part of the scope of work. Sterlite highlighted the extra bays in the SLD as 'Not in scope' and provided a copy to the BPC for their clear reference. The BPC responded to the said query vide its Additional Clarifications dated 14.06.2019 (i.e., Clarification 2) and inter alia stated that the plan layout of the Vadodara S/s that was provided was for indicating tentative position for line bay.

(d) The aforesaid Clarification 2 was issued by the BPC on 14.06.2019 and on the same date, BPC issued an Amendment to the RFP and TSA to inter alia add one switchable line reactor (spare unit) at the Vadodara end to the scope of work of the successful bidder. However, no change whatsoever was made to the number of bays to be implemented by the successful bidder.

(e) In case of the Petitioner, its scope of work was to construct two 765 kV line bays at Vadodara S/s in a one and half breaker scheme. Since the LV line is a double circuit line, each circuit was to be terminated in a different diameter (as stated in the RFP). Nowhere does the RFP or TSA specify that three circuit breakers and two feeders are to be implemented in the form of a full diameter. The half diameter, one and half breaker scheme so implemented by the Petitioner meets the full scope of work, functionality and reliability of the one and half breaker arrangement as the feeder would still be getting power even in case of outage of any one of the buses or circuit breakers.

(f) The reason a half diameter was constructed was because the RFP did not ask for provision of any additional feeders in the scheme. As stated above, in the past and even in some recent bids, wherever space for future extension of bays has been envisaged, the same has been clearly mentioned along with a provision for full diameter.

(g) The Petitioner seeks to rely on the Manual on Substations ("Manual"), prepared by Central Board of Irrigation and Power ("CBIP"), which is commonly relied upon by power utilities, manufacturers, and the engineering fraternity for guidance on

implementation of substations. It captures the industry-wide understanding on prudent utility practices on various aspects of implementation of substations. The term 'Prudent Utility Practices' has been defined under Clause 1.1.1 of the TSA to inter alia mean practices, methods and standards that are generally accepted internationally from time to time by electric transmission utilities for the purpose of ensuring the safe, efficient and economic design, construction and commissioning of the Project. Petitioner has implemented the two bays at the Vadodara S/s as per prudent utility practices as required under Clause 4.1(b)(ii) of the TSA

(h) As per the Manual, the switching scheme for 765 kV level in GIS has to be one and half breaker scheme or a double bus scheme, as also required under Clause 1.2 of the RFP. Volume 3 of the Manual provides a list of drawings detailing the typical layouts for substations including 765 kV GIS substation such as the Vadodara S/s. Drawing No. 8.8(a) is an SLD with One and half breaker scheme at 765 kV level and double main bus scheme at 400 kV level implemented at the Koteshwar S/s by PGCIL. The one and half breaker scheme arrangement implemented by PGCIL has been outlined in a red cloud for ease of reference of the Commission. PGCIL has suppressed and obfuscated this from the record in its Reply dated 30.11.2021. It is pertinent to note that the manner in which the Petitioner has implemented one and half breaker switching scheme at Vadodara S/s is identical to the manner in which PGCIL itself has implemented the same scheme at the Koteshwar S/s.

(i) BPC has stated that the additional queries raised by the bidders were forwarded to the CTU/CEA for confirmation at their end, and the CEA vide its email dated 13.06.2019 confirmed the clarifications and advised that they may be issued to the bidders. It is submitted that the said submission is false. It appears that the CEA did not confirm the draft clarification prepared by the BPC with respect to query no. 9 raised by the bidders. The copy of the CEA's email dated 13.06.2019 where the CEA has clearly stated in reference to Query 9 raised by the Petitioner that the said clarification may be issued after receipt of confirmation from the

CTU/PGCIL. However, no email or correspondence from the CTU/PGCIL confirming the said response has been placed on record by the BPC. It appears that without having received any confirmation from the CTU, the BPC issued the said clarifications in a reckless manner, without any regard whatsoever to the bidders' investment of time and cost.

(j) It is also clear from the said email that the CEA was not clear about the scope of additional bays and therefore, it suggested to the BPC to seek clarity from the CTU. Contrary to the said evidence, in its minutes dated 16.03.2021, it has been suggested that the implementation of the additional bay is an implicit requirement.

(k) The BPC has stated that even after the issuance of Clarification 2, the Petitioner had sufficient time to raise further queries, but no queries were raised by it. In response, it is submitted that after Clarification 2 was issued by the BPC on 14.06.2019, Sterlite had raised another follow up query vide its letter dated 19.06.2019 to the BPC. Vide the said letter, the Petitioner expressly asked if the additional bays were within its scope of work. The SLD of the substation, marking the additional bays as 'Not in Scope' was also attached for the reference of the BPC. However, it received no response whatsoever from the BPC on it.

Analysis and Decision

19. We have considered the submissions of Petitioners and Respondents. The following issue arises for our consideration:

Whether the Petitioner is required to implement 3 breakers for each diameter at Vadodara Substation under the Scope of work as per Article 1.2 of the RFP, Schedule 2 of the TSA and the transmission license of the Petitioner?

The above issue is being dealt in the succeeding paragraphs.

20. The Petitioner has submitted that as per the provisions of RFP and TSA, clarifications 1 and 2 issued by the BPC, the two extra nos. of bays as directed to be implemented vide CEA meeting dated 16.3.2022, at the Vadodara S/s do not fall within the scope of work of the Petitioner. The transmission license issued to the Petitioner also does not include such bays within its scope of work. Further, in case the Petitioner is directed to implement the said bays, it shall be entitled to claim the additional expenditure through an increase in tariff as the said event will constitute a change in law event under Article 12 of the TSA.

21. PGCIL vide its email dated 22.1.2020, 28.10.2020 and Letters dated 12.11.2020 and 24.11.2020 clarified to the Petitioner that the SLD clearly mentions that there are 3 bays in each diameter of the line and requested the Petitioner to carry out the said works at Vadodara GIS.

22. PGCIL submitted that CEA conducted a meeting on 16.3.2021 with PGCIL, CTU, PFCCL and the Petitioner to deliberate the issues with respect to scope of work associated with termination of 765kV Lakadia-Vadodara line at Vadodara Substation, wherein it was discussed that the Petitioner was required to implement 3 Nos. bays in each diameter of 765 kV Lakadia circuit 1 & 2 at Vadodara (GIS) S/stn. Petitioner submitted that the said minutes did not completely record the stand of the Petitioner on the issue of additional scope of work.

