

Delivering Electricity Settlement Reform

BSC Panel report to Ofgem
(Draft for Stakeholder consultation)



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1. Executive Summary

1.1 Delivering Electricity Settlement Reform

This report sets out the BSC Panel's approach to establishing a project to deliver Settlement Reform. This is in response to a request from Ofgem.

The BSC Panel proposes a review of the Settlement arrangements, focused mainly on the activities associated with the retail arrangements and Supplier energy volume allocation. The review will be unconstrained by the existing systems and processes and will deliver a vision for Settlement in 2020 that maximises the introduction of smart metering and data and infrastructure that supports it. Whilst the benefits of such reform seem primarily to be for industry we would expect that consumers would benefit from more efficient arrangements, either through savings in costs to serve or through the facilitation of new products or services.

The report describes the Governance for managing and delivering the review and reform. The BSC Panel will be responsible for the work (heavily supported by industry, ELEXON and other stakeholders) and owning most of the deliverables. Ofgem will be the final recipient of the deliverables from this work and may have a role in progressing changes outside of the industry codes.

Section 4 identifies the stakeholders that have an interest in the successful outcome of a Settlement review and the tools that will be at the Panel's disposal for engaging with stakeholders. A Review Group will be established to progress the work and produce a final set of deliverables that will be:

- A vision for Settlement in 2020
- A Cost Benefit Analysis Model
- A package of reform proposals
- An Implementation and Transition Plan
- A Benefits Realisation Plan and Monitoring Approach

The review itself is estimated to take between 12-15 months and will involve a large volume of working group meetings and two detailed consultations. ELEXON will manage the stakeholder engagement across this period, providing full transparency on the progress of the review and regular updates to interested stakeholders using the tools described in Section 4.

The success of the review depends on the support of industry and other stakeholders but we believe this will be effort well spent, given the opportunity to build a vision for the future, as opposed to piecemeal changes to the Settlement arrangements. The report recognises there are a number of dependencies for this work to succeed. Whilst we can proceed to develop a vision, we also need to understand how the market will adapt and whether government or the regulator will drive some market changes through, we have therefore noted where we believe a key dependency would help us shape our vision (for



example understanding whether data collection and aggregation will be centralised or how demand side participation will be managed).

We welcome views on this report from stakeholders and a list of consultation questions is attached to this document. For ease of reference the questions are also signposted alongside the relevant sections of this report.



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2 Introduction

2.1 Electricity Industry and 'Settlement' since 1990

From 1990 competition was gradually introduced to the electricity industry creating new wholesale and retail markets. To support these markets, infrastructure was created to allow for the correct allocation of energy volumes to various participants, this is known as Settlement¹. For the wholesale market electricity was traded half hourly. With the gradual introduction of competition customers could choose who provides them with supply. Separate private organisations became responsible for managing the generation, supply, distribution, transmission and metering services that support the electricity industry.

The 'real-time' nature of electricity as a commodity dictated that the market solutions needed to be creative. Electricity could be traded up to a certain point before real time, after which trading closes and National Grid must ensure the system balances (i.e. generation matches supply). After real time it was critical to understand whether the players have met their contractual obligations to generate or consume the energy they had contracted for.

It was commercially viable that large generating and consuming premises could have metering installed that recorded the energy consumed every half hour. However, it was not, at that time, commercially viable to install such equipment in each of the 29 million homes and businesses in Great Britain. The solution was to create a mechanism to allocate energy to each customer on a half hourly basis based on an estimate (using typical load profile created from a representative sample of customer types) and to allow for this allocation of energy to be updated when actual metering readings were taken. This solution required there to be a series of re-allocations (reconciliations) to 'true-up' the estimated consumption at the majority of metering points over a period of fourteen months. Specialist agent roles were established to process the data and aggregate volumes on behalf of Suppliers. Although this procedure corrects the overall energy volume based on actual meter readings, the allocation to half-hourly periods remains simulated by the means of the assumed load profile.

Finally, to enable customers to change Supplier, a process with series of information flows was created. This process required data relating to historic consumption, a change of supplier reading (estimated or actual) and other data to be transferred between the old and new Supplier and their specialist agents.

These arrangements have supported competition for a number of years and were based on the technology and market structures at the time. For the allocation of energy to Suppliers it also reflected the functionality of the meter in the domestic and small to

¹ Settlement uses meter readings for allocation of energy to Suppliers and Suppliers use meter readings to bill their customers. The two processes share source information but are managed separately.



medium business premises. With the introduction of Advanced and Smart meters which provide new functionality, we have the opportunity to radically improve these arrangements and address the issues we currently experience (see section 6).

2.2 Background to this work – Smart Metering

The government has proposed that, by the end of 2019, domestic and small business customers should have smart metering installed². The introduction of smart metering is intended to be a catalyst for further improvements and reform in the energy markets, using the technology, infrastructure and information that smart brings.

2.3 Background to this work – Profiling and Settlement Review

In recognition of the opportunities and changes required for the introduction of both Advanced and Smart meters, ELEXON have been undertaking a review of the current settlement arrangements through an industry expert group, the Profiling and Settlement review group ([PSRG](#)). This has examined a number of short to medium term changes for improving the current processes and has implemented enhancements already to the wholesale market. It has also undertaken some 'blue-sky thinking' work on a future settlement design for a smart metered world in 2020. This has been used as the starting point for this settlement reform work and supported Ofgem Smarter markets vision for better energy markets.

2.4 Background to this work – Ofgem Smarter Markets

In December 2011 Ofgem issued a consultation setting out eight propositions relating to the future of energy markets in a smart metered world.³ One of the propositions related to the future of Settlement arrangements and whether further work should be undertaken to determine how Settlement should be reformed to maximise the benefits of smart metering.

Ofgem published their conclusions from this consultation in August 2012⁴, proposing four areas where further work was necessary. The four areas and the initial deliverables are:

² [DECC Smart Metering Programme](#)

³ [Ofgem Smarter Markets consultation](#)

⁴ [Promoting Smarter Energy Markets - A Work Programme](#)



Policy area	Long Term Objective	Initial Question	First Deliverable
Change of Supplier	A fast, reliable and cost-effective change of supplier process, which will facilitate competition and build consumer confidence	What are the potential options for reform to deliver an appropriate balance between speed, reliability and cost?	Consultation on options for reform and the framework for evaluating them Q2 2013
Electricity Settlement	Settlement arrangements that use smart metering data to allocate energy in an accurate, timely and cost-effective way, which will facilitate product innovation and efficient use of energy	What is the most effective process for delivering longer-term reform of electricity settlement arrangements?	Open letter stating how reform will be progressed and Ofgem's role Q1 2013
Demand Side Response	Create a market environment that supports the efficient, system-wide use of DSR, which has the potential to reduce bills for consumers, enhance security of supply and contribute to sustainable development	How might current market arrangements constrain the development of DSR in electricity?	Consultation considering the potential of existing arrangements to support efficient system-wide DSR Q1 2013
Consumer Empowerment and Protection	Regulatory arrangements that empower and protect consumers to participate effectively in smarter retail energy markets, recognising the opportunities and risks involved	Are existing regulatory arrangements that influence how consumers engage with energy suppliers and the retail market more broadly fit-for-purpose for the start of mass roll-out	Initial assessment of the regulatory arrangements that may need change Q2 2013

Alongside the response Ofgem published an open letter⁵ to the BSC Panel asking them to provide a report by end of December 2012 setting out how they would manage a project to review and deliver Settlement reform. Ofgem will use this report to determine who should lead on a review of Settlement reform.

2.5 Development of this report

The Panel instructed ELEXON to work with industry to develop a report for Ofgem setting out how a review of Settlement arrangements would be undertaken. An advisory group, the Settlement Reform Scoping Group (SRSG), was established to assist in the production of the report. The Panel is consulting on the report to gather views from interested participants.

The final version of the report is due for submission to the BSC Panel in December 2012.

2.6 Structure of this report

The report is structured into the following sections:

- Objectives of Settlement Review
- Approach to Settlement Review
- Scope of Settlement Review
- Assumptions, Risks and Issues
- Deliverables
- Timetable

⁵ [Open Letter to BSC Panel on longer term electricity Settlement reform](#)



- Summary of Consultation Responses
- Recommendations

A series of consultation questions are provided as an attachment to this report seeking views on the specific areas outlined in this report.



3

Objectives of Settlement Reform

3.1 Ofgem's Long Term Objective

In its letter to the BSC Panel Ofgem set out its objective from a review of Settlement as being:

'Our longer-term objective for settlement is to have in place arrangements that use smart metering data to allocate energy in an accurate, timely and cost-effective way. This in turn should facilitate product innovation and efficient use of energy.'

In setting this objective Ofgem acknowledged that there was existing work underway to examine short and medium term changes for Settlement through the Profiling and Settlement Review Group (PSRG) and that this work should continue. The longer term Settlement reform work will, however, need to work in conjunction with the work of PSRG to minimise duplication.

3.2 Further consideration on the Objective(s)

The introduction of smart metering will provide the potential for access to accurate and timely data. Critically from a Settlement point of view the systems and processes should be reformed to take advantage of the availability of data. Translating this into facilitating product innovation and efficient use of energy will require further consideration as part of the review.

