



# **CENTRAL ELECTRICITY BOARD**

## **Tender Ref. CPB-84-2019 –Design, Supply, Installation, Testing and Commissioning of Three 66/22kV GIS Substations**

### **Minutes of Meeting**

The Pre-Bid meeting was carried out on 04 February 2020 and site visits to Henrietta, Chaumiere and Belle Vue substations were held on 04 & 05 February 2020. List of companies and its representatives who attended the above are as per attendance sheets of Annex 2.

A power point presentation at the CEB Corporate Office in Ebene was delivered to the attendees which was then followed by site visits to all the three sites.

At each site, discussions were held on the Scope of Works as defined in the Tender Suite of Documents, as well as further clarification to prospective bidders' queries. Bidders were advised to optimise their presence on site by taking any required measurements and photos as the Employer will not entertain further requests for site visits/access.

Moreover, the Employer correlated the contents of the site drawings provided and requirements as per the scope of works described in Volume 2 of the bidding document, with the actual features on site such as tower positions, existing transformer locations, equipment to be dismantled/decommissioned where applicable, site layout, existing trenches, auxiliary transformers, existing power transformer etc.

Below are the site notes on topics discussed and the associated replies.

Replies to pre-bid questions are as per Annex 1.

## Site Notes

### General Notes

All Bidders present were reminded of some of the salient features of the Bidding documents including amongst others the following:

Item	Matters Discussed/Clarified
1.0	<u>Bidding Document</u> <ul style="list-style-type: none"><li>- Bidders were reminded of the importance of carefully perusing all sections of the Bidding Documents. Unless notified through Addendum/Clarifications, the Employer's Requirements as set out in the Bidding Documents shall prevail at all times.</li><li>- Bidders were also reminded that they shall not contact any of the Client's representatives directly after the pre-bid meeting. Official communication channel as spelt out in the Bidding Documents shall be adhered to for any further clarification.</li><li>- Project time line and deliverables were again explained at the request of the bidders and confirmed as mandatory.</li></ul>
2.0	<u>Bid Security</u> <ul style="list-style-type: none"><li>- The Bid Security shall be as per Clause 19 of the ITB in Volume 1.</li></ul>
3.0	<u>Registration with the CIDB</u> <ul style="list-style-type: none"><li>- Foreign contractors as defined in the CIDB Act will have to apply for and obtain a Provisional Registration prior to bidding.</li><li>- The Bidders are requested to abide by Section 4 of the ITB in Volume 1.</li></ul>
4.0	<u>Tax Deductible at Source</u> <ul style="list-style-type: none"><li>- All prices shall be exclusive of Mauritian Customs Duties &amp; VAT but inclusive of all local charges and Tax Deductible at Source.</li><li>- For more detailed information regarding duties and taxes, the Bidders shall obtain all information from MRA or shall refer to the following link <a href="http://www.mra.mu">http://www.mra.mu</a></li></ul>
5.0	<u>Protection Study</u> <ul style="list-style-type: none"><li>- The protection study being a complex and time-consuming activity, it is strongly advised that the Contractor start the study at the earliest so that this does delay the rest of the works.</li></ul>
6.0	<u>Remote-end Protection</u> <ul style="list-style-type: none"><li>- The Contractor shall supply, install, test and commission the protection on the remote-end of the 66 kV feeders as specified in Volume 2, Clause 11.4.9.</li></ul>
7.0	<u>Extension of 66 kV GIS</u> <ul style="list-style-type: none"><li>- The extension for the 66 kV GIS shall be on one side only.</li><li>- Bidders have been reminded to size the building taking into consideration future 2 additional bays.</li><li>- Attention of bidders were also drawn as per requirements spelt out in clause 7.4 of vol. 2 of the bidding documents.</li></ul>

8.0	<p><a href="#"><u>Use of Voltage/Potential Transformer on 22 kV outgoing feeders</u></a></p> <ul style="list-style-type: none"> <li>- Refer to Clarification No. 1 dated 03 February 2020.</li> </ul>
9.0	<p><a href="#"><u>22 kV Busbar Rating</u></a></p> <ul style="list-style-type: none"> <li>- The 22 kV busbar rating is confirmed at 2500 A. Refer to Addendum No. 1.</li> </ul>
10.0	<p><a href="#"><u>Neutral Earthing Resistors</u></a></p> <ul style="list-style-type: none"> <li>- New NERs are to be provided for all retained and new transformers.</li> </ul>
11.0	<p><a href="#"><u>Nominated Sub-Contractor</u></a></p> <ul style="list-style-type: none"> <li>- GE Alstom shall be the nominated subcontractor for all required works to prove interoperability and perform programming of multiplexers and other SCADA equipment forming part of this contract scope of works. Refer to Chapter 12, Volume 2 for more details.</li> <li>- The contact details of the GE representative is: <ul style="list-style-type: none"> <li>Richard Maurice</li> <li>Senior Program Manager</li> <li>GE Renewable Energy</li> <li>Grid Software Solutions</li> </ul> <p>Tel +33 1 64 47 83 59 / Mobile + 33 6 12 75 14 40</p> <p><a href="mailto:richard.maurice@ge.com"><u>richard.maurice@ge.com</u></a></p> <p><a href="http://www.gegridsolutions.com"><u>www.gegridsolutions.com</u></a></p> </li> </ul>
12.0	<p><a href="#"><u>Outages</u></a></p> <ul style="list-style-type: none"> <li>- The Employer will only allow for outages on one circuit at a time in consultation and agreement with the Engineer and Employer.</li> <li>- Outages need to be minimized so if a circuit is on an outage, work shall be undertaken at both ends where applicable.</li> <li>- Some outages may only be provided during weekends depending on the load flow.</li> <li>- As regards for timeline and outages for incoming 66 kV cables and outgoing 22 kV cables to be supplied and laid by the Employer, these shall be discussed jointly depending on the successful bidder's Plan of Work/Programme.</li> </ul>
13.0	<p><a href="#"><u>Procedures for drawing approval and responsibilities of various parties involved.</u></a></p> <ul style="list-style-type: none"> <li>- The Employer emphasized that any approval does not relieve the Contractor of any of its contractual obligations. Being a Design &amp; Build Contract, the Contractor will still be responsible for the complete design, ensure compliance with the Employers Requirements, Laws of the Country and shall act as a prudent Contractor at all times.</li> </ul>
14.0	<p><a href="#"><u>Submission of drawings for application of Building and Land Use (BLUP) permit</u></a></p> <ul style="list-style-type: none"> <li>- The Employer clarified that the duration for obtaining the BLUP from date of submission of required drawings by the Contractor as spelt out in the bidding document Volume 2 – Chapter 2 shall be around six to eight weeks. Furthermore, bidders were informed that these drawings should be approved by a local registered civil engineer and architect.</li> <li>- The aforementioned civil work drawings are required for submission within 3 weeks in order to enable the Employer to apply for the Building and Land-use Permit. Any delay</li> </ul>

	<p>beyond the allowable three weeks for the Contractor to submit the drawings shall be imputable to him.</p> <ul style="list-style-type: none"> <li>- Nevertheless as spelt out in the Bidding Documents, the Contractor can still meanwhile proceed with below ground works, site clearance, access roads, foundation works, laying of earth mat etc.</li> <li>- The Contractor may be required to provide additional information during the processing of the BLUP.</li> </ul>
15.0	<p><a href="#"><u>Cable Routing within the site and from structures (towers/poles)</u></a></p> <ul style="list-style-type: none"> <li>- The Employer informed the bidders that it is up to them to propose an appropriate cable route based on site constraints, existing underground cables and their design/routing to be approved by the Engineer.</li> <li>- All wayleave outside the site boundaries shall be secured by the Employer.</li> </ul>
16.0	<p><a href="#"><u>Existing Towers</u></a></p> <ul style="list-style-type: none"> <li>- The Employer informed that existing Tower Structural Design to assess the strength for mounting of cable termination and surge arrester on Tower arm and additional support required for cables installation on tower, if required, shall be provided during the design stage after award of the Contract.</li> </ul>
17.0	<p><a href="#"><u>Electricity and Water Supply to Site</u></a></p> <ul style="list-style-type: none"> <li>- Bidders were informed that as spelt out in the bidding document, they shall liaise with the relevant authorities for water and electricity supply amongst others for construction purposes. For the permanent water supply the temporary water consumption meter needs to be transferred to the Employer on handover together with the long-term connection. Contractor to arrange for and pay for such connection.</li> </ul>
18.0	<p><a href="#"><u>Disposal of Demolished Structures</u></a></p> <ul style="list-style-type: none"> <li>- Bidders should allow for disposal of all demolished structures. Equipment shall be transported to the Employer's chosen location. .</li> </ul>
19.0	<p><a href="#"><u>Temporary Interconnection</u></a></p> <ul style="list-style-type: none"> <li>- Bays for temporary connections were discussed with the bidders as well as its philosophy: On the GIS side, the temporary protection scheme shall be included on the protection and control panel being supplied as part of the contract. The contractor can then consider modifying the protection scheme on the existing panel of the AIS if required. The Contractor shall determine the appropriate protection scheme to be applied. All SCADA shall be in the new substation. The temporary cables shall be removed afterwards.</li> </ul>
20.0	<p><a href="#"><u>Building &amp; Equipment Clearances</u></a></p> <ul style="list-style-type: none"> <li>- The bidder has to consider the minimum clearances mentioned between equipment to equipment, equipment to wall, as shown in the proposed Indicative layout to finalize the substation layout. Furthermore, such clearances also have been spelt out in the bidding document and are defined as minimum.</li> </ul>

