

## Black Start Competitive Procurement Event: North West, North East and Scotland

### FAQs

#### Executive summary

We have summarised below some useful queries that have been raised from previous procurement events, some of the responses have been amended so that they remain relevant to this tender.

#### Questions and Answers

Ref	Question	Response
1	The technical requirements have changed, and auxiliary units now need to be capable of 72 hours 'continuous' supply. Does this rule out storage?	<p>This requirement is driven by the need to support longer term restoration along with the need to ensure a resilient system when at the initial stages of restoration.</p> <p>We won't rule out any solutions based on technology type. We would encourage providers to submit an EOI if they can propose a solution that meets the requirements. For example, if a provider has a method of maintaining charge on a battery, so that it could be used as an auxiliary unit at any point for up to 72 hours after an instruction, we would welcome an EOI submission.</p>
2	Will submissions that deviate from the technical requirements be allowed?	<p>We want to remove or minimise barriers to entry, and are proposing to consider EOI submissions where the provider can meet almost all of the technical requirements. Where this is the case, EOI submissions are not guaranteed to be accepted, and it will be at the discretion of ESO assess whether the provider would be able to contribute to a restoration.</p> <p>Where applicable, reduced capability will be scored appropriately in the technical assessment (and may be given a zero score for that section).</p>
3	We note that the block loading requirements have been lowered, can you provide the context for this?	<p>The block loading requirements have been revised to:</p> <ul style="list-style-type: none"><li>- Reflect the current capability of DNOs to switch in smaller sections of network.</li><li>- Reduce risk to plant</li><li>- Reduce/remove barriers to entry</li></ul>

4	Is there a standard contract duration or is it up to the bidder to propose? If so what are the parameters?	The contract duration is 3 years from 1 October 2021.
5	How should the total cost be formed (is it £/MW).	The total cost is the £ per settlement period figure for all contract costs.
6	How is shutdown defined with respect to the 2-hour restart time? Is the time from a blackout or from the point a station can safely shutdown systems?	As per the Grid Code Definition, this is "... the ability to Start-Up from Shutdown and to energise a part of the System and be Synchronised to the System upon instruction from The Company, within two hours, without an external electrical power supply".
7	Is the funding cap across both F1 and F2 studies?	As per the current process, the provider is expected to fund the F1 study themselves.
8	What happens to the tender process if there are less bids than demand?	We will know at EOI stage how many tenderers to expect and will be able to assess then, however, we don't expect this to be the outcome
9	What information on tender responses will be published during the process?	This is to be confirmed. We won't disclose any information that could identify a BS provider, but will aim to publish information about awarded contracts, for example, technology types, total MWs, total cost etc.
10	How will the feedback on the commercial submissions work in practice? Will there be a chance for resubmission of a Best and Final Offer?	We will aim to share feedback on total costs, and may employ a third party to scrutinise designs and capital costs. We are currently proposing that there will be the opportunity to resubmit the commercial element after clarifications - all providers will be given the same opportunities.
11	Is it expected that all capital costs will be recovered through the commercial offer or can this be defined by the bidder?	We expect the capital costs to be open book, and to be recovered based on invoice evidence. Capital costs should not be recovered through the availability fee. If the provider does not wish to recover all of the capital costs (for example, will partially recover via another revenue stream), they should still state the full costs of all associated works in the commercial submission for review.
12	Can more explanation be provided on the requirement in the TD2, F1 Study outline document, for point 4, which is "Source data required for F2 network study modelling with neighbouring sites"?	Network studies may be required to support the capability assessment and/or to identify any restrictions around the BS Service. This is more likely to be required for certain technology types, HVDC systems for example.
13	We have already done a F1/F2 Scope/F2 study that you approved earlier in the year, can you confirm it is still valid?	If you wish to participate in the tender and have already completed one or more steps of the process, please notify us with your EOI. ESO will formally respond to confirm the validity of your study.  We will minimise rework as far as possible.

