characteristics has the potential to reduce suppliers' incentives to compete to acquire PPM customers, or the ease with which they can do so. These characteristics have a greater impact on new entrants, which therefore reduces the likelihood of large-scale entry (we have noted that the non-SLEFs have only 6% of all PPM customers). The reduced threat of losing customers to competitors contributes in our view to the softening of competition in the PPS.
80. The prepayment infrastructure is old and was designed in a pre-competitive era. We have found that it is particularly hard for new entrants to gain access

to the scarce tariff slots required to offer a prepayment gas tariff. However, we have also found that the Six Large Energy Firms all have sufficient spare slot capacity to compete.

81. We consider that the PPS is harder and more expensive to target for competitive customer acquisitions than the DD segment, and especially than the online sub-segment of the DD segment. New entrants would probably need to sell a smart meter solution – as Utilita does – but this requires more capital per acquisition, a greater sales effort and greater organisational complexity than selling in the DD segment, in particular the online sub-segment. Moreover, national advertising costs are spread over a smaller potential customer base in the PPS as compared with the DD segment.
82. If smart meters were more prevalent in the PPS, then entrants would be able to prospect in that segment without the cost or organisational complexity that a smart offering currently seems to require. However, we have found that PPM penetration of smart is only 11%, much of which is itself attributable to new entrants.
83. We have considered whether the risk associated with acquiring PPM customers who have an outstanding debt might be a disincentive to trying to acquire customers in the PPS. We have found that the DAP makes switching with debt more difficult than it would be in a well-functioning market. However, we do not consider that this would be likely to provide a significant disincentive for suppliers to prospect in the PPS as a whole since only 15% of PPS customers have outstanding debt. Nevertheless, the presence of indebted customers probably leads to a higher chance of switches that fail to complete, and may slightly increase sales and marketing costs faced by all suppliers and new entrants. This in our view reinforces our view set out in paragraph 82 above.
84. We have considered that the degree to which the four-tariff rule might impose an opportunity cost to the offering in the PPS of competitively priced acquisition tariffs (compared with the DD segment). While we believe that there is such a cost, we do not conclude that this is an absolute constraint on competition in the PPS. Moreover, we consider that it is not specific to the PPS and is common to the issues we have already raised in relation to the simpler choices component of the RMR rules.
85. For these reasons, the inquiry group has provisionally found that a combination of features of the markets for domestic retail supply of gas and electricity in Great Britain, relating specifically to the PPS, give rise to an AEC. These features, in combination, reduce retail suppliers' incentives (and, for some, their ability) to compete to acquire PPM customers (in particular, customers

with an outstanding debt or a poor credit history) and to innovate by offering tariff structures that meet customers' demand. As a result, the tariffs available in the PPS are not competitively priced compared with the DD segment. These features are as follows:

- (a) Technical constraints that limit the ability of all suppliers, and in particular new entrants, to innovate by offering tariff structures that meet demand from PPM customers who do not have a smart meter.
- (b) Softened incentives for all suppliers, and in particular new entrants, to compete to acquire PPM customers due to:
 - (i) actual and perceived higher costs to engage with, and acquire, PPM customers compared with other customers; and
 - (ii) a low prospect of successfully completing the switch of indebted customers, who represent about 15% of PPM customers.

Appendix A: Prepayment infrastructure

1. In its prepayment review,¹ Ofgem highlighted a number of issues potentially affecting competition in the prepayment segments of the GB domestic retail energy markets, including the issue of tariff codes. In addition one supplier, Scottish Power, raised the issue of tariff codes in its response to the updated issues statement.²
2. In this section we set out our understanding of tariff codes and how they might affect suppliers' ability to offer a range of tariffs to prepayment customers. We then set out a potential workaround we considered, and parties' responses to it.
3. In forming our understanding of these issues, we met with Itron and Siemens, the prepayment meter infrastructure providers (PPMIP) for electricity and gas respectively. In addition, we sent two rounds of information requests to the Six Large Energy Firms and the mid-tier suppliers to understand better the extent to which they faced technical constraints in offering tariffs to customers with prepayment meters.

