

Design, Supply, Installation, Testing and Commissioning of 400kV Transformer Bay and 230kV Transmission Line Diameter Extension at Kaliakoir Substation

[OCB No.: POWERGRID/BayExtensions/KaliakoirSS]

Clarification No.02

(03 August, 2026)

Pre-bid meeting was held on 29 June, 2026. Addendum-1 and Clarification-1 on Tender Document were issued on 27 July, 2026. Some queries were received from the prospective Bidders regarding the Tender Document. Clarifications on the above mentioned queries are given below, which will form part of the Tender Document.

S.N.	Volume/Section	Clause No.	Bidder's Query	Reply From Power Grid	Addendum (Y/N)
1	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D1.1]/Page 5-22 & Schedule-A: Requirements/ Section-1/Item [1D1.1]/Page SA-7	As per the following clause, Power Grid will supply Relay Panel for TR bay & Bay unit for Busbar protection. Whether Power Grid supplied Relay Panel will have TR differential relays (Main-1 & Main-2) for TR protection or not? Whether Contractor need to supply TR differential relays or not? Please clarify.	Power Grid will not supply any Bay unit for Busbar protection as stipulated in price schedule & scope of works. These are updated as per Addendum-1. For 400kV Relay Panel scope: Power Grid will supply Relay Panel including Main-1 & 2 relays which will be carried from other (Madunaghat) substation by the bidder. Necessary configuration/modification (connection/wiring) of the Relay Panel for 400/230kV, 520MVA Power Transformer bay shall be done. Required accessories and materials shall be supplied to complete the Protection functionality as per Power Grid Bangladesh Standard.	N

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2	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D.2]/Page 5-22 & Schedule-A: Requirements/ Section-1/Item [1D2]/Page SA-7	Whether existing 400kV busbar protection CU (Central Unit) will have enough spare communication port or option for installing new communication port for connecting the new Bay Unit or not? Does Contractor need to supply new CU? Please clarify.	Modification/extension of Busbar Protection, including all necessary requirements. There is option in CU (Central Unit) to install interfacing card for connecting new bay unit, and so new interfacing card shall have to be supplied.	N
3	Volume-1 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D.1]/Page 5-21	Please provide existing 400kV Control Panel GA & scheme drawing of corresponding Diameter for better understanding the required materials for modification works.	For better understanding of the existing panel details, bidders are advised to visit site/substation and gather necessary information required.	N
4	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D.5]/Page 5-22 & Schedule-A:	a. As existing Relay Panel is for 230kV line feeder, so there will be Line Distance/Differential relays. Can Contractor use that relay as Backup protection relay (67/67N, 50/50N, 51/51N, 27/59 etc.) for 230kV Incomer? Or will Contractor supply new backup protection relay? Please clarify. b. Also, if possible, please provide existing CRP GA & Scheme drawings for better understanding about existing relays. c. Also, as per schedule-1 & Tender Layout drawing, 230kV Line DS with	a. Upgradation/modification of existing CRP Panel of line feeder to use as a 230kV incomer bays of 400/230kV Transformer and to integrate SAS system. New Back-up protection relays shall be supplied by bidder. b. For better understanding of the existing panel details, bidders are advised to visit site/substation and gather necessary information required.	N

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		Requirements/ Section-1/ Item [1D5]/Page SA-7	ES has been considered, does existing CRP has control Mimic switch for controlling of that DS & ES?	c. Upgradation/modification of existing CRP Panel shall be done as required.	
5	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D.6]/Page 5-22 & Schedule-A: Requirements/ Section-1/ Item [1D6]/Page SA-7	Whether existing 230kV busbar protection CU (Central Unit) will have enough spare communication ports or option for installing new communication ports for connecting the new Bay Units or not? Does Contractor need to supply new CU? Please clarify.	Renovation/extension of existing Busbar protection for 230kV system, including all necessary requirements. There is option in CU (Central Unit) to install new interfacing card for connecting new bay unit, and so new interfacing card shall have to be supplied.	N
6	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1D.4]/Page 5-22 & Schedule-A: Requirements/ Section-1/ Item [1D4]/Page SA-7	As per this clause, Main-1 & Main-2 relays have to be provided for 230kV Line protection of Aminbazar & Hitech lines. a. Could Power Grid confirm whether Main-1 & Main-2 both should be line differential with distance relays or Main-1 should be Line differential relay & Main-2 should be Distance relay? b. If Line differential protection is mandatory, on that case Could Power Grid provide the relay model & manufacturer name of remote end relays (Main-1 & Main-2) of Aminbazar SS & Hitech SS?	a. For Aminbazar/ Birulia Line- Both Main-1 & Main-2 shall be Distance Relay. For Hi-Tech Line, Main-1 & Main-2 both shall be Line differential relays with distance relays b. Model & manufacturer name of remote end relays (Main-1 & Main-2) of Hitech SS- HITACHI (RED 670)	N