	<ul style="list-style-type: none"> <li>- Statutory building clearances shall apply for all sites as per local regulations. Bidders have been requested to acquaint themselves with such regulation prior to the site layout design.</li> <li>- The bidder must adapt the layout according to the size of proposed equipment and not to limit themselves to what is shown on the drawing to improve the overall design.</li> </ul>
21.0	<p><a href="#"><u>LV AC Supply to Substations</u></a></p> <ul style="list-style-type: none"> <li>- For all sites, the proposed ratings of the two auxiliary transformers will be 100 kVA each. However, during design stage if higher rating of auxiliary transformers would be required, same shall be provided by the Employer. Standard ratings available with the Employer is 100 kVA, 150 kVA and 250 kVA.</li> <li>- The Control and Protection of the Auxiliary transformers shall be via load break switches &amp; fuses and the RMU shall be stand-alone (except for Belle Vue substation which is pole mounted). Integration with the SCADA is not required.</li> <li>- Attention of bidders were drawn on the fact that in case more than 100 kVA capacity transformers are required for Belle Vue s/stn, ground transformer bases shall be required as per drawing CEB-GIS-19-10 of Vol. 4.</li> </ul>
22.0	<p><a href="#"><u>Optical Cable Connection</u></a></p> <ul style="list-style-type: none"> <li>- There shall be direct Fiber Optic (FO) connections between relays of an interconnecting line. The Contractor shall lay the FO to be supplied by the Employer (except for the temporary interconnectors). The Employer shall also supply patch panels and terminate them at both ends.</li> <li>- The Bidder shall supply, lay, terminate &amp; connect FO from the patch panels to the respective relays and any other FO requirements within the substation compound.</li> </ul>
23.0	<p><a href="#"><u>Fire Fighting</u></a></p> <ul style="list-style-type: none"> <li>- Firefighting shall only be required in the buildings as spelt in Chapter 16 of Vol. 2.</li> </ul>
24.0	<p><a href="#"><u>Air Conditioning</u></a></p> <ul style="list-style-type: none"> <li>- Air conditioning shall be provided in the 66 kV &amp; 22 kV GIS building which includes GIS Room, SCADA Room and Relay Room as per section 16.16.3 of Volume 2.</li> <li>- Forced ventilation as per the bidder's design to be provided in cable galleries.</li> </ul>
25.0	<p><a href="#"><u>Building Design</u></a></p> <ul style="list-style-type: none"> <li>- The cable galleries shall be constructed above ground level complete with drainage in case of flooding with drainage pits at the low points</li> <li>- Cable trays shall not be positioned to prevent unrestricted access and hinder the walking path in the gallery.</li> </ul>
26.0	<p><a href="#"><u>Termination Works</u></a></p> <ul style="list-style-type: none"> <li>- For all 22 kV outgoing feeders, the Employer shall lay the cables up to the respective switchgear panel.</li> <li>- The bidder, shall supply the cable terminations, terminate on the panels and commission.</li> </ul>

27.0	<p><a href="#"><u>Cable Earth Link Box</u></a></p> <ul style="list-style-type: none"> <li>- It was confirmed that 3 phase cable earth link box with SVL shall be installed for each circuit near the base of the respective tower/pole for ease of access by the Employer. At the GIS end, the pfisterer termination or equivalent earth conductor shall be directly connected to the substation earth.</li> </ul>
28.0	<p><a href="#"><u>Automatic Tap Changer Control (ATCC) Panel</u></a></p> <ul style="list-style-type: none"> <li>- New ATCC (also commonly known as Remote tap changer control (RTCC)) panels shall be supplied, installed and commissioned for all retained and new transformers.</li> <li>- All tap changer panels being supplied shall be in a dedicated panel separate from the transformer protection and control panel.</li> <li>- Tap changers on the existing transformers shall not be replaced.</li> </ul>
29.0	<p><a href="#"><u>66 kV Protection &amp; Control Panels</u></a></p> <ul style="list-style-type: none"> <li>- The Protection and Control Panels (Control Cubicles) for each bay shall be located in a separate relay room as specified in Clause 7.2 and 11.1 66 kV Protection Panel Requirements.</li> <li>- The Bay Control Unit (BCU) shall be installed in the Protection and Control Panel (Control Cubicle) which will be located in the relay room (GIS Control Room).</li> <li>- As confirmed by the Employer, in addition to the Bay Control Unit, separate mimic representation with switches and LED semaphore shall be provided for each bay on its respective Protection and Control Panel as required per Volume 2.</li> </ul>
30.0	<p><a href="#"><u>Cable Ducts</u></a></p> <p>The design of the cable ducts shall be finalized with the Employer so as to optimize routing of the 22 kV outgoing feeders within the ducts used for other power cables by the bidder.</p>
31.0	<p><a href="#"><u>Language</u></a></p> <ul style="list-style-type: none"> <li>- The English Language shall be used at all times.</li> <li>- All drawings and documents to be in English</li> </ul>

## Notes Specific to Each Site

### Henrietta Substation *(visit carried out on 04 February 2020)*

Item	Matters Discussed/Clarified
1.0	<ul style="list-style-type: none"> <li>- The Employer clearly showed the allocated plot of land for the future 66/22 kV substation. The Bidders were reminded that they will have to make allowance for clearing the land presently covered with undergrowth.</li> <li>- The Employer will, before commencement of works, relocate the existing 22 kV feeders that cross the plot of land.</li> </ul>
2.0	<ul style="list-style-type: none"> <li>- The bidder shall design and construct the cable trench from the boundary wall of the new substation to the new 66 kV and 22 kV switchboards only. The routing within the new substation compound is to be finalised at the design stage. The entrance point of the 22 kV cables and 66 kV cables were shown.</li> <li>- All 22 kV outgoing feeder cables shall be laid by the Employer up to the 22 kV. For TX 1,2,3, BESS, Capacitor Banks and Tamarind cables, the Contractor shall determine the optimal route, lay the cables and perform terminations at both ends.</li> </ul>
3.0	<b>BESS</b> <ul style="list-style-type: none"> <li>- The two existing BESS containers will remain at their present location. The Contractor must install the necessary power, control and communication cables to connect the BESS to the new 22 kV GIS switchgear.</li> </ul>
4.0	<b>PV Farms</b> <ul style="list-style-type: none"> <li>- The existing communication panels shall be relocated and integrated on the overall communication/substation controller of the new system.</li> <li>- Bidders were also informed that they need to relocate the existing energy meters of the PV farm and cater for the CT &amp; VT supervisory cables from the GIS to the location of the meter to be decided later.</li> </ul>
5.0	<b>Capacitor Banks</b> <ul style="list-style-type: none"> <li>- All four capacitor bank &amp; control panels shall be relocated in the 22 kV substation building and commissioned.</li> </ul>
6.0	<b>Ring Main Unit</b> <ul style="list-style-type: none"> <li>- The two RMUs shall interconnect on respective outgoing feeders and an auxiliary transformer.</li> </ul>
7.0	Bidders were shown the existing 66 KV structures to be demolished and allow for its disposal. The foundations are not to be removed. As regards electrical equipment to be recovered, these shall be transported to the Employer's chosen location.
8.0	Three new power transformers are to be supplied. The two existing transformers shall be decommissioned and left at their present location.
9.0	The Contractor shall dispose of all used cables.
10.	All metal surfaces shall be fully galvanized and protected against corrosion as specified in Volume 2 of the Tender documents.

11.0	As per bidder's requirement, if any upgrading of the access road is required same should be carried out for the safe transportation of the equipment. No tarring is required but should be hard wearing.
12.0	Should additional laydown areas be required, the contractor to arrange with sugar Estate as spelt out in the bidding document.



**Chaumiere Substation** *(visit carried out on 05 February 2020)*

Item	Matters Discussed/Clarified
1.0	The Employer clearly showed the allocated plot of land for the future 66/22 kV substation. The Employer will clear the plot of land from existing equipment before the commencement of works.
2.0	<ul style="list-style-type: none"><li>- The bidder shall design and construct the cable trench from the boundary wall of the new substation to the new 22 kV switchboards only. The routing within the new substation compound is to be finalised at the design stage.</li><li>- The terminal towers and poles of the 66 kV circuits were shown.</li><li>- All 22 kV outgoing feeder cables shall be laid by the Employer up to the 22 kV switchgear following which the Contractor shall supply and install the terminations at the 22 kV GIS switchgear.</li><li>- For TX 1,2,3 and Capacitor Banks, the Contractor shall determine the optimal route, lay the cables and perform terminations at both ends.</li><li>- Bidders were informed of presence of a main sewer pipe on the proposed routing of 66 kV cables. Trial pits need to be done for exact location and depth.</li></ul>
3.0	<b>Capacitor Banks</b> <ul style="list-style-type: none"><li>- All capacitor banks &amp; its control panel shall be relocated in the new 22 kV substation.</li></ul>
4.0	<b>Ring Main Unit</b> <ul style="list-style-type: none"><li>- The two RMUs shall interconnect on respective outgoing feeders and an auxiliary transformer.</li></ul>
5.0	<b>Existing 22 kV Cables on site</b> <ul style="list-style-type: none"><li>- There are two existing 22 kV cables on site. The Contractor must perform trial pits to determine the exact position of the cables. It is to be noted that the Contractor will have to bear the cost of the repairs should his personnel damage the cables.</li></ul>
6.0	<b>66 kV overhead lines</b> <ul style="list-style-type: none"><li>- Overhead lines as an alternative to underground cables is NOT acceptable.</li></ul>
7.0	Bidders were shown the existing 66 KV structures to be demolished and allow for its disposal. The foundations are not to be removed. As regards electrical equipment to be recovered, these shall be transported to the Employer's chosen location.
8.0	<ul style="list-style-type: none"><li>- Bidders were also informed that they need to relocate the existing energy meters of the PV farm and cater for the CT &amp; VT supervisory cables from the GIS to the location of the meter to be decided later.</li><li>- The control, protection &amp; communication panel, of Sarako PV farm was shown to bidders. If need be, this panel may be relocated to the new GIS building and merge with the substation controller scheme.</li></ul>
9.0	The Contractor shall dispose of all used cables.
10.0	All metal surfaces shall be fully galvanized and protected against corrosion as specified in Volume 2 of the Tender documents.
11.0	One new power transformers to be supplied. The two existing transformers shall be relocated to the new positions.

12.0	As per bidder's requirement, if any upgrading of the access road is required same should be carried out for the safe transportation of the equipment. No tarring is required but should be hard wearing.
13.0	Additional laydown area in the substation is not available. Therefore, if the Contractor requires additional space, he must contact with the sugar estate for permission to use adjacent plot of land.