14	Will I be able to ask technical queries confidentially?	<p>Yes, you will be able to use the query form and mark your query as confidential. ESO will provide comment where we can, but will not input into or steer decisions.</p> <p>Queries submitted marked as confidential will be reviewed, if ESO does not agree that it is appropriate to respond bilaterally, we will notify the tenderer that we will anonymise the answer and publish it, and will give the tenderer the option to retract their question.</p>
15	I've already completed an F2 which I think will be valid. I think I could offer a better value solution in line with the revised technical requirements but this would need design rework. Can I request funding for further design rework?	<p>Please notify us within your EOI. ESO will assess whether further funding for rework is justified, and if so, you will be asked to submit a scope for the additional work by the F1/F2 scope deadline.</p> <p>ESO will have no obligation to accept requests for further funding, and will reject proposals for work that could create a competitive advantage.</p>
16	Will the tender programme be impacted if another tenderer falls behind?	The timeline will be fixed, and ESO will ask all interested parties to commit at EOI stage to meeting it. The overall timeline will not be impacted should one tenderer not meet it.
17	Does the timeline allow for negotiation of terms prior to contract award?	<p>A prerequisite of participation in the tender is that parties agree to the standard terms, to ensure fairness and transparency.</p> <p>We do not expect to amend the terms for individual potential BS service providers, but if at EOI stage a provider still has comments on particular items, they must notify us using the contract deviation table. This will be the only opportunity during the tender to raise potential amendments. ESO is not obliged to accept any proposed deviations.</p> <p>If the service description needs to be amended to reflect the service offering this can be discussed ahead of contract award.</p> <p>We welcome all feedback on the terms during the request for feedback period, so that we can make any appropriate amendments ahead of the EOI. Please use appendix 5 of the Request for Feedback document to share this with us.</p>
18	If I send my feedback in using Appendix 5, will my comments be published?	No. We will analyse the feedback and will publish a summary of the key themes, but will not publish individual comments.
19	Are the technical requirements and assessment criteria fixed or could they change during the tender?	We don't anticipate any further changes to the assessment criteria
20	Are batteries able to participate?	Anyone can participate providing the technical requirements are met. It's possibly unlikely at the moment that batteries could meet the requirements of a full service on their own, but may be able to enter through the combined service route, providing they can find an appropriate partner.

21	What exactly is the definition of Sequential Start-ups?	Following a BS event and during the re-instatement period the Power Island created by a BS Service Provider may collapse. The expectation is that a BS Service Provider will be capable of, consecutively, re-starting and re-establishing the collapsed Power Island a minimum number of times (3).
22	Power input / demand doesn't appear in the assessment criteria. Will this be given some weight?	We are valuing the power export capability of potential BS Service Providers (active and reactive) and demand will be used to stabilise generation. Demand (blocks of load) will, in general, be provided by DNOs.
23	If this is for delivery in 2021, what will happen for future providers? Will this be an annual tender?	For this tender round, we're proposing a contract duration of 3 years after which there will be a subsequent procurement process that will draw on the outputs of the NIA and NIC projects  The contract durations for future contracts will be communicated in advance of each event.
24	In anticipation for an eventual inclusion of non-traditional technologies entering Black Start, should we see the contract terms and procurement process set out in this trial as an indication of your requirements for all BS service providers (thermal or otherwise, existing and new projects)? Do you have any thinking on how you might procure non-traditional technologies such as wind?	At the moment, this is being investigated through the NIA/NIC projects. As learnings from these projects become available we will start to evolve our procurement approaches to broaden participation where we can.
25	Where will the Request for EOI be published?	Currently, new information and updates will be uploaded onto the website for now.  We will also be using our Future of Balancing Services mailing list to notify industry of the request for EOI. You can sign up for this on our Future of Balancing Services webpage.
26	How many total MW or assets are you looking for in each of the 3 zones?	During this tender, we are planning to procure against our requirement for three zones. Our requirement is linked to target restoration time, and at the moment, we use '3 conventional stations per zone' as a proxy for describing what the requirement might look like.  This may however change, depending on the tender submissions we receive. We will procure, in merit order, services to meet our requirement in the zone.
27	How do potential providers submit an EOI?	All of the instructions for submitting an EOI will be released on 1 <sup>st</sup> August on the BS Website.  There will be a submission form that will require the potential BS Service Provider to return some information to us to confirm their eligibility.