Discussion by the SRSR (which examined previous work undertaken by the PSRG) led to the development of the following descriptions of what should be the objectives from a review of Settlement:

1. **Identify benefits to consumers:** Settlement reform will consider how benefits will be delivered, directly or indirectly, for the good of consumers;
2. **Flexibility:** The arrangements should be flexible to accommodate changes in the market, e.g. due to other new external influences such as Electric Vehicles, Demand Side Response, Smart Grids and new technologies and to allow for smooth transition from the existing arrangements and implementation of any new arrangements;
3. **Remove Barriers to new (and existing) entrants and innovation:** Settlement reform should ensure that any perceived barriers to new entrants (where these are for existing types of participant or potentially new types of participant or service provider) and innovation are minimised (or eliminated where possible), this is particularly important for 'facilitating product innovation';



Question 1: Do you agree with the proposed Objectives of Settlement reform?

Question 2: What are the top 3 objectives that Settlement reform should meet?

Question 3: Do you believe any further objectives should be added?

4. **Optimise use of data:** Ensure Settlement and associated processes make the appropriate use of the availability of data that advanced and smart meters can provide;
5. **Accurately Allocate:** Provide accurate allocation of energy to participants, for example accurately reflecting Supplier's Demand or Embedded Generation;
6. **Efficient and timely:** Timely energy allocation that supports more efficient settlement (for example the reduction of the current 14 month Settlement timescales) and supporting processes, this in turn will assist in the efficient management of networks;
7. **Utilise the changes in IT, communications technology and data:** Settlement arrangements should take advantage of developments in IT and data management solutions, communication media and data storage to deliver effective and efficient systems;
8. **Identify potential benefits in other industry code governance:** Given the Settlement arrangements are part of a wider set of integrated arrangements, it is likely that reform will impact and require wider process and code amendments to maximise benefits. Lessons may also be transferable to the gas arrangements;
9. **Deliver the best value:** In setting out to achieve the previous objectives, Settlement arrangements must deliver the best value for money for users and consumers. However this does not necessarily translate as 'cheapest' solution, as that solution may minimise flexibility or future innovation; and
10. **Support Decarbonisation goals:** The energy industry is a major contributor to the efforts to reduce carbon emission. Settlement reform should support, or not impose barriers for, initiatives that contribute to carbon reductions.



4

Approach to Delivering Review and Reform

4.1 Who should drive the work on Settlement reform?

Ofgem's request to the Panel seeks to inform their decision of who should drive the Settlement review and reform work. In early 2013 Ofgem will decide how the work is progressed.

This report is of course designed to explain how the BSC Panel would deliver a review and reform of Settlement. However it is worth testing the assumption that the work should be delivered through the BSC Panel.

Alternatives for delivering Settlement reform could be:

- Ofgem delivers the review and reform (possibly using the SCR route);
- A review is led by an external organisation or consultancy (for and on behalf of Ofgem); and
- Settlement reform is driven on a piecemeal basis using the existing industry Code change mechanisms.

Whilst not the subject of this consultation, the advisory group briefly considered whether these alternatives were suitable. It was noted that Ofgem could decide to undertake the review itself and if it did so it may well request the services of a consultancy to assist. Either way, this approach would likely require a similar commitment from industry, other stakeholders and ELEXON. The advisory group felt that the only merit of an Ofgem led SCR process, over a Panel led process, is that the SCR process could prevent any potential Modifications in the area of Settlement reform from drawing resource and focus away from the review. The group did not believe the last option was viable for delivering a review as this piece of work needs to be unconstrained by Modification governance and normal conventions for managing incremental changes against a limited set of objectives.

The advisory group agreed that this work can and should be delivered through the BSC Panel. The reasons for this were stated as:

- This work builds upon the work already undertaken by the Profiling and Settlement Review;
- Settlement changes arising from future requirements have been driven by the Panel committees in the last eighteen months, this has already spawned changes to the BSC and significant industry debate;
- The Panel and industry, supported by other stakeholders are ideally suited to consider the broad future of Settlement requirements based on the evolving market;



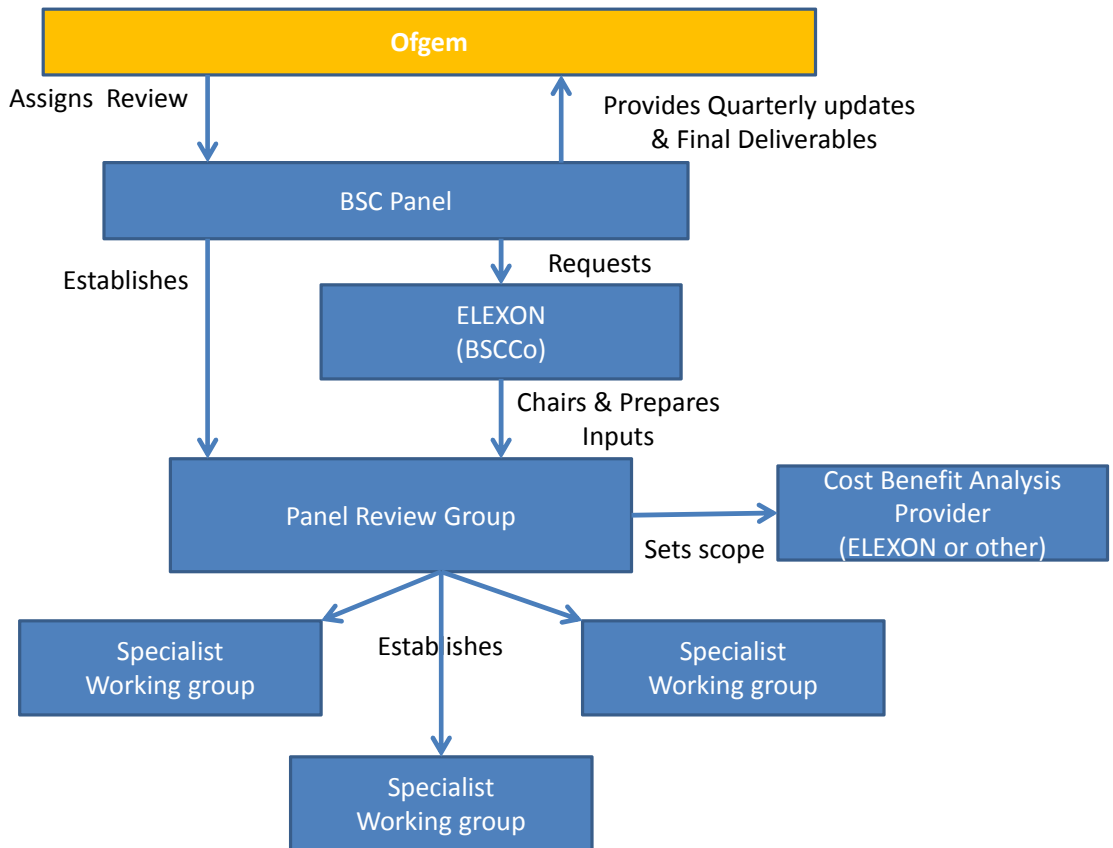
Question 4: Do you agree that the BSC Panel should drive the work on Settlement Reform?

- ELEXON has a track record of providing robust support and analysis to the Panel and its committees to assess and implement major change;
- The processes used by the Panel and ELEXON in managing the BSC are fully open and transparent and will accommodate inclusion of a broader set of stakeholders.

The importance of wider stakeholder engagement should be noted as this will help the BSC Panel deliver robust proposals for settlement reforms. The approach to Stakeholder engagement is covered in section 4.3.

4.2 Governance for Review & Reform

The following diagram displays the proposed governance for undertaking the review:



Question 5: Do you agree with the Governance structure for delivering the Settlement review?

Ofgem

The governance model recognises the need for Ofgem to confirm its expectations for the Panel to manage a review of Settlement reform, and set the timetable for undertaking a review. As such Ofgem will be the main recipient of the final deliverables. The Panel itself will need to make use of the final deliverables if it is to also progress the implementation of the reform. It is important that Ofgem initiates the work and confirms



that the review work explores areas traditionally outside the remit of the BSC (e.g. consideration of consumer benefits) to minimise the risk of challenge to the work being undertaken against the scope described in this document. Ofgem may wish to impose a requirement that the timing of the final deliverables can only be extended with their agreement, alternatively this can be managed flexibly through the quarterly reports.

It is expected that the final version of this report to Ofgem will form the basis for any request for a review to be undertaken by the Panel. Once commissioned, Ofgem will receive quarterly updates to ensure work is progressing as expected and can provide feedback to the Panel from these reports. Responsibility for progression of the review and delivery of changes should sit with the Panel and it is not proposed that Ofgem will be required to take any further action until it receives the deliverables (we recognise that some recommendations within the final deliverables may fall to Ofgem to direct as the BSC Panel/industry may not have the powers to progress certain changes). It is proposed that Ofgem attends the Review Group and any specialist working group meetings and provides any updates on changes to assumptions or progress from workstreams where a dependency has been identified.

