REA response to Ofgem Energy Storage Co-location at RO and FiT sites Guidance

The Renewable Energy Association (REA) is pleased to submit this response to the above consultation. The REA represents a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are around 550 corporate members of the REA, making it the largest renewable energy and clean tech trade association in the UK. We have around 100 members active in the energy storage industry, also making the REA the trade association with the largest number of active storage members.

Introduction

The REA welcome the publication of guidance on co-locating storage at RO and FiT accredited sites as it is one of the key sectors of the market for energy storage (on-site at existing and new build renewable energy projects).

However our members are concerned at the lack of specific advice available in terms of making changes to RO & FiT sites prior to any alterations being made, and the possible implications of the FiT proposals regarding metering and exported power. We also provide our assumptions in terms of future deployment of energy storage devices on-site at renewables sites, which we believe could feature at 40% of wind and solar farms by the end of 2021.

Key points

The publication of guidance on the co-location of renewables and energy storage devices is essential to address the expected growth of renewables and storage co-located projects in the UK.

- A recent report by the REA and All Party Parliamentary Group on Energy Storage identified the installation of energy storage devices on-site at existing and new wind and solar farms as a key market for growth and a sub-sector of the market capable of supporting 0.5 – 7GW of capacity by the end of 2021 as part of an overall market growth of 1.5-12GW additional battery storage capacity by the end of 2021.
- Our members have concerns that the Smart and storage technologies will both increase the complexity and costs required to administer the FIT scheme and we need to be mindful that it doesn't become disproportionate to the value of the generation/export being produced.
- Our members have considerable concerns regarding the administration and availability of export payments at FiT sites installing storage devices, detailed below. In particular:
    - We understand the rules in the FiT legislation on deemed exports state that the deemed rate should be paid where it is not possible to meter the export using a single MID approved meter - this will be the case if there is a battery on-site at the FiT installation;
    - Therefore the deemed rate should continue to be paid until such a time as it is proved possible and practical (ie the benefits outweigh the

costs) for a supplier to meter the export within the prescriptions of the metering legislation (MID approval), which it is currently not.

Responses to Specific Questions:
Question 1: Are there any aspects of updated sections of this guidance that could be made clearer or improved? If so, please provide specific comments including section references.

Renewables Obligation Guidance
We believe the guidance for Renewables Obligation (RO) sites should be made more explicit- this applies to Section 3 (p11-22) of the guidance.
We understand it is against Ofgem's current practice, however a pre-application check for projects seeking to install storage at existing sites, or some form of being able to understand how their approach would be viewed prior to making any technical changes, would be highly valued by industry. This would also save time and effort for Ofgem further down the process.

Feed-in Tariff Guidance
On the Feed-in Tariff proposals our detailed comments focus on export metering, in relation to which our members have considerable concerns and we do not support the current proposals.

The main problem is that the draft guidance is ambiguous on the treatment of deemed export.

For AC coupled systems such as many 'behind the meter' devices, there is no AC-coupled equivalent of scenario 4.5 (or a deemed equivalent of 4.1). It appears from discussions that this was an oversight, and Ofgem simply hadn't envisaged all scenarios.

In our and our members' view, future export payments must always be allowed where an installation is currently eligible for deemed exports.

There remains considerable uncertainty as to whether the installation of a smart meter (all of which contain an export channel) removes deeming.

We understand that Ofgem's current interpretation of the rules is that when a supplier installs a smart meter and this has an export channel, it becomes feasible to meter export and the supplier must make payments on the meter rather than deemed payments, as a requirement. I.e. if there's an export meter there the project must use it.

We are aware of two counter arguments:
- For scenario 4.1 in the draft guidance (storage installed after the generation meter, with an export meter in place) the guidance suggests that it's not possible to measure the export from the FiT installation and therefore the installation doesn't qualify for export payments. We agree that in this scenario it's not possible to measure the export from the FiT installation (at least using an MID approved meter with a single point of metering, as the legislation states is required). However on reading the FiT supply licence conditions, it can be interpreted that these state that if it's not possible (or practical) to meter the export from the FiT installation, then

deemed FiT export payments must be made - so this would apply if there were a battery on-site[1].

Therefore in our view export payments must be on a metered basis unless it is not possible to do so with the export meter, in which case deeming must be used. Installation of battery storage may mean that this is the case, in which case deeming must be used[2].

- There's also a contradiction: while it could be considered possible to meter export (arguably only where there is no storage present in light of the above), it is not practicable - suppliers need to pay the DCC to get the export data (£30 to 75 per year, which eats up more than the £15-30 a supplier gets for administration per FiT customer), there are long wait times, there are administrative burdens and waiting periods from raising export MPANs with the DNO, there is a high cost to the supplier for putting in place all the administration required to set up PPAs with end users and so on.

