

**Electricity
Transmission**

nationalgrid

Engineering and Consultancy Solutions

Harmonics Consulting Services



Who for

If you are a business that is working to advance the decarbonisation of electricity and utilises electronic-based technologies when connecting to the transmission network, our harmonics experts can support you and help you manage the impact of your connection to the network.

Why choose National Grid

- **Tailor-made modelling:** We can construct a model of your connection based on the supplied manufacturer's data.
- **Ensure compliance:** We can carry out a harmonic assessment to ensure compliance with the harmonic specification provided by the relevant network owner.
- **Our experts** can produce a conceptual design for an efficient mitigation solution for your connection.
- **One point of contact:** You will have access to a highly experienced engineering team with a single point of contact to manage your project.
- **We have an in-depth knowledge** of industry standards and grid connection compliance processes and requirements. We have a proven track record of providing consultancy services to customers and other utilities, both within the UK and internationally.
- **Quality of work:** We deliver efficient and customer-focused design solutions.

Our solution

Offshore connections:

For offshore wind, it is your responsibility to study the impact of your connection on all affected networks and then design any mitigation required to meet these limits. Our harmonics team can do this task on your behalf, offering the following services:

- **Produce the outage study specification** for submission to the Electricity System Operator.
- **Set the harmonic limits** and impedance loci for the connection of the Offshore Transmission Owner (OFTO) network.
- **Construct a suitable model** of the OFTO network and wind farm connection based on the supplied manufacturer's data.
- **Determine whether the connection will be compliant** without mitigating measures.
- **Produce a conceptual design** for an efficient mitigation solution if required.

Onshore connections:

For all onshore connections, it is your responsibility to study the impact of the connection and to demonstrate compliance with a harmonic specification provided by the Network Owners. Our harmonics team can do this task on your behalf, offering the following services:

- **Construct a suitable model:** Our experts will use the manufacturer's data to construct a model for your onshore connection.
- **Determine whether the connection will be compliant** without mitigation measures.
- **Produce a conceptual design** for an efficient mitigation solution if required.

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This service is available from other industry providers