

Kingsnorth 400kV Extension Submission Summary

National Grid Electricity Transmission
Eligibility Letter

May 2026

T3 – Kingsnorth 400kV Extension

Executive Summary

Background

The Kingsnorth 400 kV Extension is a load-driven investment to extend the existing Kingsnorth 400 kV substation in Rochester, Kent, enabling the timely connection of a data centre customer at an established transmission node. The investment makes efficient use of existing assets and brownfield land.

NGET is seeking Ofgem's approval, under the Load Related Re-Opener (Special Condition 3.18 of the RIIO-ET3 licence), to progress the Kingsnorth 400 kV Extension as a Track 2 EL investment and to secure Pre-Construction Funding (PCF).

Investment Drivers

The Kingsnorth 400 kV Extension is a load driven investment, with the proposed investment required to support the following.

- Contracted connection at Kingsnorth of a 300 MW demand data centre customer

Options

Through a structured, multi-factor optioneering process we considered the following options:

- Option A (Do nothing),
- Option B (Market-based solution),
- Option C (Whole systems/DNO solution),
- Option D (Use existing assets), and
- Option E (New-build substation).

Option A-C were not progressed as they could not deliver a compliant transmission connection. Option E was not progressed as it would result in a materially higher cost without the consumer benefits to warrant this. One variant of Option D, Option D-1, was not progressed due to challenges associated with extension of the existing 132kV at the site. Two options, D-2 and D-3, were progressed to shortlist, these are as follows:

- Option D-2 - Extend 400 kV substation through one existing AIS bay and one SF6-free GIS bay to a new SGT compound containing a greater number of Super Grid Transformers comparable to D-3.
- Option D-3 - Extend 400 kV substation through one existing AIS bay and one SF6-free GIS bay to a new SGT compound containing a fewer number of Super Grid Transformers comparable to D-2.

Preferred Solution

The preferred option is Option D-2 because it:

- Provides a timely connection.
- Is more aligned with the customer's requirements.
- Delivers greater operational resilience.
- Avoids asset stranding.
- Comparable costs to consumers.

This investment will enable the customer connections by October 2028 (Stage 1) and October 2029 (Stage 2), with site demobilisation by December 2029.