23. The Bid Process Coordinator, PFC submitted that as per the definitions provided in RFP document, “RFP” shall mean this Request for Proposal document along with all schedules, annexures and RFP Project Documents attached hereto and shall include any modifications, amendments, alterations or clarifications thereto. The queries raised by the

Bidders pertaining to the technical inputs provided by CTU were forwarded to CTU and CEA for providing clarifications. On receipt of clarifications from CTU and confirmation/clarifications from CEA, the clarifications to the queries were issued to the bidders.

24. We have considered the submissions of Petitioner and Respondents. Let us examine the scope of works for Petitioner as per various documents on record.

25. Detailed Scope of Work as per Article1.2 of RFP and Schedule 2 of TSA are as follows:

S. No.	Name of the Transmission Element	SCOD
(i)	Lakadia–Vadodara 765kV D/c line ("**LV Line**")	31.12.2020
(ii)	330MVAr switchable line reactors at both ends of Lakadia – Vadodara 765kV D/c line along with 500 ohms NGR at both ends of Lakadia – Vadodara 765kV D/c line (330 MVAR line reactor - 4 nos. &765kV Reactor bay - 4 nos.) ("**Reactors**")	31.12.2020
(iii)	2 nos. of 765kV bays each at Lakadia and Vadodara S/s for Lakadia – Vadodara 765kV D/c line (765kV line bay - 4 nos.) ("**765 kV Bays**")	31.12.2020

Note:

(a) As per MoM of 3rd ECT held on 21.12.2018, it was decided that the scheme is to be implemented by December, 2020.

(b) POWERGRID to provide space for 2 nos. of 765kV line bays and space for 2 nos. of 330MVAr switchable line reactors and reactor bays at Vadodara (GIS) for Lakadia – Vadodara (GIS) 765kV D/c line.

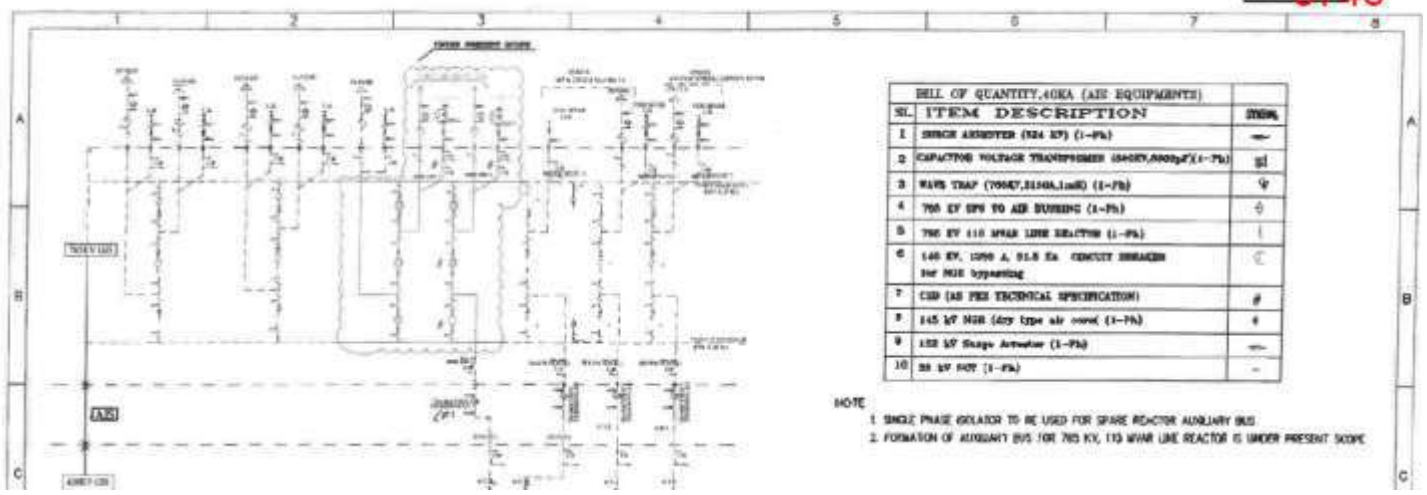
(c) Developer of Lakadia S/s to provide space for 2 nos. of 765kV line bays and space for 2 nos. of 330MVAr switchable line reactors and reactor bays at Lakadia for Lakadia – Vadodara (GIS) 765kV D/c line."

26. Clarification No. 1 dated 30.5.2019 issued by PFC provides as follows:

S. No.	Clause No. and Existing provision	Clarification Required	Clarifications
		BPC to confirm above.	
88.	**RFP General** Extn. Sub-station	Kindly provide following details for extension works in bay augmentation at Vadodara (GIS) – a. SLD. b. Overall General Electrical Layout. c. Outdoor Cable Trench Layout. d. 765KV GIS Hall Drawing. e. Make of Existing SAS equipment f. Make of Existing 76KV GIS equipment g. 765KV GIS Bus Bar Extension Module along with GIS Bus Adopter detail. h. Availability of auxiliary supply (AC-DC) i. Availability of space in CRB/ CRP Roon in GIS hall. j. Earthing Layout. k. Make and Type of bus bar Protection l. Availability of optical port in FOTE equipment. Also confirm if TSP is liable for any kind of payment to existing substation owner for access to their facilities during construction & Operations phase.	1. SLD and GA indicating the allocated bay at Vadodara GIS S/S is attached. 2. Make of existing GIS is M/s NHVS, China 3. Make of Existing SAS is M/s Siemens 4. Regarding other details, as sought, bidder may visit the substation and acquaint themselves with the existing provisions. TSP shall coordinate with existing substation owner regarding access to the existing facilities during construction and operation phase.

