



Making a positive difference
for energy consumers

To all electricity suppliers,
transmission and distribution
network operators, the system
operator, consumers
representatives and other
interested parties

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Open letter: facilitating efficient use of flexibility sources in the GB electricity system

Purpose of the letter

We have launched a new project to develop our strategy to enable and enhance the efficient provision and use of flexibility¹ sources across the supply chain in the GB electricity system. The aim of this is to ensure the energy system becomes sustainable while continuing to deliver resilience and value for money as its operation changes.

This letter explains our project and gives you an update on ongoing Ofgem projects that interact with this new piece of work.

Context

The energy system is changing. There is an increasing volume of intermittent generation connected to the system and some generation is becoming more localised. The way consumers participate in energy markets is also evolving.

The current electricity system already uses many sources of flexibility² to run efficiently. However, new sources of flexibility are likely to be required to deal with the changing operation of the system. These new sources may include -

- **Demand-side response (DSR)** - consumers changing patterns of consumption in response to a signal.
- **Energy storage** – allowing cheaper energy to be purchased at times of lower electricity prices to be used at a later date.
- **Distributed generation** - that can vary output and provide technical services in response to a signal.

¹ Flexibility takes several forms. It may include demand change, time-shifting demand, embedded generation, fuel substitution, and efficiency schemes. It may also be distinguished by its purpose, its means of operation, and the speed and duration of response.

² For example, demand-side response from large users, voltage control and transmission connected generation have been traditionally used to ensure the electricity system runs efficiently and there is enough supply at times of high demand.

Work to date

We have already been doing work to enable efficient, system-wide use of DSR across the value chain. In 2013 we consulted on the way forward to create the right environment for DSR as part of our smarter markets programme. Responses to the consultation highlighted the need to clarify the role of parties within the current regulatory framework. So we started work in 2014 to develop a framework that clearly formalises the role of different parties to efficiently use DSR across the value chain³.

In addition, work within and outside Ofgem has been progressed to ensure the benefits of smart meters and smart grids are fully realised, for example our work on electricity settlement, the new RIIO price control and our leadership in workstream 6 of the Smart Grids Forum. This last piece of work aims to understand and address the commercial and regulatory barriers to efficient use of DSR and other forms of flexibility and to create the incentives for parties to use those when it is economical to do so⁴.

Work carried out so far has established that several parties across the supply chain could benefit from using flexibility and consumers have a key role to play in maximising the potential of new sources of flexibility. However, there may be unintended consequences if parties do not coordinate when procuring, providing and using flexible sources. This could lead to a poor outcome for the energy system and for consumers.

The Flexibility Project

Introduction - the need for the project

The projects and workstreams mentioned in the previous section focused on individual policies and sources of flexibility. We consider that there is a need to take a more holistic approach to system flexibility, which looks at the potential interactions between new and traditional sources of flexibility and how these sources are used by different parties.

A consideration of the interactions should enable a greater understanding of any barriers to the most economic and effective use of flexibility in the system. To illustrate this point - consider for example that DSR, energy storage and distributed generation can all enhance flexibility. However, no assessment has been made yet of the interactions between these sources. There may be incentives or barriers that may encourage or prevent parties using one or more of these sources of flexibility.

We have therefore decided to bring together existing projects within Ofgem on DSR, energy storage and distributed generation and create a single project - the Flexibility project. The new project will identify and examine the interactions between the different uses of flexibility across the value chain. We want to understand how market participants across all parts of the supply chain might participate in providing and using flexibility in the future.

This decision means that instead of issuing a consultation on a DSR framework - as envisaged in our December 2013 decision document on creating the right environment for DSR⁵ - we will now consider DSR in the context of the Flexibility project.

Objective

Building on the work already done, our strategy will explain what we intend to do to facilitate the use of new sources of flexibility in the GB electricity system and will set out the actions that we or other parties need to take. Should changes to policies and regulation be necessary in order to deliver the strategy, we will consider them at a later stage and develop them through normal consultation processes.

Scope

³ Further information on Smarter Markets' work on DSR can be found [here](#)

⁴ Please visit our website for information on our work on [electricity settlement](#), the new [RIIO price-control](#), and [workstream 6](#)

⁵ The decision document can be found [here](#).

We will focus on three sources of electricity flexibility – DSR, energy storage and distributed generation – as defined above. While we will not look at sources of flexibility in the gas sector, we will consider learning that may be applied to electricity.

We will focus on these three sources of flexibility because procurement, provision and use of these sources is currently limited and we want to understand possible future developments, capture synergies and consider whether and when actions should be taken to ensure more of their potential is realised.

We will also consider the links between energy efficiency policy and potential actions to facilitate efficient use of flexibility sources. We will not look at developing policies to promote energy efficiency, where Government is leading, but we will assess what issues relating to energy efficiency policies may have an impact on future uptake of DSR, energy storage and distributed generation and vice versa.

Links to other work

The flexibility project has links with many ongoing projects within the organisation, among others the work on non-traditional business models, on third-party intermediaries, on the reformed electricity balancing arrangements (post-EBSCR implementation) and on future trading arrangements. We will consider all interactions and ensure appropriate and consistent communication with stakeholders. We will also leverage upon work done by other organisations, including work done by the Agency for the Cooperation of Energy Regulators (ACER), the Council of European Energy Regulators (CEER) and the European Commission, the Smart Grids Forum, industry parties, academics and consultancies.

Deliverables

We will publish our strategy in summer 2015. The strategy will set out our role in facilitating the development of a flexible energy system that efficiently uses new flexibility sources, the actions we plan to take to increase the uptake of these sources (if necessary) and a workplan to deliver the strategy.

At this stage we are not able to confirm whether regulatory intervention would be needed. By undertaking a comprehensive assessment of different sources of flexibility across the full value chain, we aim to form a view on whether there are barriers in the current regulatory framework that should be eliminated, but also what the opportunities and incentives should be to maintain system resilience and help decarbonise the electricity sector by deploying new flexibility sources.

Also, should we find that more needs to be done to diversify and increase the level of flexibility sources in the system we will not limit the list of potential actions to regulatory intervention. For example, we could consider using different media, holding workshops or organising events to raise awareness of these new sources of flexibility.

Engaging stakeholders

We plan to engage stakeholder via bilateral meetings and existing groups, including workstream 6 of the Smart Grids Forum. We are also considering holding a workshop in spring to seek views on our developing thinking. We will provide further information on the workshop in due course.

Should you have any question please do not hesitate to contact Chiara Redaelli (chiara.redaelli@ofgem.gov.uk) or Sam Cope (sam.cope@ofgem.gov.uk).

Yours faithfully,

Maxine Frerk

Senior Partner, Smarter Grids and Governance: Distribution