**Belle Vue Substation** *(visit carried out on 05 February 2020)*

Item	Matters Discussed/Clarified
1.0	<ul style="list-style-type: none"><li>- The Employer showed the allocated plot of land for the future 66/22 kV substation and the construction phases.</li><li>- The Bidders took note that the site is within a live substation. Consequently the Contractor will need to take extra precautions when working on the site. For instance, hoarding around the Air Insulated Switchgear (AIS) substation would be required to prevent access to the live area.</li><li>- The Employer will clear the land for the 66 kV GIS substation building before the commencement of works.</li><li>- The site for the 22 kV GIS substation building was shown to be part of the existing AIS substation. As described in detail in Vol.2 of the Bid documents, in Phase 2, the AIS will need to be dismantled before construction of the 22 kV GIS substation building can proceed.</li></ul>
2.0	<p data-bbox="310 789 444 821"><b><u>Site Layout</u></b></p> <ul style="list-style-type: none"><li>- All the 66 kV lines were shown to the Bidders. All 66 kV incoming network shall be via cables.</li><li>- The existing two transformers to be retained were shown to the Bidders. It was explained that TX1 will need to be rotated on its present base so that the 66 kV cables can be easily routed through the new trench.</li><li>- The existing foundation where TX 2 will be relocated was shown.</li><li>- For both existing bases of TX 1 and TX 2 as well as for the new base of TX 3, new transformer bunds shall be designed and constructed. The bunds shall be connected, through a flame trap, to an oil pit sized to hold the full oil volume of one transformer.</li><li>- A new fire wall is required to be designed and constructed for the new TX 3.</li><li>- Due constraint of space, the Contractor will have to negotiate with Sugar Estate to secure the necessary laydown area outside the substation.</li><li>- As the substation is operational, the Contractor shall ensure that he does not impede access to areas other than the construction site where the Employer may need to intervene.</li><li>- Towards the end of Phase 2, the two gates situated at the back of the substation will need to be removed and replaced by block works to produce one continuous boundary wall.</li><li>- The attention of the Bidders was drawn to the presence of 22 kV underground cables running in the site for the 66 kV GIS building. The Contractor to allow in its scope of works, for the civil works and laying of cables for temporary relocation of these cables at the back of the 66 kV GIS building. Jointing works shall be carried out by the Employer.</li></ul>

# **ANNEX 1**

## **Pre-Bid Queries**

Sr.No	Section/ Clause/ Drawing Number	Bidder's Question	Employer's Reply
<b>General</b>			
1	Vol - 2	Query 01: Please provide the drawing for existing earth mat for all the existing substations (Henrietta, Chaumiere, Belle Vue).	This shall be provided to the successful contractor. Note : both new and existing earth mats are to be linked at minimum two points.
2	Ref 01: Drawing no. CEB/GIS-19/4	Query 01: As per ref 01, we understood that 2 nos. 110V battery and battery charger are required for each substation. Please confirm.	2 nos. 110V battery charger and one set of 110 V DC battery are required for each substation which shall be installed in the 66 kV GIS building. Secondary distribution boards are to be provided in the 22 kV GIS building. Please refer to clauses 13.8 & 13.9 of Vol. 2.
3	Vol - 2	Query 01: Please confirm that the existing cable trench can be used or we need to build new cable trench for interconnector scope in the existing AIS substation.	Existing cable trench may be used subject to availability of space.
4	Ref 01: Vol-2, Cl. No. 7.3.1.1, page 108 Ref 02: Vol-2, Cl. No. 10.1, page 142	Query 01: As per ref 01, 66kV short time withstand current is mentioned as 40kA for 1 sec for GIS, but in ref 02, short circuit fault current is given as 31.5kA for 1 sec for 66kV cable. Please reconfirm the same.	Yes, this is reconfirmed.
5	Vol - 2	Query 01: Please provide the specification for communication and Optical fibre cable. Query 02: Please provide the installation details of optical fibre cable.	Please refer to clauses 12.12 & 14.7.2 of Vol. 2
6	Vol - 2	Query 01: Please provide the specification for Low voltage power and control cable. Query 02: Please provide the specification for NERs.	Please refer to Vol. 2 clauses 9.6 for NER specifications and 14.7.1 for LV cables.

7	Ref 01: Vol-2, Cl. No. 12.5, page 208	Query 01: As per ref 01, it is mentioned as "Parallel redundancy protocol (PRP) to be implemented on the Ethernet networks". As per the statement, is PRP to be implemented for complete substation automation system? And PRP ports required at IEDs. Please confirm.	Please refer to drawing CEB-GIS-19-3 of Vol. 4
8	Ref 01: Vol-2, Cl. No. 12.10.3, page 210	<p>Query 01: As per ref 01, We understood that multiplexer for communication with the System Control Centre in Curepipe will be supplied by the Employer (CEB) and the make of the same is GE. Please confirm.</p> <p>Query 02: Also Please confirm that how to implement the communication of tele protection signals between the new substations in present scope and the remote end substations. Details of the same are not mentioned in specification. Is the multiplexer supplied by employer (CEB) suitable for the same. Please confirm.</p> <p>Query 03: Also please confirm the details/scope of supply of multiplexer/telecommunication equipment at remote end substation. We understood that the same are not required for present scope of works. Please confirm.</p> <p>Query 04: Please furnish the detailed telecommunication/tele protection equipment scope and specification.</p> <p>Query 05: We understood that multiplexer equipment at System Control Centre in Curepipe is suitable for integration of the substation under present scope. Please confirm.</p>	<p>Yes.</p> <p>All relay communication between far end substation is direct relay - relay via optical cable.</p> <p>Yes, except for the IPP end at Belle Vue where new control panels with communication are to be supplied in this Contract.</p> <p>Please refer to chapter 12 of Vol. 2</p> <p>Yes</p>
9	Ref 01: Vol-2, Cl. No. 12.10.3, page 210	Query 01: As per ref 01, it is mentioned that "The communication cabinet shall be supplied and installed by the contractor". Please provide the detailed specification for the referred communication cabinet.	Already spelt out in clause 12.7 of Vol. 2
10	Ref 01: Drawing no. Single line diagram of 66kV Feeder circuit protection CEB/GIS-19/1a	Query 01: As per ref 01, fibre optic cables/patch cards (2 FIBRE DIFF (1 FIBRE Z) as per Ref 01) are going from main protection relay to patch panel. We understood that teleprotection signals are communicating between the local and remote end relays are with direct fibre connection through patch panel. Separate tele protection/telecommunication/multiplexer equipment are not required for this communication. Please confirm.	Yes

11	Vol - 4	Query 01: Please provide the existing AIS substation general arrangement drawing, cable trench drawing and building drawings by indicating the dimension in details.	Drawings of existing substations have been provided in Vol. 4.
12	Ref 01: Vol-2, Cl. No. 4.3.2, page 72 Ref 01: Vol-2, Cl. No. 5.3.2, page 85	Query 01: In ref 01 & 02, It is mentioned as "Already being catered in Chaumiere substation as per Section 5 & Already being catered in Henrietta substation as per Section 4.. Please elaborate the requirement.	The tower lines are interconnectors between Chaumiere and Henrietta s/stns. Since both substations are being replaced in this contract, thus at both ends the control panels are to be supplied by the bidder.
13	General	Please confirm the type of connection to be considered for substation equipment to the main grid and also for main grid connections.	Bidders need to propose such type of connections subject to the approval of the Engineer.
14		Telecommunication / Tele protection equipments / Multiplexer are not in present scope of work, please confirm.	Please refer to chapter 12 of Vol. 2
15	General	Please provide the details of creepage distance for Henrietta, Chaumiere and Belle Vue substations.	Please refer to the specifications of each equipment specified in Vol. 2
16	General	Query 01: The requirement of 22kV surge arrester is not mentioned in drawings & specification. Please clarify the requirement of transformer LV side surge arrester and outgoing feeder arresters. Query 02: If 22kV surge arresters are required, please confirm the location.	22 kV surge arrestors are not to be supplied in this contract.
17	Volume 3 cl 2.1.1 (7) Volume 2 Cl: 5.2.2 & 6.2.2.	Query 01: As per ref 01, Please elaborate the scope of works on retained transformer as mentioned below. "For retained transformers, to provide new tap changer and control complete". Query 02: As per ref 02, only ATCC panels are to be supplied, installed and commissioned. Please confirm. Query 03: As per ref 02, ATCC means Automatic tap changer control ?, Please confirm.	Please refer to item 28 of General Notes above.

18	4 Scope of Works Henrietta; Pg. 70	<p><b>As per Specification:</b> For the PV bay, the main relay shall be of type SEL 411L to match the far end relay and for the Case Noyale bay, it should be SEL 311L to match the far end relay.</p> <p><b>Query:</b> Request you to share the complete ordering code of SEL 411L and SEL 311L including firmware version. This information is requested by existing OEMs for offering the matching end relay. Please provide.</p>	The relay codes shall be provided to the successful bidder upon award of Contract.
19	5 Scope of Works – Chaumiere; Pg. 83	<p><b>As per Specification:</b> For the PV Sarako &amp; La Tour Koenig (LTK) bays, the main relay shall be of type SEL 311L to match the far end relay and for the St. Louis bay it should be Siemens 7SL82 to match the far end relay.</p> <p><b>Query:</b> Request you to share the complete ordering code of SEL 311L and 7SL82 including firmware version. This information is requested by existing OEMs for offering the matching end relay. Please provide.</p>	The relay codes shall be provided to the successful bidder upon award of Contract.
20	5 Scope of Works – Chaumiere; Pg. 90; Clause 5.3.4	<p><b>As per Specification:</b> The PV Sarako communication scheme shall be integrated on the substation controller. Details of the PV communication shall be provided during the implementation phase.</p> <p><b>Query:</b> We understand that Communication Equipment is already existing and only relocation of Communication Panel is in the present scope. Supply of new Communication Panel / Equipment is not part of present scope of supply. Please confirm whether our understanding is correct or not.</p>	Please refer to item 8 of Chaumiere site minutes above.
21	6 Scope of Works – Belle Vue; Pg. 96	<p><b>As per Specification:</b> For the Jinfei bay, the main relay shall be of type SEL 311L to match the far end relay and for Sottise 1 &amp; 2 bays, the main relay shall be of type ABB RED 670 to match the far end relay.</p> <p><b>Query:</b> Request you to share the complete ordering code of SEL 311L and RED670 including firmware version. This information is requested by existing OEMs for offering the matching end relay. Please provide.</p>	The relay codes shall be provided to the successful bidder upon award of Contract.
22	14 Protection; Pg. 156; Clause: 11.1.5	<p><b>As per Specification:</b> All instrument transformer wiring and supply wiring shall be of at least 4 mm<sup>2</sup> in cross-section. All other wiring shall be of at least 2.5 mm<sup>2</sup> in cross-section.</p> <p><b>Query:</b> We request you to accept for below wiring size, which is as per our manufacturing standard, meets system requirement and also accepted in all major utilities including</p>	This shall be subject to the approval of the Engineer during design stage.