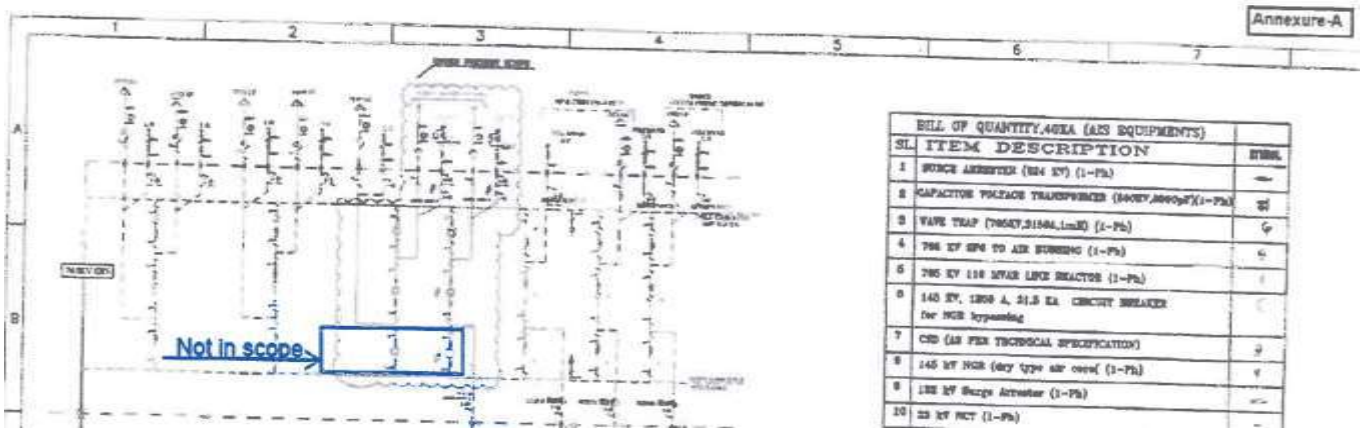
108.	**RfP Technical**	**Vadodara GIS - 765 kV Bay Extn.-** 2 Nos.765 kV line take off Bay orientation not indicated in RfP document	The plan layout of Vadodara GIS substation (PGCIL) indicating the tentative position for line bay is attached at **Annex-A.**

Annex-A 3745



27. Vide Clarification No. 2 BPC, clarified as follows:

S. No.	Clause No. and Existing Provision	Clarification Sought by Bidder	Clarifications
9.	**Sr No. 108 / RfP Technical** Clarifications on RFP & TSA for WRSS-21 (Part-B) - Transmission System strengthening for relieving over loadings observed in Gujarat Intra-state system due to RE injections in Bhuj PS Dated : 30/05/2019 **ANNEXURE – A / Drawing No :** C/ENGG-SS/TBCB/WRSS-21B/VADODARA/SLD/01 REV_00 **and :** C/ENGG-SS/TBCB/WRSS-21B/VADODARA	As per the response received, "**Annexure-A** drawings need to be referred for Bay allocation at 765KV Vadodara GIS station." However, we presume that the Take-off gantry location and Orientation shall be referred from Drawing No : "C/ENGG-SS/TBCB/WRSS-21B/VADODARA" and number of Bays under present scope shall be as per RFP only and the extra two (2) no 765KV Bays other than RFP requirement, shown in drawing : C/ENGG-SS/TBCB/WRSS-21B/VADODARA/SLD/01 REV_00 shall not be in present scope of work as shown in enclosed drawing "Annexure 1" marked as "NOT IN SCOPE"	The plan layout of Vadodara GIS substation (PGCIL) indicating the tentative position for line bay was already provided to the bidders. However, the bidders are advised to coordinate with substation owner for exact termination at Vadodara end.



28. The transmission license issued to the Petitioner, pursuant to Order dated 4.3.2020 in Petition No. 445/TL/2019, provides the following elements:

SCHEDULE

Project Related Details:

The project comprises of the following elements of the inter-State Transmission System:

S.No.	Name of the Transmission Element	Schedule date of Commissioning
1.	Lakadia-Vadodara 765 kV D/c line	31 December, 2020
2.	330 MVAr switchable line reactors at both ends of Lakadia-Vadodara 765 kV D/c line along with 500 ohms NGR at both ends of Lakadia-Vadodara 765 kV D/c line (330 MVAr line reactor-4 nos., 765 kV Reactor bay-4 nos., 1x110 MVAr 765 kV, 1 ph. Switchable line reactor (spare unit) at Vadodara end)	
3.	2 nos. of 765 kV bays each at Lakadia and Vadodara S/s for Lakadia-Vadodara 765 kV D/c line (765 kV line bay-4 nos.)	

Licence No. 63/Transmission/2020/CERC
Authority: Orders of the Commission dated 23.1.2020 and 4.3.2020 in Petition No. 445/TL/2019.

29. As per the above apart from line reactor bays, only 2 nos. of 765kV bays at Vadodara S/s for Lakadia – Vadodara 765kV D/c line has been provided for.

30. The issue under dispute in regards to scope of works associated with termination of 765 kV Lakadia-Vadodra D/C line at Vadodra(PG) S/S was deliberated in a meeting organised by CEA on 16.03.2021 wherein PGCIL, CTU, PFCCL including the Petitioner were present. The relevant extracts of the minutes are as follows:

> *"**Issue no. 1: Inadequate no. of bays being implemented by M/s LVTPL in each diameter at Vadodara (GIS) S/stn of PGCIL, wherein 765kV Lakadia Ckt1 and Ckt2 would be terminated.***
>
> ***Discussions held:***
>
> ***1. Powergrid:***

1.1 The Specific Technical Requirements for Substation works mentioned in the RfP document of the scheme specified that the developer needs to implement one and half breaker switchig scheme for 765 kV switchyard and each circuit of a double circit line shall be terminated in different diameter. Further the SLD for the Vadodara GIS S/stn was provided by Powergrid as an Annexure to the 'Additional Clarification on RfP' sought by the bidders. In the SLD (attached as Annexure A), it was clearly highlighted that the scope of works under the scheme included implemented of 3 nos. of bays in each dia where the D/c line would be terminated.

1.2 The intention behind inclusion of implementation of the second main bay in each dia is that in case of a GIS substation, installation of bay in a half equipped GIS diameter at a later date becomes non-feasible. However, it is observed M/s Sterlite is undertaking implementation of only 2 nos. CBs against 3 nos. CBs in each dia of 765 kV Lakadia Ckt1 and Ckt2 at Vadodara (GIS) S/stn of PGCIL. This is not in compliance to what was envisaged in the RfP documents issued to bidders and would result in non-optimal utilisation of space at Vadodara (GIS) S/stn.