28	Who will pay for conducting the F1 & F2 studies?	The F1 is a short study that we aim to streamline with our submission template, and is a summation of current knowledge, we expect the tenderers to cover the costs. Subject to an approved F1 and F2 scope, and once contractualised in a formal agreement, NGESO will fund the F2 report up to a cap of £150,000, which will be reimbursable following completion of the study (including responses to clarifications), and following submission of invoices and evidence of costs incurred.
29	Will fast acting frequency response capability be valued?	Fast acting frequency response is, along with other factors, important for the stabilisation of fragile power islands during the early stages of restoration, but on its own, however, does not deliver the BS Service we are pursuing under the current tender. In the current proposal, we are valuing Inertia with 15%.
30	Is there the ability to develop multiple technologies in the tender process and ultimately make two (mutually exclusive) separate commercial proposals on different technologies? This would increase development costs; would these development costs be recoverable under separate or a common funding cap?	We have provided the assessment criteria that we will use to assess each bid. There is no reason a provider deciding between two bids could not also use the assessment criteria to score each of their proposals. We expect providers to submit their most valuable offer, and will only accept one proposal on behalf of an asset/site/entity.
31	Is it possible to submit multiple assets at one site e.g. a battery starting up a diesel generator?	Providing the site can meet the technical requirements, <i>how</i> they are met is up to the provider.
32	Are we able to meet the requirements by aggregating services? If this is a yes, then would they need to be in the same location?	Aggregated submissions will also be considered, providing the contracted Service is delivered and can meet the technical requirements at one point of delivery. NIC/NIA projects are investigating different approaches to this and as learnings from these projects become available we will start to evolve our procurement approaches to broaden participation where we can.
33	What information on tender responses will be published during the process?	We will not publish any tender responses or submissions. We will, where possible, publish anonymised metrics that may include total cost, number of contracts agreed, number of participants, technology types, MWs etc.
34	How will NGESO interact with group-parties during the EOI and Tender process, when dealing with joint proposals?	We advise that any combined proposal follows a 'lead party' structure, where the lead party is the point of contact, and organises any supporting contracts necessary with other parties.
35	How will the status of acquiring required planning permission for potential Black Start providers be assessed?	<p>We ask that during the F1 submission, providers are to provide proof of engagement with relevant authorities regarding consents (to be included as part of the submission template).</p> <p>In addition to the evidence provided in the F1, we also ask for evidence of application(s) being made as part of</p>

		the F2 submission (will also be included as part of the F2 submission template).
36	Why has a 70% weighting been chosen for the commercial/technical assessment criteria.	<p>NG ESO is obliged to ensure that spend decisions are economic and efficient, and has a responsibility to minimise costs passed on to the end consumer.</p> <p>We have set out in our technical requirements what we believe will produce a viable service, and thus, have more heavily weighted the commercial element. We do want to acknowledge that technically superior bids, may contribute to faster restoration timescales, which may reduce overall costs in a BS event.</p>
37	How will solutions with environmental benefits, such as low carbon technologies, be assessed?	In accordance with our Black Start Procurement Methodology, we are technology neutral.
38	What do you mean by 'network assessments' at the EOI stage?	<p>This will be performed by NG ESO in the event that your EOI submission highlights areas of limitation in the technical requirements. ESO will assess whether the specific proposal will still be able to contribute to a restoration when considering the limitation. No action will be required from the provider.</p> <p>This is different from Network Studies referred to in the feasibility studies – please see question 12.</p>
39	Should a potential Service Provider disclose its admissible rate of block loading (example: 20MW every 2 minutes)?	The actual rate will be driven by the providers needs along with the local DNO's switching ability. This will however be detailed/confirmed throughout the F1 & F2 stages (sizes of blocks, time between blocks, any hold points, etc.)
40	Will there be provision to recover costs for testing?	It would not be economical to carry out testing for each proposal at F2 stage. We ask that a Statement of Capability from the OEM is provided as part of the F2, in lieu of pre-contract testing.
41	Is there the ability to drop out of the process following making an EOI?	You can withdraw from the tender process at any point (prior to a Black Start contract being signed). We do however ask that you give us notice of this withdrawal. If you would like to withdraw from the process during the F2 study, we advise that you ensure you complete and deliver the study to remain eligible for reimbursement.
42	Is mutual agreement required by both National Grid and the party who is proposing the service in selecting the Study provider?	NG ESO will not approve study providers, but do, as part of the process, agree on a scope of works. We do expect the study provider to have the relevant knowledge and expertise to undertake the study, which is covered in the F2 side letter and terms. The obligation is on the potential BS provider to ensure the study provider is appropriate.
43	How is extra redundancy valued – multiple units providing the Service compared to a site with only 1 unit?	We require a high service availability ( $\geq 90\%$ ) to cover for planned/unplanned outages. We also ensure that we have sufficient Service Providers contracted within each zone to cover for random faults.
44	Clarity requested on the phrase used in Appendix 1, Assessment Criteria, Section 3.1, 'Different Technology within a BS Zone'.	By technology we mean fuel (water, wind, coal, gas, diesel, etc.). Assessed against current provision of the BS Service within that zone.



