



Voltage 2026 EOI Contract and Commercial Webinar

**We will start at 11:05 to allow time for everyone to connect.
This webinar has been recorded.**



Housekeeping

- Please remain on mute during the webinar
- Videos have been disabled to maximise quality of bandwidth during this webinar
- To submit a query, please use the Q&A functionality in Teams
- If your query is confidential, please email it directly to the tender team: box.voltage2026@nationalgrideso.com
- This webinar is being recorded, a copy of the recording and the slides will be made available on our website



Agenda

Background – why is this tender needed

Summary of form of contract

Key contract terms

Consultation timeline and next steps

Q&A Session



Background

- Following the completion of the Mersey and Pennine Voltage Pathfinders ESO have conducted network analysis studies to identify future reactive power requirements
- This analysis has identified further reactive power absorption requirements in England between 2026 and 2036
- This Voltage 2026 tender is seeking to identify the most cost-effective solutions that meet these reactive power requirements

Region	Requirement	Reference points
London	-200 Mvar	Tilbury 400kV
North England	-200 Mvar	Eggborough 400kV



Summary of Contract Form



Contract Structure

- The contract terms for Voltage 2026 have been split out into two parts:
 - **Contract Form** – sets out the unit and provider specific information and will be completed following the tender
 - **General Terms and Conditions (GTCs)** – sets out the service specific information, terms and conditions that will apply to all providers.
- This is different to the previous voltage tenders for Mersey and Pennines where only one single document was used, but ESO feel this format provides greater clarity and makes solution specific information easier to find within the documentation. It has been used successfully for other projects such as the Stability Phase 3 Pathfinder.
- At the end of the tender process **each solution** will be awarded a contract – if a company is successful with multiple solutions, they will receive **multiple contracts**, one for each solution.
- This EOI and pre-tender consultation allows the market the opportunity to provide feedback on both contract documents. After the consultation feedback is received, ESO may make changes to either or both contract parts prior to finalising the form of contract in time for the ITT. Following the ITT the contract terms will not be open to negotiation or deviation requests (except for any corrections or amendments deemed necessary by ESO)
- This webinar is intended to support the consultation window
 - The key areas on which ESO would like feedback will be flagged within this webinar and are within the Contract Feedback tab of the Consultation Feedback Form
 - After contract award, the requirements of the contract become contractual obligations on the provider – if there are any concerns about meeting any of the contract obligations, this consultation is the opportunity to provide that feedback so that these can be addressed.

Key Contract Terms



Commencement & Term

- Contract duration: **April 2026 – April 2036**
- Extension provision: Twelve months prior to the end of the term, the parties can agree to extend the contract any number of times, in any granularity providing the total extensions **do not exceed ten years**
- The price set during the extension periods must not exceed the price which was proposed within the ITT / in place at year one of the contract



Security Provision – *For Consultation*

- Two options proposed at EOI – one in line with recent Pathfinder projects, the other a new proposal

Option 1

Provision of Security to cover payment of Liquidated Damages (LDs) set out within the contract

To be posted within thirty business days of contract signature

Acceptable security could be a performance bond, parent company guarantee, or cash deposit as defined in the contract

Based on the security obligation used in previous pathfinder contracts (Stability Phase 2, Stability Phase 3).

Option 2

Alternative proposal requires the provision of the same amount of security (parent company guarantee, performance bond (or equivalent) to be posted immediately as part of the contract signature process

ESO will not countersign the agreements until this is provided

As part of this the option to provide a cash deposit is removed as a form of acceptable security

LDs will then only become payable at a later date if the Scheduled Commercial Operations Date is missed



Security Provision – *For Consultation*

- Rationale: learnings from previous Pathfinders suggest there is room for improvement in relation to the security obligation in a way that is beneficial for the market whilst minimising risk of non-delivery or late delivery to the ESO
- ESO welcome feedback on which option is preferable to respondents. Please use the Consultation Form to provide your feedback.



