



System Studies

Electricity
Transmission

nationalgrid

Once we have received your application and paid your application fee, we (National Grid Electricity Transmission) will start to build your connection offer. Our Power System Engineers will carry out a series of power system analysis studies to determine how your connection application impacts the National Electricity Transmission System, and if any transmission reinforcement works are required.

Thermal Studies

To determine power flow requirements

These studies are required to calculate the current flowing through the power system and determine if our assets have enough capacity to support your connection. All assets have a thermal rating and a thermal study will determine if an increased power flow is within that rating.

Voltage Studies

To determine requirements for any additional reactive compensation devices

Occasionally a detailed voltage assessment study is undertaken. This is to examine potential voltage instability, voltage control co-ordination or to calculate voltage step changes.

Fault Level Studies

To determine required rating of circuit breakers

These studies are required to determine the currents that will flow in the power system after a fault has occurred on the network but before that faulted equipment has been disconnected. To calculate fault currents consistently we undertake a G74 dispatch. This replicates a worst-case scenario to ensure our system is designed to handle all fault currents.

Stability Studies

To determine any transient stability issues

This dynamic assessment is required to look at the ability of generators to remain stable under normal operating conditions and following a disturbance on the transmission system.



Aerial view: Showing a potential cable route



Aerial view: Looking at connection options and potential challenges

To discuss the above steps further, please make an enquiry, we're here to help.

Email: etenquiry@nationalgrid.com
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