We understand from suppliers that the steps to getting the export data and settling export is possible, but that to do it at scale (hundreds of thousands of installations) is not currently practical.

We understand that evidence is required to demonstrate this- for example where there are live situations where FiT sites with smart meters are still receiving deemed payments, and why they are still deemed.

The Ofgem energy storage team also need to meet with smart metering colleagues before the position is finalised, because it might be that the smart metering licence conditions require suppliers to settle the export if there is an export meter in place and don't mention any consideration of cost or other practical issues. A supplier has asked Ofgem if they would consider a derogation on this (with the deemed rate applying) at least until such time as it were proven to be practical to do it.

One scenario which hasn't been considered is that, unless a customer is half hourly settled, there is never any benefit to the customer from the battery exporting to the grid, so systems could be technologically configured never to do so. However in the future, behind the meter systems will start delivering aggregated ancillary services, such as FFR, which would be hampered by such restrictions.

For DC connected systems, we understand from discussions at the stakeholder workshops set up to discuss the proposals that one ramification could be the ending of FiT renewable support payments where projects are set up to allow for imports form the grid. This is due to the FiT regulations requiring single metering.
We believe there must be a technical solution to this and trust that the bi-directional meters evidence will provide evidence and a basis for this. While we understand the

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[1] The standard supply licence conditions are here: https://epr.ofgem.gov.uk//Content/Documents/Electricity%20Supply%20Standard%20Licence%20Conditions%20Consolidated%20-%20Current%20Version.pdf

[2] FiT licence condition SLC number 33, see definitions of Deemed Export, Export Payments and FiT Export on pages 319 and 320, and clause 7.1 on page 338

obvious concerns and that such storage units are not currently prevalent, ending all support payments clearly would be against the spirit of the FiT scheme if a workable metering solution could be found. Alternatively, the regulations should be amended to provide a workable solution.

In conclusion:

- We believe the rules in the FiT legislation on deemed exports state that the deemed rate should be paid where it is not possible to meter the export using a single MID approved meter - this will be the case if there is a battery on-site at the FiT installation;
- Therefore the deemed rate should continue to be paid until such a time as it is proved possible and practical (ie the benefits outweigh the costs) for a supplier to meter the export within the prescriptions of the metering legislation (MID approval), which it is currently not;
- We think that all customers who already have batteries installed should continue to be eligible for export payments, particularly if they are not half hourly settled (the vast majority of cases), in which case there is no financial benefit from the battery exporting to the grid and the only export will be from the solar;
- We would be open to working with BEIS and Ofgem on an appropriate treatment for FIT installations co-located with batteries under a deemed or metered rate in future.

Question 2: Are there any omissions in this guidance? If so, please provide comments.

We believe the guidance for Renewables Obligation (RO) sites should be made more explicit- while a principles based approach allows for flexibility and innovative approaches at project sites, greater explicit guidelines would also be very welcome by many of our members, as they will only find out if they have met the requirements after having altered their site.

Request for information regarding 'bi-directional' meters

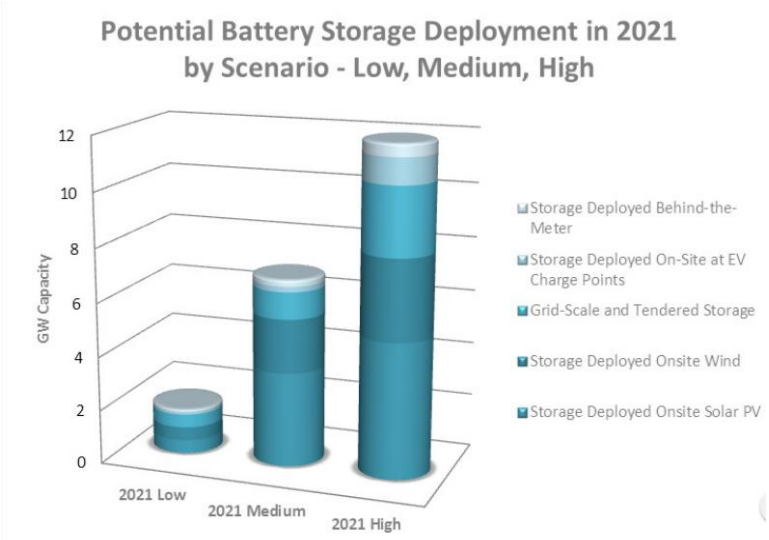
We have no specific information on such meters, however we would re-iterate that metering is a crucial element of installing energy storage at FiT-accredited sites and Ofgem should consider different metering options and enable payment of export tariffs for behind the meter FiT projects installing energy storage devices.

