

CMP280/281 - CONSISTENT TREATMENT OF GENERATION – DISCUSSION PAPER

Ofgem and BEIS set out actions in their [Smart Systems and Flexibility Plan \(SSFP\)](#)¹ to clarify the arrangements for charging electricity storage for Final Consumption Levies (FCLs) and network charges. To give effect to the actions in the SSFP, Ofgem consulted on changes to the standard conditions of the Generation Licence. Additionally, Scottish Power proposed changes to how the Transmission Company calculates network charges in accordance with the Connection and Use of System Code (CUSC).

These changes need to be made in a coordinated way, or it will further increase the complexity of the industry codes and regulations. Furthermore, if uncoordinated it will result in more costly and inefficient operations as industry participants manage inconsistencies. We believe it would be better to implement changes that adopt a consistent approach to defining and identifying affected sites, and collecting, aggregating and sharing metered data for calculating FCLs and network charges. This will enable innovation from new business models, new technologies and new services, which is in the interests of consumers.

We believe that industry should adopt a common approach to FCL and network charging based on that outlined in the Ofgem/BEIS Smart Systems and Flexibility Plan. We have developed a proposed approach and will discuss this with industry and interested parties. Furthermore, we propose that this approach can be supported by ELEXON's new systems architecture.

Charging electricity storage providers is changing: FCLs and network charges

In July 2017, Ofgem and BEIS jointly published the SSFP. In it they explained how they expected the industry arrangements to change to better facilitate the participation of electricity storage. Amongst other things, the SSFP covered the following issues:

- Network charges (Transmission Use of System (TNUOS), Balancing Services Use of System (BSUOS) and Distribution Use of System (DUOS)) put electricity storage at a disadvantage compared to other forms of generation; and
- Electricity storage operated by a generation licence holder ought to be exempt from paying Final Consumption Levies (such as for the Renewables Obligation (RO), and Capacity Market (CM)/Contract for Difference (CFD) arrangements).

In the SSFP, Ofgem and BEIS set out their view that any electricity supplied by a licensed Supplier to storage facilities operated by a Generation Licence holder should not be subject to Final Consumption Levies (FCLs):

'Electricity supplied to generation licence holders is excluded from the supply volumes used to calculate the costs of the Renewables Obligation (RO), Contracts for Difference (CFD), Feed in Tariffs (FITs) and Capacity Market auctions. Holders of either a generation licence or the new storage licence to be consulted on by Ofgem will, as a result, not be liable for such levies.'

In September 2017, Ofgem reinforced this point when it consulted on changes to the standard conditions of the Generation Licence². However, in practice there are currently inconsistencies between the way certain FCLs are charged, and the approach set out by BEIS and Ofgem in the SSFP. In particular, the CFD and CM charges levied on Suppliers do include imports to plant that are exemptible³ but operated by a licensee⁴. Therefore, in order to give

¹ Ofgem and BEIS, '[Upgrading our Energy System – smart systems and flexibility plan](#)' (July 2017)

² Ofgem, '[Clarifying the regulatory framework for electricity storage: Licensing](#)' (September 2017).

³ The CM and CFD arrangements rely on the BSC defined term 'Exemptable Generating Plant', which means 'Generating Plant where the person generating electricity at that Generating Plant is, or would (if it generated electricity at no other Generating Plant and/or did not hold a

full effect to Ofgem and BEIS' policy intent, we believe the CM and CFD arrangements will need to change, so that imports for the explicit operation⁵ of any plant operated by a generation licensee are excluded from the calculation of CM and CFD charges. This represents a change to charging arrangements primarily for storage (and other generating plant) that is exemptible⁶ but licensed (as illustrated in the Venn diagram in Figure 1).