BSC Panel

The BSC Panel would be responsible for establishing the Review Group, its membership, Terms of Reference and release of funding associated with its work (for example costs of commissioning cost benefit work). The Panel will nominate a sponsor to oversee the progress). The Panel will request ELEXON (as BSCCo) to provide the resources⁶ and expertise to deliver the work. ELEXON, through the role of Chair will provide monthly updates to the Panel on progress against plans. We propose that members of the review and specialist working group will not be 'representative' of their individual organisations but will provide expert views based on their field of experience.

In order to ensure the work does not stall the Panel will use existing powers applied to committees and working groups, to be able to amend the group Terms of Reference, group membership or timetable. The Panel will also provide a direction to the group, should it be necessary, to progress any decisions where the group cannot reach majority agreement.

The Panel will own the Final Deliverables and will be responsible for progressing work beyond the review phase. However the Panel is limited in its powers to raise changes or direct changes outside of the BSC. The Panel can utilise its joint working arrangements with other industry codes to progress relevant changes and a forum for progressing these can be established as part of the Implementation Plan. It is expected, however, that Ofgem has a potential role in progressing non code changes.

⁶ The BSC Panel will consult on the estimated resources associated with supporting this work through the BSCCo Business strategy (to be issued in December 2012).



ELEXON

It will be ELEXON's role to provide the resources to manage the review and subsequent implementation of changes (where they apply to the BSC). An estimate of the costs and resources associated with this work are contained in Section 11.1 and will form part of the resource and budgetary considerations for the forthcoming BSCCo Business Plan.

Consistent with its role in supporting the Panel change process and other work, ELEXON will provide a Chair, secretariat and expert resources to support the work. ELEXON will undertake costs benefit analysis, where it has the necessary skills to do so, however it may be that independent analysis is commissioned (as the Panel has done for major Modifications in the past).

ELEXON will generate material and strawmen proposals for the review group to develop further and develop and manage the consultations and impact assessments. In addition the ELEXON resource will manage the stakeholder engagement on behalf of the Panel and Panel groups.

Panel Review Group

The Review Group will be a Panel Committee and will be responsible for progressing the review on behalf of the Panel and working with ELEXON to;

- develop policy proposals;
- develop a detailed solution ('the vision');
- conduct impact assessments;
- conduct consultations;
- agree assumptions for cost benefit analysis; and
- develop the final deliverables.

The group should be set at a manageable size, to be agreed by the Panel but should draw upon the expertise and experience in:

- Electricity supply, distribution, small scale generation;
- Consumer interests;
- Potential new products and services; and
- Smart metering and smart innovation.

As the latter three bullets may include stakeholders who are not BSC Parties we would welcome views as to the type of organisations representatives could be sourced from. Group members will be independent experts (not representing their individual organisation views, as consultation will allow for this). They will act as experts to develop the vision of Settlement reform.



Specialist Working Groups

The Panel Review Group will be able to establish specialist working groups to progress detailed elements of their solution or contribute to the final deliverables. These groups will be of various sizes and membership, according to the need. For example a group may be established to develop a solution for the arrangements for managing legacy (non smart) metering systems. Each specialist group would have its own terms of reference and timetable for delivery and will report to the Panel Review Group, providing material for the review group to make decisions upon.

4.3 Stakeholder Engagement

It is clear that there will be a need to reach a potentially wider audience than BSC Parties when developing policy proposals and evaluating benefits of Settlement reform.

The broad range of stakeholders is likely to include:

Question 6: Can you identify any additional stakeholders missing from the list?

Question 7: Can you propose any relevant bodies that you feel represent particular stakeholder groups

- BSC Parties (including licensed and unlicensed Parties);
- Consumer Representatives;
- Supplier Agents and Meters Asset Providers;
- Ofgem (and Ofgem sponsored consumer groups);
- DECC (and DECC sponsored consumer groups);
- Technology Groups⁷;
- Trade Associations (Energy & technology);
- Energy Code Panels and Administrators;
- Small businesses;
- Private Network Operators;
- Embedded Generation Operators;
- Other (new energy market 'actors').

For this reason we propose that the following tools will be used by the BSC Panel in engaging with these stakeholders.

Approach	Purpose and Description
Impact Assessment	To communicate policy options and determine the impacts on the existing systems, processes or potential new services and innovations of stakeholders. This allows the Review group to feed the evidence into the cost benefit analysis and record

⁷ These may be Metering, IT, Communications, Engineering



	qualitative evidence of the impact of policy options.
Consultations	To gather feedback and views on the policy option and solutions to inform the decision making process of the review group and BSC Panel.
Settlement Review section of the website	<p>To keep interested stakeholders abreast of the progress of the Settlement reform work. The website can act as the main communication channel for stakeholders to keep informed by including:</p> <ul style="list-style-type: none"> • Regular updates • Share all public material (papers, consultations, CBA etc) • Provide high level summaries of solutions, issues • Signpost where further information can be found • Establish dedicated contact information • Allow for ad hoc feedback and queries to be fed into the process <p>The website would link to any relevant materials on the Ofgem website and we would expect Ofgem to provide reciprocal cross references and links.</p>
Dedicated contact details	To provide stakeholders with a single point of contact for the Settlement reform work ELEXON would establish a project email and contact number, which would be communicated through the website, presentations and other regular ELEXON and Panel communications.
Seminars and workshops	ELEXON will make use of seminars and workshops to communicate options and seek views/promote discussion. These would be scheduled for relevant stages in the process (e.g. to coincide with consultations).
One to Ones with Stakeholder (or specific Groups or change programmes)	<p>To provide an opportunity to discuss the review with individual stakeholders, particularly where stakeholders have a limited opportunity to engage due to resource constraints. ELEXON would also utilise its network of OSMs to promote discussion and gather views from existing Parties.</p> <p>In addition, using existing contacts or ELEXON participation in other code areas including DECC SMIP programme.</p>
Presentations at	To promote discussion and gather feedback from existing

**Question 8:**

Which engagement tools do you believe are the most appropriate for you and how regular would you expect engagement to occur (e.g. would you expect weekly web updates on progress and quarterly stakeholder seminars)?

existing forums	<p>industry and stakeholder forums. ELEXON promotes a number of these, including the Cross Codes forum and introduction seminars. Ofgem and DECC utilise a number of consumer forums that may be relevant for canvassing opinion from. Outside of these, there are other established groups e.g. (Independent Supplier forum) where engagement could be invited.</p> <p>We would not propose to use the conference circuit to promote discussion on this work if this would incur cost. Instead this activity could be left to Ofgem, through its promotion of Smarter Markets or ELEXON could provide presentations where it is free to do so and the review group believes there is an appropriate audience.</p>
Ad Hoc communications through existing mechanisms	<p>ELEXON will utilise existing channels to provide update, including Newscast.</p>

Specific engagement will be defined in the timetable and plan (a high level of which is set out in Section 8).

4.4 Developing the policy options for future Settlement – ‘A blank piece of paper!’

The first step in the process will be to develop the policy options for the future of Settlement.

Whilst acknowledging that there are dependencies and limitations on scope (as described in the rest of this document), we propose that the only sensible approach to developing the options for the future shape of Settlement is to start with a ‘blank piece of paper’. This approach means we will not constrain the review to accommodate how existing systems and processes work or the existing market model that supports Settlement. Rather the review will seek to understand what the vision of Settlement in 2020 will be and then identify how we best achieve that vision.

Question 9:

Do you believe the review should adopt the ‘blank piece of paper’ approach?

We will need to make use of the assumptions set out in this document plus any feedback from stakeholders on what their visions for Settlement. From this blueprint we can then develop a cost benefit model and begin to develop options by assessing what this means for the detailed components of the scope of what will make up the Settlement landscape. The Settlement processes and activities that fall within scope are set out in the next section.



What can be learnt from elsewhere?

Part of the approach to complement the initial approach will be to understand how Settlement arrangements are delivered elsewhere in the world and the reasons for the differences, whether they relate to technology, infrastructure, participation or governance. For example, do other electricity markets embrace the opportunity offered by consumers choosing to switch between pre-pay and credit services or do other markets allow for bulk pre-purchase of energy by consumers and what are the Settlement implications of these.

In addition there may be lessons to be learnt from the way centralised arrangements are managed in other industries, particularly where similar technologies are used (e.g. communications industry).

What are the 'essay questions' Settlement Reform is trying to answer?

Prior to commencing a review we will need to ensure we have asked the right questions such that we can gather feedback to develop the policy options. Whilst we understand what Settlement needs to achieve today we have an opportunity through the review to challenge expectations regarding the future of Settlement. The types of questions we can ask are linked to the Issues referenced in Section 6.1

Questions to be considered include:

- What is Settlement for?
- Who is Settlement for?
- Who will interact with Settlement in the future and why (e.g. Suppliers, Generators, Distributors, National Grid, Power Exchanges, new market roles), what others?
- Have Settlement processes been perceived as barriers to market entry or innovation? If so what are those perceived barriers?
- How long should Settlement take?
- What will smart metering bring that will act as a catalyst for change?

Question 10: What are the 'Essay' questions the review work should be seeking to answer?



