

The Connections Team
The Office of Gas and Electricity Markets
10 South Colonnade
Canary Wharf
London E14 4PU
connections@ofgem.gov.uk

Avils Consulting Ltd.

A company registered in England and Wales

Number 06914644.

17 Lower Stanton St Quintin, Wiltshire, SN14 6BY

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The Connections Team

Open letter on future reform to the electricity connections process

Avils Consulting Limited is a battery energy storage system (BESS) development company with ~10 small-to-medium sized BESS projects under development, with two registered on NGESO's fast track "Super User" portal. All the projects have been stalled by connection problems, mainly the inability to connect with any certainty before 2035-37.

We welcome Ofgem's decision to become involved in the management of these problems but are disappointed that it has taken so long to do so.

Our response to the Open Letter is attached in the Annex.



Paul Craven

Principal

Avils Consulting Ltd
UK Mobile: +44 7733 337317
UK Direct: +44 20 323 99541
Email: PGC@avilsconsult.com
www.avilsconsult.com

ANNEX

RESPONSE TO OPEN LETTER ON FUTURE REFORM TO THE ELECTRICITY CONNECTIONS PROCESS

SUMMARY OVERVIEW OF PROBLEMS AND APPROACH

BESS supports the deployment of more renewable generation on the distribution system because at times of high renewable generation, e.g., high wind generation, coupled with low system demand, it can provide a 'sink' for the excess renewable energy and store it for later export onto the network. This alone contributes to the efficient use and storage of renewable generation and the offsetting of other forms of generation when the "stored renewable energy" is released into the system.

In recognition of how BESS operates, the DNOs have said that, were it not for NGESO's insistence that BESS should not connect, they would connect and Avils' BESS projects would be in operation.

The problem that prevents BESS connecting is that Ofgem maintains (and NGESO is following Ofgem's lead) that:

- "In real-time, storage might offset other demand or generation to the value of 10MW but it must utilise network assets capable of handling that 10MW to be able to do so and those assets must be constructed by the network operator";
- "As storage both imports from and exports to the network, it is appropriate that networks consider the total amount of capacity required to facilitate both of those activities and agrees a relevant export capacity (and at distribution level, import capacity) with each storage facility as it would with any other connection capable of export."

Ofgem is claiming that having defined BESS as a generator it must be treated as if it exported and imported at the same times even though its operation unlike all other forms of generation.

BESS should not be treated as if it operated in the same way as other generation plant. It should:

- a. be modelled (as the DNOs and NGESO have proposed) at zero; that would not of itself lead to the need for reinforcement of the transmission network; and
- b. be dynamically constrained to export and import to within system thermal loads, requiring acceptance of the risk of constrained operation in return for early connection dates.

We believe developers would accept that risk.

On that basis, network reinforcement and asset replacement could then take place in a more wholistic manner with the removal of BESS operational constraints factored into the short, medium and long term plans.

Connection of BESS could be achieved on a short timescale by providing connections with limitations to match its intended mode of commercial operation.

The Open Letter:

- Does not show any understanding of this: we believe this is what is being proposed by NGESO in Annex B and Ofgem should confirm this.
- There is no proper timetable:
 - one recognising the urgency of the situation must be provided;
 - the 'initiatives' NGESO is undertaking should be included in that timetable and it should be bound to it;
 - the timetable should be open for review and approval by affected parties.
- There is little substantive in the way of proposals from Ofgem.
- Ofgem seems to indicate that it has no directive powers.
- The first 'relief date' of 2025 for connecting BESS is late, but the reason it is so late is not explained.
- There are wholly different issues in transmission and distribution so far as BESS on distribution networks is concerned: Ofgem's intention to treat the networks together is not explained with the requisite granularity. The appearance of a failure to grasp the issue of how BESS operates undermines Ofgem's approach to network issues generally.
- BESS could be connected now or shortly; as a result, equivalent amounts of embedded generation of other kinds within the same part of the distribution network could be connected *without having any impact on the transmission system*.

SECTION 1

... customer applications are ... significantly delayed by non-viable or slow to progress projects.

AVILS' RESPONSE

We have heard this said – both by National Grid and Ofgem – many times but we have yet to come across an instance of it.

