



Chiara Redaelli
Senior Economist, Energy Systems Integration
Ofgem
9 Millbank
London
SW1P 3GE

27th November 2017

flexibility@ofgem.gov.uk

Clarifying the regulatory framework for electricity storage: licensing - RWE Response

Dear Chiara,

RWE welcomes the opportunity to respond to the Ofgem consultation on the “Clarifying the regulatory framework for electricity storage: licensing” published on 29th September 2017. We are responding on behalf of RWE Supply and Trading GmbH and RWE Generation plc. This is a non-confidential response.

The explicit recognition of “*storage*” and “*storage facilities*” under the Generation Licence is an important step in the development of the regulatory regime to ensure that it can respond to the deployment of renewable energy and smart technologies. However, we note that Grid scale pumped storage facilities are already permitted under the Generation licence and that there is nothing preventing other “*storage facilities*” seeking such a licence.

The proposed changes to the generation licence appear simple and straight forward. However, classifying storage facilities with a “*primary function*” as generating stations has wider implications for the Grid Code, European Legislation and the Connection and Use of System Code. A review of these documents is required to ensure that the definitions envisaged under the draft Generation Licence is capable of delivering the required outcomes.

The Generation Licence Exemption regime does not easily accommodate “*storage facilities*” where capacity is measured at the output terminals of a direct current to alternating current converter. Further work may be required to determine whether the legislative framework requires modification to ensure that storage can be subject to a generation licence exemption.

As envisaged it appears as though generation licence exempt storage is unable to rely on the reference in draft licence condition E1(1) to the primary function of a “*storage facility*” in order to avoid final consumption levies. By definition storage facilities that are exempt are not subject to a generation licence and therefore cannot avoid the levies.

RWE Supply & Trading GmbH
Swindon Branch

Windmill Hill Business Park
Whitehill Way
Swindon SN5 6PB
United Kingdom

T +44(0)1793/87 77 77
F +44(0)1793/89 25 25
I www.rwe.com

Registered No. BR 7373

VAT Registration No.
GB 524 921354

Supervisory Board:
Dr Markus Krebber (Chairman)

Board of Directors:
Andree Stracke
Dr Michael Müller
Peter Krembel
Tom Glover

Head Office:
Essen, Germany
Registered at:
Local District Court, Essen
Registered No.
HR B 14327

Bank details:
Deutsche Bank Essen
Bank Code 360 700 50
Account No. 105 127 500
SWIFT: DEUTDEDE
IBAN: DE05 3607 0050 0105
1275 00

The operating characteristics of “*storage*” and “*storage facilities*” will change over time. On some occasions a facility may be operating to store electricity from the total system to release later (temporal displacement and energy arbitrage). However the same facility may be capable of storing renewable energy for an intermittent power source. On other occasions the same that facility may be capable of meeting an onsite demand while operating as demand side response. The “primary function” for storage as generation may therefore apply for only certain periods of time. It is not clear how the licensing regime will apply in these circumstances.

It is unclear as to whether batteries associated with electric vehicles may be included within the definition of a storage facility. Clearly when connected to the total system for recharging purposes they can provide both electricity generation as well as other ancillary services (they fall under the definition of Generating Stations as envisaged under the Draft Licence Condition). Therefore they could be caught by the requirements to have a licence (or an exemption) when connected to the total system.

Our detailed comments on the questions in the Consultation Document are included in Annex 1.

If you have any comments or wish to discuss the issues raised in this letter then please do not hesitate to contact me.

Yours faithfully

By email

Bill Reed
Market Development Manager.

Annex 1: RWE Response to the consultation questions

Our proposal and rationale

Question 1: Do you agree that the form and content of the licence as proposed in this consultation will achieve the purpose and deliver what we committed to in the *Smart Systems and Flexibility Plan*?

The proposed amendments to the Generation Licence to encompass storage can help to achieve the purpose and intent of the proposals as outlined in the Smart Systems and Flexibility Plan. However, the wider implications of the proposals for the development and delivery of storage facilities may require further consideration.

Question 2: Do you have any views on whether we should include ‘in a controllable manner’ in the definition of electricity storage?

The phrase “in a controllable manner” is not required in the definition since the controllability of the storage facility is intrinsic to the definition of storage and the operation of that storage facility.