2. M/s LVTPL:

2.1 The RFP issued by PFC Consulting Ltd on 18/03/2019 defines the scope of work as "2 nos of 765 kV bays each at Lakadia and Vadodara S/s for Lakadia - Vadodara 765 kV D/c line (765 kV line bay-4 nos.)" With reference to this RFP, bidders asked for existing station drawings & line take off bay orientations. In response of those queries, BPC (PFC Consulting Ltd) issued clarification on 30.05.2019. Vide sl. No-88 & 108 of this clarification, BPC shared Vadodara station related drawing in Annexure –A as reference for indicating the bay position only, not as scope of work.

2.2. Further to the clarification pertaining to line take off bay orientation, M/s LVTPL submitted additional queries BPC on 31/05/2019, especially marking the 2 nos. extra bays in Annexure-A and seeking the clarification that these extra 2 nos bays shall not be in the scope of work of the present scheme..

2.3. In response to this additional query, the clarification provided by BPC on 14/06/2019 at sl. No. 9 was that the plan layout indicating tentative position was already provided to the bidders. So,it is very much clear from this RFP that queries were noted by the authority & the issued drawing is only tentative bay position only.

2.4. Further on the same date (14/06/2019) BPC issued the amendment for scope of works for the scheme, wherein increase of 1 no. 110 MVAR spare Reactor was clearly mentioned as scope Amendment. However, there was no amendment for nos. of bays at Vadodara GIS station and it remained same as original RFP scope of work i.e 2 Nos. 765kV Line Bays at Vadodara

2.5. In view of the above-mentioned points, it is clear that the implementation of 2 Nos. line bays with switchable line Reactor bays at Vadodara GIS substation by M/s LVTPL is in line with RfP scope of work & its subsequent amendments.

3. BPC (PFCCL):

3.1 The scope of works incorporated in the RfP document did not specify the description of CBs to be installed in each diameter at the S/Stn, it was clarified that One and half breaker switching scheme has to be considered at 765 kV switchyard with each ckt of D/c line to be terminated in different diameter. Further, in response to the query raised by the bidder with respect to SLD and General Electric layout for extension works in bay augmentation at Vadodara, PFCCL in its clarification dated 30/05/2019 at S. No. 88 attached the SLD and General Arrangement indicating the allocated bay at Vadodara GIS S/S. In the attached SLD, the detailed arrangement of each dia and the scope of works under the present scheme was clearly highlighted.

3.2 Also, since the same SLD was to be referred in response to the query regarding 765 kV take-off bay orientation, BPC in its clarification at S. No. 108 provided to refer to the same SLD for the plan layout of Vadodara GIS substation (PGCIL) indicating the tentative position for line bay.

3.3 Accordingly, it was intended that the same SLD needs to be referred for the bay extension works to be carried out at Vadodara GIS S/stn as well as for the tentative position for line bay. Therefore, the contention of M/s LVTPL that the SLD enclosed was to be used as reference for indicating the bay position only and not as scope of work is not correct.

3.4 Further, M/s LVTPL has stated that it raised additional query pertaining to line take off bay orientation wherein it sought clarification regarding 2 extra no bays in each dia. In this regard, it may be mentioned that as no drawing highlighting the bays under question from the bidder was received. Accordingly, in the clarification furnished by BPC, the general reply to refer to the already provided plan layout of Vadodara GIS S/stn was given. Based on the general reply, M/s LVTPL seems to have presumed that the 2nd main bay in each dia may be done away with instead of seeking further clarification.

4. CTU:

4.1 As mentioned in RfP document, M/s LVTPL has to implement One and half breaker switching scheme at Vadodara GIS S/stn and each ckt of Lakadia-Vadodara D/c line has to be terminated in two separate diameters. In case of AIS, half dia can be constructed and the 2nd main bay can be constructed at a later time for the future feeders. However, in case of GIS, it is prudent to construct the complete full diameter at one go as future interfacing is difficult. The same has been deliberated in RPC(TP)s of Western Region and Northern Region, wherein it was decided that in case of GIS sitchyard, full diameter needs to be implemented from the beginning itself even though the second bay would be utlised in future.

4.2 Also, as far as M/s LVTPL's submission of strictly adhering with the scope of works as mentioned in RfP document is concerned, it may be mentioned that in the scope, only two no. of bays at Vadodara GIS S/stn was explicitly mentioned. However, in adherence to the implicit requirements of implementation of One and half breaker switching scheme, M/s LVTPL is implemeting tie bays ineach diameter. Nowhere in the RfP document, implementation of tie bays was explicitly mentioned. So, provision of one and half breaker scheme with full dia in the RfP itself, implies that two main and tie bay has to be implemented in each dia. Explicit mentioning of details of numbers of bays in each diamater in the scope of works in the RfP document is not a common practice. However, when the bidder coordinates with existing S/stn owner with regard to augmentation works to be carried out, these things also gets clarified. Further, the two nos. 765 kV bays of each dia has been marked for termination of Ahmedabad-Vadodara 765 kV D/c line at Vadodara substation.

5. CEA

5.1 In the RfP document under Specific Technical Requirements for S/stn, at para 2 of Clause 2.3 (765 kV GIS S/stn equipment), it is clearly stated that 'the arrangement of gas sections or compartments shall be such as to facilitate future extension of any make without any drilling, cutting or welding on the existing equipment. To add equipment, it shall not be necessary to move or dislocate the existing switchgear bays'.