	<p>Avils' BESS projects have been delayed by NGESO asserting (a) that it needs to build reinforcement works on the transmission system and (b) that BESS must be treated as if it generated at the same times as other plant (which it does not do).</p> <p>It is the refusal to recognise how BESS actually operates that has prevented the DNOs connecting BESS – and also, as a corollary, an equivalent amount of renewables generation within the same part of the network.</p>
<p>... over half of generation customers in the transmission queue today ... have a connection offer date at least 5 years in the future, with over 10% due to wait 10 years or more. ... While many of these are large, complex projects with long lead times due to a range of factors, this is still too long.</p>	<p>The connections problems do not merely or even mainly affect large, complex projects. They equally affect small, simple, BESS applicants in the distribution system where connection dates offered are at least as far away and, in all cases in the experience of Avils, caused by NGESO saying it needs to build large-scale transmission assets.</p> <p>It is not “too long” to wait: unless connection dates are shortly brought forward to a usual wait time, investment will dry up further than it has already and the 2035 target will be recognised as unachievable.</p> <p>There is, in this section, no indication that Ofgem recognises just how urgent resolution of the problem has become.</p> <p>There should be a proper timetable with dates and actions and a clear indication of the times at</p>

	which Ofgem expects the different classes of connection problem to be resolved.
SECTION 4	AVILS' RESPONSE
We will convene industry to drive further action as and when needed.	<p>Throughout this section Ofgem outlines what it <i>will</i> be doing. It does not say what it <i>is</i> doing.</p> <p>It also appears to have a relatively passive role.</p> <p>What is needed, as noted above, is a clear timetable for outcomes set to ensure – and to <i>show</i> as a minimum:</p> <ul style="list-style-type: none"> • that the 2035 targets will be reached; • what is to be done by whom and by what dates; • what Ofgem will be doing to ensure the timetable is adhered to. <p>That timetable should be open to approval and/or amendment by the affected parties.</p>
We will take a central role in driving progress on the reform of connections arrangements... we will provide the necessary leadership and ensure an industry-wide collective focus on the right issues and options...	<p>Ofgem gives no indication that it sees its role as anything other than a motivator of others. It does not appear to own to having a directive role. It does have a directive role and should give a clearer indication that it proposes to use it and the manner in which it will do so.</p> <p>This should be included in the timetable.</p>
we will consider whether substantial changes to the current connections queue methodology are required ...	Ofgem has many plans for what it might do after some unspecified time. What is needed is some urgency to deal with matters now.

	<p>Generally, there is no sense of urgency in this document. A proper timetable (see above) would help to provide that.</p>
ANNEX A	AVILS' RESPONSE
<p>We have identified a set of reform outcomes [they include]</p> <ul style="list-style-type: none"> • More robust connection applications ... • shorter ... connection dates... • Greater coordination and consistency across system boundaries ... <p>We have also developed a set of overarching principles...</p>	<p>Whilst we note Ofgem's 'ambitions' for reform outcomes and that it has adopted a set of "overarching principles", most importantly we see that there is no expectation of progress to a resolution of any of the issues before 2025.</p> <p>No explanation for the delay has been provided. If connection parties are to have any faith in this process, they need to be given comprehensible reasons why they will be unable to connect for what seems an unreasonably long time. That explanation will differ as between different classes of connection applicant.</p> <p>The most important part of the reform outcomes is missing key achievement dates. As above, a proper timetable is needed.</p>
ANNEX B	AVILS' RESPONSE
<p>Modelling of storage: altering how it is treated on the network, allowing it to connect faster and increase network capacity for other projects</p>	<p>Change of treatment of BESS was promised by NGESO and repeated by the DNOs last October. If such a change depends upon prior modelling, Ofgem needs to explain why it hasn't happened yet. The Open Letter presents the modelling as if it were a major new initiative that has yet to be done. NGESO has confirmed that it has yet to be done.</p> <p>This is one of the items that should be on a properly particularised timetable. One should be</p>

	provided by NGESO and included in Ofgem's broader timetable.
Interim offer for BESS: to offer an interim, non-firm connection option for Battery Energy Storage System to connect sooner, albeit with the potential of being switched off when the system is under stress, without initially being paid to do so.	If this is a proposal for a connection agreement to stipulate that BESS should operate as BESS claims it does, it is welcome. It remains unclear why this cannot be achieved before 2025.
Storage: Greater flexibility for storage customers through new contractual options, in order to alter how it is treated on the network ...	It must be assumed that this merely means what the previous paragraph states, but without more it is can be no more than a guess. General vague statements are unhelpful.
The greatest benefits are likely to be felt by customers with the longest wait times.	This is not encouraging. The longest wait times are up to 2037. Those wait times imperil the investments that would otherwise be made. They also prevent achievement of the 2035 climate goals.
Up to 95GW of energy storage projects will see further reductions in connection dates, as a result of the changes in the way that this technology is modelled and other initiatives ...	Absent more, that is vague and unhelpful.