		<p>CEB in previous projects.  CT Wiring: 2.5 Sq mm  PT Wiring: 1.5 Sq mm  DC &amp; Control Wiring: 1.5 Sq mm</p>	
23	14 Protection; Pg. 157; Clause: 11.2.1	<p><b>As per Specification:</b> The IEDs shall be interconnected via a separate Engineering Network that will allow interrogation and programming of all IEDs by an external computer when connected to the network. The Contractor shall make provision for an Engineering LAN port connection (RJ45) on the front of all protection panels. All details of the interfaces, including hardware, software, database, and protocol details shall be made available to Central Electricity Board so as to allow the equipment to be interfaced as required.</p> <p><b>Query:</b> Please note that Numerical relays are accessible simultaneously from both SAS and Engineering workstation using same LAN. Hence there is no requirement of dedicated LAN for Engineering and SCADA interface. Front port of numerical relays will be used only for local relay parameterization. This is the standard practice followed by all customers, where IEC61850 solution is offered. We request you to accept the same.</p>	Bidders are to adhere to the requirements as spelt out in the specifications.
24	14 Protection; Pg. 186; Clause: 11.6.2	<p><b>As per Specification:</b> two-zone low-impedance phase-segregated distributed numerical bus protection scheme shall be supplied and installed at each 66 kV GIS substation. The required protection devices shall each be equipped a USB and 100 Base/T Ethernet port (RJ 45) communication interface for local interrogation and connected to the 61850 network via switches for communication with the substation controllers.</p> <p>The busbar protection scheme shall utilise relays which include internal check-zone facilities as well as station over-current functionality.</p> <p>The master protection unit shall preferably a Siemens type 7SS52 or equivalent make with equivalent functionality.</p> <p><b>Query:</b> Specification calls for Decentralized type Busbar Protection. Please note that since all the control and relay panels are located in a centralized control room, it is</p>	Bidders are to adhere to the requirements as spelt out in the specifications.



		<p>recommended to offer Centralized bus bar protection. This is also the standard practice followed for GIS Substations. Centralized type Bus Bar Protection is already accepted in CEB for previous projects.</p> <p>We request you to also accept for Centralized type numerical bus protection for this project.</p>	
25	14 Protection; Pg. 200; Clause: 11.8	<p><b>As per Specification:</b> 66 kV Energy Meters</p> <p>The Contractor shall make provision for the relocation of existing energy meters (main, backup &amp; check meters) for PV farm at Henrietta substation; PV Sarako at Chaumiere substation and CTBV 1 &amp; 2 at Belle Vue substation.</p> <p><b>Query:</b> We understand that existing Energy Meters needs to be relocated and to be monuted on Feeder Control and Relay Panels being supplied under present scope. We understand that supply of Energy Meters are not part of present scope of supply. Please confirm whether our understanding is correct or not.</p>	<p>Energy meters are not in the scope of supply. The Employer shall relocate the existing energy meters and install in a meter box on the outside wall of the building. The bidder's scope of works has been defined in clause 11.8 of vol. 2</p>
26	15 Substation Control and Communication System; Pg. 207; Clause : 12.1	<p><b>As per Specification:</b> Each LAN shall consist of Ethernet switches, including one for the 61850 network and one for the Engineering network in each switchgear bay, interconnected in ring configurations via fibre optic cabling.</p> <p><b>Query:</b> Please note that Numerical relays are accessible simultaneously from both SAS and Engineering workstation using same LAN. Hence there is no requirement of dedicated LAN for Engineering and SCADA interface. Front port of numerical relays will be used only for local relay parameterization. This is the standard practice followed by all customers, where IEC61850 solution is offered. We request you to accept the same.</p>	<p>Bidders are to adhere to the requirements as spelt out in the specifications.</p>
27	15 Substation Control and Communication System; Pg. 207; Clause : 12.1	<p><b>As per Specification:</b> The Contractor shall be responsible for the complete supply, installation and testing of the control and communications systems in the substations. This shall include all interoperability tests between the substation control and the central control at Curepipe in conjunction with the Employer. The modifications to the EMS and SCADA at Curepipe shall be done by GE Alstom. GE Alstom shall be the nominated subcontractor for all required works to prove interoperability and perform programming of multiplexers</p>	<p>Bidders are to adhere to the requirements as spelt out in the specifications.</p>

		<p>and other SCADA equipment forming part of this contract scope of works. GE Alstom shall be present at the FAT of the communication system.</p> <p><b>Query:</b> We request you to limit the scope of works under this contract to only necessary support for integration of substation data with EMS SCADA at Curepipe. i.e., providing necessary support for point to point testing at Gateways located in the respective GIS substations. Modification / engineering works / Integration / upgradation works in EMS SCADA at Curepipe will be taken up by CEB directly with GE Alstom. This is required to facilitate all the bidders with same level playing ground. Please also note, this is the same modality being followed by all the utility customers.</p>	
28	15 Substation Control and Communication System; Pg. 207; Clause : 12.3	<p><b>As per Specification:</b> Each Ethernet switch shall be provided with sufficient I/O ports for connection of all IED's associated with the relevant switchgear bay, in star configuration using 10/100/1000 BASE-T copper cabling, and shall be installed in the same panel as the relevant bay IED's. Connection into the 61850 LAN and Engineering rings shall be by means of rugged Fibre Optic cable. The Ethernet switches shall be of the rugged type. Parallel redundancy protocol shall be implemented on all networks.</p> <p><b>Query:</b> Ethernet Switches with 10/100Mbps bandwidth shall suffice the requirement for this application, all the numerical relays are also supported only with 10/100Mbps interface. Request you accept the ethernet switches with 10/100Mbps.</p>	Bidders are to adhere to the requirements as spelt out in the specifications.
29	15 Substation Control and Communication System; Pg. 207; Clause : 12.3	<p><b>As per Specification:</b> Each Ethernet switch shall be provided with sufficient I/O ports for connection of all IEDs associated with the relevant switchgear bay, in star configuration using 10/100/1000 BASE-T copper cabling, and shall be installed in the same panel as the relevant bay IEDs.</p> <p><b>Query:</b> Since all the control and relay panels will be located in a centralized control room, We propose to offer One number Ethernet switch for every two bays of 66kV and one number Ethernet switch for every four bays of 22kV system. Please confirm your acceptance for the same.</p>	Bidders are to adhere to the requirements as spelt out in the specifications.

30	15 Substation Control and Communication System; Pg. 209; Clause : 12.9	<p><b>As per Specification:</b> A GPS Clock with IRIG-B time coded output shall be provided for synchronising the internal clocks of the system elements via an NTP server as required. The Contractor shall provide a spare GPS clock as part of this contract.</p> <p><b>Query:</b> We recommend to use SNTP for Time synchronization of numerical relays as per IEC61850 standard.</p>	Bidders are to adhere to the requirements as spelt out in the specifications.
31	15 Substation Control and Communication System; Pg. 211; Clause : 12.10.3	<p><b>As per Specification:</b> All required software and four (4) licences for the Substation Controller shall be made available to the Employer</p> <p><b>Query:</b> Please clarify on the requirement of four (4) license for the Substation Controller mentioned in this clause.</p>	Bidders are to adhere to the requirements as spelt out in the specifications.
32	Volume 2 cl . 9 cl 9.2.9	As per specification OLTC is Maschinenfabrik Reinhausen (MR) Germany or equivalent. Please confirm, if any other reputable make shall be accepted. We understand that in many past projects, other make OLTC are supplied and are working satisfactory. Kindly confirm.	Other makes are acceptable provided it is equivalent to Maschinenfabrik Reinhausen (MR) Germany and meets the requirements as spelt out in the bidding document
33	Volume 2 cl 4.2.1,5.2.1, 6.2.1 cl 9.2.20.1	Impedance requirement is not mentioned in these clauses however as per cl 9.1 it is at least 12.5% -Please clarify with base MVA	The base MVA is 45.
34	Volume 2 cl . 9 cl 9.2.1	As per spec" Full details of the transformers shall be finalized by the Contractor at detailed design stage" – Request you to give complete transformer details during this stage.	Please refer to chapter 9
35	Volume 2 cl 9.2.7	Please clarify the specification requirements " Normally receipt of the cooler fan fail or supply monitoring relay alarm will result in the capability of the transformer being assumed to be the ONAN rating. Receipt of the cooler monitor faulty or WTI faulty alarm will result in an engineer being sent to investigate the cause, but the transformer will normally be assumed to retain its specified ONAF rating."	Differentiation is being made here between the cooling system and the monitoring of the operation of the cooling system. If a failure of the cooling system is detected, the transformer will be assumed to be at ONAN rating. On the other hand, if a failure of the cooling monitoring system is detected, the transformer will be assumed to retain its ONAF rating.
36	Volume 2 cl 9.2.12	Following features are not available in OLTC Monitoring system "A tap-changer monitoring system capable of detecting slow operation, increased mechanical resistance (increased motor torque), high temperature in the diverter	It is the responsibility of the Contractor to meet the required specifications.