45	There's a clause in the contract requires the Service Provider to agree the LJRP within three months of service commencement, can you explain this timescale?	NG ESO will work to ensure that all LJRPs are in place ahead of service commencement, the three-month period is to allow a long stop period in case issues arise which prevent this.
46	Did National Grid mean $\geq 72$ hours at the rated output of the auxiliary unit or $\geq 72$ hours at the output required to support/deliver the contracted BS Service?	The latter; $\geq 72$ hours at the output required to support/deliver the contracted BS Service.
47	Why is there such a large mismatch between the $\geq 10$ hours for the BS Service here and the $\geq 72$ hour requirement for the auxiliary supply?	If under a BS event the ESO might decide, when developing the restoration strategy, not to enact all the contracted BS Services "in one go". Examples: (1) A Hydro Power Station, with limited water available to deliver the BS Service, might be left to a later stage of restoration; (2) The Transmission Owner and/or the local DNO may end up having unforeseen challenges in their systems/networks and, for that reason, be unavailable to assist restoration from a BS Service Provider in the first couple of days following the BS event.
48	Please clarify for the purpose of technical scoring in TD1 (technical requirements and assessment criteria) 3.1 Connection to network, how multiple connections to the network is defined. Please confirm if this is related to the number of connections a service provider has to the NETS rather than connectivity/integration at the point of connection with the wider NETS.	BS Service Providers' ability to deliver the contracted service via more than one circuit/connection (number of connections to the NETS).
49	The National Grid document Black Start Strategy - April 2018, identifies the ability to trip to house load as a restoration method allowing faster restoration. Does this functionality increase the technical score of a proposal compared to another without it assuming all other technical scoring is consistent?	No. The technical scoring will follow the published documentation.
50	Is the ability to trip to house load considered sufficiently resilient to allow a provider to not need to have an additional power source to start the main black start unit (in case of the functionality not working in a black start scenario)? How would this design be differentiated on a technical scoring basis compared to a provider using an auxiliary power source to start the black start unit?	No. From the previous answer, not applicable.
51	In TD5 Section 1.2.2, we consider that there may be elements of the scope that the OEM may not be able to confirm as it may be outside of the scope of the OEM. For example, the time between load blocks may be limited by other plant items other than the main OEM equipment. If we engage with other specialists for Sections of the F2 Scope Submission Document other than 1.2.2 they may be better placed. If this is the case, how does NG ESO accommodate such information if it is outside of the OEM competency or scope?	Section 1.2.2 is focusing on the OEM. Relevant information falling outside the OEM's scope should be considered but not under this section. Using the example shared: 1. The OEM will inform the minimum time between blocks for the relevant the Unit(s) (Example: 2 minutes between blocks); 2. When detailing the (Section 1.2.1 / iv.) Start-up sequence in BS mode the Provider will factor in any other plant items that might impact the overall time between load blocks (Example: 4 minutes between blocks).

---

Other specialists can be engaged to progress with other parts of the F2 Scope Submission Document.

52	It is expected that when re-energising the grid the CCGT will be running as a GT with the steam turbine being brought on when steam conditions allow. When assessing plant capability for the purposes of the report(s) (power output and contribution to system capability) should this be assessed at the point of energisation or once the ST has been added (i.e. GT only or CCGT)?	Reactive power: at point of energisation (MVar>0, MW=0) Active Power: contribution to stability at contracted MW (maximum output the Provider will make available for the Service).
53	Could ESO confirm that the definition of reactive capability of the BS unit is the capacity of the equipment to pre-charge the transmission lines during first energisation ( ie MW=0 ) . This is likely to be lower than the maximum VAR capability of the unit at higher MW loads Should this capacity be based upon a ramped or stepped voltage application in order to honour the maximum voltage tolerance?	Confirmed. Ideally stepped voltage but some degree of flexibility here (stepped voltage or soft energisation).
54	How is active power considered? Could we bring on second unit without the ability to block start (although this could be managed by lowering output of lead unit as that of the second increased and then providing block loads from the first unit).	Some flexibility here. The key question here is, perhaps, "how to reach the contracted MW in safe way?". That is one of the reasons we require detailed info around block loading profile (F2 Scope / 1.2.2).
55	Can clarification be given as to what is expected to be provided in section 1.4 (Commercial offer for BS service) of the F2 scoping document.	ESO will provide a draft template for the commercial offer for the SO.
56	Can ESO provide insight as to what their expected procedure would be for commissioning testing?	Guidelines / example: The Commissioning Assessment will aim to demonstrate that with and without external power supplies to all or part of the BS Service Provider the BS Auxiliary Unit(s) can be independently started and in turn allow the reliable start-up of the Main Unit(s) in the manner (including without limitation within the timescales) required by the technical parameters. Part A – Auxiliary Unit(s) – Demonstration of Capability (where applicable) 1. 3 Consecutive starts/shutdowns 2. Start sequence initiated and interrupted before Full Speed No Load (FSNL) 3. Start sequence initiated and interrupted at FSNL 4. Start sequence initiated and allowed to complete 5. Prove that the Main Unit(s) can revert to normal operation and the Auxiliary Unit(s) removed from service. 6. Safe shutdown of the Auxiliary Unit(s) No external supplies are to be provided to the Auxiliary Unit(s) during the Commissioning Assessment and activities shall be conducted consecutively and without delay between shutdowns and restarts.