The 'dumb' prepayment infrastructure

4. While there are differences between the gas and electricity infrastructure, below we give a brief overview of the general system employed for both fuel types, highlighting any relevant differences where necessary.
5. Each prepayment customer is issued with a prepayment key (in the case of electricity) or card (in the case of gas). Customers top up at local shops and post offices that offer one of three type of payment terminal (Payzone, Paypoint and Post Office).³ The customer puts their key/card in a prepayment terminal, which is then credited with the amount of the top up.
6. When the customer returns home and inserts their key/card into the meter, the balance on the meter is increased to reflect the additional credit the customer has added. If a customer's balance runs out, and they have

¹ Ofgem (June 2015), [Prepayment review: understanding supplier charging practices and barriers to switching](#).

² [Scottish Power's response to the updated issues statement](#).

³ Smart prepayment solutions, such as the one offered by Utilita, can also accept cash payments at shops but they are not limited to the shop having the physical infrastructure of a card or key reader connected to the Payzone, Paypoint and Post Office systems. With smart prepayment, a supplier could in theory have an agreement with any retail outlet to offer energy credit in exchange for cash payment.

exhausted their emergency credit,⁴ their supply will be temporarily disconnected until they have topped up again and have a positive balance.⁵

7. However, the dumb infrastructure used by suppliers to communicate with customers' meters has a number of technical limitations that affect its functionality. In the case of both gas and electricity prepayment, the current infrastructure (meters, keys/cards) was introduced in the early 1990s, before liberalisation of the energy supply markets, so was not designed to accommodate the proliferation of suppliers and tariffs now in the market.
8. In order for a prepayment meter to draw down (or 'decrement') the customer's balance correctly,⁶ the meter needs to be programmed with the customer's tariff details (standing charge and unit rate(s)). There is a mechanism through which suppliers can update the correct tariff for each customer's meter via the prepayment infrastructure.^{7,8}
9. The details of all tariffs offered by each supplier are stored on the prepayment infrastructure, with each tariff allocated a 'tariff code', setting out the details of the tariff (eg standing charge and unit rate(s)). Each customer's meter is then assigned the correct tariff code that codes for their tariff, meaning that it is able to decrement the customer's balance at the correct rate, based on their usage. The key/card transports information to the meter that includes the level of credit available (and how much debt can be extended in emergency) and the rate at which it should be decremented (the tariff).
10. The technological vintage of the system and the commercial context in which it was launched means it was not designed with the capacity to hold a very large number of tariffs. The current infrastructure has a finite capacity of tariff codes, meaning that there is a limited number of PP tariffs that can be on offer in the market at any given time.
11. While the broad description of tariff codes set out above applies to both the gas and electricity prepayment systems, there are some differences in the details – particularly around the number of tariffs that can be supported on

⁴ Each customer is allowed to have a small negative balance on their meter before their supply is cut off.

⁵ Smart prepayment meters will either be credited by wireless communication, or, in the case of some Smets1 meters, they can be credited by the customer keying a code into the meter.

⁶ ie using the correct standing charge and unit rate(s) for their tariff.

⁷ Since a customer's tariff may change on a regular basis (eg when their supplier changes its SVT, when the customer switches tariffs, or when the customer switches supplier), it would likely not be efficient for suppliers to visit the customer's home each time the details of their tariff changed to change to tariff details on the meter manually.

⁸ Siemens suggested that the easiest way to conceptualise the communications between supplier and meter was as 'pedestrian communications' where the card or key was carried between the shop and the meter by the customer. The communication could be thought of as a secure, specific, yet very slow and periodic communication channel.

each system. Below we set out more details on the gas and electricity tariff codes, and the extent to which their limited availability is likely to affect suppliers' ability to offer a range of tariffs.