		<p>switch and drive shaft failure shall be provided. The operation (position and timing) of the diverter shall be monitored by auxiliary switches in the diverter or other means.”.</p> <p>The above mentioned features is not available with the OLTC (MR Germany) , Please provide the make and model complying the above mentioned requirement.</p>	
37	Volume 2 cl 9.2.13	OLTC DM Box shall be of Aluminium against mentioned cast Al. and Marshalling box shall be of Aluminium /SS against mentioned Cast Al. Please confirm.	Bidders are to adhere to the requirements as spelt out in the specifications.
38	Volume 2 cl 9.2.13	As Regulating current measured shall be part of AVR so, it shall be provided in RTCC (if required). It shall not be part of OLTC DM box. Please confirm.	This shall depend on the proposed design.
39	Volume 2 cl 9.2.10	OLTC shall be part main tank only however divertor oil shall be separate from the tank oil. Please confirm.	The OLTC/divertor shall be separate from the main oil tank
40	Clause 12.6 Engineering Access Vol. 2 Pg 208	<p>A separate Engineering network is required for the new 22kV protection and 66kV protection as per the protection and comms diagram, drawing number MMSA- 385657-E-DR-3711-0015, and should be fiber Optic networks (FcPc Single mode) and the Router / Gateway connections should facilitate these requirements (SC type connectors).</p> <p>Noted. We understand that engineering access for IED’s are provided in the panel front side which is part of the ethernet network switch – Please confirm</p>	<p>Please note that this drawing has not been provided in the bidding document. Please refer to drawing CEB-GIS-19-3.</p> <p>Access for IEDs provided on the panel front side is for local Engineering Access. However, remote engineering access shall also be provided as spelt out in clause 12.6 of Vol 2 .</p>
41	Clause 11.2.6 Temporary Protection Vol 2 Pg 162	Upon completion of changeover to the new 66kV GIS and disconnection of the temporary interconnectors, the protection relays shall become the property of the Employer We assume that after the complete transfer of the existing substation to the new substation, the protection panels for the interconnector circuits shall be left in place as they are	Bidders are reminded that existing protection relays/control panel may be utilized as deemed appropriate on the AIS side. However, if additional relays are being required depending on your design, no dismantling is required.

		and no dismantling works shall be done to these. Please confirm that this is acceptable.	On the GIS side, control & protection panels being supplied as part of the contract, shall be used for temporary interconnection.
42	Cl. No. 6.3.3 Automatic Control Vol. 2 Pg 102	New ATCC panel/scheme required for all three transformers. We understand that new Automatic Tap Changer Control panels are to be provided for all existing transformers that are to be used in the new substations. We kindly request that you provide the existing transformer drawings	This shall be provided to the successful bidder.
43	Clause 12.5 Router/Gateway Vol 2 Pg 208	Parallel redundancy protocol (PRP) to be implemented on the Ethernet networks. We understand as per the specification PRP to be implemented on the Ethernet networks. However, drawing 7. CEB-GIS- 19-3 SUBSTATION PROT. & COMMS seems not to depict PRP.  Please confirm that PRP is to be implemented	Yes, PRP is to be implemented.
44	Cl. No. 1.3 Climate Vol 2 Pg 3	There is no history of seismic activity in the area. What shall be the Earthquake Zone/parameters to be considered for Civil design ? Alternatively, shall earthquake forces be ignored for design ?	Yes, earthquake forces are to be ignored for design.
45	Cl. No. 16.8.12.5 Concrete Composition and Strength Vol 2 Pg 66	Concrete( excluding mass concrete and blinding ) shall have a characteristic cube strength of at least 32N/mm <sup>2</sup>  Kindly define the minimum grade of concrete (C-25 or C-30) as per BS EN 206.	The minimum cube strength shall be 32N/mm <sup>2</sup> as per 16.8.12.5 of Volume 2.
46	Cl. No. 16.2.5 Crane Vol 2 Pg 242 Crane	Kindly confirm, if maintenance Walkways is mandatory required along the Long Travel girder of crane in GIS hall on both sides?	Maintenance walkways along the girder of the crane in GIS hall is <b>not</b> mandatory.
47	Cl. No. 4.4.14 Site Services Vol. 2 Pg 79 Site Services -	The Contractor shall be responsible for arranging the connection to the public water supply and all installation works shall for part of this Contract.  Kindly provide an approximate distance, if known, between the substation and the nearest Public water Supply point for all three substations.	Please refer to General Notes - Item 17 of the site notes.  On handover, the meter for permanent application shall be transferred to the Employer.
48	Cl. No. 16.4.6 Design Loads Vol 2 Pg. 255	3. Wind Load - Design for wind loading shall be in accordance with BS EN 1991, using a three-second wind speed of 280km/h.	Given the island is cyclone-prone, the requirement of wind loading using a 3-second gust of 280 km/h is maintained.

		<p>As per BS EN 1991, basic wind speed is calculated as 10 minute characteristic wind velocity.</p> <p>Kindly provide the conversion formula/factor to change the 3 second wind speed to 10 minute characteristic velocity; or provide the basic wind speed to be followed as per BS EN 1911.</p>	The Contractor shall do necessary conversion to 10- minute characteristic, if required, based on accepted standards
49	Cl. No. 16.1.5 Foundation Vol. 2 Pg 239	It is anticipated that major plant and buildings, will be reinforced concrete ground bearing or piled foundations. Upon studying the soil reports, it is our belief that reinforced concrete foundations shall suffice.	This should be substantiated by appropriate design calculations to be approved by the Engineer.
50	Cl. No. 4.3.2. Remote End substation protection Vol 2 Pg 75	<p>1. Case Noyale 66kV Substation 2.Combo 66kV Substation 3.PV 66kV Substation (Private)</p> <p>We understand there is no substation controller installed in these remote substations , since no integration is envisaged with controller, all SCADA signals and alarms will be provided in a dry type terminal in panels and CEB will be responsible for connection and integration to RTU</p>	Yes
50	Cl. No. 4.3.2. Remote End substation protection Vol. 2 Pg. 75	<p>1. Case Noyale 66kV Substation 2.Combo 66kV Substation 3.PV 66kV Substation (Private)</p> <p>We understand there is no busbar integration envisaged for the panel replacement done in this substations. If applicable please share existing busbar protection make and model</p>	Yes.
51	Cl. No. 4.3.2. Remote End substation protection Vol 2 Pg75 Substation Control: Additional Information:	<p>The BESS system as well as the PV farm communication panel shall also be integrated on the substation controller. Details of the BESS shall be provided during the implementation phase.</p> <p>Please clarify the communication scheme and integration to substation controller at Henrietta SS</p>	The existing communication panels were shown and explained during the site visit. Further, details shall be provided during implementation phase.
52	Section 2: Item 3.1 1 Pg 40	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the cash flow requirements estimated as USD 10 Million (Equivalent	Any one of the evidence stated would suffice.

		<p>to MUR 370 Million) for the subject contract(s) net of the Bidder's other commitments.</p> <p>Documentary evidence may comprise but not limited to :</p> <ol style="list-style-type: none"> <li>1) Bank Certificate</li> <li>2) Certificate from Auditors</li> <li>3) Certificate from a Professional Registered Accountant</li> </ol> <p>Kindly confirm if bidder can provide any one of the documentary evidence stated or all three are required.</p>	
53	<p>Section 2c: (C) Assessment of Adequacy of Technical Proposal as per Requirements Vol.1 Pg46</p>	<p>Sales of Indoor GIS Switchgear of 66 kV class or higher voltage for last 5 years - Above 2000 bays</p> <p>Sales of Power transformers of 66 kV or higher voltage and of minimum capacity of 45 MVA for last 5 years - Above 200 units</p> <p>Sales of Indoor GIS switchgear of 22 kV up to 36 kV for last 5 years - Above 750 panels</p> <p>Please confirm the requested number of bays/units per individual equipment has to be from the same manufacturing unit from where we propose to supply the equipment for this project or global experience of manufacturer (irrespective of supplying factory) will be considered for evaluation</p>	<p>The requested number of bays/units per individual equipment has to be from the same manufacturing unit from where we propose to supply the equipment for this project.</p>
54	<p>Section 2 : Eligibility and Qualification criteria Vol.1 Pg 45</p>	<p>The Bidder must demonstrate from its proposed Suppliers Sales records that meets the following requirements:</p> <ol style="list-style-type: none"> <li>1. 66 kV GIS Switchgear- 500 units of indoor GIS Switchgear bays of 66 kV class or higher voltage</li> <li>2. Power Transformers - 50 units Power transformers of 66 kV or higher voltage and of minimum capacity of 45 MVA</li> <li>3. 22 kV GIS Switchgear - 250 units of indoor GIS switchgear panels of 22 kV up to 36 kV</li> </ol> <p>Bidders shall submit the suppliers' sales records for the last five years.</p>	<p>Export records are to be provided to confirm the sales.</p>

		Kindly confirm if sales records required is split between export and import or for exports only. In addition kindly confirm the minimum number of export references required	
55	Commercial	Kindly confirm that decennial liability insurance is not required on this project	Please refer to requirements as spelt out in FIDIC
56	Commercial Section 1: Cl 39.2 Vol. 1	Kindly confirm the required incoterm for the project	Refer to clause 1.1 of Vol. 3
<b>Henrietta Substation</b>			
57	Ref 01: Vol-2, Cl. No. 7.3.1.8, page 114	Query 01: As per the ref 01, VT protection class mentioned as 3MP. We understood that the same shall be read as CL 3P. Please confirm.	Yes
58	Ref 01: Vol-2, Cl. No. 4.1.4, page 70 Ref 02: Vol-2, Cl. No. 8.3.8, page 121	Query 01: There is a contradiction in 22kV Transformer VT rating. As per ref 01, VT rating for core 2 is mentioned as 50VA, CL 3P( AVR/protection), and the same is mentioned as 50VA, CL 0.2 (AVR) in ref 02. We presume that the details in ref 01 is correct. Please confirm.	Yes, details given in clause 4.1.4 are the correct one.
59	Ref 01: CPB842019 CEB Geotechnical Report GIS Substation at Henrietta, page 8 Ref 02: Drawing no. CEB/GIS-19/22	Query 01: As per ref 01, altitude level is mentioned as 488m, but in ref 02, the same is given as <1050masl. Please confirm the exact altitude.	All sites are less than 500 m altitude.
60	Ref 01: Vol-2, Cl. No. 1.3, page 3 Ref 02: Drawing no. CEB/GIS-19/22	Query 01: As per ref 01, minimum temperature is mentioned as -5 (indoor) and -10 (outdoor), but in ref 02, it is given as 0 to +40 (indoor) and -5.6 to +40 (outdoor). Please confirm the exact temperature.	Indoor : -05 to + 40 deg. C Outdoor : -10 to + 40 deg. C
61	Ref 01: Drawing no. CEB/GIS-19/25	Query 01: Please provide the details of existing BESS arrangement.	This was shown during site visit.



