Appendix 2 – EOI Tender submission and technical requirements declaration form

|  |  |
| --- | --- |
| Provider Name | [ Complete ] |
| Site/Asset/Project Name | [ Complete ] |

Your Details

|  |  |  |
| --- | --- | --- |
| Primary Contact | Name |  |
| Email |  |
| Telephone Number |  |
| Position |  |
| Secondary Contact | Name |  |
| Email |  |
| Telephone Number |  |
| Position |  |

Instructions

**All relevant Sections within this document must be completed in full and submitted along with a signed NDA on or before the 11 November 2022 1700hrs to qualify for a compliant EOI Submission. Please email your PDF copies to** [commercial.operation@nationalgrideso.com](mailto:commercial.operation@nationalgrideso.com) **and CC** [alexander.unitt@nationalgrideso.com](mailto:alexander.unitt@nationalgrideso.com)

**Please note that you should complete one form per solution, which could be a single site/plant, or a combination of assets providing a consolidated bid for a respective category in this tender.**

**If you include multiple applications on one form, we will not accept it and will require you to split the information.**

Section 1 – Tender Category Submission

Please highlight what category you would like to participate in during this Tender.

| Category | Description | Please Tick (Checkmark with solid fill) | Complete sections |
| --- | --- | --- | --- |
| Primary Restoration Service Provider | The ability to self-start and meet the full technical requirements to energise and block load at transmission level |  | Section 2 & Section 3.1 |
| Top-up Service | Expected to have the ability to self-start, can meet some of the technical requirements outlined for a primary service and further assist Restoration. |  | Section 2 & Section 3.2 |
| Anchor Generator (Distributed ReStart) | With the ability to self-start and establish an independent voltage source at distribution network level. |  | Section 2 & Section 3.3 |
| Top-up Services (Distributed ReStart) | Can provide supplementary services required to fulfil the technical capability of a DRZ[[1]](#footnote-2) such as energy (MWs), fast MW control, frequency control, voltage control and short circuit level (MVArs). |  | Section 2 & Section 3.4 |

Section 2 - Project Summary

|  |  |
| --- | --- |
| Question | Brief project summary of no more than 500 words to include:   * Description of current plant and capability. * Description of how planned capability would be achieved. |
| Response |  |

**EOI Responses**

Please write your response in the last column, in the response format described. If the question requires you to submit another attachment, it will be indicated in column 4, otherwise it has been left as ‘N/a’.

|  | **Question/Information Required** | **Response Format** | **Provider to complete and return** | **Column 5 – Provider Response** |
| --- | --- | --- | --- | --- |
| 1 | Please provide the geographical and electrical location of any/all proposed sites/assets involved in the proposed project, highlighting the point of delivery of the service to the network. | Please complete column 5 with the region, and postcode/s or coordinates of point of delivery to the network. | N/a |  |
| 2 | Does the proposed project meet the stated technical requirements for the category you are tendering in for? Are there any limitations with regards to meeting the technical requirements? | Please complete column 5 and label any relevant appendices clearly. | N/a |  |
| 3 | Does the potential ESR service provider agree not to make any public announcements to disclose the potential ESR capability, and do they agree to sign the Non-Disclosure Agreement (NDA) by 11th November 2022. | Please state Yes/No in column 5. | Appendix 3 – Non-Disclosure Agreement |  |
| 4 | Does the potential ESR service provider agree to meet the service commencement date of  01st November 2025 | Please state Yes/No in column 5. | N/a |  |
| 5 | Applicable for **Primary Restoration Service Provider** only - For the site/asset/project in question, have you previously submitted a Stage 1 Feasibility Study? | Please provide details if applicable in column 5, including:  File names  Submission date  Approval date | N/a |  |
| 6 | Applicable for **Primary Restoration Service Provider** only - For the site/asset/project in question, have you previously submitted a scope of works for a Stage 2 Feasibility Study? | Please provide details if applicable in column 5, including:  File names  Submission date  Approval date | N/a |  |
| 7 | Applicable for **Primary Restoration Service Provider** only - For the site/asset/project in question, have you previously submitted a Stage 2 Feasibility Study? | Please provide details if applicable in column 5, including:  File names  Submission date  Approval date | N/a |  |  |
| 8 | Please confirm your stations registered or possible contracted capacity | Numerical value in MW |  |  |  |
| 9 | Please confirm the MPAN and site address | 13-digit number and full address |  |  |  |
| 10 | Do you have a connection agreement with either the ESO, or relevant DNO or both? If yes, please indicate which one and provide your connection contract reference number(s) | Yes/no |  |  |  |
| 11 | Please confirm which DNO area your asset falls in. |  |  |  |

Section 3 – Technical Declaration

Section 3 has been split up into 4 sections to coincide with the different categories within this tender.