Gas tariff codes

12. On the gas prepayment system (managed by Siemens), tariff codes are grouped into pages, each containing 11 codes.⁹ We understand that there are a total of 102 tariff pages currently allocated to suppliers, and that there are no further pages available to allocate at present. This means that there is a total of 1,122 tariff codes, and therefore an absolute maximum of 1,122 tariffs that can be offered across the industry today.¹⁰
13. However, given regional differences in costs, suppliers often set different prices for each of the 14 PES regions. In reality, suppliers may make different choices around the extent to which they vary prices by region (for example, RWE explained that it did not currently set regional prices). Nevertheless, for a supplier to launch a new gas PP tariff nationally, with different prices for each region, it would require 14 tariff codes. Therefore, if suppliers offer a different price for each of the 14 regions, there would be an absolute constraint across the industry of approximately 80 gas PP tariffs.
14. While 80 gas PP tariffs across the industry may not seem overly restrictive (given that there are approximately 30 suppliers currently active), there are two reasons why the availability of gas tariff codes may constrain suppliers' ability to offer a range of competitively priced PP tariffs:
 - First, some tariff structures – like the currently popular acquisition tariffs, the annual fixed tariff whose rate changes every month – require a large number of slots, since suppliers require tariff codes for each tariff that currently has customers, even when they are no longer available to new customers.
 - Secondly, over 85% of available tariff codes are held by the Six Large Energy Firms, potentially restricting the ability of other suppliers to enter and offer a range of PP tariffs.

We discuss both these issues in more detail below.

⁹ Tariff codes on the same page all have to share some characteristics, such as the amount of emergency credit available to customers.

¹⁰ Although Siemens has set out that technical solutions are being pursued to expand this to the theoretical maximum of 2,750 tariff codes.

Tariff codes for fixed tariffs

15. Given the impact of fluctuating wholesale prices, suppliers tend to make their fixed tariffs available only for a short period of time, before withdrawing them and replacing them with new fixed tariffs. For a supplier to offer a fixed PP tariff that is removed and replaced by a new offer on a regular basis, it would require considerably more tariff codes than it would to offer a variable or tracker tariff.
16. This is because suppliers need a tariff code for each tariff that still has customers on it, regardless of whether it is still available in the market. As a result, even once a fixed tariff is removed from sale, it will require a tariff code for its duration (ie until the end of its fixed term). If, for example, a supplier removes its old fixed tariff and replaces it with a new one every two months, it could have customers on up to six different tariffs at any point in time.
17. In contrast, on a supplier's SVT (or, if any were offered, on a tracker), all customers within a region pay the same price regardless of when they joined, meaning that there is only ever one SVT or tracker (and therefore only one tariff code required). As a result, in order to offer a fixed tariff that renews every two months, a supplier would require at least six times the number of tariff codes it would require in offering an SVT or tracker. This means that the restricted availability of tariff codes makes it particularly difficult to offer fixed tariffs, which are the very tariffs that have become popular acquisition tariffs outside the prepayment market. Nevertheless, some of the large suppliers do offer fixed deals to prepayment customers.
18. As set out above, there are sufficient tariff codes available for suppliers to offer a total of 80 gas PP tariffs across the market (and more if they do not charge different prices in each of the 14 PES regions). If 30 suppliers offer a prepayment SVT (leaving sufficient tariff codes for 50 further tariffs across the market), this could allow, for example, for:
 - eight fixed tariffs that vary every two months (in the manner described above) across the whole market; or
 - 50 tracker tariffs (more than one per existing supplier).

Allocation of tariff pages

19. One reason why independent suppliers may be unable to offer a range of PP tariffs is that the limited number of tariff pages that are available are concentrated in the hands of the Six Large Energy Firms. Of the 102 tariff

pages that are available to suppliers, a total of 87 (more than 85%) are currently controlled by the Six Large Energy Firms.

20. Table 1 below sets out the allocation of the gas tariff pages by supplier. While each of the Six Large Energy Firms has at least seven tariff pages (with Centrica holding as many as [X]), none of the mid-tier suppliers has more than [X]. Since, as noted above, each tariff page codes for 11 tariffs, suppliers need just over one page to launch a single tariff if they wish to vary prices in each of the 14 PES regions.

Table 1: Allocation of tariff pages by supplier

	<i>Supplier</i>	<i>Tariff pages</i>
SLEFs	Centrica	[X]
	EDF Energy	[X]
	E.ON	[X]
	RWE	[X]
	SSE	[X]
	Scottish Power	[X]
Mid-tier	Co-operative Energy	[X]
	First Utility	[X]
	Ovo Energy	[X]
	Utility Warehouse	[X]
	Others	[X]
Total		102

Source: CMA analysis.