5 Scope of Settlement Review

5.1 Scope and timing of settlement reform arrangements to take effect

The request from Ofgem defines at a high level the scope to cover:

'the changes that can be made as a result of the roll-out of smart and advanced meters, with specific focus on:

- *The Supplier Volume Allocation (SVA) arrangements, including all domestic and non-domestic sites and all metered and unmetered sites (including import and export).*
- *Other processes linked to the SVA arrangements, such as performance assurance and the energy credit arrangements.'*

The proposed time for the new settlement reform arrangements to take effect is 2020. However, some elements may be required to be implemented earlier to align with milestones in the smart meter roll-out. This approach would:

- Be in line with the completion of the smart meter rollout;
- Allow the design to provide a structure that will facilitate key developments, such as Demand Side Reduction, Smart Grids, Renewable generation, European requirements; and
- Recognise the technological developments in IT systems and management and communication of data.

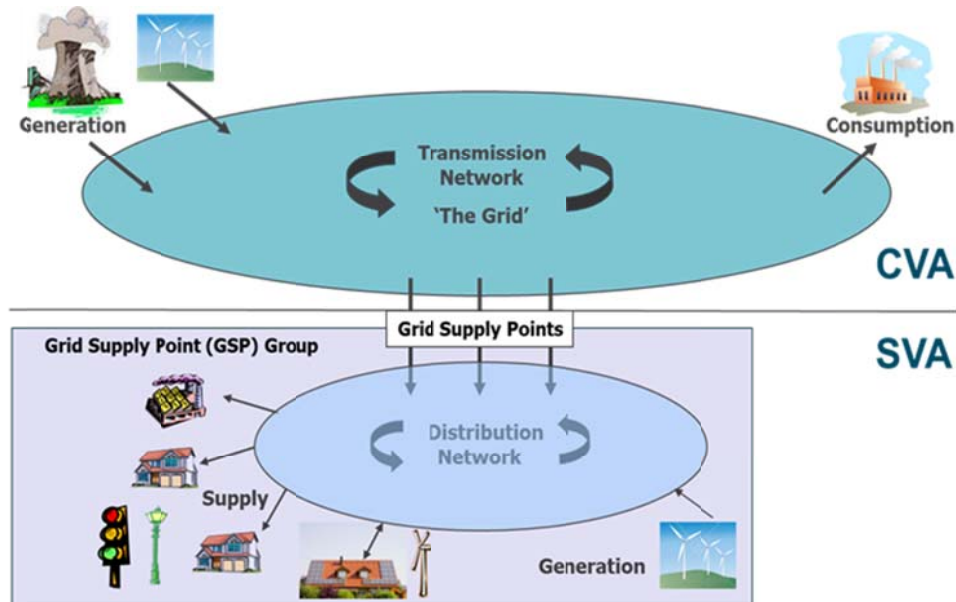
Overview of the electricity SVA arrangements

The SVA arrangements cover the processes from the collection of data from an appropriately installed Settlement meter to the delivery of accurately allocated metered volumes to the BSC settlements administration process. They also include the Performance Assurance Framework to ensure that the relevant parties involved (Suppliers, their agents, Distribution Businesses, registration agents) follow the rules and requirements of the BSC to minimise impacts on other Parties.

A diagram of the scope of the SVA arrangements is shown overleaf.

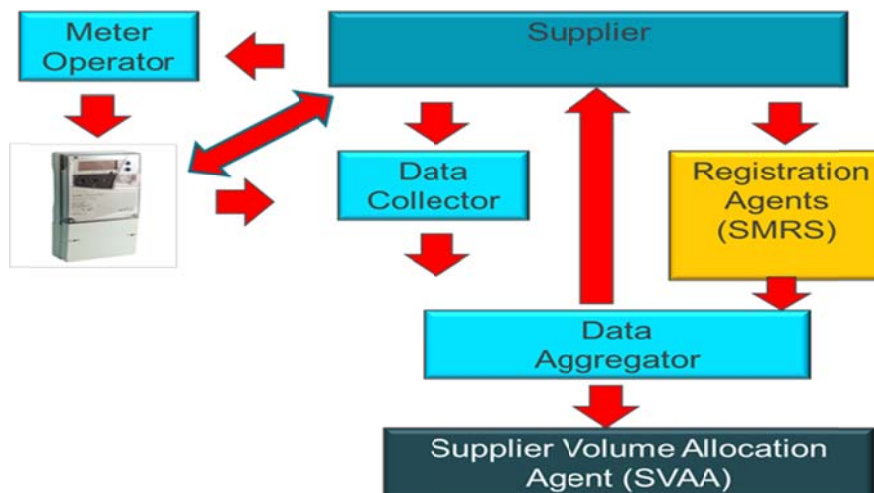


Scope of current SVA arrangements



The SVA processes are currently underpinned by the Supplier Hub principle. This is where the Supplier appoints agents to undertake the main components of the processes described in 5.1 above, e.g. meter operation (installing and maintaining a meter), data collection (reading of meters to obtain energy consumption (or generation) data and processing them, and data aggregation (the collation of processed meter reads for use in settlement)). The following diagram shows the key processes of this and also the role of registration agents (performed by the Distribution Businesses).

Participants and interactions within SVA arrangements





5.2 Detailed Scope of the Settlement arrangements for inclusion

The following components of the SVA arrangements are proposed to be included in the review of the electricity settlement reform. Focus will be on the opportunities and challenges that the rollout of smart (and Advanced Meters) bring to electricity settlement.

No.	Settlement Component
1.	All settlement meters that are either Smart or Advanced or legacy, all settled in SVA either Non Half Hourly or Half Hourly
2.	Settlement Run timetable (the re-calculation of a Suppliers allocation of energy as further meter data becomes available)
3.	The process for determining the Supplier's allocation of energy in a Settlement Period (currently either Non Half Hourly (profiled) or Half Hourly readings)
4.	Supplier Hub principle and agent processes (Meter Operation, Data Collection and Data Aggregation)
5.	Performance Assurance Framework ⁸ (covers SVA arrangements and in particular Suppliers, their agents and Distribution Businesses)
6.	The concept of Grid Supply Point (GSP) Groups and the allocation of energy to Suppliers through GSP Group correction
7.	The impact of 'unrecorded' energy volumes or estimates that are used in the allocation of Supplier energy volumes
8.	Import and Export metered quantities (currently settled in SVA either Non Half Hourly or Half Hourly)
9.	The allocation of Suppliers' energy due to the presence of Suppliers seeking third party access to Licence Exempt Distribution Networks (private networks)
10.	Unmetered Supplies (currently settled in SVA either Non Half Hourly or Half Hourly)
11.	Suppliers' Credit Cover Calculation (this calculation is based Supplier's allocation of energy)

The detailed description of the Settlement component along with rationale for inclusion of each of the above components is given below.

⁸ The Performance Assurance Framework (PAF) is in place to provide assurance that:

- Energy is allocated between Suppliers efficiently, correctly and accurately;
- Suppliers and Supplier Agents transfer Metering System data efficiently and accurately;
- Calculations and allocations of energy and the associated Trading Charges are performed in line with the requirements detailed in the BSC.



1. **All settlement meters that are Smart, Advanced, existing half hourly meters or non half hourly legacy meters, all that are currently settled in SVA either Non Half Hourly or Half Hourly.** This is main basic objective of the review and will include all Half-Hourly (HH) and Non-Half-Hourly (NHH) settlement meters connected to the distribution networks. This will cover all domestic and non-domestic sites as they will have either half-hourly capable metering either Smart or Advanced meter or where these meters have not be able to be fitted existing legacy meters (that may not have HH capability).
2. **Settlement Run timetable (the re-calculation of a Suppliers allocation of energy as further meter data becomes available).** The current settlement timetable has two main elements:
 - a standard 14 month reconciliation process where the SVA settlement calculations are repeated at a number of intervals; and
 - a disputes element which allow data going back 28 months (Parties are obliged to hold data back to 40 months for potential use).

The first element is to allow more meter reading data into the settlement process to more accurately determine a Suppliers energy volume. The second is to correct erroneous data or calculations not performed in accordance with the BSC. The advent of smart and advance metering will allow for these processes to be optimised and indeed allow for a more timely allocation of Supplier's energy volumes.

3. **The process for determining the Suppliers allocation of energy in a Settlement Period (currently either Non Half Hourly (profiled) or Half Hourly readings).** This area is the mainstay of the SVA arrangements and currently a Supplier's customer's energy is settled either as NHH where the energy for a Settlement Period (half hour) is estimated using meter reads (as the meter can only record energy consumed over a period of weeks, or months up to a year) and using a profile of load for an average customer; or HH where actual HH consumption data is used that is collected from the meter. As Smart and Advanced meters have the capability to record and store energy data at HH intervals, the reform exercise should investigate the benefits/opportunities this will bring.
4. **Supplier Hub principle and settlement processes.** The Supplier Hub defines the processes for which the Supplier is responsible, but Suppliers meet their obligations using 'agents' for the collection of meter readings and the subsequent processing and aggregation for submission into central settlement. The Supplier Hub agents are Meter Operator, Data Collector and Data Aggregator and the interaction with central settlement and registration agents are key processes for the accurate and timely allocation of energy. It should be noted that in Ofgem's Smarter Markets work programme there is a separate work area on investigating the Change of Supplier processes, which includes the assessment of centralised Data processing and Data Aggregation services. Therefore, this area will have an important



interaction with any work looking at the supplier's agents and centralised data processing and aggregation. This area is where requirements from the Ofgem led Change of Supplier will be fed in for an effective process for preparing data for settlement.