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7	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1E]/Page 5-22 & Schedule-A: Requirements/ Section-1/ Item [1E]/Page SA-8	As per schedule-A (1D), existing DFDR Manufacturer is Qualitrol. a. Could you please confirm whether it is BEN series or IDM+ series from Qualitrol? b. Also, does DFDR panel has enough space for installing extension module for the new bays? c. If existing DFDR is BEN series, then does it's CPU unit has capability to take Acquisition unit for the new bays? Please clarify.	a. For detail information, bidders are advised to visit site/substation and gather necessary information required. b. For 400kV DFDR, expansion of existing system is possible. There is enough physical space and CPU capacity available. Supply of Acquisition Units and integration are in EPC's scope. For 230kV: New panel for acquisition unit is required. Supply of Acquisition Units and integration are in EPC's scope.	N
8	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1C]/Page 5-21 & Schedule-A: Requirements/ Section-1/ Item [1C]/Page SA-6	As per Tender SLD & Layout, 400/230kV, 520MVA Power Transformer will be supplied by Power Grid, Please confirm whether other accessories (like TR RTCC panel, TR Cooling Control Cabinet, Terminal box etc.) will be supplied by Power Grid or Contractor has to supply? Please clarify.	Supply of RTCC panel shall be under this project scope of work. The price of the same shall be deemed to be included in the overall contract price.	N

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9	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1C1]/Page 5-21 & Schedule-A: Requirements/ Section-1/ Item [1C1]/Page SA-6	a. As per Schedule-A (1C1), it is mentioned that "Auxiliary/ Earthing transformer 33/0.415kV, 300kVA: to be supplied by power grid. But its installation, 33kV & 415V connection to it, including 33kV CT, PT, LA, CB, DS/DES & other 33kV & 415V equipment as required, shall be under this project scope". But in the same clause, it's mentioned that "the primary side (33kV) of this Auxiliary/ Earthing transformer shall be connected from the tertiary side (33kV) of the existing 400/132kV, 325MVA Auto Transformer-2. Modifications (if needed) of the existing arrangements 33kV switchgears (33kV switchgears that are arranged from the existing 400/132kV transformer's tertiary side to be connected with the auxiliary transformer) shall be under the scope of this project." Please confirm whether contractor has to consider supply of 33kV CT, PT, LA, CB, DS/DES or not? b. Also, please confirm whether existing 33kV CRP is there for that existing 33kV tertiary bay or Contractor has to supply one 33kV CRP? c. Please provide existing 33kV SLD of that tertiary bay for better understanding.	a. Contractor has to consider supply of 33kV CT, PT, LA, CB, DS/DES. Also note as follows: Installation of Auxiliary transformer (33/0.415kV, 300kVA), 33kV & 415V connection to it, including supply of 33kV CT, PT, LA, CB, DS/DES & other 33kV & 415V equipment as required; necessary 33kV and 415V cables/conductors, LVAC panels as required, including incoming & outgoing feeder breakers, busbars and full LVAC panel arrangements shall be under this project scope. For LV ACDB Panels: i. Two Incoming ACB (630A), one for connection with new Aux. TXR and other for interconnection with existing LVAC (backup usage in case of failure of Aux. TXR) ii. LV ACDB with a total of 20 outgoing MCBs (rating 20A, 30A & 63A) iii. LV ACDB Busbar: 800A b. Modification of the existing CRP is required to ensure protection scheme for the newly supplied Aux. TXR & LVAC system. c. For detail information, bidders are advised to visit site/substation and gather necessary information required.	N

