



# Implementing the European Electricity Target Model in Great Britain

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## The Electricity Storage Network

The Electricity Storage Network is the UK's industry association for the promotion of electrical energy storage. Current members include electricity storage manufacturers and suppliers, developers of electricity storage projects, users, electricity network operators, consultants, academic institutions and research organisations.

The Electricity Storage Network works on behalf of its members to respond to and address issues affecting the development and utilisation of grid-scale electricity storage within the UK power system. This includes special interest meetings, liaising with the media, responding to consultations, providing a unified point of contact for those interested in electricity storage and promoting the value of storage within the UK power system.

We strongly support UK energy storage solutions for the UK electricity system and by promoting local innovation in electricity storage we support wider UK industry.

## Introduction

The GB electricity market is undergoing significant change both internally and externally through EMR and the Third Package, respectively. This consultation is to examine the potential synergies between the internal and external changes to ensure that a fit for purpose GB market can be created as soon as possible and with minimum disruption to the current and developing market.

## General Comments

The three major aims of DECC's Pathways to 2050 were to:

- Ensure security of supply as the generation and demand profiles change;
- Ensure that electricity generation is decarbonised;
- Ensure that price rises for electricity are minimised;

And where these aims interact positively with the European Target Model then those aspects should be pursued. If however some aspects of the European Target Model create difficulties in achieving these national aims, then GB should opt out of those aspects, although there seems little flexibility in the EU Target Model to allow such opt outs.

### *Dependence on Interconnectors*

The European Target Model envisages an increased number of interconnectors linking GB with Europe (and other markets) and places reliance on interconnectors to help manage intermittency in generation and to manage wrong-time energy. Interconnectors are the only way to create a pan-

European electricity network, but interconnectors are not the only method to ensure security of supply in a system that is likely to become increasingly dependent on intermittent generation. Indeed, as detailed in the Open Letter, the failure of an interconnector has resulted in the payment of significant constraint payments.

Energy storage offers the ability to store electricity (either as electricity or as another form of energy for conversion to electricity) so that electricity can be provided at times of low generation or to absorb “wrong-time” generation.

Interconnectors are certainly part of a broad strategy for managing intermittency, but the EU Target Model needs to be flexible enough to support other technologies that exist now or may develop in the future.

It is not clear in the development of the various codes what the implications are for other non-interconnector technologies or even low-carbon technologies that may require some form of initial support to ensure they are developed and utilised.

### *Maintaining Frequency*

With increasing penetration of intermittent generation, power quality becomes a significant issue and maintaining a stable frequency becomes harder as responsive reserve on the system is reduced. Interconnectors, while offering additional flexibility in responding to changing demand, offer only very limited capability in providing a secure and stable supply, operating within statutory limits. Managing system resilience will require other methods, particularly if high-carbon generation, which typically provides inertia, is being replaced with low-carbon generation (such as windpower and PV) and new nuclear plant which is unlikely to operate in a flexible mode for economic reasons.

### *Price zones and impact on Capacity Market*

It is not clear how and where price zones will be set in Europe and whether GB will be in a single price zone or multiple price zones. Since the Capacity Market may offer a route onto the system for new technologies, including storage, the impact of the EU Target Model and in particular price zones needs to be assessed with care to ensure that the effectiveness of the Capacity Market in bringing new technologies to the market is not unintentionally diminished by the introduction of price zones.

### *Impact on support for Low Carbon technologies*

Introducing low carbon technologies to the GB market in pursuit of demerger generation and CO<sub>2</sub> emissions is an important facet of the UK's electricity market reform. In some cases such support may represent a market distortion, but this support may be the only way to ensure that the new technologies needed for the future are developed and trialled. There would be concern if the EU Target Model reduced the UK's ability to support new technologies' entries on to the system.

### *Time line: 31 December 2014 is too soon?*

We question whether it will be possible to implement the EU Target model fully by 31 December 2014. This is an ambitious deadline and we have concerns that the tightness may result in a lack of necessary strategic thinking to ensure that the EU Target model is implemented in the GB in a way that ensures current and future benefits to the wider GB system and to specific new and emerging low carbon technologies and without adopting policies and practices that will cause regret at a later stage.

Once implemented the codes are not expected to be reviewed frequently (currently there is the opportunity to review codes annually) and this may reduce flexibility to respond to issues as they arise and “lock out” certain technologies or exclude particular options at all system levels.

It is not clear if there will be penalties if GB fails to implement all the steps necessary to comply with the EU Target model by the end of 2014.

Providing certainty in the market and sending clear signals to investors regarding future opportunities in the GB market, is critical, and while a rapid implementation of the EU Target model may minimise some uncertainty it will be vital to ensure that implementation is carried out in an orderly and consistent way.

### *GB is unusual (in EU terms) in the structure of its electricity system.*

GB is an island system, with a relatively low degree of interconnection and as one of the first systems to go through restructuring (twice) it has a greater reliance on market based solutions in comparison to other countries, with a higher degree of remnant vertical integration. This lack of verticality in the GB system may provide particular challenges to implementing the EU Target Model. Our view is that the priority should be ensuring the objectives for the GB system first, and matching the EU’s requirements second. There are national implications for security of supply, because of the island nature of GB, and the low level of interconnections.

The ESN represents members in the GB market as well as Northern Ireland and the SEM. GB is effectively an island system weakly connected to continental Europe. The SEM also represents an island system with weak interconnections, and therefore the technical aspects of system operation are similar, and in some cases more extreme. From a holistic point of view, there needs to be national view taken towards these issues so that the interests of all parts of the United Kingdom are represented in a coherent way.

## **What are the key aspects of the Target Model for GB?**

We recognise the importance of this question, but believe that others are better placed to respond.

## **What changes will be needed to GB market arrangements?**

Our expectation is that changes are likely to be needed to GB market arrangements in order to comply with the EU Target Model, indeed changes have already been promoted by the EU Target Model. While some of the changes may be broadly in line with the aims of the current Electricity Market Reform it will be necessary to ensure that any changes to market arrangements do not impact adversely on investor confidence (at all levels) or impact on the ability of new technologies to enter the market.

## **Should we try and minimise change or consider holistically the best combination of GB and EU requirements?**

It makes sense to consider holistically the best combination of GB and EU requirements, where those requirements are to the benefit of the GB market, so as to minimise disruption and uncertainty in the markets. Ongoing uncertainty with national electricity market reform is already

impacting on investor confidence, particularly with regard to new non-renewable generation. The additional uncertainty created by the implementation of the EU Target Model will only exacerbate this and has potential to adversely impact on our progress towards DECC's aims for 2050.

### **How can we deliver the best outcomes?**

We need to focus on the best outcomes for GB and ensure that we meet the aims of DECC's goals for 2050, including the support for low-Carbon technologies. Additionally no commitments should be made that are not flexible or that may exclude any future technologies.

Consultation with a broad range of current and potential stakeholders needs to be undertaken to ensure that there are no disadvantages to stakeholders.

### **What process is needed to take this work forward?**

Ofgem will need to ensure that consultations and workshops are organised regularly to maintain communication and input from all stakeholders. Given the proposed rapid program of implementation it may be appropriate to develop a small group of stakeholder representatives who are able to respond rapidly to queries and changes.