5. **The Performance Assurance Framework⁹.** This is an important aspect for all Parties as it assures that energy is allocated accurately, timely and efficiently. It accounts for a significant element of the current BSC arrangements, approx. £3m annual costs and for the requirements all parties have to meet. The PAF consists of a complementary set of preventive, detective, incentive and remedial assurance techniques. These techniques are used flexibly to address settlement risks, for example the risk of having inaccurate meter data flowing into settlement. There are a number of techniques including education, qualification and monitoring of supplier's data. New settlement designs considered through the reform work should seek to optimise this assurance framework and remove/reduce the complexity and burden of these arrangements (and potentially completely replace them depending on the detail of the reform proposals).
6. **The concept of Grid Supply Point (GSP) Groups and the allocation of energy to Suppliers through GSP Group correction.** Currently the determination of a Supplier's energy volume is affected by all Suppliers energy volumes (and their customers' energy consumption/ generation) operating in that GSP Group and any errors/approximations that are used in the SVA settlement process through GSP Group Correction. The use of GSP Group Correction allows for all energy to be accounted for in a GSP Group. The review should seek to explore the elements of this arrangement and whether any improvements can be made to the allocation of energy. For example, there may be benefits in investigating an approach at the Grid Supply Point level and/or recognising the increased amount of embedded generation in the future and the implications this may have for accurate energy allocation.
7. **The impact of 'unrecorded' energy volumes or estimates that are used in the allocation of supplier energy volumes.** Currently there are a number of estimated quantities that are used in the SVA arrangements, such as Line Loss Factors, estimates of energy when meter data is not available, estimates for unmetered supplies. Furthermore, theft and unrecorded (unmetered) export will have an impact of a Supplier's energy. There are also market issues which can lead to the misallocation of energy, we monitor these and these currently include (amongst others) Energisation status, Erroneous Large EAC/AAs and long term vacant sites.
8. **Import and export metered quantities.** Smart and Advanced meters are able to record both import and export data. In addition, existing HH meters have the export functionality (as well as some legacy NHH meters). Due to the success of the Feed

⁹ [PAF](#)



in Tariff Scheme (FiT) promoting more installation of micro-generation across domestic and non domestic premises, export volumes are likely to increase in the future. Currently there is 1.3GW (and 285k installations) of installed micro-generation registered through FiT. Export can be currently settled either HH or NHH and there are only 3,500 sites and 140MW settled NHH. Therefore, a lot of the generation is spilt onto the distribution network which then affects GSP Group Correction (and then the allocation of the Suppliers energy volumes). The reform will need to consider any increased spill onto the distribution network and the impact this has on all parties (Suppliers, distribution Businesses and therefore customers). There will be an interaction with the work the PSRG are doing in Work Areas 1 and 2 which will require close liaison.

9. The allocation of Suppliers' energy due to the presence of Suppliers seeking third party access to Licence Exempt Distribution Networks (private networks). Settlement is based on metering (or allocation of energy to UMS) at exit points from the distribution network. Private networks were treated as exit points from the distribution network. However, as customers can now seek competitive supply on a private network, these exit points on a private network must be recognised in settlement and this has implications for the allocation of energy at the boundary meter (of the private and distribution network). It is envisaged that in future more and more customers will wish to seek competitive supply and we must ensure the allocation of energy to all Suppliers operating in that distribution and private networks remains accurate;

10. Unmetered Supplies (UMS). The SVA arrangements cover both metered and unmetered exit points of the distribution network. As the review is considering all aspects of what is consuming or producing energy on the distribution network and registered in settlement, this must be included. The calculation of what these sites consume is an important aspect of the accurate allocation of a Supplier's energy volume due to the current approach of GSP Group Correction.

Question 11: Do you agree with the components identified as being **in scope** for review?

11. Suppliers' Credit Cover Calculation. This calculation is based Supplier's allocation of energy and smart and advanced meters may help to improve the accuracy or timeliness of this calculation, especially with regards to estimation used. For example, part of the calculation of credit cover for Suppliers is based on estimates of the Supplier's energy volumes. With the introduction of Advanced and smart meters the use of the more accurate data in the calculation or a different approach/timetable for the calculation may be achievable.

5.3 Detailed Scope for exclusion

The following elements will be excluded from the review (the rationale provided supports the views expressed by Ofgem in their request to the BSC Panel) are:

1. The calculation of imbalance prices. Imbalance prices do not impact on the calculation of supplier volumes (only their imbalance charges) and are not part of



the SVA arrangements. Furthermore, this area is being considered separately through Ofgem's Significant Code Review (SCR) ¹⁰.

2. **The definition of Settlement Period.** The duration of the Settlement Period is 30 minutes and has not changed since the introduction of competition in electricity in 1990. Future changes in the technology and Demand Side Reduction or Smart Grid may have requirements for this to change, e.g. whether it should be <30 minutes or not. However, the agreed definition for smart meters' maximum resolution for data storage (and Advanced Meters) is a 30 minute interval and these other areas are being considered outside of the electricity settlement reform, so it is proposed to exclude this from the settlement reform scope. However, we must monitor developments in this area and capture any requirements that may impact on the settlement reform work.
3. **Balancing Mechanism.** The balancing mechanism approach and the reflection of this under the BSC are excluded from this review. This is because this is being considered by Ofgem under the SCR.
4. **Other elements of Central Volume Allocation (CVA).** These are proposed for exclusion as these processes are not directly impacted by the rollout of smart (and Advanced) meters. CVA processes include notification of contract volumes, the determination of energy volumes connected to the transmission network, losses on the transmission network, the balancing mechanism (as covered above in 3), the calculation of imbalance prices, determination of a BSC Party's imbalance charges and credit cover.
5. **Code Governance.** This is excluded from the review excluded as the focus of the reform work is the electricity SVA arrangements and there would be little benefit at this stage to extend the review scope and potentially hinder progress in the SVA arrangements. Furthermore Ofgem have stated that work on reform to the change of supplier process (and, in particular, the centralising of registration) should commence first which will then necessarily lead to an assessment of the rationale for maintaining some existing codes. Ofgem will then consider the opportunities for beneficial code consolidation as part of the overall Smarter Markets work programme.
6. **Gas Market.** This area is excluded as the focus of the reform work is the electricity SVA arrangements and these should be considered first by this review. However any electricity settlement reform proposals that were to bring benefits to the wholesale gas market arrangements will be identified to both Ofgem and the gas code administrator.

Question 12: Do you agree with the components identified as being **out of scope** for review?

¹⁰ [Ofgem Electricity Balancing SCR.](#)



5.4 Key Interactions

We note that the electricity reform work will naturally overlap or be dependent on other work being considered Ofgem, DECC and other organisations. The following table shows the key interactions and how it is proposed that these will be managed.

No.	Area	Led by	Settlement Reform Interaction	Proposed Liaison
1.	Changes to the wholesale electricity market	Industry/ ELEXON/ Ofgem/ DECC	This is where changes arise from either changes already being progressed or ('known unknowns') which may impact on the work during 2013 on settlement reform. Specific changes known at this stage are P272 and P280.	Timely identification of these changes by all parties to inform the settlement reform work.
2.	Profiling and Settlement Review	ELEXON	This work is looking at short to medium term changes which may impact on longer reform.	ELEXON will support both PSR work and the settlement reform and will feed in any information, roadmap and transitional arrangements to ensure work is fully informed.
3.	Smart Meter Implementation Programme (SMIP)	DECC	The programme is defining the requirements of the smart meter E2E business process which will impact/shape the future requirements for SVA arrangements. The programme is developing a Smart Energy Code which may amend requirements to the BSC or Settlements	ELEXON supports the DECC Programme in developing the solution for the interaction of smart and existing systems. ELEXON also supports DECC's consequential amendments work, from which we analyse the requirements coming out of the SMIP programme and for



No.	Area	Led by	Settlement Reform Interaction	Proposed Liaison
			arrangements.	progressing any changes needed to the BSC.
4.	Smarter Markets: Change of Supply (CoS)	Ofgem	<p>CoS is one of the main processes in the SVA arrangements and there is a great dependency on the settlement design to define and support this process.</p> <p>Key settlement interactions are the centralisation of registration in the Data Communication Company (DCC) and the central procurement of electricity data processing and data aggregation arrangements.</p>	<p>Settlement Reform work will identify options that change the settlement aspects of the CoS process and designs for centralised data collection and aggregation. These will be fed into the Ofgem lead work area. Work closely with Ofgem:</p> <ul style="list-style-type: none"> Identify key milestones in both work areas Regular reviews ELEXON participates in CoS work group
5.	Smarter Markets: Demand Side Response (DSR)	Ofgem	<p>DSR market/solutions will be a major input for requirements of the SVA settlement process.</p> <p>The settlement reform work will also seek to identify solutions that are flexible to potential new market players which could include DSR activities.</p>	<p>Work closely with Ofgem:</p> <ul style="list-style-type: none"> Identify key milestones Regular reviews ELEXON participates in DSR work group