21. As set out above, fixed tariffs that are renewed regularly require considerably more tariff pages than variable tariffs. In the example set out above, where a supplier removes and replaces its fixed tariff every two months, it would require a total of 84 tariff codes, or eight gas tariff pages. It is clear from Table 1 that, given the current allocation of gas tariff pages, only the Six Large Energy Firms would have sufficient tariff pages to make such an offering. However, it should be noted that there are possible acquisition tariff structures that do not require as many tariff slots as annual fixed deals. For example, tracker tariffs would only use up one tariff code per region.
22. In addition, Table 2 below sets out that most of the Six Large Energy Firms use only a fraction of the tariff pages under their control. For example, E.ON and RWE have [X] and [X] tariff pages respectively, but each uses less than one full page; Centrica uses [X] of its pages, but also has [X] unused pages.

Table 2: Number of unused tariff pages for each of the Six Large Energy Firms

<i>Supplier</i>	<i>Pages</i>	<i>Unused pages</i>
Centrica	[X]	[X]
EDF Energy	[X]	[X]
E.ON	[X]	[X]
RWE	[X]	[X]
SSE	[X]	[X]
Scottish Power	[X]	[X]

Source: CMA analysis.

23. This suggests two conclusions:
- (a) Based on the tariffs currently offered by the Six Large Energy Firms, there would be significant scope to reallocate gas tariff codes in a way that enables a greater number of tariffs to be made available by other suppliers.
 - (b) The Six Large Energy Firms do not themselves currently face significant constraints in their PP tariff offerings as a result of the availability of gas tariff codes.

Mechanism for allocating tariff codes

24. We asked suppliers if there was an effective mechanism for monitoring the allocation of tariff codes and reallocating them where appropriate. Suppliers set out that tariff pages could be bought and sold via Siemens, but were not aware that a formal process existed for reallocating unused tariff codes.
25. E.ON stated that Siemens managed all the gas tariff code allocations. E.ON set out that it recently returned four unused tariff pages to Siemens, [X], suggesting that there is a mechanism for reallocating tariff codes. However, it is not clear that this is transparent and visible to all suppliers that may wish to acquire further tariff codes.
26. Overall, while it is clear that it would not be possible for suppliers to offer the same range of gas tariffs on prepayment that they do on standard credit and direct debit (where there are no technical restrictions on the number of tariffs suppliers can offer), it is also clear that the infrastructure allows for considerably more choice than is currently on offer.

Electricity tariff codes

27. In the electricity prepayment system (managed by Itron), each supplier is issued with a 'supplier ID', which is capable of supporting a total of 249 tariffs.¹¹ There is a maximum of 99 supplier IDs available on the system, of which we understand just over half are currently assigned to suppliers (though some of these are assigned to defunct suppliers that have been taken over). Compared with gas PP tariff codes, where the number of tariff codes varies considerably by supplier, in the electricity prepayment system, each supplier receives the same number of codes.

¹¹ More accurately, each supplier has 255 tariff codes with six reserved for 'industry tariffs'.

28. Unlike in gas, where suppliers typically require 14 codes for each tariff they offer, in electricity suppliers tend to require more codes per tariff. The majority of suppliers offer Economy 7 tariffs in addition to single rate tariffs. Since Economy 7 tariffs include a different structure (and different level) of prices compared with single rate tariffs, suppliers require separate tariff codes for these variants.
29. A supplier that offers both Economy 7 and single rate tariffs would require 28 tariff codes for each different tariff (14 regions, each with a single rate and Economy 7 version of the tariff). We understand that some suppliers have other types of prepayment meter (eg restricted meters used to offer time-of-use tariffs), which would require additional tariff codes.¹²
30. If each supplier served customers with both single rate and Economy 7 meters, their 249 tariff codes would enable them to offer eight different tariffs (with different prices in each of the 14 PES regions, with both a single rate and Economy 7 variant).
31. As noted above in the section on gas PP tariffs, offering fixed tariffs requires a greater number of tariff codes (as suppliers need to allocate tariff codes to all tariffs that currently have customers, even if they are no longer available to new customers). As a result, in practice a supplier could use its available electricity tariff codes to offer:
- one SVT, and up to seven fixed tariffs throughout the year (eg introducing a new fixed tariff and removing the old one approximately every two months); or
 - one SVT and up to seven tracker tariffs with regional variation.