Static & Dynamic Service Provision – *For Consultation*

- Assets are able to provide the service either statically or dynamically
- **Static Facilities** and **Dynamic Facilities** are referenced as such throughout the contract and defined within the terms
- While Static facilities only have one mode of operation:
 - **Control Mode** which enables constant reactive power absorption
- Dynamic facilities have two:
 - **Constant Reactive Power Control Mode:** the ability of a Dynamic Facility to keep target Reactive Power injected or absorbed at the Grid Entry Point equal to the preselected MVAR Set Point;
 - **Voltage Control Mode:** in relation to a Dynamic Facility, the ability to absorb or inject MVAR in direct proportion to the deviation of the NETS from the Instructed Set Point and inversely proportional to the Slope setting
 - Provider of Dynamic Facilities must be able and prepared to operate in both modes
- The contract is drafted in a way to treat both modes equally with regards to contract obligations, whilst acknowledging the differences in operation
- ESO welcome feedback on the contract terms around the service provision for both types



Availability

Static

- Be available to provide the service in accordance with a Set Point with a minimum availability of 90%
- Absorb reactive power to at least 90% of their contracted absorption capability when instructed (else they will be considered unavailable during that Settlement Period (SP))
- Respond to instructions to provide the service, change the Set Point or to stop providing the service
- Make a declaration of availability and any subsequent unavailability in accordance with the GTCs

Dynamic

- Be available to provide the service with a minimum availability of 90%)
- Absorb or inject reactive power in line with their full declared absorption / injection capability range (else they will be considered unavailable during that SP)
- Respond to an instruction to provide the service, switch modes, change the Set Point or to stop providing the service
- Make a declaration of availability and any subsequent unavailability in accordance with the GTCs



Permitted Services

- Providers can stack the following “Permitted Services” set out within the GTCs providing that it doesn’t impact the ability to provide the Reactive Power Service
 - Balancing Mechanism
 - Response
 - Reserve
 - Constraint Management
 - Enhanced Reactive
 - Wholesale Electricity Market
 - Capacity Market
 - Restoration
- Providers entering into the agreement relinquish any ORPS payments as described in 4.6.2 of the GTCs
- Providers are not entitled to any other amounts payable under any Commercial Services Agreement or other contract in respect of Voltage or Reactive Power services



Payment Formula – *For Consultation*

- Providers will be paid based on availability only
- There will be no utilisation payments in this contract
- There will be no settlement period utilisation cap within the contract for this tender – this is different to Mersey and Pennines contracts. However, please be aware the technical specification still provides indicative utilisation information to assist bidders when pricing their solutions.
- Two different payment formulae options are proposed within Schedule 2 of the GTCs -
 - ESO welcome feedback on which version respondents prefer
 - Based on this feedback ESO will finalise payment formula to retain in the final contract terms
- Both formulae intend to reimburse the providers fairly for their availability to provide the service based on their absorption capability
- A Payment Calculator is included within the EOI to enable these options to be explored in further detail by bidders. Please note this tool is illustrative only and is provided in good faith to help the market develop their bids. By providing this tool ESO are not guiding the market in how to price their bids.

Payment Formula – Proposal 1 Example 1

$$AP_m = ((AF_i * (e/(a + e)) * AM_j * (RPe * RPa)) + (Afi * (a/(a + e)) * AM_j * RPa))$$

AF_i = Availability Fee = £100/SP

a = Contracted **Absorption** capability = 80MVA_r

e = Contracted **Injection** Capability = 60MVA_r

AM_j = Availability Flag = 0 if unavailable else, 1

RP_a = Declared **Absorption** Capability / Contracted **Absorption** capability = 80MVA_r / 80MVA_r = 1

RP_e = Declared **Injection** Capability / Contracted **Injection** Capability = 60MVA_r / 60MVA_r = 1

$$AP_m = \text{Availability Payment} = ((£100 * (60 / 140)) * 1 * (1 * 1)) + ((£100 * (80 / 140)) * 1 * 1) =$$

£42.86 + £57.14 = £100

Figures are purely illustrative



Payment Formula – Proposal 1 Example 2

$$AP_m = ((AF_i * (e/(a + e)) * AM_j * (RPe * RPa)) + (Afi * (a/(a + e)) * AM_j * RPa))$$

AF_i = Availability Fee = £100/SP

a = Contracted Absorption capability = 80MVA_r

e = Contracted Injection Capability = 60MVA_r

AM_j = Availability Flag = 0 if unavailable else, 1

RP_a = Declared Absorption Capability / Contracted Absorption capability = 50MVA_r / 80MVA_r = 0.625

RP_e = Declared Injection Capability / Contracted Injection Capability = 60MVA_r / 60MVA_r = 1

$$AP_m = \text{Availability Payment} = ((£100 * (60 / 140)) * 1 * (1 * 0.625)) + ((£100 * (80 / 140)) * 1 * 0.625) =$$

£26.79 + £35.72 = £62.50

Figures are purely illustrative



Payment Formula – Proposal 2 Example 1

$$APm = ((AFi * (e/(a + e)) * AMj * (RPe)) + ((Afi * (a/(a + e)) * AMj * RPa)$$

However if RPa falls below 0.7, the APm will revert to £0.