Question 3: Do you think there are any risks or unintended consequences that could arise as a result of our proposal? If so, please provide an explanation.

We have identified two areas of risk or unintended consequences that could arise as a result of the proposal. These relate to the definition of “capacity” and the licence exemption regime.

1. Capacity Definition for Generation Stations as Storage Facilities

The definition of capacity in relation to the storage facility is clearly important. In this context the Generation Licence appears to envisage that a storage facility will be a “generating station” and have a “capacity” as follows:

"generating station"	shall be construed in accordance with standard condition 14 (Compulsory Acquisition of Land etc). means an electricity generating station or an electricity storage facility which: (i) has, or will have when its construction or extension is completed, a capacity of not less than 50 megawatts or such other capacity as may be specified in relation thereto by order of the Secretary of State under section 36(3) of the Act; (ii) is, or will be when its extension or construction is completed, operated by or for the licensee;
----------------------	--

The Generation Licence elsewhere makes reference to the “Registered Capacity” of a generating station and this is a defined term in the Grid Code. The Grid Code definition of Registered Capacity makes further reference to other terms including “Generating units”, “CCGT Modules”, “Power Park Modules”, “Power Stations” and “DC Convertors”. A “Power Station” is defined in the Grid Code as

“An installation comprising one or more Generating Units or Power Park Modules (even where sited separately) owned and/or controlled by the same Generator, which may reasonably be considered as being managed as one Power Station”.

It is unclear as to which category of generating station a storage facility falls into under the Grid Code and on what basis it will submit a registered capacity, as required under the Generation Licence. It is therefore uncertain as to whether the provisions the Grid Code must be modified to facilitate the change as envisaged (e.g. to allow storage facilities to submit a registered capacity).

There are wider implications in relation to the classification of a storage facility as a generating station which may require review including the technical provision of the Grid Code, European legislation including Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators. The CUSC may also require review in relation to connection requirements and the liability for generation transmission charges.

2. Generation Licence Exemption

The consultation document states that any storage facility with a “capacity” of less than 50MW (or up to 100MW with the approval of the Secretary of State) could be licence exempt. The licence exemption regime relates to the “declared net capacity” of a “generating station” as follows

1. *“The declared net capacity of a generating station which is driven by any means other than water, wind or solar power is the highest generation of electricity (at the main alternator terminals) which can be maintained indefinitely without causing damage to the plant less so much of that capacity as is consumed by the plant”.*

(The Electricity (Class Exemptions from the Requirement for a Licence) Order 2001, Schedule 1 (1)).

2. *“The declared net capacity of a generating station which is driven by water, wind or solar power shall be ascertained by the application of the formula*

$$A \times B$$

where—

A is the highest generation of electricity (at the main alternator terminals or, in the case of direct current generation, at the output terminals of the direct current to alternating current converter) which, on the assumption that the source of power is available uninterruptedly, can be maintained indefinitely without causing damage to the plant less so much of that electricity as is consumed by the plant; and

B has the value set out in the table as applicable to the particular description of station”

(The Electricity (Class Exemptions from the Requirement for a Licence) Order 2001, Schedule 1 (2)).

“Generating stations” that are “storage facilities” would appear to be defined under Schedule 1 (1) of the licence exemption order since they are not driven by water, wind or solar power. This schedule defines the capacity in relation to the main alternator terminals. Since storage facilities such as batteries to do include an alternator the provisions under Schedule 1(1) may not apply to a storage

facility. However, storage facilities are not catered for under Schedule 1(2) since this relates only to a generating station driven by water, wind or solar power.

Ofgem must clarify how the licence exemption regime applies to the “*generation of electricity*” at “generating stations” that are “storage facilities” and which do not generate electricity at the “alternator terminals” as defined under Schedule 1 (1) above.

Question 4: Do you have any comments on the list of technologies that should be included or excluded from the definition of storage as set out in Appendix A?

We have no comments on the list of technologies that should be included or excluded from the definition of storage as set out in Appendix A

Changes to the licence application form

Question 1: Do you have any comments on the proposed changes to the Application Regulations for electricity and gas licences?

We have no comments on the list of technologies that should be included or excluded from the definition of storage as set out in Appendix A