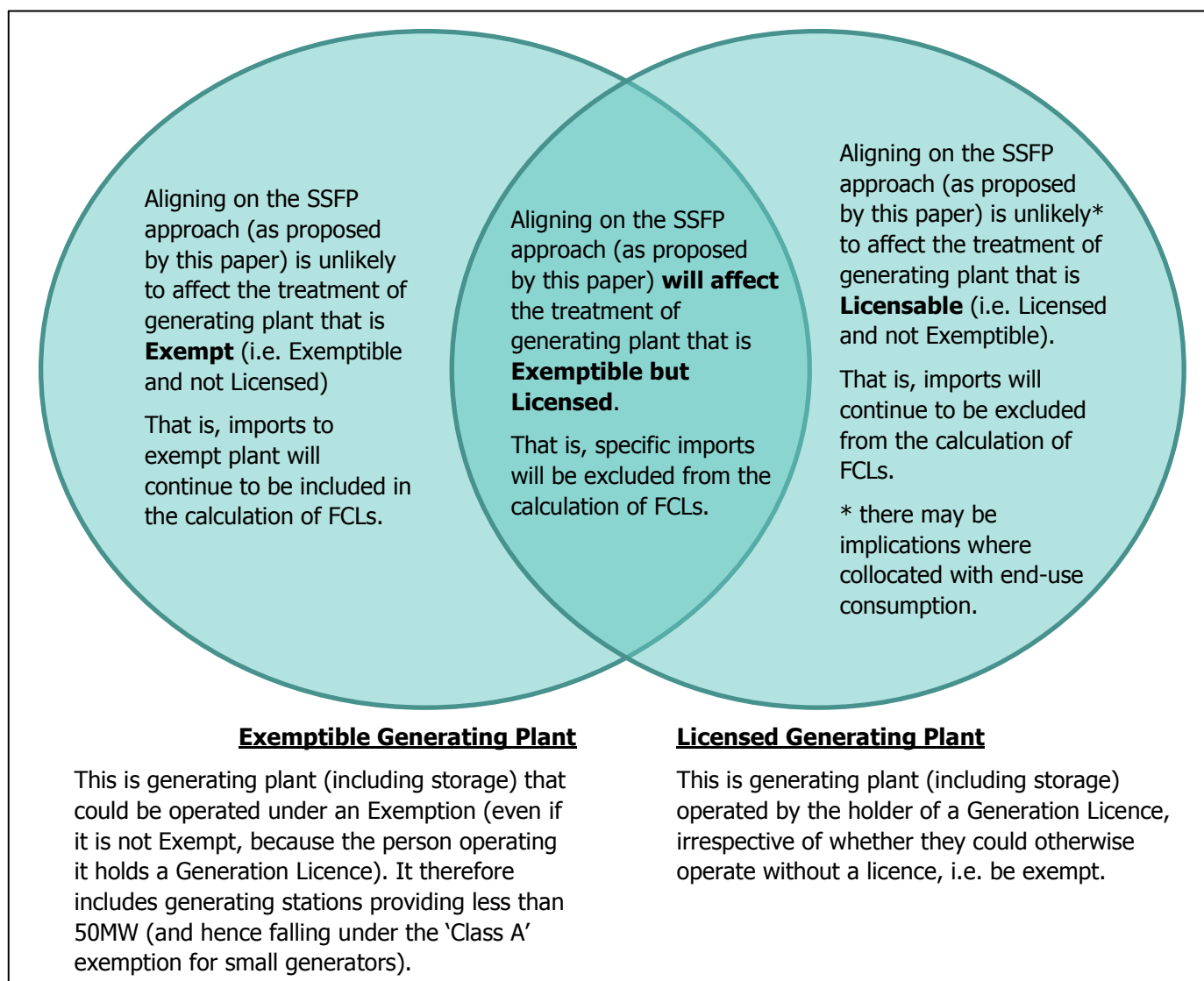


Figure 1

Generation Licence) be, exempt from the requirement to hold a Generation Licence'. The terms 'exemptible' and 'Exemptible Generating Plant' do not have an explicit basis in relevant legislation, e.g. the Electricity Act 1989.

