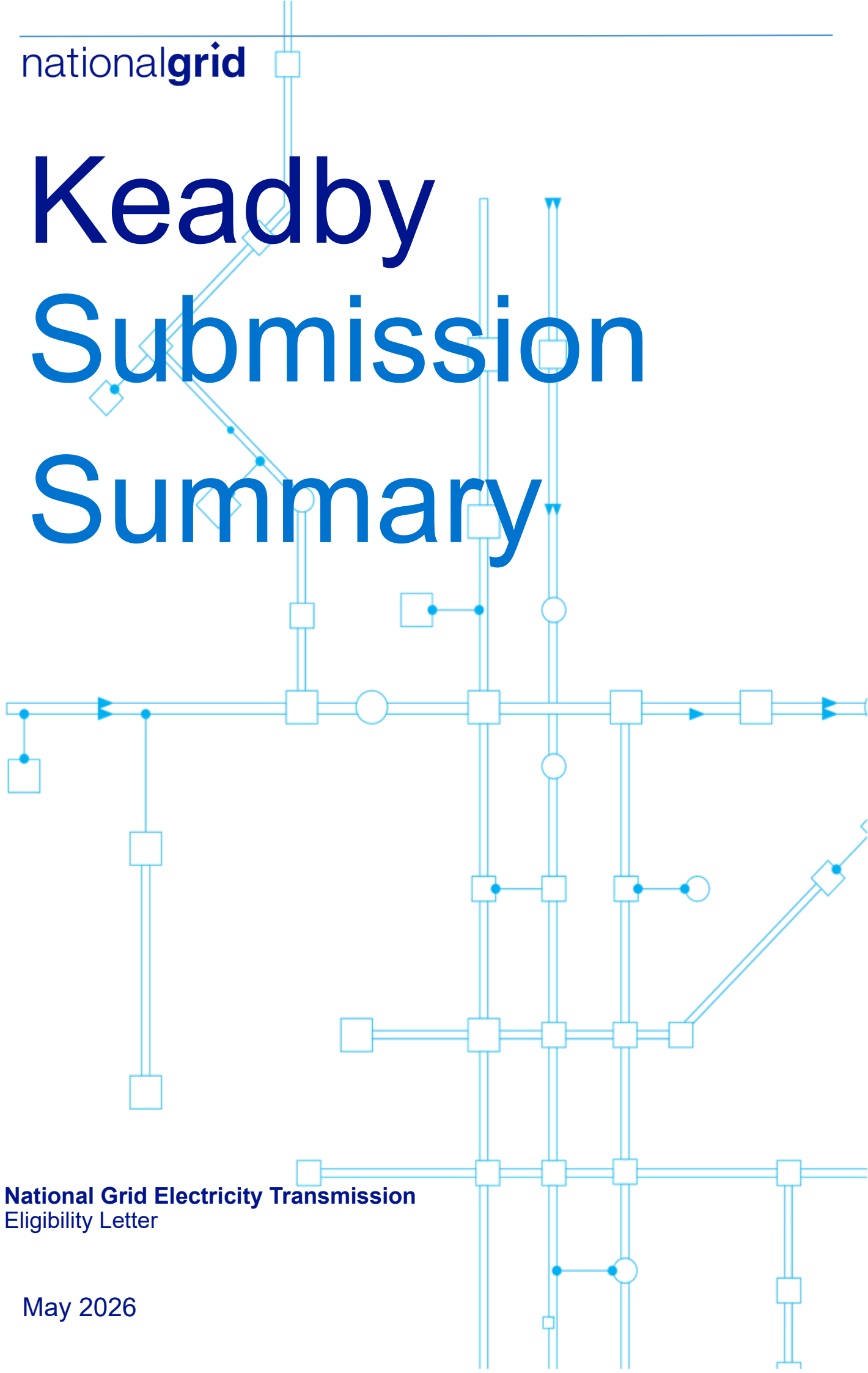


Keadby Submission Summary

National Grid Electricity Transmission
Eligibility Letter

May 2026



T3 – Keadby 132kV Connection Assets

Executive Summary

Background

Keadby is a RIIO-ET3 load-driven connection-assets project to replace the 132kV transmission–distribution cable interface between NGET’s Keadby 400kV substation and the DNO’s new 132kV GIS substation.

The investment is required because the DNO is decommissioning its existing 132kV substation and building a new GIS substation. NGET must therefore install replacement cable circuits and associated protection and control works to maintain the TO–DNO interface and support the DNO’s connection requirements.

Investment Drivers

The primary driver is the replacement of the TO–DNO cable connection to facilitate the DNO’s customer connections:

- DNO requires additional capacity for embedded generation and demand at Keadby
- NGET studies indicate that, without reinforcement, the additional generation would create fault level and thermal overloading issues.
- The existing DNO 132kV substation is approaching end of life and the existing NGET–DNO cable interface cannot provide an enduring connection to the rebuilt GIS substation.

Options

NGET considered do nothing, market-based, whole-system, reuse of existing assets and new-build options. Options A to C were discounted because they would not meet the customer driver, while reuse of the existing oil-filled cables was discounted due to rating, environmental, asset-life and deliverability concerns.

The shortlisted options were:

- Option A: Do nothing counterfactual option.
- Option B: Market-based solution.
- Option C: Non-transmission, whole-system solution.
- Option D: Re-use of the existing cable.
- Option E: Installation of new XLPE cable.

Option E was the only feasible and proportionate option taken forward because it meets the TO–DNO interface need using new XLPE cables on the shortest feasible route within existing operational land.

Preferred Solution

The preferred solution is Option E: installation of new XLPE cable.

- The scope installs new XLPE cable circuits between the LV side of the 400/132kV transformers at Keadby 400kV substation and the corresponding bays at the DNO’s new 132kV GIS substation.

- The works include associated civil and structural works, protection and control systems, LV panels, fibres, interlocking updates, removal of redundant assets and related design, procurement and temporary works.
- The preferred route is within existing operational land and is described as the shortest, most direct and proportionate route, with no credible alternative route identified.
- The solution replaces legacy oil-filled cables with modern XLPE cable technology and maintains continuity of supply to the local DNO following decommissioning of existing assets.

Option E represents the lowest-cost and lowest-risk solution capable of meeting the required interface and contractual obligations, while minimising planning, land and stakeholder impacts.