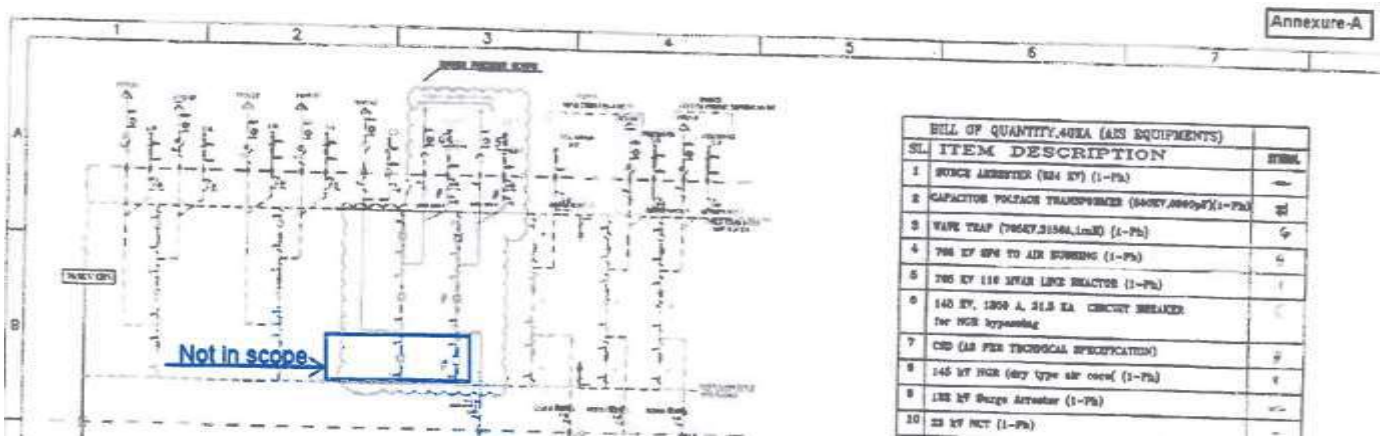
Under Specific Technical Requirements for the S/stn (in the RfP), it is metioned that One and half breaker switching scheme has to be considered at 765 kV switchyard with each ckt of D/c line to be terminated in different diameter.

From the SLD and General Layout of Vadodara GIS S/stn attached wth the clarifications issued by the BPC, it is clear that the 2nd main bay in each dia would be utilised for future augmentation. In view of above, if M/s LVTPL is not undertaking implementation of 2nd main bay ineach dia at Vadodara GIS S/s, then it would not be able to comply with the above mentioned clauses of the RfP document.

After detailed deliberations, it ws agreed that the implementation of twonumber of full GIS dia comprising of 2 no. of main bays and 1 no of tie line bay is required at Vadodara GIS S/stn as per the RfP provisions. Non-adherence of M/s LVTPL would tantamount to non-compliance of the bidding documents by M/s LVTPL."

We observe that the RFP as well as license provides for 2 no. 765kV bays at Vadodra associated with Lakadia- Vadodra transmission line. However, subsequent to RFP vide Clarification No. 1 dated 30.5.2019, an SLD was attached with Clarification where 3 breakers were indicated against each diameter. However, we observe that vide Clarification No. 88 where SLD is provided for does not refer to Annexure-A which is referred to at Clarification No. 108 where Annexure-A is provided for "take off gantry bay orientation".

31. Petitioner has submitted that vide its letter dated 31.05.2019 to the BPC (emailed on 02.06.2019), and expressly sought clarification on whether the two extra bays indicated in the SLD will be a part of the scope of work. Petitioner has submitted that it highlighted the extra bays in the SLD as 'Not in scope' and provided a copy to the BPC for their clear reference.



Petitioner queried as follows:

"As per the response received, "Annexure-A drawings need to be referred for Bay allocation at 765KV Vadodara GIS station." However, we presume that the Take-off gantry location and Orientation shall be referred from Drawing No : "C/ENGG- SS/TBCB/WRSS-21B/VADODARA" and number of Bays under present scope shall be as per RFP only and the extra two (2) no 765KV Bays other than RFP requirement, shown in drawing : C/ENGG-SS/TBCB/WRSS-21B/VADODARA/SLD/01 REV_00 shall not be in present scope of work as shown in enclosed drawing "Annexure 1" marked as "NOT IN SCOPE"

To the above BPC clarified as follows:

"The plan layout of Vadodara GIS substation (PGCIL) indicating the tentative position for line bay was already provided to the bidders. However, the bidders are advised to coordinate with substation owner for exact termination at Vadodara end."

The snapshot of Clarification No. 2 issued by BPC,is as follows:

S. No.	Clause No. and Existing Provision	Clarification Sought by Bidder	Clarifications
9.	**Sr No. 108 / RfP Technical** Clarifications on RFP & TSA for WRSS-21 (Part-B) - Transmission System strengthening for relieving over loadings observed in Gujarat Intra-state system due to RE injections in Bhuj PS Dated : 30/05/2019 **ANNEXURE – A / Drawing No :** C/ENGG-SS/TBCB/WRSS-21B/VADODARA/SLD/01 REV_00 **and :** C/ENGG-SS/TBCB/WRSS-21B/VADODARA	As per the response received, "**Annexure-A** drawings need to be referred for Bay allocation at 765KV Vadodara GIS station." However, we presume that the Take-off gantry location and Orientation shall be referred from Drawing No : "C/ENGG-SS/TBCB/WRSS-21B/VADODARA" and number of Bays under present scope shall be as per RFP only and the extra two (2) no 765KV Bays other than RFP requirement, shown in drawing : C/ENGG-SS/TBCB/WRSS-21B/VADODARA/SLD/01 REV_00 shall not be in present scope of work as shown in enclosed drawing "Annexure 1" marked as "NOT IN SCOPE"	The plan layout of Vadodara GIS substation (PGCIL) indicating the tentative position for line bay was already provided to the bidders. However, the bidders are advised to coordinate with substation owner for exact termination at Vadodara end.

32. We observe that BPC vide the above said clarification did not reply anything on the aspect of "NOT IN SCOPE" and rather limited its reply on the first part of query related to "take off gantry". We also observe that on 14.06.2019, the BPC has issued Amendment No. 2 to the RFP and TSA ("Amendment No. 2") amending the scope of work to also include 1 no. 110 MVAR spare reactor. However, no amendment was made to clarify the scope of work including implementation of complete diameters with 3 breakers in each diameter at the Vadodara S/s.

33. We note that PFCCL vide meeting held at CEA on 16.3.2021 stated as follows:

"In this regard, it may be mentioned that as no drawing highlighting the bays under question from the bidder was received. Accordingly, in the clarification furnished by BPC, the general reply to refer to the already provided plan layout of Vadodara GIS S/stn was given. Based on the general reply, M/s LVTPL seems to have presumed that the 2nd main bay in each dia may be done away with instead of seeking further clarification."