---



Part B – Demonstration of Black Start Capability (where applicable)

1. Remove all external supplies from the BS Service Provider;
2. Re-start the power generating module/facility;
3. Energise a pre-isolated bus bar at point of connection onto to the Network (example: isolated bus bar 400kV substation) by dead bar close of the relevant Circuit Breaker;
4. Energise a pre-isolated circuit of the network out of the relevant substation;
5. Synchronise to an adjacent power island.

Part C – Black Start Telephony Systems  
Check the resilience of internal communication systems across the power generating module/facility (example: radio system from the local Control Room to field staff);

Part D – Local Joint Restoration Plan – Desktop Exercise Plan agreed between the Power Station, System Operator

57	F1 study scope. The evidence required relates to block loading and voltage control limits during block loading. This work will be verified during F2 in OEM scope is this acceptable for F1 requirements?	Yes
58	Same as above for frequency control	Yes
59	Block loading capability - the block loading of the BS unit will be modelled and verified by OEM during F2 is it expected a theoretical response is included for the F1 study?	Yes
60	F1 submission document -Appendix1 – provider expected following F1 (column 5)? What is expected in this column, a lot of answers will only be fully known at the F2 stage	If for the F1, you need to attach any additional information as appendices, please clearly list them in section 1.6 and attach to the end of the report in the format given. This section can be left blank if there are no appendices.
61	Service availability - Please clarify how this will be measured for the purpose of the annual assessment. Will both planned and unplanned outages be included in the calculation?	Availability measured continuously over 365 or 366 days (leap year) if applicable. Yes.
62	What communications should be considered in the F2 study (1.2.4)?	All communications relevant to the delivery of the service and under the Provider's responsibility. Examples: internal telephony systems, DCS, Protections, etc.
63	ESO have indicated 3 yearly on-site testing of black start capability In the case of generation units this will necessitate a commercial outage of all generation units to render a black out event. Should the revenue losses for testing be included within the commercial offer ?	Yes, we will provide a section in the commercial submission template (to be provided) where the calculations should be outlined.

64	Can NG confirm that they will fund performance testing to conclude the F2 study?	It would not be economical to carry out testing for each proposal at F2 stage. We ask that a Statement of Capability from the OEM is provided as part of the F2, in lieu of pre-contract testing. If the Provider wishes to carry out pre-contract testing, this will be at their cost.
65	Please confirm number of service contracts to be placed during this round of tendering for the NE, NW and SC regions or describe the nature of the awards that will be made.	Please refer to response to Q26 above:  During this tender, we are planning to procure against our requirement for the specified zones. Our requirement is linked to target restoration time, and at the moment, we use '3 conventional stations per zone' as a proxy for describing what the requirement might look like. This may however change, depending on the tender submissions we receive. We will procure, in merit order, services to meet our requirement in the zone.
66	We will develop a fully compliant offer for NG, however alternative options may offer greater value or lower cost to NG. How would NG like these to be submitted?	Please refer to response to Q30 above document.  We have provided the assessment criteria that we will use to assess each bid. There is no reason a provider deciding between two bids could not also use the assessment criteria to score each of their proposals. We expect providers to submit their most valuable offer, and will only accept one proposal on behalf of an asset/site/entity.
67	Clarity is needed from ESO on 'Commissioning', 'Outage Requirement' & 'Operation and Maintenance Strategy' for F2 Scope. What type of information and format are you expecting to see?	High-level information around: - Commissioning: key milestones that will enable, if applicable and when building up the BS capability, some degree of monitoring; - Outage requirements, O&M Strategy: predicted activities/cycles, to inform the BS availability of the service.
68	Grid Code is currently being modified for HVDC Black Start testing, how does this impacts the Black Start Tender?	This won't have an impact on the tender.
69	ESO to provide clarity on 'Service Readiness Strategy' for F2 Scope-. Is this when the service will be available or something more than that?	High level information around how the provider will ensure that they meet the minimum 90% availability.
70	Can NGESO confirm that they will assess the commercial bids on the basis of £/settlement period, irrespective of technical capability (e.g. MW or MVA.s or MVAR) and that the lowest bid price will score 100% and other bids will be assess linearly against this e.g. a bid of twice the lowest bid would score 50%?	We are expecting that providers will follow the service readiness strategy they present in the F2 study to ensure they meet the minimum 90% availability. We are not expecting warming payments to be required for the purposes of this BS tender.
71	Can NGESO confirm that where Bidder A includes a request for a capital cost contribution and Bidder B does not, NGESO will assess Bidder A's cost as the capital cost contribution plus their 5 years of payments at the £/settlement period rate whereas	Capital contributions can be requested for upgrades to existing plant, for example for auxiliary units to provide self-start. The £ per settlement period figure will include ALL costs meaning that capital contributions will have an impact on Commercial Score.

