Discussion paper for electricity settlement expert group – approach to reform packages

Author: Ofgem
Audience: Electricity settlement expert group and other interested stakeholders
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1. Purpose of the paper

1.01 As part of the Smarter Markets Programme, Ofgem has convened an expert group to support its work to examine how consumers can be settled against their half-hourly (HH) consumption data. This paper sets out Ofgem's initial thinking and proposed approach to developing reform packages, for discussion at the expert group meeting on 1 October 2014.

1.02 We are seeking views from the expert group on the following questions:

- Do you agree with our summary of the group's conclusions on the likely constant factors across packages? (section 4.1)
- Do you agree with our assessment of the feasibility of different packages? (section 4.3)
- Do you agree with our proposed approach to gathering cost estimates for different options, in particular the proposal to do so in such a way as to keep all shortlisted options on the table at this time? (section 5)
- Which interdependencies between options are likely to have a material impact on costs and therefore need to be costed in conjuction? (section 5.5)

2. Structure of the paper

2.01 This paper contains the following sections:

- Section 3 – describes the issue
- Section 4 – describes our initial thinking on the contents of the packages
- Section 5 – sets out our proposed approach to the quantitative cost assessment of packages in the next stage of the project
- Section 6 – explains our next steps.

3. Description of the issue

3.1 Reform packages

3.01 The launch statement for the settlement project indicated that our view is that it is in consumers' interests for them to be settled using their HH data. In 2015, we plan to undertake an impact assessment (IA) to help us come to a more developed view on whether it would be appropriate to be settling consumers in this way. This IA will sit within the analytical framework for the project, which we discussed with the expert group and have been using for the current, qualitative assessment phase.[1]

3.02 We have been exploring with the expert group a range of options for what any potential HH arrangements might look like. These options relate to: data processing and data aggregation (DPDA) functions, data estimation techniques and the settlement run timetable. We have also taken an initial look at the approach to transition. When combined as workable combinations, sets of options will comprise potential reform packages. The IA will enable us to assess which possible combinations best meet our evaluation criteria and should be taken forward as packages, for example for public consultation. We recognise that it will be important to develop a manageable number of packages for assessment (for example, around five).

3.2 Why are we discussing this topic with the group?

3.03 We believe that at this stage in the project the expert group can provide useful input in the following areas.

Contents of packages

3.04 Discussions with the group to date have been productive and group members have come to consensus on several points. It is useful to discuss these areas of consensus as they will likely form the backbone of potential packages. Ofgem also intends to publish a summary of the findings of the expert group: this will constitute a key part of such a communication.

Approach to quantitative cost assessment of packages

3.05 We will rely on industry parties to provide certain items of information and data needed for the IA. This may take the form of Requests for Information (RFI). We are keen to take this opportunity to discuss our approach to cost analysis with the expert group at this early stage. We think that costs will be one of the main ways in which packages will differ in their impacts.

4. Contents of potential packages

4.1 Constant factors across packages

4.01 The settlement project is premised on Ofgem's view that it is in consumers' interests for them to be settled on their HH data. Discussions with the expert group have further confirmed this view, and the group has expressed the view that settlement on HH data is an appropriate potential goal. Settlement with HH data will therefore be a common factor across possible reform packages.

4.02 The project is exploring options for how such settlement arrangements may work. Our understanding is that the group has coalesced around the following points, which are therefore likely to be constants across potential reform packages:

- The settlement timetable can and should be shortened significantly. This will bring significant benefits, in particular relating to suppliers' credit cover costs.
- 10 working days is an appropriate timescale for the timing of the first settlement run.

[1] Ofgem, Analytical framework for electricity settlement project. (https://www.ofgem.gov.uk/ofgem-publications/88229/13analyticalframework.pdf).

- The final settlement run should be brought forward incrementally (eg in two stages), dependent on observed performance levels once HH arrangements go live.

- Data estimation routines should be carried out on a site-specific basis for smart meters. This will maximise the accuracy of settlement and the automation of these routines will keep costs down.

4.03 It is worth noting that we are also assuming that other aspects of settlement outside the scope of our work remain constant.[2]

4.2 Variable factors across packages

4.04 Notwithstanding clear initial views from the expert group on the above areas, there remain a number of short-listed options in each of the focus areas. Table 1 below indicates the main outstanding points for each.

Table 1 – variable factors

Focus area	Sub-element	Principal options
DPDA functions (high-level options)	n/a	• Supplier Agent model • Central agent(s) model • Hybrid competition
Data estimation (for traditional meters/sites without HH data)	n/a	• New smart profiling techniques • Freezing current profiles (daily actual temperature correction) • Freezing current profiles (using, for example, 10 year average temperatures)[3]
Settlement timetable	Timing of final run	• 3-6 months
	Interim runs	• Existence and timing
	Extra run(s)	• Existence and timing
Transition	Timing of transition	• Rapid transition • More gradual transition
	Process of transition	• Various potential rules to govern process

4.05 Possible reform packages would therefore comprise the constant factors listed in section 4.1 and a combination of options from each of the areas in Table 1.

4.3 Feasibility of potential packages

4.06 When combining options into possible packages, it is essential that these packages be coherent and workable in practice.