No.	Area	Led by	Settlement Reform Interaction	Proposed Liaison
6.	Smarter Markets: Consumer Empowerment and Protection	Ofgem	This Ofgem led work area looks at how consumers participate in energy retail markets characterised by smart metering and the rules that govern their interactions with market participants. Work in this area may have impacts on the settlement design which will need to be considered.	Work closely with Ofgem and <ul style="list-style-type: none"> Identify key milestones Regular reviews with Ofgem Ofgem feed in any requirements
7.	Retail Market Review (RMR)	Ofgem	Ofgem has been considering ways to make energy retail markets in Great Britain work more effectively in the interests of consumers. These included more transparency of tariff information and increasing liquidity in the market.	ELEXON will request that Ofgem identify any proposals that may impact on the settlement reform work.
8.	Electricity Balancing Significant Code Review (SCR)	Ofgem	Potential interaction due to the fact the imbalance market may radically change, impacting the basis of settlement. We understand that proposals in this area will be known mid-2013.	ELEXON is working closely with Ofgem on this review and will feed in any information to ensure work is fully informed.
9.	Smartgrid Forum	DECC/ Ofgem	Smart Grids may revolutionise the flows of electricity on the distribution network and	ELEXON will monitor forum, review outputs/work plans and propose participation,



No.	Area	Led by	Settlement Reform Interaction	Proposed Liaison
			require new markets/solutions. Therefore it could be a major input for requirements of the SVA settlement process.	where appropriate. Ofgem will feed in relevant information into the settlement reform work.
10.	Other codes	MRA, DCUSA (and eventually SEC)	Work on settlement reform may impact on existing arrangements in other Codes.	ELEXON will utilise existing contacts and cross code forums to inform settlement reform work.
11.	Electricity Market Reform (EMR)	DECC	Potential new requirements for settlement information to support the proposals on Contracts for Differences (CfDs), availability payments and any other new initiatives.	ELEXON is closely following the developments and has provided input to DECC on this review. We will feed in any information to ensure work is fully informed.
12.	European Legislation: Balancing Framework Guidelines (BFG)	EU – via DECC/Ofgem	The EU is constantly developing obligations for standardising and integrating EU wide energy arrangements. In particular is the BFG which refers to imbalance settlement must be harmonised across Europe within 3 years of the Network Code coming into force. We understand this to be for 2018. Further details will be known in early 2013.	ELEXON will request Ofgem to keep the review work informed about potential developments.



No.	Area	Led by	Settlement Reform Interaction	Proposed Liaison
13.	Developments in Use of System Charging	Distribution (& Transmission)	Settlement information uses outputs from distribution charging methodologies and distributors in turn rely on accurate data from Settlement. This means that the impact of proposed changes to distribution charging methodologies need to be understood to ensure settlement reform complements it.	Input from Ofgem and network operators to ensure the review process is fully informed.
14.	Distributed Generation	DECC	DECC through the Distributed Energy Ministerial Contact Group helps identify the full potential of decentralised energy (to support the objectives of the Electricity Market Review) and identify any barriers to decentralised energy and the measures necessary to remove the barriers	ELEXON will monitor the work by the group and will utilise existing contacts in DECC to cover any potential impacts.

Question 13: Do you agree with the list of Key interactions that the review needs to take account of?

5.5 Approach to assessment of Costs and Benefits

In order to allow for a proper assessment of the policy options associated with Settlement reform it will be necessary to develop a robust model for measuring costs and benefits. This is consistent with the approach used by DECC and Ofgem in developing policy and has been used in the assessment of change to the BSC by ELEXON. We will need to establish costs, impacts and benefits for the market, relevant players and consumers. The main features of this approach are:



1. Establish scenarios based on developed solutions for settlement reform
2. Estimate Costs, using consultations and obtain:
 - Industry (and wider) Impact assessment
 - Consumer impacts/costs?
3. Estimate Benefits:
 - Develop hypotheses, methodology, calculation, assumptions
 - Consult relevant parties and organisation:
 - Industry
 - Wider market players (including new participants e.g. ESCOs, DSR aggregators)
 - Consumers
 - Industry and consumer benefits
4. Refine cost benefit model
5. Validate costs and benefits
6. Run CBA model
7. Undertake sensitivity analysis
8. Produce CBA report and conclusions

The cost-benefit analysis may be undertaken by ELEXON or an organisation with broader expertise in developing CBA (particularly consumer benefits) may be employed.



6 Assumptions, Risks and Issues

6.1 Key current Issues:

The key issues that have been cited with the existing arrangements are:

1. Complexity of the current settlement arrangements, systems and processes, e.g. performance assurance framework and the need for simplicity;
2. The estimation techniques and processes used in the allocation of a Supplier energy volume to a half hour;
3. The issues Suppliers currently have with aligning sales and purchases, its complexity and removing uncertainty;
4. Separated processes and agents including the Supplier Hub agents, central settlement, registration agents and the data and interactions this requires;
5. The current processing costs for settling a meter read;
6. The process for billing DUoS charges and the level of the charge and differences between NHH and HH charges;
7. Timeliness of current settlement, e.g. it takes 14 months to finalise a Supplier's position and then possibility of a dispute which can be undertaken at 28 months;
8. The barriers to competition that exist in the current market and the impact these have on customers (domestic and non-domestic);
9. The lack of innovation in the industry compared to other industries/markets, such as supermarkets, banking and mobile telephony;
10. The impacts of the current settlement processes on customers; and
11. The current DECC SMIP proposed data privacy requirements and the rights of the consumer regarding its data restrict the granularity of data Suppliers are allowed to access without specific consent from the consumer. A business case would need to be made if more granular data than current DECC privacy requirements is required for settlement reform proposals.

Question 14: Can you identify any other Assumptions, Risks or Issues that should be added to the list?

6.2 Assumptions

The following assumptions have been made that underpin the scope, objectives, approach and timetable for the settlement reform project.

No.	Assumption	Impact	Risk of assumption not true and mitigation
A1.	Smart rollout - the majority of smart meters will be	Need to ensure design covers	If the % non-smart is high, this may impact on the settlement design.



No.	Assumption	Impact	Risk of assumption not true and mitigation
	completed by Q1 2020: 97% domestic (Profile Classes 1 and 2); 97% non -domestic (Profile Classes 3-4)	legacy non smart meters, but not to the detriment of improvements that can be made for smart meters.	Monitoring of rollout and any periodic reviews or changes in requirements from SMIP.
A2.	99% of PC 5-8 customers will have an Advanced (CoP10) meter by April 2014	Need to ensure design covers legacy non smart meters, but not to the detriment of smart meters	If number of NHH settled meters reduces then will be potential simplification of profiling arrangements.
A3.	The DCC will be in place by Q4 2014	If the target dates are not met will this delay elements of Settlement reform.	Monitor DECC SMIP and key milestones.
A4.	Registration will be in DCC by 2017.	If the target date is not met this may delay elements of Settlement reform?	Close liaison with Ofgem on CoS work area
A5.	The SEC in place by mid-2013	If the target date is not met this may delay elements of Settlement reform especially assurance as this is covered for smart meters in SEC.	Monitor DECC SMIP and key milestones.
A6.	Settlements will have access to half hourly (HH) meter data when it is required for settlement purposes.	Impact on aspects of settlement design, e.g. will it be full HH settlement	Business case needs to made if more granular data than current DECC privacy requirements

6.3 Risks

The following risks have been made that underpin the scope, objectives, approach and timetable for the settlement reform project.