As per above, PFCCL representative attending the meeting at CEA on 16.3.2021 stated that they have not received any drawing from Petitioner.

34. Commission vide ROP for hearing held on 24.1.2022 asked Respondent, PFCCL to clarify as follows:

"4…
c)Respondent, PFCCL to clarify regarding its reply with respect to query of the Petitioner dated 31.5.2019 towards bays shown as "NOT IN SCOPE" (i.e. at Sr.9 of Additional Clarifications of RfP& TSA Queries). Whether the reply clarifies the position as to whether such bays shown as "NOT IN SCOPE" are to be implemented or not to be implemented?"

35. In regards to above said query, PFCCL vide Affidavit dated 18.2.2022 has acknowledged receipt of query dated 31.5.2019 by Petitioner along with drawing thereto. PFCCL has further submitted that it forwarded the query to CEA and CTU and issued clarifications as approved by CEA and CTU.

36. BPC has been assigned responsibility of carrying out the bidding process for which it is duly compensated for. BPC must be very careful while issuing clarifications, when it is aware that clarifications form part of RFP. Here following casualness is noted on part of BPC, PFCCL

a. The scope of work is the starting point of bidding. There should be no ambiguity in scope of work. In the bidding document of the scheme, 2 nos. of 765 kV bays at

Vadodara substation has been specified. If it was known upfront that full diameter has to be constructed in GIS, the same should have been clearly provided in RFP.

b. BPC nowhere indicated SLD is at Annexure-A and the same is specifying scope of work as per clarifications dated 30.5.2019.

c. Further at one point of time during meeting held on 16.3.2021, PFCCL is refusing receipt of Drawing at Annexure-1 of petitioner's query dated 31.5.2019 and while filing affidavit at Commission, it acknowledged receipt of the same. This clearly implies that it did not see the drawing at the time of issuing the clarification no. 2. Even vide its reply in instant petition, rather than taking the responsibility of error on its part on ignoring the drawing, it has tried to pass on the blame on to CTU and CEA. Even if BPC is taking support of CEA or CTU, finally before issuing clarifications, it is the responsibility of BPC to ensure completeness of query and its reply.

37. Let us peruse the relevant clause regarding the switching scheme as mentioned in RFP.

38. The RFP provides as follows:

"SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

1.0……..

1.1….

1.2 Switching Scheme
It is essential that the system should remain secure even under conditions of major equipment or bus-bar failure. Substations being the main connection points have large influence on the security of the system as a whole. The selection of the bus switching scheme is governed by the various technical and other related factors. One & Half breaker bus scheme for 765kV has been generally considered due to its merits in terms of reliability, security, operational

flexibility and ease of maintenance of equipment. At 765kV switchyard, each circuit of a double circuit line shall be terminated in different diameter.
……..

It is observed that RFP mandates that in 765 kV switchyard each circuit of a double circuit line shall be terminated in different diameter. However, at the same time RFP nowhere mandates "one and a half breaker" scheme, rather the RFP suggests to consider ""one and a half breaker scheme" citing its advantages. In case anything is a mandate, it should be clearly provided for in the document , rather than including it as an option.

39. Further Clause 2.3 of the RFP is as follows

Service continuity requirement for GIS:

"2.3 765KV GIS Substation equipment
.....The arrangement of gas sections or compartments shall be such as to facilitate future extension of any make without any drilling, cutting or welding on the existing equipment. To add equipment, it shall not be necessary to move or dislocate the existing switchgear bays. As the GIS is likely to be extended in future the TSP shall make available the complete details for the design of interface module such as cross section, enclosure material, enclosure dimensions (inner & outer), Flange diameter (inner & outer), conductor cross-section & connection arrangement, bolt spacing & dimension, rated gas pressure, Gasket detail etc. Further, adequate space for GIS Busbar Interface module shall be taken into account for future scope."

40. In regard to above, petitioner has submitted that the entirety of Clause 2.3 has to be looked into rather than a particular portion of the clause. The entire clause is extracted hereinbelow:

*"**2.3 765KV GIS Substation equipment***
GIS (Gas Insulated Switchgear) shall be indoor type and in accordance to IEC: 62271-203. The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All the switchgear such as Circuit Breaker, isolator, earth switch including CT, PT etc. shall be GIS type. Surge Arrestors used for transformer/Reactor connections will be AIS or GIS type. 765kV scheme shall be designed in such a way that it shall be possible to use line reactors (if provided) as bus reactors, in case of outage of line, to control bus voltage. Local control cabinets

(LCC) shall be provided as per requirement. The alarm & annunciation of GIS equipment shall be wired to SCADA System.

The GIS assembly shall consist of separate modular compartments e.g. Circuit Breaker compartment, Bus bar compartment filled with SF6 Gas and separated by gas tight partitions so as to minimize risk to human life, allow ease of maintenance and limit the effects of gas leaks failures & internal arcs etc. These compartments shall be such that maintenance on one feeder may be performed without de-energizing the adjacent feeders. These compartments shall be designed to minimize the risk of damage to adjacent sections and protection of personnel in the event of a failure occurring within the compartments. Rupture diaphragms with suitable deflectors shall be provided to prevent uncontrolled bursting pressures developing within the enclosures under worst operating conditions, thus providing controlled pressure relief in the affected compartment. The arrangement of gas sections or compartments shall be such as to facilitate future extension of any make without any drilling, cutting or welding on the existing equipment. To add equipment, it shall not be necessary to move or dislocate the existing switchgear bays. As the GIS is likely to be extended in future the TSP shall make available the complete details for the design of interface module such as cross section, enclosure material, enclosure dimensions (inner & outer), Flange diameter (inner & outer), conductor cross-section & connection arrangement, bolt spacing & dimension, rated gas pressure, Gasket detail etc. ***Further, adequate space for GIS Busbar Interface module shall be taken into account for future scope.***

The material and thickness of the enclosures shall be such as to withstand an internal flash over without burns through for a period of 300 ms at rated short time withstand current. The material shall be such that it has no effect of environment as well as from the by-products ofSF6 breakdown under arcing condition. This shall be validated with Type Test.

Each section shall have plug- in or easily removable connection pieces to allow for easy replacement of any component with the minimum of disturbance to the remainder of the equipment. Inspection windows (View Ports) shall be provided for Disconnect Switch and both type of earth switches i.e., Maintenance and fast operating.