Request for information regarding the uptake of co-located storage

Question 1: What stage are you currently at in the process to install storage?
Question 2: What is the capacity of the storage you are considering or planning to co-locate with your generation?
Question 3: What is your estimated timeline for installing and commissioning the storage facility?

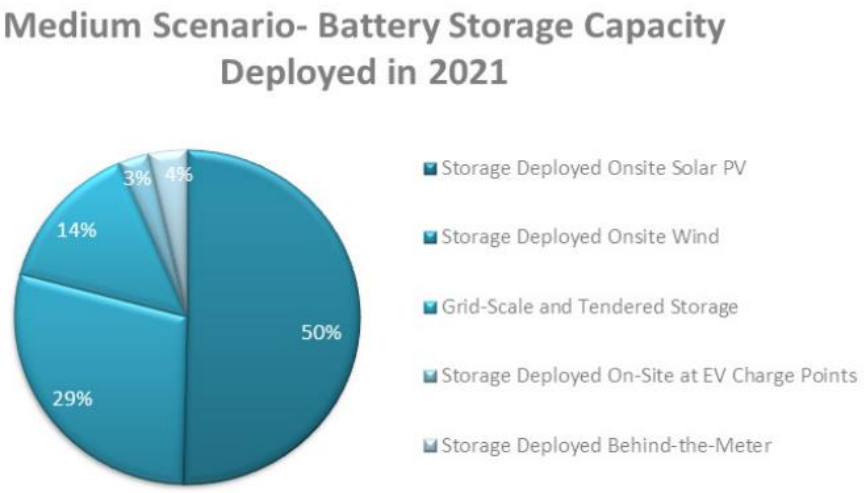
We are aware of a large volume of such projects under development, at both existing projects and those under construction.
The REA has modelled future deployment for battery energy storage capacity in the UK out to 2021- these are contained in the report: *Batteries, Exports, and Energy*

Security, published by the APPG on Energy Storage late last year. The report forecast 0.5-7GW of storage installed on site at wind and solar farms by the end of 2021, the majority of which will be at existing RO and FiT sites, although it will also include CfD and subsidy-free projects[3].



Energy storage deployment in the UK to end-2021: projecting 0.5-7GW on-site at renewables projects. Source: APPG ES/REA, 2017, Batteries, Exports, and Energy Security

The medium scenario envisages over 75% of battery storage capacity by 2022 being deployed on-site at wind and solar farm sites.
This scenario envisages the issues around co-location of storage at renewables projects being resolved and costs falling for the technologies.



Energy storage deployment in the UK to end-2021: Medium scenario. Source: APPG ES/REA, 2017, Batteries, Exports, and Energy Security

[3] APPG Energy Storage/REA, 2017, http://www.r-e-a.net/upload/energy_storage_appg_report-_dec_2017_-_large_-_final.pdf

Conclusion

More guidance on the deployment of energy storage on-site at RO and FiT accredited renewables projects is very necessary and we welcome Ofgem's move to provide this. However industry would appreciate some clearer guidance on installing storage devices at RO sites (in addition to the principles-based approach), and the ability to ask Ofgem whether particular configurations would be acceptable prior to application/changes being made, as opposed to the current approach whereby such projects would only gain confirmation of this after making any changes to the site.

Regarding FiT sites with energy storage deemed export payments must continue to be made, in relation to which we would make the following points:

- We believe the rules in the FiT legislation on deemed exports state that the deemed rate should be paid where it is not possible to meter the export using a single MID approved meter - this will be the case if there is a battery on-site at the FiT installation;
- Therefore the deemed rate should continue to be paid until such a time as it is proved possible and practical (ie the benefits outweigh the costs) for a supplier to meter the export within the prescriptions of the metering legislation (MID approval), which it is currently not;
- We think that all customers who already have batteries installed should continue to be eligible for export payments, particularly if they are not half hourly settled (the vast majority of cases), in which case there is no financial benefit from the battery exporting to the grid and the only export will be from the solar;
- We would be open to working with BEIS and Ofgem on an appropriate treatment for FIT installations co-located with batteries under a deemed or metered rate in future.

The REA believe that there is significant potential for the deployment of energy storage capacity on-site at renewables projects (particularly variable technologies such as wind and solar PV), with 0.5 – 7 GW possible as per a report late last year. The majority of such capacity could be at existing RO and FiT sites.

We would be very happy to discuss any of the above points further in any follow-up discussions.

REA, February 2018