⁴ LCCC and Electricity Settlements Company, '[G2 – Calculation of Supplier Demand for EMR Charging – EMRS Guidance](#)' (March 2018) – paragraph 6.4

⁵ For a more detailed explanation, please see the subsection entitled 'Scope of revised charging arrangements' below.

⁶ The Connection and Use of System Code (CUSC) uses the term 'Exemptible', while the BSC uses the term 'Exemptible', but the meaning is the same.

In June 2017, Scottish Power raised CUSC Modifications CMP280⁷ and CMP281⁸ in response to Ofgem and BEIS' views on how storage providers are charged network charges. CMP280 currently seeks to create a new Generator Demand TNUoS tariff consisting of only the locational elements of the Demand TNUoS tariff, thereby excluding all imports by Central Volume Allocation⁹ (CVA) registered generators (including storage) from the calculation of the Demand Residual Charge. CMP281 currently seeks to exclude the imports to 'exemptible storage BM [Balancing Mechanism] Units' from the calculation of BSUOS charges. As it stands, CMP281 proposes to define 'exemptible storage BM Units' as a BMU that consists of only plant and apparatus capable of storing energy from electricity imported from the Transmission System and wholly or mainly converting stored energy back to electricity for the purpose of exporting it back to the Transmission System, i.e. CVA registered.

Ofgem and BEIS' SSFP and consultation on changes to the Generation Licence are based on the idea that electricity storage constitutes a form of generation and so should be subject to the same industry arrangements where these are appropriate. We are concerned that the FCL and CUSC arrangements are heading in different directions. Our understanding is that in practice Ofgem and BEIS' policy means imports for the explicit operation¹⁰ of any generating plant operated by a licensee should be excluded from FCLs – regardless of whether the site is connected to a Transmission System or Distribution System, and whether the site's meters are registered in the BSC's Supplier Volume Allocation (SVA) or CVA arrangements. However, both CUSC modifications seek a more limited effect. That is, CMP280 applies to all generation registered in the BSC's CVA arrangement, and CMP281 applies to 'Exemptible Storage BM Units' only, which would also only apply to plant connected to the Transmission System and registered in the BSC's CVA arrangements.

One of the key issues raised by respondents to the SSFP Call for Evidence¹¹ was that complexity and lack of consistency in charging arrangements is a barrier to investment in storage. In order to improve rather than worsen this situation, we propose that parties, code administrators and others involved in the development of charging arrangements should seek to converge on the approach outlined in the SSFP. In particular that:

- Imports to storage (and other generation) operated by a generation licensee should be excluded from the calculation of FCLs, network charges and other charges levied on demand, irrespective of whether the generation is 'exemptible', or whether it is registered in Supplier Volume Allocation (SVA) or CVA); but
- Imports to storage (and other generation) that is operated by an unlicensed person should be treated like an ordinary 'supply' and included in the calculation of FCLs, network charges and other charges levied on demand.

For example, we believe the CMP280 and 281 workgroups should consider Workgroup Alternative CUSC Modifications (WACMs) that are consistent with Ofgem and BEIS' approach. In particular, that changes to the rules for charging TNUoS and BSUoS are, as far as possible, implemented so they apply to all licensed storage providers (and possibly generators) whether or not they are connected to the Transmission System and registered in CVA.

As well as facilitating fair treatment, we believe common or at least consistent industry arrangements would likely keep the cost of changes to central and individual parties' processes and systems to a minimum, rather than requiring the design of solutions that substantively differ from code to code, agreement to agreement.

⁷ [CMP280 'Creation of a New Generator TNUoS Demand Tariff which Removes Liability for TNUoS Demand Residual Charges from Generation and Storage Users'](#)

⁸ [CMP281 'Removal of BSUoS Charges From Energy Taken From the National Grid System by Storage Facilities'](#)

⁹ The terms Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) refer to different sets of BSC rules for registering metering systems and collecting and aggregating corresponding metered data for Settlement purposes. SVA arrangements apply to metering systems registered by Suppliers, where metered data is collected and aggregated by Supplier Agents. The CVA arrangements apply to larger and individual sites registered by a BSC Party (typically generators), where metered data is collected and aggregated by central agents managed by ELEXON.