* Please complete the applicable table below to demonstrate the capability of the asset or project.
* Please only complete the sub section that is relevant to your submission.
* In the third column, ‘Current Capability’, please delete the instructions within each cell, and state the values at present in the requested format.
* In the fourth column, ‘Planned Capability’, please state the values at present in the requested format.
* Failure to submit a completed Technical Declaration and your bid will be deemed as non-compliant.

**Example Question and Response**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here.** |
| Resilience of Supply,  ESR Auxiliary Unit(s) | ≥ 72h | State in number of hours | No auxiliary units on site currently | * We would propose as part of our submission to purchase and install auxiliary units * We would/would not require capital to do this * Once installed, the auxiliary units will have resilience for ≥ 72h |

# Provider Declaration of Technical Requirements

# 3.1 Primary Restoration Service Provider

| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here:**   * If changes are required/planned, please briefly describe them. * Is capital required? Indicative budget * What is the indicative capability post changes? |
| --- | --- | --- | --- | --- |
| Time to Connect | ≤ 2h | State in number of hours and minutes. |  |  |
| Phase 2 Time to Connect | 2hrs – 24hrs | State in number of hours and minutes. |  |  |
| Phase 3 Time to Collect | 24hrs – 72hrs | State in number of hours and minutes. |  |  |
| Service Availability | ≥ 80% | State percentage of expected average availability between 1 November 2025 and 30 October 2030, based on number of settlement periods where the contracted service is delivered. |  |  |
| Voltage Regulation | Existent | Yes/No |  |  |
| Frequency Regulation | Existent | Yes/No |  |  |
| Resilience of Supply,  ESR Service | ≥ 10h | State in number of hours |  |  |
| Resilience of Supply,  ESR Auxiliary Unit(s) | ≥ 72h | State in number of hours |  |  |
| Block Loading Size | ≥ 10MW | State expected largest size of block load |  |  |
| Reactive Capability | ≥ 50MVAr Leading | State capability in MVAr Leading |  |  |
| Sequential ESR Starts | ≥ 3 | Yes/No |  |  |
| Short-circuit level (following the start of a system disturbance) | For t ≤ 80ms:  I ≥ [kA]  U ≡ connection voltage [kV] | For t≤80ms, please state value of I, in kA |  |  |
| For t > 80ms:  I ≥ [kA]  U ≡ connection voltage [kV] | For t>80ms, please state value of I, in kA |  |  |
| Inertia Value | ≥ 400 MVA.s | Please state value in MVA.s |  |  |
| All technical requirements listed above can be met at one point of delivery to network. | Yes | Yes/No |  |  |

# 3.2 Top-up Service

**The first section below is mandatory**. You must be to complete and provide all of the below to participate in this category

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here:**   * If changes are required/planned, please briefly describe them. * Is capital required? Indicative budget * What is the indicative capability post changes? |
| Resilience | ≥ 24h | State in number of hours and minutes. |  |  |
| Service Availability | ≥ 80% | State in number of hours and minutes. |  |  |
| Voltage Regulation | Existent | Yes/No |  |  |
| Frequency Regulation | Existent | Yes/No |  |  |

Please then complete at least one of the following:

| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here:**   * If changes are required/planned, please briefly describe them. * Is capital required? Indicative budget   What is the indicative capability post changes? |
| --- | --- | --- | --- | --- |
| Block Loading Size | ≥ 10MW | State expected largest size of block load |  |  |
| Reactive Capability | ≥ 50MVAr Leading | State capability in MVAr Leading |  |  |
| Short-circuit level (following the start of a system disturbance) | For t ≤ 80ms:  I ≥ [kA]  U ≡ connection voltage [kV] | For t≤80ms, please state value of I, in kA, and Connection Voltage (kV) |  |  |
| For t > 80ms:  I ≥ [kA]  U ≡ connection voltage [kV] | For t>80ms, please state value of I, in kA, and Connection Voltage (kV) |  |  |
| Inertia Value | ≥400 MVA.s | Please state value in MVA.s |  |  |