	<p>Bidder B's cost is just the 5 years of payments at the £/settlement period rate?</p> <p>a. Is there an interest charge on the capital cost contribution in this assessment?</p> <p>b. Is this affected by the actual or predicted availability?</p>	<p>Indexation will be applied to the availability fee, but NOT to any capital contributions.</p> <p>The Annual Availability Shortfall Payment and related Works Contribution Refund Payments are linked to actual availability. Please read the contract terms for full details.</p>
72	Can NGESO confirm that the role of the DNO / SO / TO in restoring supplies will be established as part of the Local Joint Restoration Plan (LJRP), which will be jointly developed after contract award, and is not required as part of the F1 or F2 submissions?	Yes
73	How many contracts will be awarded per zone?	<p>Please refer to response to Q26 above;</p> <p>During this tender, we are planning to procure against our requirement for three zones. Our requirement is linked to target restoration time, and at the moment, we use '3 conventional stations per zone' as a proxy for describing what the requirement might look like.</p> <p>This may however change, depending on the tender submissions we receive. We will procure, in merit order, services to meet our requirement in the zone</p>
74	How will NGESO assess bidders' contribution to restoration time?	As per TD1 (Technical Requirements and Assessment Criteria), we will use the restoration model that we have recently developed (which has been validated by BEIS and Ofgem). The ESO is considering further developments in the model to accommodate individual contributions from BS Service Providers to Zonal Restorations times, and as such the scoring methodology for this section is also still under development. We will not be able to publish the results of the model, however, if possible, we will publish the scoring methodology.
75	Can NGESO provide details and timeline of expected negotiations on the F2 scope and price in the period between a bidder's F2 scope submission and the Invitation to Tender Part 2?	The provider should provide a detailed breakdown and justification for their F2 costs as part of the F2 scope. There will be clarifications issued where necessary as part of the assessment period between 1 August and 30 September.
76	Within the F1 report, how much detail does a prospective provider have to provide to show progress with any planning or consent requirement at that time?	<p>As per response to Q 35 above;</p> <p>We ask that during the F1 submission, providers are to provide proof of engagement with relevant authorities regarding consents (to be included as part of the submission template).</p> <p>In addition to the evidence provided in the F1, we also ask for evidence of application(s) being made as part of the F2 submission (will also be included as part of the F2 submission template).</p>

In terms of details, we ask that prospective providers share their position at the time, with evidence supporting any statement. Example: demonstrate commitment towards the BS Tender by sharing evidence of engagement with the relevant authorities to that end.