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10	Volume-1 of 3 & Volume-3 of 3	Section-4: Tender & Contract Forms/Schedule 1: Plant & Equipment supplied from abroad/ Item [1F]/Page 5-22 & Schedule-A: Requirements/ Section-1/ Item [1G]/Page SA-8	As per schedule-A (1G), Manufacturer of existing FOME/FOTE is HITACHI. Can Power Grid confirm model of Hitachi FOME/FOTE of Kaliakoir end? Also, Power Grid is requested to provide model & Manufacturer information of the FOME/FOTE of Hitech SS end & Amin bazar SS end.	Manufacturer of existing FOME/FOTE is HITACHI. Model of Hitachi FOME/FOTE- FOX 615 For other necessary information, bidders are advised to visit site/substation and gather necessary information required.	N

S.N.	Volume/Section	Clause No.	Bidder's Query	Reply From Power Grid	Addendum (Y/N)																		
11	Clarification-1	Clarification-1, S.N. 16	<table border="1"> <thead> <tr> <th>S.N.</th><th>Volume/Section</th><th>Clause No.</th><th>Bidder's Query</th><th>Reply From Power Grid</th><th>Addendum (Y/N)</th></tr> </thead> <tbody> <tr> <td>16</td><td>Volume 3 of 3</td><td>Tender Price Schedule and SCHEDULE A</td><td> Description: Item 1: One (1) set of configuration of Power Grid is optional Relay Panel for 400/230kV, 520MVA Power Transformer Bay. Required accessories and materials shall be supplied to complete the Protection functionality as per Power Grid Bangladesh Standard. Power Grid Bangladesh will supply Bay Unit for busbar protection. Query: As per the Price Schedule and Schedule A, Power Grid will supply the relay panel for the transformer bay as well as the bay unit for busbar protection. The Bidder understands that, in case any relay(s) installed in the Power Grid supplied relay panels require replacement or upgrading due to compatibility or any other requirements, the supply of such upgraded/replacement relay(s) shall be under Power Grid's scope. Kindly confirm whether the Bidder's understanding is correct. </td><td> Power Grid will supply no BCU, CSD, Busbar Relay as stipulated in price schedule & scope of works. These are updated as per attached Addendum 1. Please note that if OEM expert support is required for the installation, testing or commissioning of such Employer supplied equipment, the same shall be solely under the Bidder's scope of works. </td><td>Y</td></tr> </tbody> </table> As per the clarification, the Bidder needs to supply the Busbar Protection Bay Unit for the protection panel. The Bidder does not need to supply the Main-1 & Main-2 Transformer Differential Protection Relays. Power Grid will supply the relay panel with suitable Transformer Differential Protection Relays. Please confirm whether the Bidder's understanding is correct.	S.N.	Volume/Section	Clause No.	Bidder's Query	Reply From Power Grid	Addendum (Y/N)	16	Volume 3 of 3	Tender Price Schedule and SCHEDULE A	Description: Item 1: One (1) set of configuration of Power Grid is optional Relay Panel for 400/230kV, 520MVA Power Transformer Bay. Required accessories and materials shall be supplied to complete the Protection functionality as per Power Grid Bangladesh Standard. Power Grid Bangladesh will supply Bay Unit for busbar protection. Query: As per the Price Schedule and Schedule A, Power Grid will supply the relay panel for the transformer bay as well as the bay unit for busbar protection. The Bidder understands that, in case any relay(s) installed in the Power Grid supplied relay panels require replacement or upgrading due to compatibility or any other requirements, the supply of such upgraded/replacement relay(s) shall be under Power Grid's scope. Kindly confirm whether the Bidder's understanding is correct.	Power Grid will supply no BCU, CSD, Busbar Relay as stipulated in price schedule & scope of works. These are updated as per attached Addendum 1. Please note that if OEM expert support is required for the installation, testing or commissioning of such Employer supplied equipment, the same shall be solely under the Bidder's scope of works.	Y	Bidder's understanding is correct. Also note as follows. For 400kV Relay Panel scope: Power Grid will supply Relay Panel including Main-1 & 2 relays which will be carried from other (Madunaghat) substation by the bidder. Necessary configuration/modification (connection/wiring) of the Relay Panel for 400/230kV, 520MVA Power Transformer bay shall be done. Required accessories and materials shall be supplied to complete the Protection functionality as per Power Grid Bangladesh Standard.	N						