# 3.3 Anchor Generator (Distributed Restart)

| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here:**   * If changes are required/planned, please briefly describe them. * Is capital required? Indicative budget * What is the indicative capability post changes? |
| --- | --- | --- | --- | --- |
| Time to Connect | ≤ 8h | State in number of hours and minutes. |  |  |
| Service Availability | ≥ 80% | State percentage of expected average availability between 1 November 2025 and 30 October 2030, based on number of settlement periods where the contracted service is delivered. |  |  |
| Voltage Regulation | Existent | Yes/No |  |  |
| Frequency Regulation | Existent | Yes/No |  |  |
| Resilience of Supply,  ESR Service | ≥ 72hrs | State in number of hours |  |  |
| Resilience of Supply,  ESR Auxiliary Unit(s) | ≥ 120hrs | State in number of hours |  |  |
| Block Loading Size | ≥ 2MW | State expected largest size of block load |  |  |
| Reactive Capability | Power factor of 0.95 lead/lag at Point of Connection | State capability in MVAr Leading |  |  |
| Sequential ESR Starts | ≥ 3 | Yes/No |  |  |
| Short-circuit level (following the start of a system disturbance) | ≥ 1x Anchor’s MVA Rating | Please state value of I, in kA, and Connection Voltage (kV) |  |  |
| Inertia Value | Linked to the Block Loading Capability as follows:  2MW, ≥ 80 MVA.s  3MW, ≥ 120 MVA.s  4MW, ≥ 160 MVA.s  5MW, ≥ 200 MVA.s  6MW, ≥ 240 MVA.s  7MW, ≥ 280 MVA.s  8MW, ≥ 320 MVA.s  9MW, ≥ 360 MVA.s  10MW, ≥ 400 MVA.s  etc. | Please state value in MVA.s  Note: should be consistent with the declared Block Loading Size |  |  |
| Earthing |  | Please explain, to the extent possible at this stage, how are you envisaging to have facilities suitable for safe and effective earthing consistent with your proposed role in the restoration process. |  |  |
| All technical requirements listed above can be met at one point of delivery to network. | Yes | Yes/No |  |  |

# 3.4 Top-up Services (Distributed Restart)

| **Requirement** | **Minimum** | **Response format** | **Provider Response** | **If requirement is not met, but the provider expects to deliver changes through the tender process in order to meet it, please summarise what will be required here:**   * If changes are required/planned, please briefly describe them. * Is capital required? Indicative budget * What is the indicative capability post changes? |
| --- | --- | --- | --- | --- |
| Resilience of Supply - Service delivery | ≥ 72 hours | State in number of hours and minutes. |  |  |
| Service Availability | ≥ 80 % | State percentage of expected average availability between 1 November 2025 and 30 October 2030, based on number of settlement periods where the contracted service is delivered. |  |  |
| Fast MW control | |  | | --- | | <200ms provide available MW, sustained for at least 15 minutes with gradual reduction toward preferred operating position, | | and/or | | <200ms provide available MW, sustained for at least 10 seconds with gradual reduction toward preferred operating position, | | and/or | | Active power output reduction in response to a change in system frequency above a certain value (value and required rate of reduction to be confirmed) | | and/or | | Active power output increase in response to a system frequency below a certain value (value and required rate of increase to be confirmed). This will only be required if output has been constrained below the maximum output power. | | Please clarify what are the features you will be seeking to deliver and how are you expecting to deliver them. |  |  |
| Inertia | There is no minimum requirement for individual generators/resources, but the service provider should state what inertia is available. | Please state value in MVA.s |  |  |
| Frequency Control | Provide frequency sensitive control of  active power. | Yes/No |  |  |
| Reactive Capability (Voltage Control) | Provide continuous steady state control of the voltage at point of connection.  Compliant with Engineering Recommendation G99 requirements on reactive capabilities. | Yes/No |  |  |
| Short-circuit level (following the start of a system disturbance) | ≥ 1 x DER MVA rating (at t≥1s) | Please state value of I, in kA, and Connection Voltage (kV) |  |  |
| Energy (MWh) | Generate or consume MW on instruction from an external control system, deliver within 10 seconds of request. | In MW and MWh, range that will be made available to generate/consume. |  |  |

1. Distribution Restoration Zone (DRZ) – a power island in the distribution network used for restoration purposes [↑](#footnote-ref-2)