Service continuity requirement for GIS:

The GIS equipment with the given bus switching arrangement is divided into different gas compartments. During the work such as a fault repair or major maintenance, requiring the dismantling of a gas compartment for which more than one compartments may need to be degassed.

During the above following Service continuity conditions shall be ensured to the extent possible:

- *For One & half breaker bus switching scheme, during a fault in Circuit Breaker compartment, no bus bar and feeder is permitted out of service during maintenance and repair/replacement.*

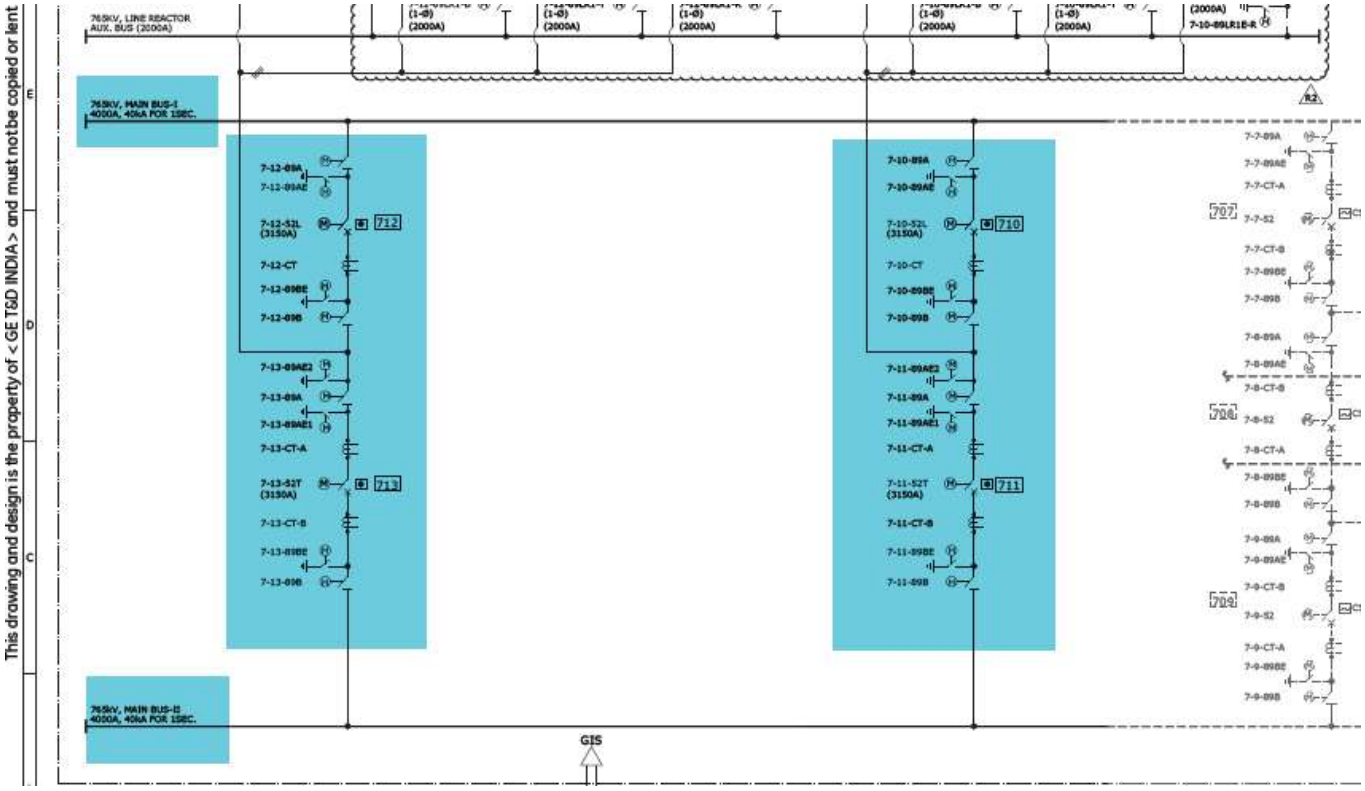
- *For Double Main bus switching scheme, during a fault in Circuit Breaker compartment, no bus bar is permitted out of service during maintenance and repair/replacement.*

- *During a fault in GIS compartment other than Circuit Breaker compartment, maximum one bus bar and/or one feeder is permitted out of service during maintenance and repair/replacement."*

