

**Clarification - II dated 17/10/2024 to the bidding documents for 400kV Mobile GIS Substation Extn. Package: MGIS131 for Procurement of 01 No.400kV Mobile GIS Bay along with CRP, Auxiliary system etc. under Technology Development**

<b>Sl. No.</b>	<b>Reference document</b>	<b>Reference Clause</b>	<b>Bidder's Query</b>	<b>POWERGRID's Reply</b>
1	Section Project	Page 2/9 Clause No. b (8) Three (3) numbers 1-phase Surge Arrester.	We understand that present scope is 1Nos. 400kV Line cum Transformer GIS bay. Please confirm whether we need Three (3) numbers 1-phase Surge Arrester or Total Six (6) numbers on both side.	Please refer SLD provided along with Technical Specifications. Surge Arrestors (3 nos. of 1-phase) are envisaged on one side only.
2	Section Project	Page 2/9 Clause No. C Temporary and portable post insulators suitable for mounted on ground in the vicinity of trailer may also require to be used to support connection between MGIS bay and existing substation arrangement. These portable post insulators minimum 6 (six) numbers 3 for each side of connection are also under present scope.	1. We understand that 400kV BPI shall be mounted on Ground(FGL) not on Trailer. Please confirm.  2. Please confirm the scope of Foundation, Structure, Earthing Risers for BPI.	Please refer clause no. 1 (c) of Section - Project for scope of work regarding portable post insulators. Makeshift mounting arrangement is envisaged for portable post insulators.
3	Section Project	Page 3/9 Clause No. f GIS Assembly/MTS Assembly along with Control and Protection panels, Auxiliary power system shall be mounted on trailer as a complete unit and shall be suitably designed for transportation on roads and highways	We understand that we need to consider one (1) container & Trailer for GIS and one (1) another container & Trailer for Auxiliary Items. Please confirm.	Bidder to quote as per provisions of Bidding Document.

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4	Section Project	Page 3/9 Clause No. g The container should be made of high-quality steel construction to provide durability and protection against environmental factors.....	Please share the detailed specification of Container to avoid ambiguity at later stage.	Bidder to quote as per provisions of Bidding Document.
5	Section Project	Page 3/9 Clause No. h The connection made with MGIS bay can be with or without the use of temporary portable post insulators as per the need on a case-to-case basis.	1. Please confirm whether we need to consider BPI in our scope or not. 2. Provided dimension in section project, BPI installation is not feasible on Trailer. Please suggest PGCIL execution philosophy.	Please refer clause no. 1 (c) of Section - Project for scope of work regarding portable post insulators.
6	Section Project	Page 3/9 Clause No. j .....and portable ground mats for MGIS bay is under present scope.	Please confirm the resistivity value to consider for calculation of Portable earth mat.	Bidder to quote as per provisions of Bidding Document.
7	Section Project	Page 4/9 Clause No. o The complete MGIS bay, including pre-installed bushing to be transported from one location to another location, permanent transportation packings/supports....	1. Please confirm whether Plugable type is acceptable. Which require very minimal Gas work at site. 2. Because of the Height constraint, MGIS Transportation will be done only after removing the bushing. Please accept.	Please refer clause no. 1 (o) of Section - Project for scope of work regarding bushings.
8	Section Project	Page 4/9 Clause No. t CONTROL & PROTECTION SYSTEM ....	We understand that CRP to be provided only. We don't need to consider SAS/RTU for the MGIS.	Bidder's understanding is correct. Please refer Clause 1 (t) of Section - Project.

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
9	Section Project	Page 5/9 Clause No. U Trailer (Transport Vehicle) - Trailer Type - Modular Type with Hydraulic axels (without prime mover/truck)	Please clarify whether the Flat-bed trailer is acceptable, not low-bed trailer.	Bidder to quote as per provisions of Bidding Document.
10	Section Project	Page 6/9 Clause No. w Bidders shall include in their proposal the deployment of all special tools and tackles required for operation and maintenance of MGIS bay during its service	Tools tackles shall be deployed at site for Installation & Commissioning purpose and same shall be on returnable basis.	Bidder to quote as per provisions of Bidding Document.
11	Section Project		Please clarify whether multi-leaf or air suspension type trailer is acceptable, not Hydraulic.	Bidder to quote as per provisions of Bidding Document.
12	Section Project		1. Regarding the AC/DC converter, there is no requirement mentioned in detail. Please suggest. 2. Please clarify the one battery and one battery charger could be acceptable, not redundant system.	(1) Bidder to quote as per provisions of Bidding Document. (2) Noted.
13	Section Project	Dimensional Limits LXWXH (Complete containerized MGIS bay) - 14X3.5X5 meters	1. Please confirm whether the specified dimensional limits are for complete MGIS bay including Trailer or the dimensional limit are for MGIS Container only. 2. Please clarify whether SF6/air bushing part should be considered for limit length 14m(L) & 5(H).	Please refer Section - Project clause no. 1 (u), Sl. No. 10 of table for dimensional limits. The dimensional limits are including bushings.
14	Section Project		It is not possible to accommodate 6 bushing within the given trailer while maintaining standard container. As standard container will occupy 14m trailer, projected bushings shall hamper Prime mover. So trailer length shall be non-standard with length more than 14m. Please accept.	Bidder to quote as per provisions of Bidding Document.

