

# Flexible Energy's Response to National Grid's Consultation



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## Executive Summary

Flexible Energy Ltd is a recently formed small investor owned company. Flexible Energy Ltd has developed a concept for dynamically controlling residential demand which will be of interest to the GB System Operator National Grid, or to one or more electricity suppliers serving the UK market.

We believe there is a yet uncapped potential in small appliances to offer balancing services to National Grid. As such, we believe it would be helpful for National Grid to significantly reduce the minimum size of the bid-offer pair it will accept, at least in the short to medium term, until provision of demand side services for system balancing is well established.

From our experiences, we think that a statement of National Grid's view of its long term Balancing Services requirement would be very useful to inform the business cases both for new technologies and for new Balancing Services businesses.

Finally, we believe that our technology, as outlined below, needs to be included in those being considered for providing future Balancing Services and would welcome the opportunity to work with National Grid and / or other industry stakeholders to facilitate a rapid deployment of the technology.

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## 1 The Company

Flexible Energy Ltd is a recently formed small investor owned company. Flexible Energy Ltd has developed a concept for dynamically controlling residential demand which will be of interest to the GB System Operator National Grid, or to one or more electricity distributors/suppliers serving the UK market.

## 2 Our Response

Flexible Energy's response to National Grid's Consultation is provided below. We have responded to those where we believe Flexible Energy has something of note to contribute and have not responded to those questions outside our expertise.

This response is distinct and separate from that prepared and submitted by any organization with a shareholding in Flexible Energy Ltd.

### **Question 36:**

We have assessed the potential discretionary domestic load which in principle could be controlled by Flexible Energy or a similar system. Our findings are broadly in line with the view expressed in the consultation regarding the potential domestic load which could be controlled, however we expect that in practice only a proportion of that potential will be accessed by 2020.

### **Question 37:**

In the consultation document, National Grid has recognized that a substantial part of the Balancing Services in 2020 will be provided by sources that currently do not exist. Most of the assets that will provide these services will individually deliver control of units of power that are many orders of magnitude smaller than the units of power that are currently traded. (Domestic assets range from several tens of thousand times smaller to more than a million times smaller.) Although aggregators will multiply the effective size of these units (by combining their control), the aggregated volumes are still likely to be well short of the current minimum trading unit. In order to facilitate Balancing Services from demand side providers, it would be helpful for National Grid to significantly reduce the

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minimum size of the bid–offer pair it will accept, at least in the short to medium term until these services are well established.

### Question 40:

Whilst we broadly agree with the mapping of technology to Balancing Service Capability, we believe that a technology is missing. That technology is being developed by Flexible Energy. Using a low cost retrofit device, large numbers of existing domestic appliances can be flexibly controlled to be constrained off or dispatched on request. Deployment of this technology does not require the roll-out of Smart Meters or the agreement of white goods manufacturers, with the pre-requisite development of standards or legislation. It therefore is not subject to the delays which are inherent in Smart Meters or Dynamic Demand and similar technologies. It is able to cause additional energy to be drawn from the system on request. It is able to reduce the energy that is drawn from the system on request. We therefore propose that an additional technology is added to Table 14, which can provide or enable:

- Frequency Response;
- Fast Reserve;
- Fast Start;
- STOR; and
- Energy Balancing.

### Questions 41 & 42

A statement of National Grid's view of its long term Balancing Services requirement would be very useful to inform the business cases both for new technologies and for new Balancing Services businesses. It would be helpful in developing the confidence of potential investors. A 10 year view would be helpful, plus if possible an outline of what might be required beyond this period.

## 3 Any questions?

If you have any questions or comments on our response, please send them to [info@flexible-energy.co.uk](mailto:info@flexible-energy.co.uk)