No.	Risk	Impact/Outcome	Impact Rating (High, Medium or Low)	Mitigation
R1.	DECC change the Smart meter requirements or solution during the developing of proposals stage of the settlement reform work that may lead to key assumptions becoming invalid that impact on the options for settlement reform.	Settlement reform proposals are incomplete	High	Close liaison with DECC SMIP. Establish settlement reform that not dependent to different smart scenarios/requirements
R2.	There are no firm proposals regarding CoS during the developing of proposals stage of the settlement reform work that lead to less robust settlement arrangements.	Settlement reform proposals are incomplete	High	Close liaison with Ofgem. Develop robust plan to settlement reform work which identifies points where reform work is identifying proposals that cover settlement aspects of CoS, registration and centralised DC/DA. Establish settlement reform that robust to different CoS scenarios/requirements
R3.	There are not firm proposals regarding Demand Side Reduction during the developing of proposals stage of the settlement reform work that may lead to non robust settlement arrangements.	Settlement reform proposals are incomplete	High	Close liaison with Ofgem. Establish settlement reform that robust to different DSR scenarios/requirements
R4.	The industry lead settlement reform work does not engage sufficiently with consumers to develop	Does not deliver consumers benefits	Medium	Ensure proper engagement with consumers through: Establish right contacts Education



No.	Risk	Impact/Outcome	Impact Rating (High, Medium or Low)	Mitigation
	robust proposals and calculate correct cost benefits.			Consultation Involvement in any expert groups
R5.	The industry lead settlement reform work falters due to filibustering by parties and does not make sufficient progress and therefore does not deliver settlement reform proposals.	Settlement reform proposals are incomplete and Ofgem required to undertake SCR.	Low	Establish clear rules of engagement and obtain buy in from all parties and commitment to the settlement reform process.
R6.	The industry led settlement reform work falters due to insufficient resource (both industry and key parties) and does not make sufficient progress and therefore does not deliver settlement reform proposals.	Settlement reform proposals are incomplete and Ofgem required to undertake SCR.	Medium	Establish clear rules of engagement and obtain clear commitment to the settlement reform process and level of resource
R7.	The granularity of data required to deliver settlement reform is not available due to privacy restrictions	Settlement reform is limited or cost of innovative solutions are prohibitive due to costs of privacy enhanced solutions	High	Develop robust rationale that justifies access to data and articulate benefits for consumers
R8.	The industry led settlement reform work does not adequately represent the introduction of new technologies and the impacts these have on the current settlement arrangements.	Settlement reform proposals are incomplete or flexible enough for new technology.	Medium	Ensure review group has expertise in this area and sufficient engagement with parties bringing new technology to the market.



No.	Risk	Impact/Outcome	Impact Rating (High, Medium or Low)	Mitigation
R9.	The introduction of changes required for government regulations/ initiatives make impact on the ability of settlement reform work to deliver robust policy reform proposals.	Settlement reform proposals are incomplete or robust to these new changes.	Medium	Close liaison with Ofgem. Establish settlement reform that flexible.
R10.	The transitional road map to the end 2020 settlement arrangements are too expensive to implement resulting in the breakdown in the 2020 settlement arrangements.	Settlement reform proposals are not delivered or the transition to a 2020 solution fails.	Low	Ensure transition proposals are fully costed and signed on by all parties.
R11.	Significant market issues occur which divert key resource and expertise which impacts on the development and implementation of the settlement reform policy proposals.	Settlement reform proposals are incomplete or not delivered or the transition to a 2020 solution fails.	Medium	Minimise by identifying contingency arrangements.
R12.	Political intervention results in wider market reforms which changes the basis for energy markets and settlement.	Settlement reform proposals are not relevant or right for new direction or need to be changed during implementation.	Medium	Close liaison with DECC and Ofgem.

6.4 Future Issues:

The future issues that are believed may have an impact on the development of settlement reform policy proposals are:



1. There is a significant increase in intermittent generation both transmission and distribution network connected that requires fundamental changes to the settlement arrangements;
2. There is a significant increase in distributed (embedded) generation that requires fundamental changes to the settlement arrangements;
3. There is a significant proliferation of electric vehicles and their resultant demand volume and shape that requires substantial changes to the settlement arrangements; and
4. The generation mix changes radically that requires substantial changes to the settlement arrangements.



7

Deliverables

7.1 Key deliverables from Settlement review

The following key deliverables will be provided from the completed review work. The deliverables describe only the end output not the processes for their delivery (which will include consultation, impact assessment, working groups, etc).

The Vision for Settlement for 2020

As a result of the analysis of what Settlement should look like in 2020 the review will produce a blueprint document that describes the preferred solution and will therefore provide the basis for the other deliverables. The blueprint is the vision for Settlement and describes at a high level what Settlement processes do, their timings, activities of participants in the Settlement processes, its interactions with other industry processes (including data feeds to and from) and who Settlement serves. The blueprint serves as a master vision against which lower level changes can be assessed to ensure they contribute to the goals. The vision will incorporate the activities and solutions in the transition plan.

Cost-Benefit Analysis (CBA) Model

The CBA will support the decision making process for how Settlement should be reformed. The CBA will be based on a defined methodology supported by various assumptions. The CBA tool will therefore support evaluation of the proposed costs and benefits of Settlement reform throughout the review exercise and beyond into cost/benefit evaluation. As with any CBA we will capture the qualitative benefits as well as quantitative. The CBA will incorporate any incremental changes that are required to deliver the final vision.

Package of Reform Proposals

At the end of the review a suite of changes will be developed and presented to stakeholders for progression. It is anticipated that there will be a range of changes of varying size and complexity, not just impacting the BSC but also other industry Codes and potentially licences.

Implementation Plan & Transition Plan

The package of reforms will be accompanied by an implementation plan describing which changes should be made, when they need to be made and highlighting any interactions between decisions required to deliver changes (e.g. co-ordinated Code changes or dependency on Ofgem decisions, licence changes). It is expected that changes can be staggered across the period from the end of the review to 2020 to allow for benefits to be realised as early as possible. Whilst the Panel can manage the implementation for changes to the BSC and co-ordinate changes with other Code



panels, where necessary, Ofgem may be required to instigate changes outside this framework, such as licence condition changes.

In addition the review will need to consider how to manage transitional issues and set out how any cut over and roll off of arrangements will be managed.

Question 15: Do you agree with the list of deliverables for the review?

Benefits Realisation plan and Monitoring approach

A benefits realisation plan will be provided to allow for the monitoring of the success of the reform work. Within this plan will be an explanation of the methodology to be used for gathering evidence regarding the costs and benefits of change and the reporting mechanisms for sharing the information with the relevant stakeholders. This feedback will in turn help inform how change is implemented to support the vision set out in the blueprint. It will also allow the CBA to be updated.



8

Timetable for Review and Reform

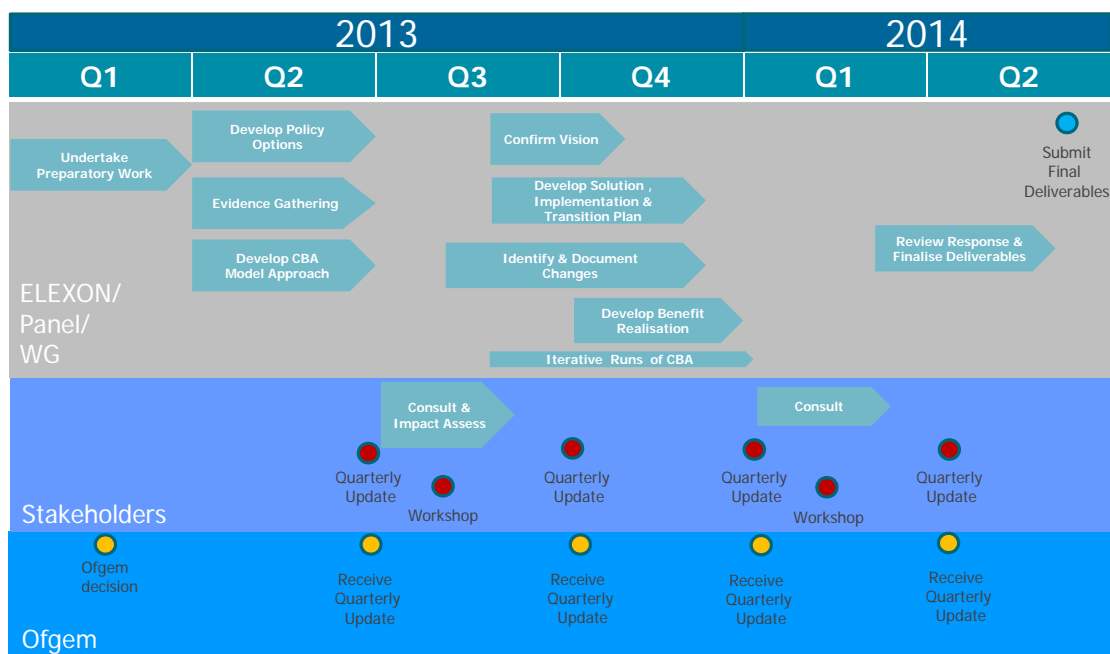
8.1 Review

Question 16: Do you have any comments on the timetable for review?

The timeline below sets out the timetable for undertaking the Settlement review work. The timetable describes the approach to be taken up to the completion of the final deliverables described in Section 7. A detailed project plan will be developed by ELEXON that supports this timeline.

Assuming an Ofgem decision by end Q1 2013, the review could be delivered within just over a year, allowing for at least two 6 to 8 week consultations with stakeholders.

Settlement Review Timeline



Preparatory Work

The timeline shows preparatory work being undertaken by ELEXON to support the process. This will involve a limited amount of activity designed to allow for a prompt start to the review work.

Preparatory work could include developing draft Terms of Reference for working groups, establishing meeting slots and sounding out potential CBA providers.



Develop Policy Options

The Panel Review Group will meet several times to develop their thinking on options for what is required of Settlement in 2020. They will use feedback gathered through this consultation and the evidence gathering work to build up a vision for 2020 and the options associated with various components within that vision. ELEXON will provide working papers to the group, however, the group will also be invited to bring ideas to the meetings for discussion.

Group materials will be published online and to a wider audience to invite feedback on the working papers and developing options.

The full set of options will be subject to stakeholder review and Impact Assessment.