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
15	Section Project		Regarding Air Conditioning System, Fire Protection System, the lighting system there is no requirement for the containerized room so the vendor's standard would be proposed. Otherwise, please clarify the detailed requirement for the containerized room.	Bidder to quote as per provisions of Bidding Document.
16	Section Project		The Line protection and transformer protection is required but there is no information about SAS and RTU. Please clarify whether the RTU or SAS panel is not included for this project. Otherwise, please provide detail information about RTU or SAS.	Please refer Clause 1 (t) of Section Project.
17	Section Project		Please clarify the interface between protection panel on mobile substation and SAS panel on existing substation is not contractor's scope.	Please refer Clause 1 (t) of Section Project.
19	Section Project		Provision and availability of Three Phase AC Supply shall be in the scope of PGCIL. Please confirm.	Temporary power source for Auxilliary and its connection to the MGIS Bay will be arranged by POWERGRID.
20	Section Project	Pg. 1/9 Cl. 1 a Power VT GIS Assembly shall consist of GIS components (i.e., Circuit Breaker, Disconnectors, Earthing Switches, Current Transformers, Surge Arrestor, Power VT, FES and SF6 to Air Bushings as specified)	Power VT is not available with our existing Instrument transformer manufacturer (approved PGCIL Vendor), they have power VT available only up to 145 kV. currently, we are checking with a new supplier for the availability of 420kV Power VT. We request you to kindly confirm if a new vendor without any prior supply record and performance can be accepted in the project. Kindly confirm your acceptance	Bidder to quote as per provisions of Bidding Document.

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
21	Section Project	<p>Pg. 4/9 Cl. 1 o. Bushing Type The complete MGIS bay, including pre-installed bushing to be transported from one location to another location, permanent transportation packings/supports, cushioning, shock absorbers etc. for different portions of MGIS bay shall be suitably provided. Alternatively, MGIS bay suitable for on-site pluggable bushing arrangements, requiring no on-site gas work or dry type mechanically rotatable bushings for the purpose of transport can also be provided.</p>	<p>Please note that the plug-in type bushing for 400 kV mobile GIS is not available with our vendor thus we are considering the supply of normal bushing, however, this type of bushing needs to be dismantled during transportation; to limit the gasworks of bushing removal before deployment we can provide a small gas buffer before bushing to reduce the degassing time.</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>
22	Section Project	<p>Pg. 5/9 Cl. 1 u. Container dimension Dimensional Limits LXWXH (Complete containerized MGIS bay) - 14 X 3.5 X 5 meters</p>	<p>Kindly confirm the bidder's understanding that the container having GIS should have a maximum dimension of 14 X 3.5 X 5 meters. Additionally, kindly provide us information about any restrictions on the trailer length and height (from ground to container roof).</p>	<p>Please refer Section - Project clause no. 1 (u), Sl. No. 10 of table for dimensional limits.</p>