62	Ref 01: Vol-2, Cl. No. 4, page 70	Query 01: Please provide the make name of existing communication panel of 66kV PV farm and existing communication panel of 22 kV PV CEB Green. Also please confirm that for which purpose the relocated communication panel to be used.	These communication panels were shown to bidders during the site visit. The relocation of these panels are required to maintain the communication with the PV farms.
63	Ref 01: Vol-2, Cl. No. 4.3.2, page 75 Ref 01: Drawing no. CEB/GIS-19/22	Query 01: Please provide the details of remote end substation protection for Wind farm feeder.	This is outside the scope of this contract
64	Ref 01: Vol-2, Cl. No. 4.1.3 page 69	Query 01: In ref 01, The requirement of 66kV surge arrester for Wind farm feeder is not mentioned, please confirm the requirement.	This is outside the scope of this contract
64	Ref 01: Vol-2, Cl. No. 4.3.5 page 73	Query 01: As per ref 01, It is understood that auxiliary transformer and RMU is supplied by employer. Please provide the KVA rating of transformer and current rating of RMU for our consideration.	Please refer to clause 21 of General Notes above.
66	Ref 01: Vol-2, Cl. No. 4.4.9 page 75	Query 01: As per ref 01, It is mentioned that employer shall supply and install all concrete pole structures with facilities for terminating cables on all 66kV feeder circuits by contractor, Pl. provide the location of concrete pole structure for each feeder.	This has been shown during site visit
67	Ref 01: Vol-2, Cl. No. 4.5,1 page 76 Ref 02: Drawing no. CEB/GIS-19/23a	Query 01: As per ref 01, In special requirement it is mentioned to provide 66kV cable for Case Noyale, Chaumiere 1 & 2, Combo 1 feeders. Please clarify the scope of supply is by contractor or by employer.  Query 02: If the 66kV cables need to be supplied by contractor, please indicate the distance between respective new H-pole support structure of above mentioned feeders from proposed GIS building.	The scope of supply of all 66 kV cables as per specification spelt out in the bidding document is upon the Contractor. Bidders were requested to take all measurements during site visit.
68	Ref 01: Vol-2, Cl. No. 4.5,1 page 76 Ref 02: Vol-2, Cl. No. 4.5,2 page 77	Query 01: As per ref 01 & 02, For 66kV PV Farm feeder "It is mentioned to provide straight joint and extend the existing cable". Please provide the details indicating where straight joint need to be provided and also confirm the distance between straight joint and proposed 66kV GIS feeder.	Contractor shall determine appropriate location of the joint depending of site conditions.

69	Ref 01: Vol-2, Cl. No. 4.5,1 page 77	<p>Query 01: As per ref 01 , Please provide the electrical layout for BESS and also provide the distance between BESS and proposed 22kV switchgear.</p> <p>Query 02: As per ref 02, Please confirm the location of mentioned step up transformer in AIS compound for Tamarind feeder and also provide the distance between step-up transformer and 22kV switchgear.</p> <p>Query 03 : Please provide the existing AIS general arrangement drawing, indicate the details of Tamarind feeder.</p>	Bidders were requested to take all required measurements during the site visit.
70	Ref 01: Vol-2, Cl. No. 4.5,1 page 77	Query 01: As per ref 01, 66kV cable details for 66kV Combo 2 & Wind farm feeder is missing, Please confirm supply is under contractor scope. If supply is under contractor PI. provide the distance of cable feeder and also confirm scope of supply of support structure.	Supply of 66 kV cable for Combo 2 & Wind Farm feeders, are outside the scope of this contract
71	Ref 01: Vol-2, Cl. No. 4.5,1 page 77	Query 01: As per ref 01, Please provide the distance between existing Case Noyale and Chaumiere 2 feeder bays to Spare 1 & 2 bays of 66kV GIS switchgear for considering the temporary interconnection of AIS and GIS substation.	Bidders were requested to take all required measurements during the site visit.
72	Ref 01: Vol-2, Cl. No. 4.4,10 page 75 Ref 02: Vol-2, Cl. No. 4.5,3 page 78	Query 01: There is contradiction in 66kV cable laying procedure, As per ref 01 it is mentioned outside substation boundary 66kV circuits shall be installed in PVC duct layed in trenches whereas in ref 02, it is mentioned outside substation compound HV cable shall be directly buried. Please clarify the exact requirement.	Depending on the site condition and routing of the cables, the method of laying shall be finalised at implementation stage.
73	Ref 01: Vol-2, Scope of work, Cl. No. 4, page 67	Query 01: Please elaborate the requirement mentioned i.e., "Provision must also be made for the protection panels at the far end substations namely one protection panel each for Combo 1 & 2" in ref 01.	One panel for Combo 1 feeder and another panel for Combo 2 feeder to be installed at the far end substation.
74	Cl. No. 4.1, General Vol 2 Pg70.	We presume that the control & protection panel of existing bays that are to be used as interconnector bays can be kept in use during the transfer from AIS to GIS. Hence we considering temporary protections only for GIS End Spare bays. Please confirm is this is OK	Please refer to reply no. 41 above

75	Cl. No. 4.3.5, Common equipment's Vol 2 Pg 76	<p>Additional Information - 2x 22/0.415kV Auxiliary transformers &amp; 2 x 22 kV RMU's to be supplied 'free issue' by the Employer and to be installed and commissioned by the Contractor.</p> <p>We assume that the necessary Protections &amp; control for the free issued RMUs will be provided together with the RMUs by The Employer. Please confirm whether these protection and control shall be standalone or will they need integrating into the SCADA</p>	They shall be stand alone.
76	Cl. No.4.4.9 Foundations & Support Structures Vol 2 Pg 78	<p>Assessment of structural strength of existing towers and detailed design of any strengthening including structural calculations shall be provided by the Contractor.</p> <p>We kindly request that the employer provide the Existing Tower Structural Design, calculation to access the strengthening for mounting of Cable Sealing end &amp; Surge arrester on Tower arm and support required for cables climb on Tower.</p>	This shall be provided at implementation stage.
77	Cl. No. 4.4.1 Earthworks/Ena bling Works Vol. 2 Pg 77	<p>The existing 66 kV AIS Substation will require complete decommissioning.</p> <p>With exception to the existing overhead line tower, we assume that the new substation area is void of any foundations/facilities previously installed. Please confirm that our understanding is correct.</p>	Bidders had the opportunity to take cognizance of the site conditions during the site visit.
78	Cl. No. 4.4.2 Drainage Vol. 2 Pg 77	<p>A new site drainage system is to be installed with run-off to a soak away pit.</p> <p>We assume that new drainage is only to be installed in the new substation area and no additional drainage is to be installed in the existing area. Could you please clarify if the new drainage is to be connected to that of the existing site or a new direct connection is to be made to another system? Could we please request that you provide the maximum rainfall intensity for this area and also the existing Drainage network drawing and design</p>	<p>Yes, drainage system is to be provided in the new substation area and shall not be connected to the existing system.</p> <p>Maximum rainfall intensity for this area can be obtained from the Mauritius Meteorological Services.</p>

79	Cl. No. 4.4.12 Lighting Vol. 2 Pg 79	Lighting shall be provided for the new 66 kV GIS substation building, power transformer area and the new 22 kV switchgear building. External lighting shall be provided for access with acceptable Lux levels (refer to Section 14.9.1).  It is our understanding that no additional lighting will be required for the area to be decommissioned and that all new external lighting is to be installed at the new substation only. Please confirm that our understanding is correct.	Yes
80	Cl. No. 4.4.11 Walls, Fencing & Gates Vol. 2 Pg 78	A boundary wall, with gates, shall be provided to secure the site (i.e. all land within the Employers ownership boundary). Since the new Henrietta substation is to be constructed adjacent to the existing one, we assume that the existing substation wall can be used as a shared wall between the new and existing substations. Please confirm if our understanding is correct.	No, boundary wall on the four sides of the new site are to be provided.
<b>Chaumiere</b>			
81	Ref 01: Vol-2, Cl. No. 5.1.4, page 83 Ref 02: Vol-2, Cl. No. 8.3.7, page 121	Query 01: There is a contradiction in 22kV Transformer CT rating, as per ref 01, CT rating for core 4 is mentioned as Class X 2000/1200/1( bus zone), and the same is mentioned as Class X 2500/1200/1 (bus zone) in ref 02. We presume that the details in ref 01 is correct. Please confirm.	The rating shall be Class X 2500/1200/1 (bus zone)
82	Ref 01: Vol-2, Cl. No. 5.1.4, page 83 Ref 02: Vol-2, Cl. No. 8.3.8, page 121	Query 01: There is a contradiction in 22kV Transformer VT rating, as per ref 01, VT rating for core 2 is mentioned as 50VA, CL 3P( AVR/protection), and the same is mentioned as 50VA, CL 0.2 (AVR) in ref 02. We presume that the details in ref 01 is correct. Pl. confirm.	Please refer to above reply.
83	Ref 01: CPB842019 CEB Geotechnical Report GIS Substation at La Chaumiere, page 8 Ref 01: Drawing no. CEB/GIS-19/18	Query 01: As per ref 01, altitude level is mentioned as 182m, but in ref 02, the same is given as <1050masl. Please confirm the exact altitude.	All sites are less than 500 m altitude.