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12	Addendum-1	Attachment-1 of Addendum-1	<table border="1"> <thead> <tr> <th>IC</th><th>Power Transformer & Earthing/Auxiliary Transformer</th><th>lot</th><th>1</th><th></th><th></th></tr> </thead> <tbody> <tr> <td>IC1</td><td>Auxiliary transformer 33/0.415kV, 300kVA to be supplied by power grid. But its installation, 33kV & 415V connection to it, including 33kV CT, PT, LA, CB, DS/DES & other 33kV & 415V equipment as required; necessary 33kV and 415V cables/conductors, LVAC panels as required, including incoming & outgoing feeder breakers (Nos. to be fixed at design stage), busbars and full LVAC panel arrangements shall be under this project scope.</td><td>lot</td><td>1</td><td></td><td></td></tr> <tr> <td>IC2</td><td>Necessary grounding arrangements for the tertiary 33kV side of the 400/230/33kV, 520MVA Transformer (project scope), including 33kV LA, PT, and other necessary conductor/clamp connectors.</td><td>lot</td><td>1</td><td></td><td></td></tr> </tbody> </table> Kindly confirm who will supply the above-mentioned 33kV AIS equipment.	IC	Power Transformer & Earthing/Auxiliary Transformer	lot	1			IC1	Auxiliary transformer 33/0.415kV, 300kVA to be supplied by power grid. But its installation, 33kV & 415V connection to it, including 33kV CT, PT, LA, CB, DS/DES & other 33kV & 415V equipment as required; necessary 33kV and 415V cables/conductors, LVAC panels as required, including incoming & outgoing feeder breakers (Nos. to be fixed at design stage), busbars and full LVAC panel arrangements shall be under this project scope.	lot	1			IC2	Necessary grounding arrangements for the tertiary 33kV side of the 400/230/33kV, 520MVA Transformer (project scope), including 33kV LA, PT, and other necessary conductor/clamp connectors.	lot	1			Bidder will supply. Also note as follows: Installation of Auxiliary transformer (33/0.415kV, 300kVA), 33kV & 415V connection to it, including supply of 33kV CT, PT, LA, CB, DS/DES & other 33kV & 415V equipment as required; necessary 33kV and 415V cables/conductors, LVAC panels as required, including incoming & outgoing feeder breakers, busbars and full LVAC panel arrangements shall be under this project scope. For LV ACDB Panels:	N
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				i. Two Incoming ACB (630A), one for connection with new Aux. TXR and other for interconnection with existing LVAC (backup usage in case of failure of Aux. TXR) ii. LV ACDB with a total of 20 outgoing MCBs (rating 20A, 30A & 63A) iii. LV ACDB Busbar: 800A	
13	Addendum-1	Attachment-1 of Addendum-1	16.2 245 kV, 2,000A, 50kA/ 1 sec, 50Hz, 1,050/460 kV BIL, cable terminal end & associated support structures for single phase XLPE cable. Nos. 8 Please provide the specifications and Guaranteed Technical Particulars (GTP) for the outdoor Cable Sealing End. The manufacturer has requested these details for preparation of their offer.	It is the bidder's responsibility to submit GTP of CSE during the execution stage for approval from CSE manufacturer. Technical parameters of 230kV CSE shall be suitable for 230kV XLPE Cable (to be supplied under this project scope of work).	N
14	Addendum-1	Attachment-1 of Addendum-1	Description of 400kV Control Panel, Relay Panel scope is not clear. Please Clarify.	For 400kV Control Panel scope: Control Panel shall be existing. Bidder shall have to supply one new Bay unit, two new CSD and shall have to install, connect, and do configuration/modification/wiring as necessary. For 400kV Relay Panel scope: Power Grid will supply Relay Panel including Main-1 & 2 relays which will be carried from other (Madunaghat) substation by the bidder.	N

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				Necessary configuration/modification (connection/wiring) of the Relay Panel for 400/230kV, 520MVA Power Transformer bay shall be done. Required accessories and materials shall be supplied to complete the Protection functionality as per Power Grid Bangladesh Standard.	
15	Addendum-1	Attachment-1 of Addendum-1	Inclusion of control cable trench to be connected from 132kV SPR to Main control building scope is not clear. Please Clarify.	LV Power and control cable trench shall be newly constructed through 132kV SPR to main control building for laying cables from 400kV, 230kV & 132kV switchyards, as well as from 132kV SPR. For this purpose, to integrate cable trench through 132kV SPR to main control building, floor cutting in the 132kV SPR will be required to extend and integrate the existing cable trench to the newly constructing cable trench. Detailed drawings shall be approved during the execution stage.	N