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
23	Section Project	<p>Pg. 6/9 Cl. 1 y. MGIS during transportation It is planned to deploy the MGIS bay as and when required, without any gas work at the site. If there are any design or regulatory limitations in transporting the pressurized GIS/MTS Assembly, a small capacity, closed-circuit gas handling plant with gas storage facility as part of MGIS bay shall be provided to recover and refill the gas during transportation and deployment, respectively.</p>	<p>Please note that transportation of GIS when it's filled at rated pressure is not allowed, so before deployment of MGIS degassing of GIS to lower gas pressure is essential. In such case we can provide a gas handling plant however, a gas handling plant and gas storage facilities will be present on another trailer. Kindly accept the same.</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>
24	Section Project	LA,VT transportation	<p>Please note that, during transportation it's not advisable to transport GIS with LA &amp; VT still connected. We recommend the removal of LA &amp; VT before deployment.  Kindly accept the same</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>
25	Section Project	separable trailer and GIS container.	<p>Please confirm if there is a requirement for the GIS container and the trailer to be separate. This way, the container can be moved to a different trailer if needed</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>
26	Section Project	<p>Pg. 1/9 'Cl. 1. a. LCC &amp; CRP Mobile Gas Insulated Switchgear (MGIS) Bay comprises of complete arrangement of trailer mounted GIS switchgear along with control and protection panels and its auxiliary power supply systems with requisite battery back-up.</p>	<p>Please clarify, LCC and CRP will require as a single panel or separate panels.</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
27	Section Project	Pg. 2/9 'Cl. 1. b.10 LCC & CRP Local Bay Control Cubicle (LCC) with mimic.	For Mobile substation we would like to propose optimised solution of panel which will includes BCU/BCPU (as per 'Cl. 1. t Pg. 4/9) instead of conventional design of panel. In that case mimic, annunciator, switches will be removed and thses functions will be taken care by BCU/ BCPU. Kindly confirm your acceptance	Bidder to quote as per provisions of Bidding Document.
28	Section Project	Pg. 3/9 'Cl. 1. l Interconnection of cable between different parts of MGIS bays i.e., GIS switchgear, LCC panels, CRP panels, ACDBs, DCDBs, Batteries, Battery Chargers etc. shall be plugin type for easy removal and replacement.	For Mobile substation due to space constraints it is getting difficult to include ACDBs, DCDBs, Batteries, Battery,Chargers etc. Also, difficult to fit two separate panels of LCC and CRP as like regular projects. Kindly confirm your acceptance	Bidder to quote as per provisions of Bidding Document.
29	Section Project	Cl. 1. q Pg. 4/9 Complete AC and DC distribution board to meet requirement of entire AC and DC loads inside the container shall be under present scope. Provision of single point 3-Ph, 415V AC Power Source for necessary auxiliary power requirement of MGIS Bay is under present scope.	For Mobile substation due to space constraints it is getting difficult to include ACDBs, DCDBs, power source etc Kindly confirm your acceptance	Bidder to quote as per provisions of Bidding Document.

Sl. No.	Reference document	Reference Clause	Bidder's Query	POWERGRID's Reply
30	Section Project	<p>Cl. 1. t Pg. 4/9 MGIS bay may be used for connection of multiple type of power system elements i.e., Line and Transformer. Following Control and Protection scheme with associated tripping/ auxiliary/ supervision relays mounted on minimum nos. of panels shall be provided considering, MGIS bay may be used for connection of different power system element on either side or on both sides.</p> <ul style="list-style-type: none"> <li>• Main-I: Distance protection scheme. (With built in LBB function)</li> <li>• Main-II: Distance protection scheme</li> <li>• Transformer differential protection</li> </ul> <p>BCU shall be mounted in LCC panel. MGIS bay shall also be provided with Ethernet Switch and LIU for reporting of Data of MGIS bay.</p>	<p>For Mobile substation we would like to propose optimised solution of single panel of LCC &amp; CRP. For that we need necessary and feasible function list for BCPU selection. As we have size limitations we cant considers duplication of any signals however we wont compromise quality of product.</p> <p>Kindly confirm your acceptance and share function list.</p>	<p>Bidder to quote as per provisions of Bidding Document.</p>



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31	Section Project	<p>Multiple type of Protection required. e.g.</p> <ol style="list-style-type: none"> <li>1. Distance Protection (Main-1 &amp; 2)</li> <li>2. Transformer Protection</li> <li>3. BCU</li> <li>5. Ethernet Switch &amp; LIU</li> </ol>	<ol style="list-style-type: none"> <li>1. What are the maximum dimension allowed for LCC or CRP ?</li> <li>2. Seperate Control &amp; Protection Panels required for Line &amp; Transformer ?</li> <li>2. Conventional Control &amp; Protection Panel required for MGIS as per PGCIL specification ?</li> </ol> <p>If not &amp; if space not permitted, need to consider below points.</p> <ol style="list-style-type: none"> <li>1. There will not be seperate LCC panel. BCU shall be in LCC Panel.</li> <li>2. Separate BCU required for Line &amp; Transformer Protection ? OR</li> <li>3. If BCU needed, can we consider common BCU for control of Line &amp; Trnasformer Protection ? OR</li> <li>4. Can we consider control of Line &amp; Transformer Protection in respective Protection relay itself ?</li> </ol>	<p>Bidder to quote as per provisions of Bidding Document. Please refer Clause 1 (t) of Section - Project.</p>