- 
- |  |   |
|--|---|
| <p>77 Previous FS1/2 submissions have been approved. Difficulty in completing the standard templates in this ITT when utilising data from so many years ago. Process doesn't seem to cater for such circumstances – please clarify how to proceed.</p> | <p>The standard templates for this Tender shall be used by all potential Service Providers and populated only with up to date information:</p> <ul style="list-style-type: none"> <li>- If information previously approved by NG is still relevant (up to date), that information should be included in the standard template;</li> <li>- If information previously approved by NG is out of date, the expectation is for it to be updated and then included in the standard template;</li> <li>- If information is missing (not addressed in previous studies), the expectation is for it to be flagged and then acted upon by potential Service Providers.</li> </ul> |
|--|---|
- 
- |  |  |
|--|--|
| <p>78 If we are able to offer discounted capex where we contract two sites together, how do we make this visible to NGESO if only able to submit one price for one solution for each site?</p> | <p>Providers shall submit one individual stand-alone offer per site.</p> <p>When a potential Provider is submitting offers for services across more than one site, we will allow them to notify us of "scale based discounts" alongside the expected price for the Service being offered in isolation. When applicable, the discount(s) should be clearly tagged as well as the underpinning conditions. Example: "This revised CAPEX value (discount) is valid if Services A, B and C are contracted".</p> <p>We will not accept or consider 'all or nothing' style bids, and will not overhold to access the discounted rate. All offers will be evaluated on an individual basis, and will only be contracted in merit order. However, if both sites are in merit then it ultimately benefits the end consumer to take advantage of the discount.</p> |
|--|--|
- 
- |   |  |
|---|--|
| <p>79 If we do some of the work normally expected to be in the F2 report now (e.g. modelling to prove block loading capability), can this be reimbursed if we qualify for the next stage?</p> | <p>We are only offering contributions towards F2 study work (subject to an accepted F2 scope of works). Please use the guidelines provided to spec your F1 and F2 appropriately.</p> |
|---|--|
- 
- |  |   |
|--|---|
| <p>80 With regard to your inertia requirement, you clarified this is during the EOI process:<br/>MVA.s being used in alignment with System Operability Framework (SOF) assessment of 'Black Start from Distributed Sources' (<a href="https://www.nationalgrideso.com/document/102871/download">https://www.nationalgrideso.com/document/102871/download</a>). Figure 4 shows the MVA.s required for each block load size to keep frequency within 2.5Hz. Considering a load block size of 20MW and assuming embedded generation of the same size, total block</p> | <p>In this report, 400MVA.s is calculated as the minimum inertia for a 20MVA block (with inertia constant of 5 pu) to cause a frequency swing to the limit. Whilst this value is correct in theory, when we come to specifying a BS product other practicalities needed to be considered. Specifically, we took into account:</p> <ul style="list-style-type: none"> <li>• Pre-fault frequency being low. If frequency was at 49.8 pre-fault, the swing due to block loading could cause a lower absolute frequency.</li> <li>• Unknown Embedded Generation (DER) connected within the demand block that could automatically start</li> </ul> |
|--|---|
-

	<p>size = 40MW. From Figure 4, minimum requirement = 800MVA.s.</p> <p>It's not clear why embedded generation increases the total block size. We would expect it not to contribute to the block load size at all given G59/G99 protection preventing island operation. Accordingly, the rotating energy requirement should be 400MVA.s according to the Black Start from Distributed Sources document, especially if it is confirmed that there is no other distribution generation in the part of the network being energised. Please can you confirm.</p>	<p>exporting after being reenergised causing a larger swing in power than purely being 20MW. Please refer to SOF 2015 section 5.8.2.2.</p> <p>Based on these factors and using our most relevant data to consider uncertainty of embedded generation, a value of 800MVA.s has been assigned. Our NIC Project on BS from Distributed Energy Resources is expected to inform further understanding of DER effect in the future.</p>
81	<p>Please can you confirm that you do not require detailed power system modelling to prove, for instance, frequency response to block loading for the F1 report but expect this to be included in the F2 submission, which is funded (up to £150k) by NGESO.</p>	<p>Yes, confirmed.</p>
82	<p>Please can you confirm your assumption that the intermediate pressure and medium pressure gas distribution network is available during a black start event.</p>	<p>We can confirm the assumption that gas will be available during a BS event.</p>
83	<p>Please advise on process when the original F1 study that had been completed in the recent past, does not include elements of the new F1 template?</p>	<p>Where providers already have an approved F1 study, please refer to the Invitation to Tender Document. Part 1 Submission Section states that "All Providers must make a submission. If a provider already has an approved F1 study, they should submit the previously approved study along with the F1 Submission template, clearly referencing within the template the parts of the prior study that meet each requirement"</p> <p>To meet this requirement, please complete the sections with the link/reference to where the capability was demonstrated in your approved F1 study, if something has not been clearly demonstrated in your original F1 then this section will require a new response. For audit purposes, please also upload the approved F1.</p>
84	<p>Noting that the block loading requirements were reduced from previous guidance, is there any additional value in providing larger blocks.</p>	<p>20MW value is considered a better value and should allow a wider range of solutions. The assessment criteria provided demonstrates how technical capability is valued.</p>
85	<p>Please confirm if service providers with existing contracts/capability are permitted to bid in this process.</p> <p>Is the current bidding process equal for all, i.e. are all providers new to Black Start and needing to develop their infrastructure?</p>	<p>Yes, the tender is open to all providers who meet the technical requirements. There is only one methodology to assess providers.</p>
86	<p>With respect to the F2 study:</p> <p>a. please confirm that 150k is the limit for the costs of the F2 study.</p>	<p>a) F2 Studies will be reimbursed up to a max figure of £150k, providing that a detailed breakdown of the costs and justification is provided to a satisfactory degree to</p>