84	Ref 01: Vol-2, Cl. No. 1.3, page 3 Ref 02: Drawing no. CEB/GIS-19/18	Query 01: As per ref 01, minimum temperature is mentioned as -5 (indoor) and -10 (outdoor), but in ref 02, it is given as 0 to +40 (indoor) and -5.6 to +40 (outdoor). Please confirm the exact temperature.	Indoor : -05 to + 40 deg. C Outdoor : -10 to + 40 deg. C
85	Ref 01: Vol-2, Cl. No. 5, page 83	Query 01: Please provide the make name of existing communication scheme of 66kV PV Sarako. Also please confirm that for which purpose the relocated communication panel to be used.	The communication panel was shown to bidders during the site visit. The relocation of the panel is required to maintain the communication with the PV farm.
86	Ref 01: Vol-2, Cl. No. 5.1.3 page 82	Query 01: In ref 01, The requirement of 66kV surge arrester for PV Sarako feeder is not mentioned, please confirm the requirement.	Same is already available and is not to be supplied.
87	Ref 01: Vol-2, Cl. No. 5.3.5 page 87	Query 01: As per ref 01, It is understood that auxiliary transformer and RMU is supplied by employer. Please provide the KVA rating of transformer and current rating of RMU for our consideration.	Please refer to clause 21 of General Notes above.
88	Ref 01: Vol-2, Cl. No. 5.5,1 page 90 Ref 02: Drawing no. CEB/GIS-19/19a	Query 01: As per ref 01, In special requirement it is mentioned to provide 66kV cable for St Louis / LTK, Henrietta 1 & 2, PV Sarako feeders. Please clarify the scope of supply is by contractor or by employer.  Query 02: If the 66kV cables need to be supplied by contractor, please indicate the distance between respective existing terminal tower of above mentioned feeders from proposed GIS building.	The scope of supply of all 66 kV cables as per specification spelt out in the bidding document is upon the Contractor. Bidders were requested to take all measurements during site visit.
89	Ref 01: Vol-2, Cl. No. 5.5,1 page 90 Ref 02: Vol-2, Cl. No. 5.5,2 page 91	Query 01: As per ref 01 & 02, For 66kV PV Sarako feeder "It is mentioned to provide straight joint and extend the existing cable". Please provide the details indicating where straight joint need to be provided and also confirm the distance between straight joint and proposed 66kV GIS feeder.	Contractor shall determine appropriate location of the joint depending of site conditions.
90	Ref 01: Vol-2, Cl. No. 5.5,1 page 90	Query 01: As per ref 01, Please provide the distance between existing ST Louis and Henrietta 2 feeder bays to Spare 1 & 2 bays of 66kV GIS switchgear for considering the temporary interconnection of AIS and GIS substation.	Bidders were requested to take all required measurements during the site visit.

91	Ref 01: Vol-2, Cl. No. 5.4,10 page 89 Ref 02: Vol-2, Cl. No. 5.5,3 page 91	Query 01: There is contradiction in 66kV cable laying procedure, As per ref 01 it is mentioned outside substation boundary 66kV circuits shall be installed in PVC duct layed in trenches whereas in ref 02, it is mentioned outside substation compound HV cable shall be directly buried. Please clarify the exact requirement.	Depending on the site condition and routing of the cables, the method of laying shall be finalised at implementation stage.
92	Cl. No. 5 General Vol 2 Pg83	We presume that the control & protection panel of existing bays that are to be used as interconnector bays can be kept in use during the transfer from AIS to GIS. Hence we considering temporary protections only for GIS End Spare bays. Please confirm is this is OK	Please refer to reply 41 above
93	Cl. No. 5.3.5, Common equipment's Vol 2 Pg 90	Additional Information - 2x 22/0.415kV Auxiliary transformers & 2 x 22 kV RMU's to be supplied 'free issue' by the Employer and to be installed and commissioned by the Contractor.  We assume that the necessary Protections & control for the free issued RMUs will be provided together with the RMUs by The Employer. Please confirm whether these protection and control shall be standalone or will they need integrating into the SCADA	They shall be stand alone.
94	Cl. No.5.4.9 Foundations & Support Structures Vol 2 Pg 791	Assessment of structural strength of existing towers and detailed design of any strengthening including structural calculations shall be provided by the Contractor.  We kindly request that the employer provide the Existing Tower Structural Design, calculation to access the strengthening for mounting of Cable Sealing end & Surge arrester on Tower arm and support required for cables climb on Tower.	This shall be provided at implementation stage.
95	Cl. No. 5.4.1 Earthworks/Ena bling Works Vol 2 Pg 90	The existing 66 kV AIS Substation will require complete decommissioning. With exception to the underground cable to be put into a concrete jacket for the width of the gate (drawing CEB-GIS-19-19a), we assume that the area where the new substation is to be built is void of any foundations from previous construction. Please confirm is our understanding is correct	Bidders had the opportunity to take cognizance of the site conditions during the site visit.

96	Cl. No. 5.4.2 Drainage Vol. 2 Pg 77	<p>A new site drainage system is to be installed with run-off to a soak away pit.</p> <p>We assume that new drainage is only to be installed in the new substation area and no additional drainage is to be installed in the existing area. Could you please clarify if the new drainage is to be connected to that of the existing site or a new direct connection is to be made to another system? Could we please request that you provide the maximum rainfall intensity for this area and also the existing Drainage network drawing and design</p>	<p>Yes, drainage system is to be provided in the new substation area and shall not be connected to the existing system.</p> <p>Maximum rainfall intensity for this area can be obtained from the Mauritius Meteorological Services.</p>
97	Cl. No. 5.4.12 Lighting Vol. 2 Pg 90	<p>Lighting shall be provided for the new 66 kV GIS substation building, power transformer area and the new 22 kV switchgear building. External lighting shall be provided for access with acceptable Lux levels (refer to Section 14.9.1).</p> <p>It is our understanding that no additional lighting will be required for the area to be decommissioned and that all new external lighting is to be installed at the new substation only. Please confirm that our understanding is correct.</p>	Yes
<b>Belle Vue</b>			
98	Ref 01: Vol-2, Cl. No. 7.3.1.8, page 114	Query 01: As per the ref 01, VT protection class mentioned as 3MP. We understood that the same shall be read as CL 3P. Please confirm.	Yes
99	Ref 01: Vol-2, Cl. No. 6.1.4, page 96 Ref 02: Vol-2, Cl. No. 8.3.8, page 121	Query 01: There is a contradiction in 22kV Transformer VT rating, as per ref 01, VT rating for core 2 is mentioned as 50VA, CL 3P( AVR/protection), and the same is mentioned as 50VA, CL 0.2 (AVR) in ref 02. We presume that the details in ref 01 is correct. Please confirm.	Yes, details given in clause 4.1.4 are the correct one.
100	Ref 01: Vol-2, Cl. No. 6.3.1, page 98	Query 01: As per ref 01, in Belle Vue 66kV GIS substation it is mentioned as 10 x feeder panels (CTBV 1&2, Sottise 1&2, Amaury 1&2, Dumas, Jinfei). We understood that it should be 8 x feeder panels (CTBV 1&2, Sottise 1&2, Amaury 1&2, Dumas, Jinfei). Please confirm.	10 feeder panels including Spare 1 & 2

101	Ref 01: CPB842019 CEB Geotechnical Report GIS Substation at Belle Vue, page 8 Ref 02: Drawing no. CEB/GIS-19/14	Query 01: As per ref 01, altitude level is mentioned as 92m, but in ref 02, the same is given as <1050masl. Please confirm the exact altitude.	All sites are less than 500 m altitude.
102	Ref 01: Vol-2, Cl. No. 1.3, page 3 Ref 02: Drawing no. CEB/GIS-19/14	Query 01: As per ref 01, minimum temperature is mentioned as -5 (indoor) and -10 (outdoor), but in ref 02, it is given as 0 to +40 (indoor) and -5.6 to 40 (outdoor). Please confirm the exact temperature.	Indoor : -05 to + 40 deg. C Outdoor : -10 to + 40 deg. C
103	Ref 01: Vol-2, Cl. No. 6, page 97	Query 01: As per ref 01 it is mentioned that "The Contractor's programme shall make provision for transfer of 22 kV circuits from the existing 22 kV switchboard to the new 22 kV switchboard". Kindly confirm the detailed scope of contractor for the mentioned works. Also it is mentioned that "All termination works on the 22 kV GIS shall be carried out by the Contractor". Is terminations for 22kV GIS outgoing feeders are in contractor scope?. If the same is in contractor scope, Kindly confirm for which size cables termination to be suitable.	This has clearly been spelt out in the scope of works. Yes, the size of cables has been provided in Chapter 8 of Vol. 2.
104	Ref 01: Vol-2, Cl. No. 6, page 96	Query 01: Please provide the make of two existing 36/45 MVA, 66/22 kV step down transformers.	Bidders were requested to take all information during site visit.
105	Ref 01: Vol-2, Cl. No. 6, page 97	Query 01: Please provide the make name of existing communication scheme of 66kV CTBV 1 & 2 . Also please confirm that for which purpose the relocated communication panel to be used.	There is no relocation of communication scheme. Belle Vue 1 & 2 new control panels to be supplied & installed at CTBV shall transmit all data from the BCU via optical cable to the control panel BCUs in the 66 kV GIS building at Belle Vue s/stn.
106	Ref 01: Vol-2, Cl. No. 6.1.3 page 95	Query 01: In ref 01, The requirement of 66kV surge arrester for Sottise1 feeder is not mentioned, please confirm the requirement.	This is outside the scope of this contract.