This suggests that the Six Large Energy Firms (with the exception of [X]) and possibly [X]) are likely to be more constrained by the availability of electricity tariff codes than they are by gas tariff codes. As noted, on the electricity prepayment system, each supplier could offer a maximum of eight tariffs (with different prices for each region, and separate codes for single rate and Economy 7 meters);¹³ most of the Six Large Energy Firms have sufficient gas tariff codes to offer more than this number of gas tariffs.

32. In contrast, suppliers other than the Six Large Energy Firms, which do not have a significant number of gas tariff pages, are likely to be considerably

¹² For example, [X] stated that they needed [X] tariff codes respectively to support each electricity tariff.

¹³ As noted above, some suppliers have stated that they require more than 28 tariff codes per electricity tariff, meaning that their 249 tariff codes may enable them to offer fewer than eight tariffs because of additional meter types that need to be catered for.

more constrained by the availability of gas tariff codes than by the comparatively less scarce electricity tariff codes.

33. We understand that when introducing a new tariff, suppliers tend to introduce both a new gas and electricity tariff together (with the same branding and tenor), to enable them to attract dual fuel customers. As a result, it is likely that a constraint on a supplier's ability to offer tariffs on one fuel type (eg gas) will affect its willingness to offer tariffs on the other (eg electricity). That is, suppliers that have very limited access to gas tariff pages (and are therefore restricted in the number of gas tariffs they can offer) are unlikely to make full use of their (comparatively less scarce) electricity tariff codes.

Potential workaround

34. Based on this understanding of the constraints, we were concerned that the limited availability of tariff codes could restrict firms' ability to offer competitive acquisition tariffs – especially those based on the currently popular one-year fixed structure. As a result, we engaged further with suppliers to understand better the nature of these constraints, and whether there are potential workarounds that could mitigate the effect of these technical barriers.
35. We considered it possible that suppliers could offer PP tariffs without the need to have a tariff code for each tariff they offered. We set out a potential workaround and put it to suppliers for comment, set out below.

Our proposed workaround

36. As noted above, the purpose of the tariff code is to communicate to the meter the rate at which it should decrement the customer's balance. One of the infrastructure providers pointed out that the purpose of the PP tariff on the meter was to decrement credit, not to try to recreate the accuracy of the billing engine on the meter. Any number of tariffs can be applied at the billing engine and can be reconciled with the customer against any payments made, as per the normal credit customer process. We were interested in understanding whether a customer could be placed on a tariff code that does not match their actual tariff details (meaning that the balance on their meter would be decremented at the 'wrong' rate), but then for there to be a 'truing up' process subsequently to ensure that the customer ends up paying the correct amount.
37. For example, a supplier could offer its customers a competitively priced fixed tariff, but use its SVT tariff code. The customer's meter would decrement their balance based on the SVT tariff code (and therefore in line with the SVT standing charge and unit rate(s)), but the customer would be refunded the difference at a later date.

38. The prepayment infrastructure enables suppliers to receive meter readings when a customer tops up, meaning that the supplier would be able to calculate how much the customer should have paid over a given period (eg between top-ups). The supplier would therefore be able to calculate how much a customer's balance needed to be adjusted (either up or down).
39. The prepayment infrastructure also has a credit-adjustment function that allows suppliers to adjust individual customers' balances (ie add or remove credit from their balance) when they top up. That is, the supplier can send a message to a payment terminal, and when the customer inserts their key/ card, their balance is adjusted, based on the supplier's instructions. This feature is in regular use by suppliers in the ordinary course of operation of the system, whether it be to manage a debt agreement or to make adjustments to payments against actual meter readings.
40. As a result, under the workaround we proposed to suppliers, suppliers would be able to offer tariffs to customers for which they did not have tariff codes. While customers' meters would decrement at a rate that is not perfectly in line with their tariff, there would be a mechanism through which suppliers could remotely adjust their customers' balances (eg at each top-up) to reflect any over- or under-payment.