b. please confirm the schedule/Timeframe and whether there is opportunity for extensions	allow approval up front, and that satisfactory evidence that costs have been incurred is provided to enable recovery. Please note that we may take the costs of the F2 study into account in the total costs of the contract to incentivise providers to minimise these.
	b) The published timeline is fixed.
87 How hypothetical can the F1 be, can any of it be deferred to the F2?	Providers should complete the F1 report with the aim to provide enough confidence to ESO that the provider is committed to the project, and that there is reasonable grounds to invest in further assessing the feasibility at the cost of the end consumer.
88 Is a provider 'locked' to solutions proposed in the F1?	There is allowance at F1 stage to consider some level of optionality, but by the submission of the F2 report a final proposal should be produced. We expect that providers have done sufficient work at F1 stage to present appropriate and thought through solutions in a level of detail reflecting the requirements in the F1 template. However, if a better value solution becomes apparent in the F2 study, it would be prudent to investigate this also. As per the response above, please ensure in your F1 study and F2 scope of works that you can demonstrate grounds to proceed and can instil confidence in the proposal.
89 Tender timescale is short, taking into account the requirements of a Capital Project.	As the overall TT timeframe has been accelerated and the Contract duration is 3 years, we do not anticipate proposals that include large capital investments. We encourage participants to propose innovative solutions to minimise capital requirements
89 Explain the interaction of the F1 to F2 study as the EOI template appears very similar.	Please refer to TD2 - Feasibility Assessment Process.  Providers also need to submit the F2 Scope, which presents the case for proceeding to the next stage, and the plan for delivering the F2 study.
90 Please clarify how to proceed if we have a limitation regarding the technical requirements (e.g. Inertia, reactive or SCL)?	Please refer initially to the eligibility section of the EOI document under sub-heading 'Limitations'.  If a provider can still demonstrate an acceptable level of service/contribution to restoration, and/or can suggest an alternate or acceptable proposal which offers a valuable solution to end consumers, we will consider this.
91 With regard to Query Log ITT v3 issued 05/07 we would appreciate a little more guidance as to the technical scope expectation. Can ESO provide insight as to what their expected	A 1 • Synchronisation of adjacent Power Islands is accomplished via circuit breakers with power system



procedure would be for commissioning testing?  
 Part B Demonstration of Black Start Capability  
 Item 5. Synchronise to an adjacent power island

Q 1 Could ESO provide their expectation of how synchronisation between adjacent Network power islands is anticipated in both a black start restoration event and a test procedure?

Q2 Will ESO have control to synchronise across a breaker of their ownership between power islands ?

Q 3 Will ESO require to have remote operation to the frequency control in order raise and lower speed of the BS unit to achieve this?

Q 4 Will the BS Unit be required to change from frequency control to droop control at this eventuality? If so, how is it anticipated for this to be initiated?

synchronizing (PSS) capability. Similar to any Unit synchroniser, these circuit breakers are installed on a (considerable) number of Transmission substations across GB;

- On both a real or test event synchronisation is accomplished via the ability of reaching synchronising conditions on “both sides” of the adjacent Power Islands. To that end, typically the smaller Power Island is the one adjusting its parameters;
- On a test there is the option to progress with a “dummy synchronisation” (PSS operation is assessed but with no real/physical closure of the relevant circuit breaker blades).

A2

• The synchronisation between adjacent Power Islands will be accomplished via circuit breakers owned by National Grid Electricity Transmission (ESO is now an independent company);

- The process will be led by the ESO and progressed with an “open telephone line” between ESO → BS Service Provider and ESO → NGET.

A 3

No. ESO will require the BS Service Provider to have that ability locally.

A 4

It is expected that Generating Units may be instructed to operate in Frequency Sensitive Mode (Grid Code defined term) at certain times during the restoration. Decisions on frequency control will be taken by the ESO taking account of the preferred loading range for individual Generating Units to delivery frequency response.