¹⁰ For a more detailed explanation, please see the subsection entitled 'Scope of revised charging arrangements' below.

¹¹ The issues raised by respondents are summarised in the SSFP [Call for Evidence question summaries and response from the Government and Ofgem](#) (July 2017)

Detailed implementation issues

In order for market participants to benefit from a consistent approach to charging, it is important that different codes and charging arrangements adopt a consistent approach not just to principles, but to the details of implementation. In the context of aligning charging arrangements on the approach outlined in the SSFP, these important details include clear and consistent definitions of the following (which are discussed in more detail in the remainder of this paper):

1. The **scope of revised charging arrangements**, e.g. the extent to which imports to other loads associated/co-located with the licensed storage (or generation) can be excluded from the supply volumes used to calculate FCLs and network charges;
2. The **metering arrangements** necessary to collect metered volumes for such storage or generation; and
3. The industry processes for licensed generators (or other parties acting on their behalf) to **register which Metering Systems** should be excluded from the calculation of import charges, and for data from those Metering Systems to be **collected and aggregated** for charging purposes.

Scope of revised charging arrangements

Although the principle of not charging for imports to storage (and other generation) operated by licence holders seems clear, consideration is needed of what happens when generating units are co-located with end-use consumption. Imports to the end-use consumption should still be charged for (on grounds of fairness, and to avoid creating perverse incentives for all consumers to install storage or other generation as a way of avoiding charges).

In October 2017, Ofgem recognised this point in its consultation on changes to the generation licence. They proposed a licence condition that licensees operating a storage facility must primarily export back to the system, thereby limiting the types of electricity storage provider that could hold a licence. However, this does not entirely solve the problem, as licensees operating other forms of generation would not be subject to the same constraint.

Earlier this year ELEXON discussed these points of definition with Ofgem and BEIS. Our understanding is that Ofgem and BEIS had meant only electricity imported for the specific purpose of operating a generating asset operated by a licensee should be exempt from FCLs and other charges. In other words, it is only imports to licensed storage units and generating units (and any directly associated load) for the eventual purpose of exporting electricity back to a Transmission or Distribution System that should be excluded from import charges.

In order to implement the above, industry would need to agree a clear definition of what load can be treated as directly associated with a generating unit. We suggest that it may be appropriate to follow existing Low Carbon Contracts Company (LCCC) guidance on what load should be included in the registration of a CFD Facility i.e. the licensed generating unit(s) and any auxiliary equipment required to operate the generating unit(s) for a sustained period of time safely and efficiently at the maximum capacity possible and without causing damage to it.

Metering Arrangements

The majority of FCLs and network charges are calculated using data from Settlement metering installed in accordance with the provisions of the BSC. The approach outlined above therefore implies that licensed generators wishing to avoid charges on imports to their generating units will need to ensure that those generating units (and any directly associated load) is metered separately to any other on-site load.

- Single purpose sites - existing Settlement metering may be sufficient for collecting and reporting metered data for straightforward sites where the imports are explicitly for the operation of the generating unit(s).
- Mixed purpose sites - however, a party may need to install additional metering where a site is complex, so the metering differentiates between electricity imported for operating licensed generating unit(s) and for other purposes.

- Rely on existing Settlement metering – that is, because existing Settlement metering may not differentiate between how the electricity is used on site, the metered data for mixed purpose sites cannot be used to exclude the site from the calculation of FCLs or network charges;
- Register additional Settlement meters – parties could use existing BSC provisions to register additional Metering Systems in Settlement that explicitly record the different imports at a mixed purpose site; or
- Operational metering - a party might install non-Settlement metering 'behind-the-meter', to record the different sub-flows of electricity use. However, the metered data from these non-Settlement meters is not currently collected and aggregated for Settlement purposes and reported by ELEXON to Network Businesses, Suppliers and EMRS Ltd. Therefore, parties would need to collect this metered data themselves and report it directly to whomever is responsible for calculating FCLs or network charges. Furthermore, the charging arrangements would need to change to allow this alternative source of metered data to be used in the calculation of charges.
- Incorporate 'behind-the-meter' activities into the BSC - ELEXON recognises that future charging and market arrangements, e.g. Peer to Peer trading and market aggregation services, require greater visibility and control of 'behind-the-meter' activities. As such we are already exploring how the industry arrangements might be modified to enable the registration, assurance and aggregation or differencing of sub-metering, which traditionally has not been necessary for Settlement purposes. By extending the BSC to cover non-Settlement meters, metered data could be collected, aggregated and reported using existing or amended BSC provisions.