4.07 Our initial view is that the main effect of interactions between options will be on costs (see section 5.5 below for how we propose to identify these cost interactions). We have not identified options that appear unworkable when combined, and no such issues have been raised to date during the group's discussions. For example, it would appear that both a Supplier Agent and a central agent DPDA model would be compatible with the settlement timetable and estimation options on the table. We are seeking the group's views on whether this assessment is correct.

5. Approach to quantitative cost assessment of packages

5.01 The nature of the possible packages will have an impact on the costs of using HH data in settlement. We may use an RFI to help us identify how different options affect costs when combined as packages, in order

[2] Ofgem, Analytical framework for electricity settlement project, p.9. (https://www.ofgem.gov.uk/ofgem-publications/88229/13analyticalframework.pdf).

[3] This option was not discussed with the expert group but based on further analysis we have decided that it is relevant to assess this option.

to assess them against one another. When designing the RFI, we would look to meet the following objectives:

- To ensure that the IA provides an assessment of the costs and savings of different potential reform packages sufficient to enable us to come to an informed view on which should be taken forward.
- To keep all shortlisted options (and therefore packages) available for assessment in the IA.
- To minimise the burden placed on industry by any requests.

5.02 With these objectives in mind we are proposing the approach set out in the remainder of this section.

5.2 Cost categories

5.03 We will need to take a view on the appropriate groupings of quantifiable costs for the purposes of the RFI. The appropriate categories will depend on the target of the RFI. For example, suppliers' costs will be different from ELEXON's. Costs will include both upfront costs (eg investment in new business processes) and ongoing costs (eg running those new processes).

5.3 Constant costs

5.04 Some types of costs relate to the constant factors across packages and will therefore only require a single estimate. For this reason it is useful to identify and isolate them. In particular, the use of HH data, which will underpin all of the potential reform packages, will be a driver of several types of costs. For example we would expect forecasting changes to be largely independent of the different options.

5.4 Costing options

5.05 As per section 4.2, at this stage we are leaving various reform options on the table. This means that some of the cost categories will need to be estimated under a range of scenarios. Our proposed approach is to identify the cost categories affected by different options and to create sub-categories accordingly. For example, if estimation options are deemed to affect Supplier Agents' systems costs, we would ask for an estimate of new estimation systems costs for the range of estimation options.

5.06 In Table 2, below, is an indication of the high-level cost categories that could vary according to the options for each focus area. The costs are based on the high-level costs that group discussions have indicated would be most relevant. These can be split into upfront costs and ongoing costs. Key upfront costs will be changes to business processes (eg workflows) and changes to systems (eg IT software development. Key ongoing costs will be the costs of running processes (eg data processing) and credit cover costs (posted to cover potential imbalance charges).

5.07 We have limited the thinking here to suppliers'/Supplier Agents' costs – other parties (eg DCC, ELEXON) will be affected but in more specific ways. We have also omitted the DPDA focus area, since the options there relate to market structure, which will require specific costing.

Table 2 – Option costs

Focus area	Type of cost	Cost that may vary according to options
Data estimation	Upfront	• Process costs (more ambitious options may require greater changes to existing processes) • Systems costs (more ambitious options may require greater changes to existing systems)
	Ongoing	• Process costs (more ambitious options may incur more expensive data processing)
Settlement timetable	Upfront	• Process costs (more ambitious timetable options may require greater changes to existing processes) • Systems costs (more ambitious timetable options may require greater changes to existing systems)
	Ongoing	• Credit cover (shorter timescales would reduce credit cover costs) • Process costs (shorter timescales may require more expensive processing eg to resolve exceptions)
Transition	Upfront	• Process costs (more rapid transition options may make changes to processes more expensive to implement) • Systems costs (more rapid transition options may make changes to systems more expensive to implement)
	Ongoing	• n/a

5.08 We believe that this approach enables us to gather estimates for different possible reform options in a way that keeps all shortlisted option on the table. This is in line with the feedback from the expert group, which has encouraged Ofgem not to foreclose options at this stage.

5.5 Option interdependence

5.09 A complication of this approach is that certain options may interact with one another in such a way that they need to be costed in conjunction in order to capture the effects of that interaction (both potential costs and savings). See Figure 1 for an example of such an interaction of focus areas.

Figure 1 – example of interdependent options: estimation options and transition timing

Cost category: Upgrades to internal systems
Sub-category: Upgrades to internal estimation systems

Cost estimates matrix:

	Estimation option 1	Estimation option 2
Transition date 1	£8	£12
Transition date 2	£5	£12

5.10 This disaggregated approach enables us to identify the fact that (in this example) the costs of estimation option 1 are dependent on transition dates (eg due to systems upgrade aligning with other planned upgrade) while the costs of option 2 are independent of the transition date (eg due to completely new system build).

5.11 Our initial view is that such overlaps are limited in number. We are seeking the group's views on which options may interact in a way that has a material impact on costs and would therefore need to be captured as such in the RFI.

6. Next steps

6.01 At the expert group meeting on 1 October we will present a summary of this paper to set the scene for an initial discussion based on the questions set out in section 1. Drawing on this initial discussion, we will refine our thinking in preparation for a detailed discussion at the sixth expert group meeting on 23 October. We ask that expert group members reflect on this paper and the discussion at the 1 October meeting to develop their thoughts ahead of the 23 October meeting.