Suppliers' responses to the proposed workaround

41. We received a range of responses from suppliers, with all suppliers considering our proposed workaround to be infeasible in practice. Below we set out the main barriers identified by parties.

Technical barriers

42. A number of suppliers told us that the messaging service for crediting or debiting balances on the prepayment infrastructure would not be able to handle the increased volume of messages that would be needed to adjust customers' balances on a regular basis.
43. Suppliers set out that the messaging service had limitations on the volume of messages it could send to customers' accounts. Under the current infrastructure, messages have to be sent to individual payment terminals and are picked up by the customer's key/card when they top up.¹⁴ As a result, a customer will pick up a message only when they top up at the 'correct' terminal; if the supplier sends a message to one terminal, but the customer

¹⁴ It is not possible to send messages to a customer that can be picked up at any terminal.

tops up elsewhere, the customer may not pick up the message during that top-up. When sending messages to customers, suppliers therefore try to send them to the terminals they consider the customer is likely to use for its next top up.

44. Suppliers told us that each terminal had a fixed capacity of messages. If a supplier sends a message to a terminal that has reached its capacity of messages, the message is not stored on the terminal, and does not reach the customer (even if they top up at that terminal subsequently). These messages are queued, and reach the terminal only when space becomes available (ie when other messages have successfully been picked up by other customers, and are therefore removed from the terminal). Suppliers also told us that if a message is waiting for a space on a payment terminal to become free for more than a certain amount of time, it is cancelled, and the message would have to be resent.
45. In addition, Centrica noted that a recent exercise that required sending messages to approximately 1.6 million customers had already taken over 12 months, and had so far reached only 89% of the target customers. Given these difficulties with the messaging system, suppliers considered that it was not feasible to use it to adjust customers' balances on a very frequent basis (eg each time they top up).

Financial barriers

46. A number of suppliers explained that introducing such a system would be costly for them. Centrica, E.ON, RWE and SSE explained that they would face considerable costs in adjusting their systems to enable them to calculate and execute the required adjustments to customers' balances. EDF Energy, E.ON, RWE, SSE, Co-operative Energy and Ovo Energy highlighted their concerns regarding the likely increased costs of sending the required messages.
47. In addition, suppliers also set out that this proposed system would likely result in considerable confusion, as customers' meters would decrement at the 'wrong' rate, leading to a greater volume of calls to their customer service advisers, further increasing costs. More generally, suppliers raised their concerns that customers' experience would be negatively affected by such a system, noting that many of their customers with prepayment meters were in financial difficulty, and monitored their expenditure closely. As a result, they considered that a system where the balance reported on the customer's meter did not reflect their actual balance would cause problems for those customers.

Regulatory barriers

48. We did not receive consistent responses on whether or not there would likely be regulatory barriers to implementing such a system. However, EDF Energy and SSE questioned whether this would be counter to Supplier Licence Condition (SLC) 22B, which prohibited cash discounts. SSE also questioned whether this would be contrary to the Treating Customers Fairly licence condition (SLC 25C) due to the potential for customer confusion, and the potential for the customer to be charged the incorrect rate until they receive the message through the terminal. In addition, E.ON and Co-operative Energy considered that unilateral contract variation rules would apply if the supplier changed the rate at which the customer's meter decremented, even if the customer was on a fixed tariff.

