



**Ofgem**  
Infrastructure and Security of Supply  
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15 June 2023

Dear Mr Kaul,

### **Response to the open letter on future reform to the electricity connections process**

Field welcomes the opportunity to respond to your open letter of 16<sup>th</sup> May, setting out proposals to reform the connection process to keep the country on track to meet its 2035 and 2050 climate goals.

### **About Field**

Field is a vertically integrated infrastructure business focusing on developing, building and operating battery storage sites in the UK and Europe. Field was founded in December 2020 and in the UK has 20 MW in operation, 115 MW in or preparing for construction and 1,181 MW in its development pipeline. In Q3 2022 we started standalone battery storage project development in Southern Italy. By 2025 we plan to have 3.3 GW of batteries, solar and emerging technologies in operation globally.

Field fully endorses the changes being proposed within Stage 1 and Stage 2 of reform and NGESO's Five Point Plan to make immediate improvements to the connections process. In particular:

- We welcome the urgency to reform the connection queue; distant connection dates are the single greatest barrier to delivering a low carbon grid. It is essential that stalled are removed from the queue, with capacity reallocated to bring forward projects that can be delivered more quickly.
- We support NGESO's revised Construction Planning Assumptions for energy storage and its acknowledgment that the impact of storage on network capacity should be reduced by virtue of its complementary pattern of operation compared to renewable output. Indeed, we believe that storage – if located and operated correctly – can help **reduce** the overall amount of network reinforcement that the consumer will need to fund. By way of example we include in the Appendix, an extract of a Construction Agreement for one of our projects showing how – with removal of what may be deemed to be non-essential enabling works – the connection date can be accelerated from 2030 to 2026.
- We also continue to actively engage in workgroups such as CMP393 and CMP405 that develop locational price signals and correct distortions for storage in the current network charging methodology.
- We note it is vital that the network companies are adequately funded to deliver the required investment and we strongly support Ofgem's ASTI process to fast-track the necessary investment. We especially urge Ofgem to carefully scrutinise the adequacy of staff levels and training of new staff within the regulated businesses, since without suitably experienced people to deliver their projects, they cannot be delivered at the pace needed

to meet the climate goals – no matter the speed of the ASTI process or money made available. Whilst in our experience the ESO has recently started improving staffing levels in the connections team we believe that the most acute pinch-point lies within the Transmission and Distribution Owners who are facing intense competition for experienced staff from many other parts of the industry.

- We acknowledge that early connection dates are only part of the picture; it is essential that ESO progresses with urgency on updates to its control systems so it has the tools to manage a much more complex system that earlier connection dates will bring by enabling an effective step-change in the number of generators and energy storage projects in a short space of time. For example, the incomplete implementation of the dispatch part of the Electronic Balancing System several years ago showed the challenge in updating critical ESO systems but it will be essential to deliver such changes in parallel with Connection Reform.
- The focus in the short-term should be on some 'easy wins' e.g energy storage could be used to reduce system constraint costs but only if the ESO has real-time visibility of the storage volume available (so that within operational timescales it can use it effectively) and implementing the necessary changes in the Grid Code and creating suitable signals in the Balancing Systems should be an early priority.

We recognise the challenge Ofgem faces in trying to protect the consumer whilst simultaneously approving rapidly increasing network investment. To this end we hope that the recent addition of a legal mandate to reach the Net Zero goals will allow Ofgem to better account for the longer-term benefits of new infrastructure and also the asymmetric risk to the consumer from much higher costs of late delivery or under-investment of network infrastructure.

We look forward to engaging with Ofgem and wider industry in these consultations and industry workgroups to deliver a zero carbon grid for Great Britain by 2035.

Yours sincerely,

Damian Jackman

Techno Commercial Lead

## Appendix A

Extract of an example of a typical Construction Agreement for an energy storage site, currently held by Field.

- The site is located at Knocknagael Substation near Inverness
- Minimal connection works (App G) are required (new 132 kV bay, 800m of 132kV cable and 132kV circuit breaker/disconnector at the storage substation). Estimated completion date of connection works is **2025**
- Current connection date is 2030 due to need for enabling works in Oct 2030 comprising a new double circuit 400kV line from Beaulieu to Denny (App H)

We expect that the revised CPAs will allow the Transmission Owner to remove the enabling works such that the connection date can be brought forward from 2030 (see current App J) to around 2026.

### **APPENDIX G** **TRANSMISSION CONNECTION ASSET WORKS**

User: Virmati Energy Ltd  
Connection Site: Knocknagael BESS 132kV Substation

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The Transmission Connection Asset Works comprise the following:

1. Installation of a new 132kV bay at Knocknagael Substation.
2. Install a single circuit 132kV underground cable from the new 132kV busbar bay, via appropriate switchgear, at the Knocknagael Substation compound, to run for a distance of approximately 0.8km, terminating at 132kV line disconnector, circuit breaker and disconnector at the Knocknagael BESS 132kV Substation.
3. Protection and control modifications as required.
4. Associated civil works.
5. Miscellaneous and minor works.

Note: The ownership boundary between The Relevant Transmission Licensee and the User owned equipment will be the 132kV clamps on the User's side of the final 132kV line disconnector at the Knocknagael BESS 132kV Substation.

**APPENDIX H**  
**ENABLING WORKS**

User: Virmati Energy Ltd  
Connection Site: Knocknagael BESS 132kV Substation

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The Enabling Works comprise the following:

1. **Beauly - Blackhillock 400 kV Double Circuit OHL-** Establish a new double circuit 400kV overhead line approximately 130km from Beauly to Blackhillock. The new OHL is connected to the Beauly 400kV AIS busbar and the Blackhillock 400kV GIS busbar. The Beauly 400kV busbar is established by SHET-RI-007b and Blackhillock 400kV busbar is part of SHET-RI-007c works. **(SHET-RI-007a)**
2. Protection and control modifications as required.
3. Associated civil works.
4. Miscellaneous and minor works.

**APPENDIX J**  
**CONSTRUCTION PROGRAMME**

User: Virmati Energy Ltd  
Connection Site: Knocknagael BESS 132kV Substation

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The Construction Programme comprises the following:

**PROVISION OF CONSENTS**

Transmission Connection Asset Works:	Not applicable
Enabling Works (Appendix H):	
- SHET-RI-007a	Consented
Provision of Section 36 and/or Section 37 Consent and/or planning permission and/or land rights relating to the generation facility Consent:	Not applicable
Provision of all necessary Authority approvals to be granted by:	Not applicable
Confirmation date:	Not applicable

**COMMENCEMENT OF WORKS**

One off Works	31 August 2029
Transmission Connection Asset Works:	31 October 2025
One-off works:	
Enabling Works (Appendix H):	
- SHET-RI-007a	01 August 2024

**COMMISSIONING PROGRAMME COMMENCEMENT**

Commissioning Programme Commencement Date:	31 August 2030
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**COMPLETION OF WORKS**

Third Party Works Completion Date:	Not applicable
User's Works Completion Date:	
- Items 2, 3, 8, 9, 10 and 11 of Appendix I	31 October 2025
- Remaining all other User works	31 October 2030
Completion Date:	31 October 2030
Backstop Date:	31 October 2032

Note: The Construction Programme is based upon the assumption that all parties agree outages. These dates may be amended by agreement of both parties.