$AFi = \text{Availability Fee} = \text{£}100/\text{SP}$

$a = \text{Contracted Absorption capability} = 80\text{MVAr}$

$e = \text{Contracted Injection Capability} = 60\text{MVAr}$

$AMj = \text{Availability Flag} = 0 \text{ if unavailable else, } 1$

$RPa = \text{Declared Absorption Capability} / \text{Contracted Absorption capability} = 80\text{MVAr} / 80\text{MVAr} = 1$

$RPe = \text{Declared Injection Capability} / \text{Contracted Injection Capability} = 60\text{MVAr} / 60\text{MVAr} = 1$

$$APm = \text{Availability Payment} = ((\text{£}100 * (60 / 140) * 1 * 1) + ((\text{£}100 * (80 / 140) * 1 * 1)) =$$

£42.86 + £57.14 = £100

Figures are purely illustrative



Payment Formula – Proposal 2 Example 2

$$APm = ((AFi * (e/(a + e)) * AMj * (RPe)) + ((Afi * (a/(a + e)) * AMj * RPa)$$

However if RPa falls below 0.7, the APm will revert to £0.

AFi = Availability Fee = £100/SP

a = Contracted **Absorption** capability = 80MVA_r

e = Contracted **Injection** Capability = 60MVA_r

AMj = Availability Flag = 0 if unavailable else, 1

RPa = Declared **Absorption** Capability / Contracted **Absorption** capability = 50MVA_r / 80MVA_r = 0.625

RPe = Declared **Injection** Capability / Contracted **Injection** Capability = 60MVA_r / 60MVA_r = 1

$$APm = \text{Availability Payment} = ((£100 * (60 / 140) * 1 * 1) + ((£100 * (80 / 140) * 1 * 0.625)) =$$

£42.86 + £35.72 = £78.58

However, as RPa (0.625) is below 0.7, the payment amount for this settlement period is set to £0.

Indexation – *For Consultation*

- An alternative Indexation proposal has been made within Schedule 2 of the GTCs


Option 1

CPI Indexation (current Pathfinder arrangement)

- The Availability Fee will be baselined at the start of the contract and uplifted by CPI each year from April 2027
- The fee can increase or reduce as dictated by the rate of CPI

Option 2

BEAMA* Indexation (new alternative)

- The Availability Fee will be baselined at the start of the contract and uplifted by a combination of two BEAMA indices; one for electrical materials and one for electrical labour
- The fee can increase or reduce as dictated by the index
- ESO would welcome feedback from the market on this alternative indexation approach. Please refer to the Consultation Feedback Form, where ESO also request views on the split between the two BEAMA indices 

*BEAMA is the UK trade association for manufacturers and providers of energy infrastructure technologies and systems

Background Checking – *For Consultation*

- In line with procurement best practice the Pathfinders team have identified an opportunity to introduce background checking obligations
- New Background Checking (Security) terms have been added into the GTCs within Schedule 3
- ESO welcome feedback on this schedule, acknowledging it has not been used on previous Pathfinder tenders.



Post Tender Milestones (PTMs)

- As part of the tender submission, providers will be required to include dates and details on their plan to complete key activities should they be successful, e.g. connection agreement, land rights, manufacturing agreements, funding etc.
- The list of PTMs is within Part 3 of the Contract Form
- These will be monitored from post contract award to service delivery
- Twelve months prior to the tendered start date, the provider will need to demonstrate that it has met all the milestones or be able to do so after a further two months (the additional two months is at ESO's discretion and dependent on progress)
- Failure to complete all the milestones by the PTM date, or the revised date, would result in the contract being terminated and the provider being liable for the termination sum
- As part of the pre-tender consultation, ESO request confirmation from respondents that the PTMs reflect activities that can be carried out by twelve months prior to the Scheduled Commercial Operations date and that they are **NOT** dependencies for the provision of security

Conditions Precedent (CPs)

Within thirty business days of contract signature the Provider must have completed the following CPs:

1. Applied for a Connection Agreement
 2. Posted the required Security – please note this is only for Option 1 of the Security Provisions (set out earlier), for Option 2 Security / Performance bond must be provided at contract signature
 3. Demonstrated that they have Acceptable Protection Settings
- ESO welcomes any feedback on the CPs



Termination Sum

- Where a contract is terminated prior to go-live, providers will have to pay a termination sum equal to 75% of the Liquidated Damages cap (set out on the next slide)
- This lower rate is to incentivise providers to make ESO aware of any delivery issues at the earliest opportunity



Liquidated Damages (LDs)

- If there is a delay in passing the proving test by the Scheduled Commercial Operations date, the provider will become liable for LDs at the LAD rate:
 - **LAD Rate:** means a daily rate equal to the Availability Fee multiplied by the number of Settlement Periods in the day
- For the period between the Scheduled Commercial Operations date and the date on which the proving test is actually passed, the Provider will owe any accrued amount of LDs based on this rate
- If the LDs reach the **LAD Cap** (180 days of LDs accrued at the LAD rate) then ESO have the option to terminate the contract



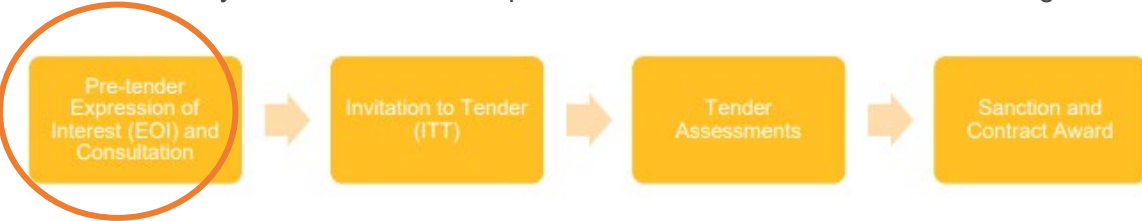
Voltage 2026 Timeline and Next Steps



Timeline

The Voltage 2026 tender will follow a one-stage process, consisting of a pre-tender Expression of Interest (EOI) stage followed by the Invitation to Tender (ITT).

We are currently in the 'Pre-tender Expression of Interest and Consultation' stage.



Voltage 2026 Indicative Timeline	
Task	Date
EOI Launch	6 October 2023
EOI Consultation Feedback Deadline	3 November 2023
EOI Registration Deadline	Early Bird: 24 November 2023 Backstop: 19 January 2024
ITT Launch	December 2023
ITT Window	December 2023 – May 2024
ITT Deadline	May 2024
ESO Internal Tender Assessments	May – July 2024
ESO Internal Sanction Process	August – September 2024
Contract Award	September – October 2024

Please note this timeline is subject to change/updates as the tender progresses

Immediate next steps

To participate in this Voltage 2026 tender and be invited to the ITT, participants must express an interest by sending an email to box.voltage2026@nationalgrideso.com

Expressions of interested must be received by the **EOI deadline**.

EOI Deadline

The '**Early Bird**' deadline is **5pm 24th November 2023**. Bidders who express their interest by this deadline will ensure they are invited to the ITT on Launch Day, with the ability to access all tender documents for the full tender window.

Bidders who miss the 'Early Bird' deadline will have until **5pm 19 January 2024** as the EOI **Backstop Deadline** to express an interest. Those who miss the Early Bird deadline can still register up until the EOI Backstop and be invited to the ITT. By registering after the Early Bird deadline, bidders accept the risk that they may not receive access to the ITT until after the ITT Launch Day. All bidders will have the same ITT deadline, regardless of when they received access to the ITT. All bidders are required to formally express their interest if they wish to participate.

Consultation Deadline

The market is invited to provide consultation feedback on the draft tender documents that have been shared.

The deadline to return any consultation feedback to ESO is **5pm 3rd November 2023**.

If a participant wishes to provide feedback it should be done using the [Consultation Feedback Form](#) and returned to box.voltage2026@nationalgrideso.com.



Providing feedback on the documents shared in this EOI is optional. Providing feedback does not result in an obligation to express an interest or propose a tender submission.

We will now open for Q&A

Please submit any questions or queries via the Q&A functionality in teams

Any confidential questions or queries should be sent directly to the team by email

box.voltage2026@nationalgrideso.com

Any questions that we are unable to answer will be taken away and responded to offline

We will publish a Q&A document afterwards to capture the generic Q&A from this webinar