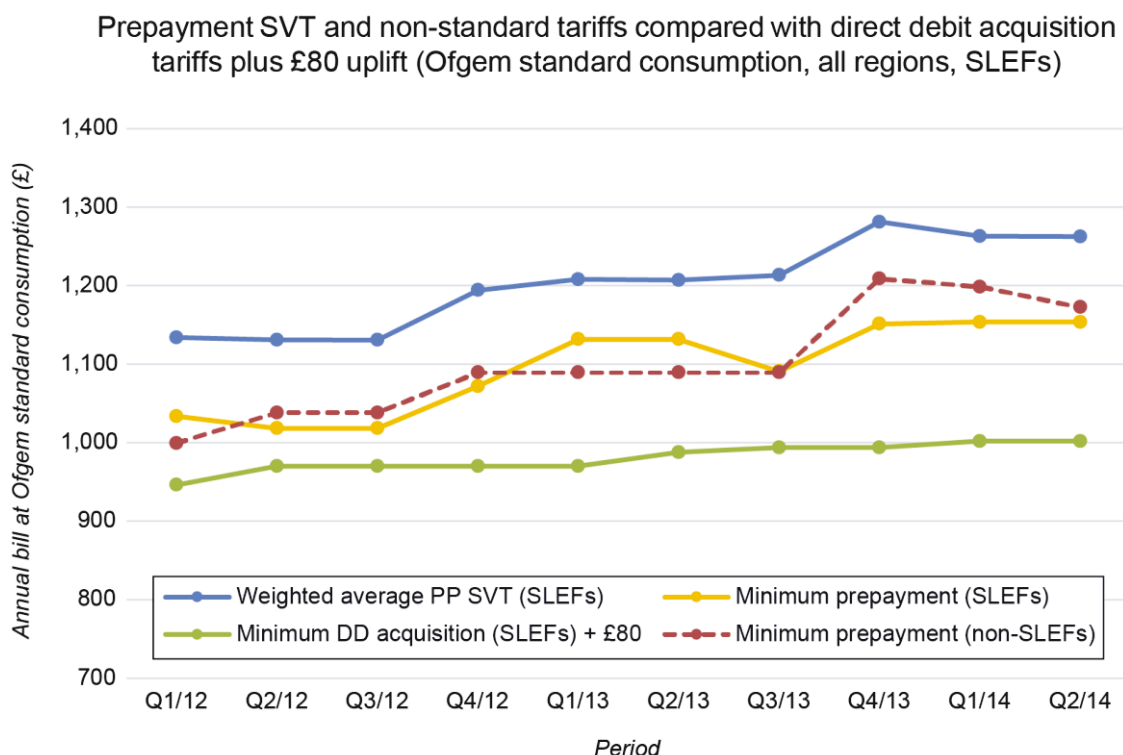
Our assessment

49. Having considered suppliers' responses to this potential workaround for the tariff code issue, we consider it unlikely that there is a solution to the tariff code issue that would not require reasonably large system changes. Suppliers also noted that smart meters would remove tariff code issues and the payment infrastructure limitations, affecting the proportionality and cost-effectiveness of any remedy in this area. As a result, we do not think that this proposed workaround is a solution to the tariff code issue that would be both timely and proportionate.

Appendix B: Comparison of prepayment tariffs against minimum direct debit acquisition tariffs

1. The figure below displays a comparison between PP tariffs against minimum DD acquisition tariffs.

Comparison of PP tariffs against minimum DD acquisition tariffs (adjusted for cost-to-serve differential)



Source: CMA analysis.

2. This chart shows annual bills calculated at Ofgem's typical domestic consumption values (3,200 kWh and 13,500 kWh for electricity and gas respectively), across the period from quarter one 2012 to quarter two 2014, for each of the following categories of tariff:
 - weighted average Six Large Energy Firm (SLEF) PP SVT;
 - minimum SLEF PP tariff;
 - minimum non-SLEF PP tariff; and
 - minimum DD acquisition tariff (plus £80 uplift¹).

¹ For the purpose of this calculation, we have assumed that the cost-to-serve differential between prepayment customers and DD customers is £80. This is based on Ofgem's findings (Ofgem open letter (20 May 2014), [Price differences between payment methods](#); Ofgem (26 March 2015), [Roundtable Report – Payment Differentials](#)),

3. We have used tariff data provided by the SLEFs to calculate:
 - the weighted average SLEF prepayment SVT;
 - the minimum SLEF PP tariff; and
 - the minimum DD acquisition tariff.
4. In calculating the weighted average SLEF prepayment SVT, we have used customer numbers provided by the suppliers.

noted in paragraph 7.77 of our provisional findings report. The Six Large Energy Firms, with the exception of EDF Energy, said that Ofgem's analysis was a reasonable basis for assessing the differential. They also provided further details on the discounts they give to their direct debit, dual fuel customers. These are in the range of £70–£90 a year. We are currently carrying out further work on this.