107	Ref 01: Vol-2, Cl. No. 6.3.5 page 100	Query 01: As per ref 01, It is understood that auxiliary transformers is existing. Please provide the KVA rating of auxiliary transformers for our consideration. Also provide the distance between auxiliary transformers and main LVAC distribution board of the new 66 kV GIS substation..	Please refer to clause 21 of General Notes above.
108	Ref 01: Vol-2, Cl. No. 4.4.9 page 75	Query 01: As per ref 01, It is mentioned that employer shall supply and install all concrete pole structures with facilities for terminating cables on all 66kV feeder circuits by contractor, Pl. provide the location of concrete pole structure for each feeder.	These were shown during site visit.
109	Ref 01: Vol-2, Cl. No. 6.5,1 page 102 Ref 02: Drawing no. CEB/GIS-19/15a	Query 01: As per ref 01, In special requirement it is mentioned to provide 66kV cable for Dumas / Jinfei, Amaury 1 & 2, CTBV 1 & 2, Sottise 2 feeders. Please clarify the scope of supply is by contractor or by employer. Query 02: If the 66kV cables need to be supplied by contractor, please indicate the distance between respective existing terminal tower / new H-pole support structure of CTBV 1 & 2, Sottise 2 feeders from proposed GIS feeder.	The scope of supply of all 66 kV cables as per specification spelt out in the bidding document is upon the Contractor. Bidders were requested to take all measurements during site visit.
110	Ref 01: Vol-2, Cl. No. 6.5,1 page 103 Ref 02: Vol-2, Cl. No. 6.5,2 page 104	Query 01: As per ref 01 & 02, For 66kV Sottise 1 feeder "It is mentioned to provide straight joint and extend the existing cable". Please provide the details indicating where straight joint need to be provided and also confirm the distance between straight joint and proposed 66kV GIS feeder.	Contractor shall determine appropriate location of the joint depending of site conditions.
111	Ref 01: Vol-2, Cl. No. 6.5,1 page 103	Query 01: As per ref 01, Please provide the distance between existing Case Amaury 1 and Sottise 2 feeder bays to Spare 1 & 2 bays of 66kV GIS switchgear for considering the temporary interconnection of AIS and GIS substation. Query 02: As per ref 01, Please provide the distance between existing 22kV switchboard feeder bays to Power transformer for considering the temporary interconnection of AIS and GIS substation.	Bidders were requested to take all required measurements during the site visit.
112	Ref 01: Vol-2, Cl. No. 6.4,10 page 102 Ref 02: Vol-2, Cl. No. 6.5,3 page 104	Query 01: There is contradiction in 66kV cable laying procedure, As per ref 01 it is mentioned outside substation boundary 66kV circuits shall be installed in PVC duct layed in trenches whereas in ref 02, it is mentioned outside substation compound HV cable shall be directly buried. Please clarify the exact requirement.	Depending on the site condition and routing of the cables, the method of laying shall be finalised at implementation stage.

113	Ref 01: Vol-2, Scope of work, Cl. No.6, page 93	Query 01: Please elaborate the requirement mentioned i.e., "Provision must also be made for the protection panels at the far end substations namely one protection panel each for CTBV 1 & 2, Amaury 1 & 2 and Dumas bays" in ref 01.	one panel for CTBV 1 feeder and another panel for CTBV 2 feeder to be installed at the far end substation etc.
114	Cl. No6.3.2 Remote end substation Protection Vo. 2 Pg 102	<p>The new control panels to be installed at CTBV shall transmit all data from the BCU via optical cable to the control panel BCU in the 66 kV GIS building at Belle Vue s/stn.</p> <p>Please provide the specification of CTBV end control panel and the distance between Belle Vue and CTBV</p>	<p>New control panels are to be supplied &amp; commissioned at CTBV similar to the ones being provided in the GIS building in Belle Vue.</p> <p>The optical link is already available and shall be re-routed by the Contractor as spelt out in item 22 – General Notes above.</p>
115	Cl. No. 6 General Vol 2 Pg96	We presume that the control & protection panel of existing bays that are to be used as interconnector bays can be kept in use during the transfer from AIS to GIS. Hence we considering temporary protections only for GIS End Spare bays. Please confirm is this is OK.	Please refer to reply no. 41 above
116	Cl. No.6.4.9 Foundations & Support Structures Vol 2 Pg 105	<p>Assessment of structural strength of existing towers and detailed design of any strengthening including structural calculations shall be provided by the Contractor.</p> <p>We kindly request that the employer provide the Existing Tower Structural Design, calculation to access the strengthening for mounting of Cable Sealing end &amp; Surge arrester on Tower arm and support required for cables climb on Tower.</p>	This shall be provided at implementation stage.
117	Cl. No. 6.4.2 Drainage Vol. 2 Pg 104	<p>A new site drainage system is to be installed with run-off to a soak away pit.</p> <p>We assume that new drainage is only to be installed in the new substation area and no additional drainage is to be installed in the existing area. Could you please clarify if the new drainage is to be connected to that of the existing site or a new direct connection is to be made to another system? Could we please request that you provide the maximum rainfall intensity for this area and also the existing Drainage network drawing and design</p>	<p>Yes, drainage system is to be provided in the new substation area and shall not be connected to the existing system.</p> <p>Maximum rainfall intensity for this area can be obtained from the Mauritius Meteorological Services.</p>

118	Cl. No. 6.4.12 Lighting Vol 2 Pg 105	<p>Lighting shall be provided for the new 66 kV GIS substation building, power transformer area and the new 22 kV switchgear building. External lighting shall be provided for access with acceptable Lux levels (refer to Section 14.9.1).</p> <p>For Belle Vue, since the power transformers and the new 22kV building is to be constructed in the same area as the existing 66kV substation, could you please confirm whether new lighting is to be provided in these areas as well or augmentation to the existing lighting where necessary would be acceptable?</p>	Yes
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## ANNEX 2



### CENTRAL ELECTRICITY BOARD Transmission & Distribution Department Project & Construction Section

#### ATTENDANCE SHEET FOR PREBID MEETING AND SITE VISITS

CPB-84-2019: The Design, Supply, Installation, Testing And Commissioning Of Three 66/22  
kV GIS Substations

Date : Tuesday 4<sup>th</sup> February 2020














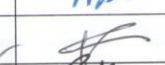

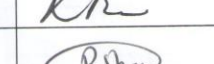


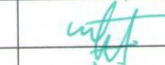
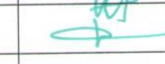
Time : 10:00

Venue : Pre-Bid meeting held at Central Electricity Board Corporate Office, Rue du Savoir,  
Cybercity, Ebene, Mauritius.

Site Visits: at Henrietta.

Were present:

Name	Company	Position	Signature
Rejik	KPTL	Engineer	[Signature]
Tarch	KPTL	Engineer	[Signature]
Ajita Sengupta	KPTL	General Manager	[Signature]
Yogesh Sarang	KPTL	Dy. Gen. Manager	[Signature]
S. Ghose	GE Grid SAS FRANCE	Sr. Bid Manager	[Signature]
Yasir FALGAL	~ ~	Am Sales Drock	[Signature]
A. Kothari	~	Engg mgr.	[Signature]
Sabit Narasimhan	Schneider Electric	Country Manager	[Signature]
AGUSTIN PIRA	ELECON	Engineer	[Signature]
ELIYAH Rikerh	PA&CO Ltd	Manager	[Signature]
Mallesh Jeeva	BCEG	Quantity Survey	[Signature]
T. SREENIVASAN	JFA Logistics	Engineer	[Signature]
Clarey August	National Contracting	Engineer	[Signature]
K. Porur Selvam	Nahimchenky G.	Sr. Manager-Contr	[Signature]
MARCHAND . S	VINCI	Technical moyer	[Signature]
PEROUME. I	VINCI	Engineer	[Signature]
BERNARD Guy	VINCI	bus. Dev. Rgr	[Signature]

Name	Company	Position	Signature
Jaco Combink	Optipower	Project Manager	
Moussum Manda	L&T	Design Manager	
Joydeep Saha	KEC	Project Manager	
Yari CANNIAH	CANNIAH SENSEN	Mg	
Gopale	Sopravir Lk	Foreman	
Ravin dafoo	CONCO	Project Engineer	
Greenish Sahoo	ARER	Sales Manager	
Sharmuga	ABB	Sales Manager	
E. PITHILIPS	CONCO	MANAGER	
Imtiaz Horroly	CONCO	Project Engineer	
Globiz Consult	Globiz Consult	Manager	
Jimmy Mahadev	Globiz I. Consult	Consultant	
Zubeir Peer	CSI Energy Group	Project Manager	
Beebejwan Rehaz	General Const CO	Estimator	
Pratima Shankar	GCC	Engineer	
Abdullah MAALEJ	SIEMENS ENERGY	SALES MANAGER	
ZIARA Abdallah	Siemens Energy	Civil Engineer	
ROULLIER JC	Siemens	Construction	
Djibrane	PINGIRO	Site agent	
NAEIRAB	KEC	MANAGER	





**CENTRAL ELECTRICITY BOARD**  
**Transmission & Distribution Department**  
**Project & Construction Section**

**ATTENDANCE SHEET FOR PREBID MEETING AND SITE VISITS**  
**CPB-84-2019: The Design, Supply, Installation, Testing And Commissioning Of Three 66/22**  
**KV GIS Substations**

Date : Wednesday 5<sup>th</sup> February 2020

Time : 10:00

Site Visits: at Chaumiere substation followed by Belle Vue substation.

Were present:

Name	Company	Position	Signature
Ellayach Rikesh	PAD & Co Ltd	Site Manager	
Jaco Combrinck	Optipower	Project Manager	
AGUSTÍN PIÑA	ELECNOR	Engineer	
C. Rozant	NCC	Engineer	
M. Mandat	L&T	Engg. Manager	
K. Porurathan	NCC	sr. Manager	
Albert F	TRD	Director	
F. AITKEN	GEC	ENGINEER	
Omosale O.	Grid Solution	Engineer	
Blec Namah	Grid Sol	Engineer	
Pramit Chatterjee	CONCO	Project Engineer	
Imshad Hussain	CONCO	Project Engineer	
Anurag Kothari	GB	Sugg. Mgr.	
Jaydeep Saha	KEC	Manager Project	
A. MAALEJ	SIEMENS ENERGY	SALES MANAGER	
Girish Saha	ABB South Africa	Sales Manager	
Sharmista	ABB	Sales Manager	