Industry processes for registration, data collection and data aggregation

The processes for calculating network charges and FCLs are specified in industry codes (CUSC, DCUSA and BSC) for network charging, and secondary legislation for FCLs (such as RO, CM and CFD charges). In general, all these processes rely on BSC registration, data collection and data aggregation processes to obtain the aggregated metered data needed for charging purposes.

As a result, changing the charging arrangements to differentiate between licensed storage and generation and exempt storage and generation will require changes to BSC processes (including in particular the development of processes for licensed generators, or parties acting on their behalf, to identify Metering Systems associated with licensed generating plant).

We believe that a BSC Modification to deliver these changes would be relatively straightforward, as it would build on the solution we are delivering next year for Modification Proposal P344 (['Project TERRE implementation into GB market arrangements'](#)). The P344 solution includes processes for registering information about individual Metering Systems, and aggregating metered data related to them. These processes are being delivered on a new data platform, implemented on the public cloud using micro-services and Software as a Service (SAAS) solutions. This architecture gives us the ability to adapt our business processes flexibly and quickly, and would therefore facilitate re-purposing the P344 solution to also collect and aggregate data related to licensed generation for network charging and FCL purposes.

Possible wider implications – remove the distinction between exemptible and licensable plant?

Ofgem and BEIS' intent is to differentiate between generating units that are operated by parties that either hold a licence or not. They have told us that they do not differentiate between exemptible and licensable plant.

As stated above, we believe it is in the interest of parties and consumers that changes to the arrangements for FCLs and network charges should be implemented as consistently as possible across the industry codes. With this in mind we believe that Ofgem and BEIS' policy intent could require further consideration of how the wider industry arrangements apply to generators.

For example, the BSC differentiates between exemptible and licensable plant. The purpose of this distinction is to enable exemptible plant to be registered by a Supplier in the SVA arrangements, who then accrues embedded benefits (for example reduced BSUOS charges), which they may share with the generator.

Ofgem and BEIS' policy intent in relation to FCLs suggest that we should differentiate between plant operated by a licensee or not, rather than between exemptible and licensable plant. In order that the overall treatment of generators is consistent, it may be appropriate to modify the BSC and other industry codes to align with this treatment. Whilst such a change might enable consistency and simplify the treatment of generators, it could have considerable practical and financial implications for generators and suppliers.

Summary and Next Steps

In summary, we propose that parties, code administrators and others involved in the development of charging arrangements should seek to converge on the following approach, which is based on that outlined in the SSFP:

- Imports to generation (including storage) operated by a generation licensee should **not** be subject to FCLs or demand charges, provided that there is dedicated Settlement Metering of the imports to licensed generating units (and any auxiliary equipment required to operate them for a sustained period of time safely and efficiently at the maximum capacity possible and without causing damage to them) separately from any other on-site demand; and
- Imports to generation (including storage) operated by an unlicensed person should be treated like normal demand for the purposes of FCLs and charging.

In the first instance, we intend to work towards this by:

- Discussing with the CMP280/281 Workgroups the possibility of raising WACMs consistent with the above approach; and
- Discussing with BSC Parties (and LCCC) the possibility of raising a BSC Modification Proposal that would put in place the registration and aggregation processes necessary to fully implement the above approach.

Want to know more?

Contact:

Nicholas.Rubin@elexon.co.uk

020 7380 4007