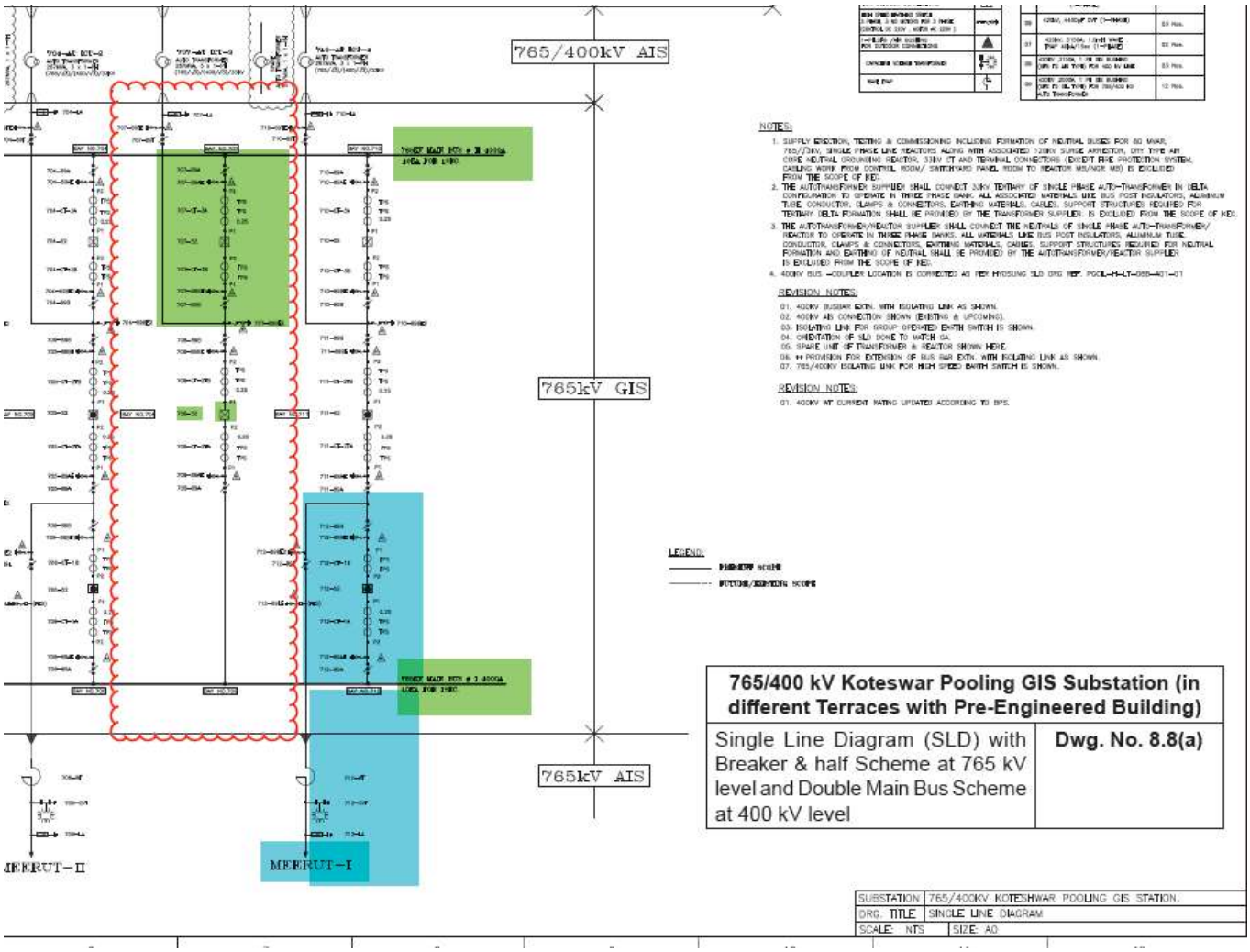
41. Petitioner has submitted that it is clear from a bare perusal of the said clause that it refers to expansion of the GIS by using bus interface modules and requires space to be left

for the same and that the GIS shall be extended from the main bus and the said requirement has been complied with by the Petitioner. The Petitioner has further contended that the said clause does not require implementation of additional bays by the Petitioner. It has submitted that the GIS shall be extended from the Main Bus in the same way LVTPL is extending the existing PGCIL GIS without any drilling, cutting or welding on the existing equipment.

42. Petitioner has also submitted example of Koteswar substation of PGCIL where 765kV GIS has been implemented in manner as been implemented by the Petitioner at Vadodara. A snapshot of SLD of Vadodara GIS S/s as submitted by Petitioner vide affidavit dated 27.11.2021 is as follows:



A snapshot of SLD of Koteshwar GIS S/s of Powergrid as submitted by Petitioner vide affidavit dated 27.11.2021 is as follows:



From the above SLD it can be seen that there are diameters at Koteshwar which have 3 breakers and diameter with two breakers also. The petitioner has also implemented 2 breakers for each diameter. Hence, it is observed that it is not a technical mandate to construct 3 breakers for each diameter. Rather, it would depend on the scheme of things as planned. We observe that Clause 2.3 of RFP as quoted at paragraph 40 above provides under “service continuity requirement of GIS” options of “one and a half breaker scheme” or “double main scheme”. The scheme implemented by Petitioner is actually double main

double breaker scheme which was an option under the RFP. We have already observed at paragraph 38 that “one and half breaker scheme” was only an option to be considered by petitioner.

43. Petitioner has also attached a few RFPs issued subsequent to instant RFP, where the RFP has been modified to remove the ambiguities. One such RFP in case of Khavda dated 28.01.2022 issued by REC Transmission Projects Company Limited provides as follows:

B.1.2 Switching Scheme

The switching schemes, as mentioned below, shall be adopted at various voltage levels of substation/switchyard:

Substation	765kV side	400kV side	220kV side (Future)
765/400/220kV Khavda PS-2 (KPS2) (GIS) S/s	One & half breaker (GIS)	One & half breaker (GIS)	Double Main (GIS)

Notes: -

i) At 765kV & 400kV voltage level, each circuit of a double circuit transmission line shall be terminated in different diameters.

ii) Transformers and bus reactors of same HV rating shall be placed in different diameters (i.e. two transformers of same HV rating shall not be connected in the same diameter and similarly two bus reactors of same HV rating shall also not be connected in the same diameter).

iii) In case of GIS substation where the bus scheme is One & Half breaker scheme, the diameters (diameter is a set of 3 circuit breakers with associated isolators, earth switches, current transformers etc. for controlling of 2 numbers feeders) shall be complete with feeder/line side isolator to be used for any future line with switchable line reactor bay and GIS duct of the future bay shall be brought outside the GIS hall/building with extension/interface module suitably.

We observe that in the abovesaid RFP, it has been clearly provided that requirement is for one and a half breaker scheme (3 breakers in each diameter along with associated

isolators, earth switches, current transformers etc. for controlling 2 numbers feeders) and the diameters shall be complete with feeder/ line side isolator for future expansion. However, in the instant case, the same was not specified.

44. Hence as per the foregoing discussions, we observe that the 765kV GIS bays for Lakadia-Vadodra line at Vadodra being implemented by the petitioner are in accordance with RFP and it is not required to implement the third breaker for each diameter as per the RFP. Accordingly, prayers (m) to (q) of the Petition and (g) to (j) of IA 61/2021 are resolved. With respect to other prayers of the Petition and IA 61/2021, the same shall be as observed at Paragraph 6 of the Order.

45. We direct that, Vadodara substation being an important substation, the Petitioner must ensure compliance to Clause 2.3 of the RFP, for future expansions. It is further directed that BPC and CTU should make scope of work very clear without any ambiguity for projects under TBCB and take utmost care while issuing clarifications.

46. Petition No. 158/MP/2021 along with 61/IA/2021 is disposed of in terms of the above.

Sd/	Sd/	Sd/
(P.K. Singh)	**(Arun Goyal)**	**(I.S. Jha)**
Member	**Member**	**Member**