Evidence Gathering

In parallel (and to support the development of policy options) ELEXON will undertake a series of evidence gathering exercises to understand:

- what stakeholders want to see from Settlement between now and 2020;
- what potential new innovations and market activities may need to be supported;
- what services consumers may wish to have (or are likely to be offered);
- what information is likely to be required, by Settlement and from Settlement;
- Where the key costs and benefits of any Settlement reform are likely to fall;
- What dependencies there are on other Codes, processes, regulatory frameworks and projects.

Evidence gathering will be primarily driven by ELEXON, through direct discussions with individual stakeholders and stakeholder groups. Discussion will be targeted to extract the relevant information from particular stakeholder groups. Where forums exist that involve groups of stakeholders (for example cross codes forum, independent Supplier forum, consumer groups) we will seek to use those forums to gather targeted evidence. In addition ELEXON will discuss longer term policy with DECC and Ofgem to ensure any potential changes are understood and captured.

The evidence will support the development of the vision and the CBA model approach. In addition the information gathered will be used to update the risks, issues and dependencies recorded by the project.

Develop CBA Model Approach

ELEXON will develop (and may seek external support) an approach for building a robust CBA model. The Review Group will be responsible for agreeing the assumptions and individual components of the costs and benefits that comprise the CBA.

The approach to developing the CBA will be subject to consultation.



Confirm Vision

Post consultation the Review Group will define a clear vision for Settlement in 2020. The vision document will be approved by the Panel through a recommendation from the Review Group. The vision will be published to stakeholders and will form the basis for the remaining work.

The vision document may be amended by the Panel but this will only be where there is a significantly material change in the assumptions that support the vision (e.g. Suppliers are no longer mandated to install smart metering for all customers, or DECC introduces significant market change that cuts across the review work).

Develop Solution, Implementation & Transition Plan

The Review Group will develop solutions that deliver the vision. At this stage it is anticipated that specialist groups will be established to work on various components of the solution. Specialist groups will utilise appropriate expertise from the stakeholder community and provide solutions (or options) for the review group's consideration. Specialist groups may be supplemented by wider stakeholder workshops (or workshops used instead of specialist groups).

The combination of the solution and changes identified will be used by ELEXON to develop the Implementation and Transition plan. Specialist working groups or stakeholder workshops will be held to develop the plans. The plans will be subject to the Review Group approval.

Informal feedback will be gathered by ongoing stakeholder engagements by ELEXON at established forums and through the web and monthly updates.

The outputs will be subject to stakeholder consultation.

Identify & Document Changes

ELEXON will catalogue the suite of changes that have been identified through the solution work for agreement by the Review Group. If changes are identified that span industry Codes, cross code working arrangements will be established to capture input from other Codes. Quick targeted Impact Assessments may be used to gather impacts and further costs.

The catalogue of changes will be subject to stakeholder consultation.

Iterative Runs of CBA

Post consultation a CBA tool will be developed (by ELEXON or with external support).

The CBA model will be run to assess the net benefits (or not) and help refine the solution to deliver the vision. The CBA tool will be re-run, on a periodic basis, when new evidence emerges.



A number of quick Impact Assessments may be conducted to support the evidence used in the CBA. Alternatively independent analysis may be commissioned if there is limited or conflicting evidence presented.

The CBA results will support the decision making process and the results will be included in the consultations on the solution.

Develop Benefit Realisation Plan

Towards the end of the review the Review Group (or a specialist group) will develop a benefit Realisation Plan to explain how the success of any reform will be measured. The Plan will detail the data that will be gathered and responsibilities for reporting.

The Plan will be subject to consultation prior to approval by the Review Group. The Panel will own the Plan once the final deliverables are submitted to them.

Stakeholder Engagement

Tools to be utilised for Stakeholder Engagement are described in section 4.3. There will be two formal consultations:

- The first consultation on the policy options and approach to developing the CBA;
- A second consultation on the reform proposals (supported by CBA), packages of changes, implementation and transition plan and benefits realisation.

The group may find it necessary separate the consultations to reduce burden on reviewers or stagger their workload.

There will be regular ad hoc engagement at meetings outside the two formal consultations and workshops shown on this high level schematic. These will include monthly updates to the webpages to explain progress and attendance at any relevant forums to provide updates and gather feedback.

8.2 Reform

Question 17: What are your thoughts on the timing of impact of Settlement review and reform in the context of the wider industry change framework?

In order to implement the new vision for Settlement by 2020 the reforms will need to be introduced during the period 2014 to 2020. During this period there is already a full agenda of regulatory change, including for example the smart meter roll-out and DCC go-live, introduction of a new registration mechanism and changes to the change of supplier process, and the Electricity Market Review, amongst others. The benefits in reforming Settlements could well be significant but it will need to be demonstrated that the industry has sufficient bandwidth to support this additional programme.

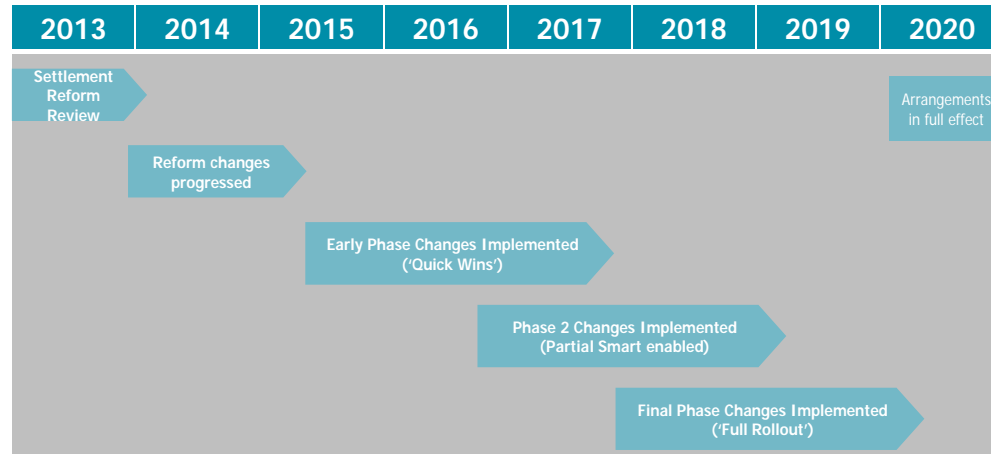
The development and implementation of solutions would need to recognise any milestones in the market as part of a roadmap to 2020 (including taking account of the work of the Profiling and Settlement Review Group¹¹).

¹¹ [PSRG](#)



It will be the responsibility of the Panel Review Group to develop a Package of Reform Proposals and an implementation Plan for delivering them. However a potential timeline for development could be as set out below:

Implementing Settlement Reform



- 2013/ Early 2014 – Fully developed policy reform (high level solutions);
- End of 2014/early 2015 - Package of changes approved by Ofgem/Panel and industry Codes. This may include any regulatory changes (DCUSA, National Grid, BSC, SEC and any others) together with any complementary changes that may be required prior to 2020 (e.g. driven by PSR work);
- 2015/2016 – Early Phase Implementation of changes (e.g. non smart reliant or quick wins);
- 2016-2019 – Intermediate steps (and changes implemented); and
- 2017 - 2020 – All changes progressed to allow new arrangements to take effect



9 Summary of Consultation Responses

9.1 [TO BE COMPLETED ONCE RECEIVED]



10 Recommendations

10.1 [TO BE COMPLETED AFTER CONSULTATION]



11 Appendices

11.1 ELEXON resource and costs estimate for delivering review

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	Total
Resource (Mandays)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	960
Other costs (Meeting rooms, catering, travel) (,000)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	80k
Specialist Support (CBA or Other) (,000)																	400k

ELEXON estimates that the equivalent of three full time resources would be required to support the review process. This includes (but is not limited to):

- managing the review process;
- chairing meetings;
- producing working group materials;
- developing final deliverables;
- managing stakeholder engagement;
- reporting.

A provision is made based on an estimate of funds for specialist support. For example this may be to help in the development or running of cost benefits analysis or used or specialist advice on consumer benefits or targeted engagement activity.

11.2 List of Acronyms

Acronym	Definition
AA	Annualised Advance
BSC	Balancing and Settlement Code
BSCCo	Balancing and Settlement Code Company (ELEXON)
CBA	Cost-Benefit Analysis
CoS	Change of Supplier
CoP	Code of Practice
CVA	Central Volume Allocation
DCUSA	Distribution and Connection Use of system



	Agreement
DECC	Department of Energy and Climate Change
DSR	Demand Side Response
DUoS	Distribution Use of System
EAC	Estimated Annual Consumption
ESCO	Energy Service Company Organisation
FIT	Feed in Tariff
GSP	Grid Supply Point
GSPG	Grid Supply Point Group
HH	Half Hourly
MD	Maximum Demand
MRA	Master Registration Agreement
NHH	Non Half Hourly
PAF	Performance Assurance Framework
PC	Profile Class
PSRG	Profiling and Settlement Review Group
SCR	Significant Code Review
SEC	Smart Energy Code
SMIP	Smart Meter Implementation Programme
SRSG	Settlement Review Scoping Group
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent