

BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

**WORLD TRADE CENTRE, CENTRE NO.1,
13th FLOOR, CUFFE PARADE, MUMBAI 400005**

Case No:

IN THE MATTER OF:

Application under Section 18 of the Electricity Act, 2003 and the MERC (Transmission Licence Conditions) Regulations, 2004 including amendments thereof, seeking amendment of the Transmission Licence No. 1 of 2014 dated 14.08.2014

AND IN THE MATTER OF:

The Tata Power Company Limited
Bombay House, 24 Homi Mody Street,
Mumbai - 400 001

...Petitioner

MOST RESPECTFULLY SHOWETH:

I. Background:

1. The Petitioner, The Tata Power Company Limited (herein after referred to as "***Tata Power/Applicant***") is hereby filing the present Application seeking amendment of its Transmission Licence under Section 18 of the Electricity Act, 2003 (herein after referred to as "***Electricity Act***") read with the Maharashtra Electricity Regulatory Commission (Transmission Licence Conditions) Regulations, 2004 as amended in 2006 (herein after referred to as "***Transmission Licence Conditions Regulations***").

2. The Hon'ble Maharashtra Electricity Regulatory Commission (herein after referred to as the "*Hon'ble Commission*"), on 14th August, 2014, granted a Transmission Licence to Tata Power for a period of 25 years named "**Transmission Licence No. 1 of 2014**" through their Order in Case No. 112 of 2014 (herein after referred to as "*Transmission Licence of Tata Power*"). A copy of the said Transmission Licence is annexed hereto and marked as **Annexure 1**.
3. The Transmission Licence was granted to Tata Power for the Transmission Lines and the Transmission Bays located in and outside the Mumbai area, owned by Tata Power or proposed to be constructed and owned by Tata Power in future and forming part of the Intra-State Transmission System of Maharashtra.
4. It is submitted that pursuant to grant of the said Transmission Licence, there have been certain developments to the existing Transmission system of Tata Power and therefore, Tata Power is hereby invoking jurisdiction of this Hon'ble Commission for inclusion / alteration to the Transmission Licence of Tata Power as enunciated in the subsequent paragraphs.
5. Subsequently, the Hon'ble Commission vide the MYT Order for the Transmission Business of Tata Power in Case No. 22 of 2016 dated 30th June, 2016 has considered Transmission Line lengths and Bays for FY 2015-16. Further, the Hon'ble Commission in the said Order has *inter alia* given certain directions to Tata Power, relevant extracts of which is being reproduced herein below for ease of reference:

"The Commission observed that there has been modification of assets in certain schemes vis-à-vis the assets approved in TPC-T's Licence. In the present Order, the Commission is approving the various ARR expenses corresponding to the revised assets presented in the Petition subject to amendment of the Transmission Licence. TPC-T is directed to submit, within 3 months, an Application for amendment of its Licence accordingly, with details of the revised assets vis-à-vis those in the existing Licence."

II. Amendments required in the Tata Power Transmission Licence:

6. Considering the above, Tata Power is hereby proposing certain amendments to the Transmission Licence of Tata Power as detailed in the sections below:
7. The Area of Transmission in the Transmission Licence of Tata Power is categorised in 4 sections as below:
 - a) Existing Transmission Lines
 - b) Existing Bays at Sub-Stations
 - c) Proposed - List of Transmission Lines
 - d) Proposed - List of Bays
8. Since, the Transmission Licence granted is line / bay wise, there are certain modifications required in the Licence on account of creation / commissioning / modification to the Transmission Lines / Bays as per system requirements and in line with the approvals of all the concerned authorities, post the grant of Transmission Licence in 2014. We are presenting below the amendments required in the Transmission Licence of Tata Power:

IIA. Amendment required in the Transmission Licence for Existing Transmission Lines

(i) Changes in Transmission Line Lengths:

9. Subsequent to the grant of the Transmission Licence in 2014, one Transmission Line has undergone a change and as a result, the form and length of the Transmission Line has changed with respect to that mentioned in the Licence. The details of this change are as provided below:

a. **110 kV Trombay Dharavi 2 Transmission line:**

10. The 10.36 ckt. km 110 kV Trombay Dharavi 2 Transmission Line from Trombay Generating Station to Dharavi Receiving Station is part of the Transmission Licence of Tata Power and is listed as *Item No. 67* under the Heading "*Existing Transmission Lines*". There is a change in this Transmission Line configuration subsequent to the grant of the Transmission Licence, which has been described below:
11. The Hon'ble Commission had granted an "In Principal Clearance" to the Detailed Project Report (DPR) for "Construction of 220 kV Trombay Dharavi Salsette Lines" through its letter reference MERC/CAP/DPR/17/06 1006 dated 22/10/2012 dated 9th May, 2007. We have enclosed the approval letter of this scheme as **Annexure 2** to this submission. The single line diagram for the line is enclosed as **Annexure 3** to this submission. In line with this approved DPR, the existing 110 kV Trombay Dharavi-2 Transmission Line has been decommissioned and the Right of Way (RoW) of a section of the 110 kV Trombay-Dharavi 2 Transmission Line, from Trombay Generating Station up to Somaiya Plot (near Sion area - Tower Location 33) has been used for the proposed 220 kV Trombay - Dharavi Transmission Line. This change was carried out during the year 2015. Hence, the portion of 110 kV Trombay Dharavi-2 Transmission Line from Trombay up to Somaiya plot Tower Location 33 no longer exists. However, the section from Somaiya Plot (Tower Location 33) to Dharavi Receiving Station has been retained with a line length of 2.84 ckt. km as a spare section for future use. Since, the original form of the Transmission Line has changed, we propose a revision in the Item No. 67 of the Transmission Licence as follows:

**Table 1 - Proposed Change in Item 67 of the Transmission Licence (110 kV Trombay-Dharavi-
2 Transmission Line**

Area of transmission	Item No. in Transmission Licence	Description as per Licence	Amendment in Description
Existing Transmission Lines	67	110 kV Trombay-Dharavi 2 Transmission Line (10.36 km) from Trombay Receiving Station to Dharavi Receiving Station	Spare circuit of 110 kV Dharavi-Somaiya Plot Transmission Line (2.84 ckt. km.) from Dharavi Receiving Station up to Somaiya Plot (Tower Location 33)

12. It may be noted that the 110 kV bay at the Dharavi end has been used to charge a new Line named as "110 kV Dharavi-BKC-4 Transmission Line" (which is being described in subsequent section in this petition), while the bay at Trombay end was not part of the Transmission Licence. Hence, there is no change in the number of bays on account of the above change.

13. We request the Hon'ble Commission to approve the change in name and Transmission Line Length for Item 67 of the Transmission Licence of Tata Power as proposed in **Table 1** above.

(ii) Shifting of Transmission Lines from “Proposed - List of Transmission Lines” to “Existing Transmission Lines” in the Transmission Licence.

14. Post the grant of Transmission Licence, certain Transmission Lines which were proposed to be established have been established and put in service. In view of this, it is proposed to shift these lines from “Proposed - List of Transmission Lines” to “Existing Transmission Lines” in the Transmission Licence. Further, the lengths of the Transmission Lines actually commissioned are incorporated as compared to the proposed lengths in the Transmission Licence. The details of the Transmission Lines are provided below:

a) **110 kV Khopoli Bhivpuri Transmission Line**

15. The 110 kV Khopoli-Bhivpuri Transmission Line from Khopoli Generating Station to Bhivpuri Generating Station is part of the "Proposed - List of Transmission Lines" in the Transmission Licence and is listed as *Item No. 30* with a line length of 28.00 ckt. km. Subsequent to the grant of Transmission Licence, the 110 kV Khopoli Bhivpuri Line has been commissioned and named as 110 kV Khopoli Bhivpuri Tie Line # 2. Thereafter, the final permission from Electrical Inspector was received on 7th July, 2015.
16. This Transmission Line has been established in line with the DPR "Stringing of Second 110 kV Line between Khopoli & Bhivpuri in the existing transmission corridor" which was provided an "In-principle" clearance by the Hon'ble Commission through their letter MERC/TECH-VII/CAPEX/20122013/01644 dated 22nd October, 2012 (kindly refer **Annexure 4** for the letter). The single line drawing of the line is enclosed as **Annexure 5** to this submission.
17. The actual length of the 110 kV Khopoli Bhivpuri Tie Line # 2 after commissioning is 28.94 ckt. km against a length of 29.00 ckt. km approved in the DPR by the Hon'ble Commission.
18. In view of the above, we propose the following change in the Transmission Licence

Table 2 - Shifting of 110 kV Khopoli Bhivpuri Transmission Line from Proposed to Existing

Existing Transmission Licence			Amendment		
Area of transmission	Item No. in Transmission Licence	Description as per Licence	Area of Transmission	Proposed Item No. in Transmission Licence	Description
Proposed - List of Transmission Lines	30	110 kV Khopoli-Bhivpuri Transmission Line (28.0 km) from Khopoli Receiving Station to Bhivpuri Receiving Station	Existing Transmission Lines	78	110 kV Khopoli-Bhivpuri Tie Line # 2 (28.94 ckt. km.) from Khopoli Generating Station to Bhivpuri Generating Station

19. We request the Hon'ble Commission to approve the shifting of the Transmission Line from "*Proposed - List of Transmission Lines*" to "*Existing Transmission Lines*" along with

change in the nomenclature and Transmission Line length for *Item 30* of "*Proposed - List of Transmission Lines*" of the Transmission Licence as proposed in **Table 2** above. Item 30 in the Proposed - List of Transmission lines will consequently be removed.

b) 110 kV Dharavi - BKC Transmission Lines

20. The 110 kV Dharavi - BKC Transmission Line from Dharavi Receiving Station to BKC Receiving Station is part of the "Proposed - List of Transmission Lines" in the Transmission Licence and is listed as *Item No. 34* with a line length of 2.00 ckt. km. Subsequent to the grant of Transmission Licence, the 110 kV Dharavi - BKC Transmission Lines 3 and 4 have been commissioned on 27th January, 2016 and 29th March, 2015 respectively.
21. In this regard, we wish to submit that the Hon'ble Commission had granted an "In-Principle" clearance for the DPR of "145kV Gas Insulated Sub-Station at Bandra Kurla Complex (BKC)" with scheme value of Rs. 230.50 Crores, through its letter reference MERC/CAP/DPR/17/08/965 dated 9th May, 2008 (kindly refer **Annexure 6**). The scope of this DPR included establishment of 2 nos. of 110 kV Transmission Lines between Dharavi Receiving Station and BKC of 6.94 ckt. km each. Accordingly, two nos. 110 kV Dharavi - BKC Transmission Lines have been established and not one as mentioned in the Transmission Licence. The single line diagram of the lines is being submitted in **Annexure 7**. Also, the approval of the STU is presented in **Annexure 8**.
22. Further, two existing 110 kV overhead lines of 4.14 ckt. km each from Dharavi to Tower Location 16, were utilised for establishing part of the 110 kV Dharavi - BKC Transmission Lines # 3 and 4 as per the approved DPR. For the balance portion, underground cables of 2.80 ckt. km were laid for each line from Tower Location 16 to the new BKC Receiving Station. Thus the total length of each of the Dharavi - BKC Transmission Line was sum of the existing Transmission Line of 4.14 ckt. km from Dharavi to Tower Location 16 and an underground cable length of 2.80 ckt. km from Tower Location 16 to BKC Receiving

Station making the total length 6.94 ckt. km for each line. The relevant extract from the DPR is reproduced below:

Two additional 22 kV feeders from Dharavi R/S are routed on 110 kV transmission line towers and are terminated on H frames within the BKC plot area. These lines are rated for 110 kV. From the H frames, these 22 kV feeders are brought into the switchgear room through 22 kV cables. It is proposed to supply BKC S/S at 110 kV using these existing overhead lines from Dharavi R/S to BKC S/S. These 110 kV lines may be used as incoming to the proposed 145 kV GIS.

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The 110 kV cables to connect the incoming overhead lines to the 145 kV GIS bays and the 145 kV GIS Bays to 110/33 kV transformers shall be selected to carry the full load current continuously....

23. In view of this, we propose the following changes in the Transmission Licence:

Table 3 - Changes in 110 kV Dharavi-BKC Transmission line

Existing Transmission Licence			Amendment		
Area of transmission	Item No. in Transmission Licence	Description as per Licence	Area of Transmission	Item no. after amendment	Description
Proposed - List of Transmission Lines	34	110 kV Dharavi-BKC Transmission Line (2.0 km) from Dharavi Receiving Station to BKC Receiving Station	Existing Transmission Lines	79	110 kV Dharavi-BKC # 3 Transmission Line (6.94 ckt.km.) from Dharavi Receiving Station to BKC Receiving Station
			Existing Transmission Lines	80	110 kV Dharavi-BKC # 4 Transmission Line (6.94 ckt.km.) from Dharavi Receiving Station to BKC Receiving Station

24. We request the Hon'ble Commission to approve the following changes regarding the 110 kV Dharavi-BKC Transmission Line in the Transmission Licence:

- i Shifting the 110 kV Dharavi - BKC Transmission Line from "Proposed - List of Transmission Lines" to "Existing Transmission Lines"
- ii Consideration of 2 Transmission Lines instead of one considered in the Transmission Licence

- iii Correction to the line length from 2 km to 6.94 ckt. km for each of the Transmission Lines

(iii) Addition / Removal of Existing Transmission Lines

- 25. Subsequent to the issuance of the Transmission Licence, there have been certain additions / removals of Transmission Lines from the Transmission system of Tata Power. Further, the additions were not part of the "Proposed - List of Transmission Lines", however, these additions have been carried out basis approved DPRs. We are providing below the details of such additions / removal of Transmission Lines:

a) 220 kV Salsette - Saki and Salsette - Sahar Transmission Lines

- 26. The 4.77 km 220 kV Saki - Narayan Industrial Estate (NIE) - Sahar Transmission Line from Saki Receiving Station to Sahar Receiving Station is part of the Transmission Licence of Tata Power and is listed as *Item No. 23* under the Heading "*Existing Transmission Lines*". In this case the existing 220 kV Saki-NIE-Sahar Transmission Line (4.77 ckt. km) (Item 23 of the existing Transmission Line) has been absorbed in to the new 220 kV Salsette-Saki & Salsette-Sahar transmission lines, the details of which are provided below:
- 27. Tata Power received an "In-principle" clearance for the following two DPRs from the Hon'ble Commission, the scope of which included setting up of 220 kV Transmission Lines from Salsette Receiving Station to (i) Saki Receiving Station ("In-principle" clearance enclosed as **Annexure 9**) and (ii) Sahar Receiving Station ("In-principle" clearance enclosed as **Annexure 10**) as detailed below:

Table 4 - Details of "In-principle" clearance for 220 kV GIS at Saki / 245 kV GIS at Sahar

Name of DPR	In Principle Clearance Letter	Date of Clearance	Approved Scheme Value Rs. Crores	Scope of DPR included
220 kV GIS at Saki & Upgrading of Transmission Lines (Annexure 5)	MERC/CAP/DPR/17/07/2536	04.12.07	195.05	Setting up of 220 kV transmission line from Salsette to Saki Receiving Station
245 kV GIS at Sahar (Annexure 6)	MERC/CAPEX/2009 2010/00313	17.03.10	167.28	Laying of 220 kV cables from Saki to Sahar Receiving Station & location 24 of Salsette-Saki line to Sahar

28. According to the approved DPRs, Tata Power has commissioned the following lines:

- 220 kV Transmission Line from Salsette Receiving Station to Saki Receiving Station which comprises of 220 kV overhead Transmission Line of 5.74 ckt. km starting from Salsette and further an under-ground cable up to Saki Receiving Station of length 3.32 ckt. km as against the proposed overhead Transmission Line length of 7.20 ckt. km and the underground cable length of 1.50 ckt. km in the DPR. Change in length of overhead line and underground cable on account of non availability of clearance from Airport Authority of India (AAI) for required transmission tower height. This has been communicated to the Hon'ble Commission vide letter ref CREG\MUM\MERC\13\239 dated 18th November, 2013. The total line (overhead line + Underground cable) is of 9.06 Ckt. km. It may be noted that this line was not part of the Transmission Licence granted by the Hon'ble Commission, either existing or proposed and hence is an addition to the Transmission Licence.
- 220 kV Transmission Line from Salsette Receiving Station to Sahar Receiving Station which comprises of a 220 kV overhead Transmission Line of 5.74 ckt. km starting from Salsette and further an under-ground cable upto Sahar Receiving Station of length 4.29 ckt. km. The total Line (overhead line + Underground cable) is of 10.03 ckt. Km. It may be noted that this line was not part of the Transmission Licence granted by the Hon'ble Commission, either existing or proposed and hence is an addition to the Transmission Licence.

29. For establishing the above transmission lines, the existing 220 kV Saki-NIE-Sahar Transmission Line (4.77 ckt. km) was used (Item 23 of the existing Transmission Line). A schematic showing the above changes is enclosed as **Annexure 11**.
30. In view of the above, *Item 23* in the Transmission Licence: “220 kV Saki-Narayan Industrial Estate-Sahar Transmission Line (4.77 ckt. km) from Saki Receiving Station to Sahar Receiving Station” is required to be removed from the Transmission Licence and “220 kV Salsette-Saki Transmission Line (9.06 ckt. km) from Salsette Receiving Station to Saki Receiving Station” and “220 kV Salsette-Sahar Transmission Line (10.03 ckt. km) from Salsette Receiving Station to Sahar Receiving Station” is required to be included in the Transmission Licence as shown in the Table below:

Table 5 - Addition / Removal of Transmission Lines

Existing Transmission Licence			Amendment		
Area of transmission	Item No. in Transmission Licence	Description as per Licence	Area of Transmission	Item no. after amendment	Description
Existing Transmission Lines	23	220 kV Saki-Narayan Industrial Estate (NIE) - Sahar Transmission Line (4.77 km.) from Saki Receiving Station to Sahar Receiving Station	Remove from the Transmission Licence		
Not Existing in the Transmission Licence			Existing Transmission Lines	23	220 kV Salsette-Saki Transmission Line (9.06 ckt. km.) from Salsette Receiving Station to Saki Receiving Station
Not Existing in the Transmission Licence			Existing Transmission Lines	81	220 kV Salsette-Sahar Transmission Line (10.03 Ckt-km) from Salsette Receiving Station to Sahar Receiving Station

31. We request the Hon'ble Commission to kindly amend the Transmission Licence for the following:

- i. Removal of "220 kV Saki-Narayan Industrial Estate-Sahar Transmission Line (4.77 ckt. km) from Saki Receiving Station to Sahar Receiving Station" from the Transmission Licence.
- ii. Addition of (a) 220 kV Salsette-Saki Transmission Line (9.06 ckt. km) from Salsette Receiving Station to Saki Receiving Station and (b) 220 kV Salsette-Sahar Transmission Line (10.03 ckt. km) from Salsette Receiving Station to Sahar Receiving Station.

b) 110 kV Trombay HPCL 1 & 2 feeders

32. The 1.90 ckt. km 110 kV Trombay - HPCL 1 feeder and 1.90 km 110 kV Trombay - HPCL 2 feeder are part of the Transmission Licence of Tata Power and are listed as *Item Nos. 77e and 77f* under the Heading "*Existing Transmission Lines*".
33. The above mentioned Lines were established under a DPR approved by the Hon'ble Commission for providing power supply to HPCL (consumer) at 110 kV. (Refer **Annexure 12** for the "In-principle" clearance of the DPR). The line assets of the two feeders were established by the Distribution Business of Tata Power and accordingly, the assets are in the books of the Distribution Business. However, being 110 kV lines, these were inadvertently considered under Transmission Licence.
34. In view of this, we are proposing removal of these two feeders from the Transmission Licence as follows:

Table 6 - Removal of 110 kV Trombay-HPCL feeders from the Transmission Licence

Existing Transmission Licence			Amendment		
Area of transmission	Item No. in Transmission Licence	Description as per Licence	Area of Transmission	Item no. after amendment	Description
Existing Transmission Lines	77e	110 kV Trombay-HPCL 1 feeder (1.90 km)	Remove from theTransmission Licence		
Existing Transmission	77f	110 kV Trombay-HPCL 2 feeder (1.90 km)	Remove from theTransmission Licence		

35. We request the Hon'ble Commission to kindly amend the Transmission Licence to remove the 110 kV Trombay - HPCL feeders as mentioned in Table 6 above.

(iv) Change in names of Transmission Lines

36. The following change in names have occurred in the list of existing transmission lines and are being submitted as under for suitable amendment:
- i. It is being sought to change the name of Item No. 32 from “110 kV Carnac-Backbay 1 Transmission Line (4.01 km) from Carnac Receiving Station to BEST Backbay Receiving Station” to “110 kV Carnac-BEST-Backbay 1 Transmission Line (4.01 km) from Carnac Receiving Station to Backbay Receiving Station”.
 - ii. It is being sought to change the name of Item No. 45 from “110 kV Khopoli-Mankhurd Transmission Line (56.27 km) from Khopoli Generating Station to Mankhurd Receiving Station” to “110 kV Khopoli-Bhokarpada-Mankhurd Transmission Line (56.27 km) (Bhokarpada was earlier known as IXORA) from Khopoli Generating Station to Mankhurd Receiving Station”.

IIB Amendment required in the Transmission Licence for Transmission Bays

37. In addition to the amendments required in the Transmission Licence for Transmission Lines as explained above, amendments are required for the Transmission Bays at various Receiving Stations of the Transmission Business of Tata Power. The various reasons for the amendments are described below in detail:

- (i) **Shifting of Transmission Bays from the “Proposed List of Bays” to “Existing Bays at Sub-Stations” in the Transmission Licence after their commissioning:** As the Hon'ble Commission is aware, the Transmission Licence was granted inclusive of the proposed addition of bays in the near future. Subsequent to the grant of Transmission Licence, many of these bays in the "Proposed List of Bays" have been

commissioned. Accordingly, we are seeking amendment to the Transmission Licence to shift such bays which have been commissioned from the "Proposed List of Bays" to "Existing Bays at Sub-Stations".

(ii) **Modification of Existing Bays:** Subsequent to the grant of Transmission Licence, a number of Receiving Stations have undergone modifications for various reasons. These modifications have led to either an increase or decrease in the number of bays as compared to that presented in the Transmission Licence. The broad reasons for such changes are as follows:

- Addition of bays on account of change in configuration of the Existing Receiving Station.
- Addition of Bays which were existing but were missed out in the Transmission Licence (eg.: Bus PTs)
- Removal of Bays which were inadvertently considered as Transmission Bays in the Transmission Licence
- Decommissioning of Transmission Bays

Amendment is required to incorporate these modifications in the Transmission Licence to bring it in line with the actual Transmission System of Tata Power.

(iii) **Addition of Bays as per approved DPRs:** Subsequent to the grant of Transmission Licence, some of the bays were installed and commissioned as part of various new schemes under DPRs approved by the Hon'ble Commission. However, these schemes were not part of the "Proposed List of Bays". Amendment is required to include these Bays in the "Existing Bays at Sub-Stations"

(iv) **Error in Technical Specifications / Nomenclature:** There are certain errors in the present Transmission Licence on account of incorrect Technical Specifications / nomenclature used, which need to be corrected.

38. Considering the above mentioned reasons, we are presenting below the addition / modification / removal / corrections required in each of the Receiving Station of Tata Power-Transmission.

a.) Ambernath Receiving Station

39. As per the existing Transmission Licence, there are 12 nos. 110 kV Bays (Item 9 of "Existing Bays at Sub-Stations") and 20 nos. 22 kV Bays (Item 41 of "Existing Bays at Sub-Stations") at Ambernath Receiving Station.
40. While there is no change in the representation of the 110 kV Bays, in the 22 kV Bays, 2 nos. Bays where in one capacitor bank bay and one incomer bay from Transformer 1 had been inadvertently missed out. We are attaching Single Line Diagram (SLD) of Ambernath Receiving Station to this submission as **Annexure 13**. The actual no. of 22 kV Bays at Ambernath Receiving Stations are 22 with the following configuration:

Table 7 - 22 kV Bays Configuration at Ambernath Receiving Station

Bay Name	No. of Bays
Incomer Bays	2
Outgoing Feeders	14
Station Transformer Bays	2
Bus PT Bays	2
Caacitor Bank Feeder	1
Bus Section Breaker	1
Total	22

41. Considering the above, we request Hon'ble Commission for an amendment in the Transmission Licence to include the 2 nos. 22 kV Bays, which were inadvertently missed out as explained above. The requested amendment is as shown in the Table below:

Table 8 - Amendment in the 22 kV Bays at Ambernath Receiving Station

Location: Ambernath Receiving Station

Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	41	20 No. of 22 kV Bays at 110 kV Ambernath Receiving Station		20			
Add: Inadvertent Omission				2			
			Amendment requested to Existing Bays	22	Existing	41	22 No. of 22 kV Bays at 110 kV Ambernath Receiving Station

b.) Backbay Receiving Station

42. As per the existing Transmission Licence, there are 7 nos. 220 kV Bays (Item 1 of "Existing Bays at Sub-Stations"), 12 nos. 110 kV Bays (Item 10 of "Existing Bays at Sub-Stations") and 11 nos. 33 kV Bays (Item 31 of "Existing Bays at Sub-Stations") at Backbay Receiving Station. In addition, 12 nos. 33 kV Bays are in the "Proposed List of Bays" (Item 61).
43. While there is no change in the representation of the 220 kV and 110 kV Bays, following amendments are proposed for the 33 kV Bays:
- The Hon'ble Commission had approved addition of 14 nos. 33 kV Bays at Backbay as per the "In-principle" clearance received for the DPR "Installation of additional 33 kV bays at Borivli, Malad and Backbay Receiving Station" by their letter MERC/TECH - VII/CAPEX/20122013/02113 dated 21st December, 2012 (kindly refer **Annexure 14**). Of these 14 approved bays, 13 nos. 33 kV bays have been commissioned at Backbay during FY 2014-15 and FY 2015-16 (11 nos. in FY 2014-15 and 2 nos. in FY 2015-16).
 - However, the no. of 33 kV bays proposed to be added as per the Transmission Licence are 12 (Item 61 of "Proposed List of Bays").
 - In view of this, we are proposing the following two amendments:
 - Removal of Item 61 of "Proposed List of Bays"

- Increasing the no. of bays of Item 31 of "Existing Bays at Sub-Stations" from 11 to 24 on account of addition of 13 nos. 33 kV Bays at Backbay as explained above.
- We request Hon'ble Commission for an amendment in the Transmission Licence as shown in the Table below for 33 kV bays at Backbay Receiving Station. The SLD of Backbay Receiving Station is enclosed as **Annexure 15** to this submission.

Table 9 - Amendment in the 33 kV Bays at Backbay Receiving Station

Location: Backbay Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	31	11 No. of 33 kV Bays at 220 kV Backbay Receiving Station		11			
Proposed	61	12 No. of 33 kV Bays at 220 kV Backbay Receiving Station		12			
			Additional one 33 kV Bay as per approved DPR	1			Commissioned as per DPR: MERC/TECH-VII/CAPEX/20122013/0 2113
			Amendment requested to existing bays	24	Existing	31	24 No. of 33 kV Bays at 220 kV Backbay Receiving Station
			Amendment requested to proposed bays	-	-	61	Delete

c.) Bandra Kurla Complex (BKC) Receiving Station

44. As per the existing Transmission Licence, 8 nos. 110 kV Bays (Item 28 of "Proposed List of Bays"), 25 nos. 33 kV Bays (Item 52 of "Proposed List of Bays") are part of the "Proposed List of Bays" at BKC Receiving Station. This Receiving Station was established as per DPR approved by the Hon'ble Commission by their letter MERC/CAP/DPR/17/08/965 dated 9th May, 2008 (refer **Annexure 16**) and commissioned in FY 2014-15. Accordingly, the 110 kV and the 33 kV Bays are required to be shifted from the "Proposed List of Bays" to the "Existing Bays at Sub-Stations".

45. In this regard, we wish to submit that the actual number of bays added were different from the number specified in the Transmission Licence. With respect to the 110 kV Bays, it is submitted that the DPR approval states 6 nos. 110 kV bays: 2 Incomers, 3 outgoing and 1 Bus coupler bay. However, 110 kV PT Bays which are a standard feature of any Bus-section have not been specifically mentioned. Further, one no. 110 kV incoming line bay has been added for the purpose of meeting future requirement. As the Hon'ble Commission is aware, it is very difficult to add a GIS bay to an existing GIS, if required in future. In view of this, an additional incomer bay has been added to meet the future demand expected in the BKC area. Considering this, the total no. of 110 kV Bays added at BKC are 9. The SLD of BKC Receiving Station is enclosed as **Annexure 17** to this submission.
46. In view of the above, we are proposing the following amendment for 110 kV Bays at BKC:
- Addition of 9 nos. 110 kV Bays at BKC in the "Existing Bays at Sub-Stations
 - Removal of 8 nos. 110 kV Bays at BKC from the "Proposed List of Bays" (Item 28)
- The amendment requested is as shown in the Table below:

Table 10 - Amendment in the 110 kV Bays at BKC Receiving Station

Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Proposed	28	8 No. of 110 kV Bays at 110 kV BKC Receiving Station		8			
			Addition as modification	1			8 bays converted from proposed list to existing. Out of this, 6 bays were as per approved DPR: MERC/CAP/DPR/17/08/965 and additional 2 bus PT bays commissioned. Additionally, 1 spare bay was commissioned. (Total 9 bays)
			Amendment to existing bays	9	Existing	New	9 No. of 110 kV Bays at 110 kV BKC Receiving Station.
			Amendment to proposed bays	-	-	28	Delete

47. Further, with respect to the 33 kV bays, it is submitted that the DPR submission states 15 nos. 33 kV bays for two bus sections.

- Further, BKC receiving station was envisaged with two nos. 75MVA, 110/33kV power transformers and accordingly two bus sections of 33kV GIS having total of 15 bays (breaker bays, 2 I/C, 1 BC & 12 O/Gs) were planned. At this point in time, separate distribution transformers were considered to feed existing 22kV loads.
- However, during detailed engineering, it was noted that additional one no. 20 MVA, 33/11 kV distribution transformer was required to feed increasing 11 kV loads. To feed this additional 11 kV load, there was no space to accommodate separate distribution transformers. Hence it was decided to revise the rating of power transformers to 125 MVA, 110/33/22 kV (3 winding transformer) to feed 22 kV loads, having 20 MVA capacity on 22 kV winding and balance on 33 kV.

- As the power transformers capacity was increased to 125 MVA, for which STU approval has been obtained (Refer **Annexure 18**), and the following changes were required to be made to 33 kV GIS bays:

33 kV Original Bays as per DPR approval	33 kV Actual Bays commissioned	Remarks
Outgoing : 12	Outgoing : 20	4 additional O/Gs on each bus for evacuation due to increased capacity from 75 MVA to 105 MVA (after reducing for 20 MVA for 22kV from 125 MVA)
Capacitor & Reactor : NIL	Capacitor & Reactor : 4	2 bays for each bus. These were originally not considered, but would be required in future to install capacitor & reactors
Incomer : 2 Bus coupler : 1	Incomer : 3 Bus coupler : 3	As the power transformer rating was increased to 125 MVA, the layout of 33 kV GIS was changed so as to address the continuity of supply during outage of 125 MVA transformer. The 33 kV Bus II was split into 2 Buses IIA & IIB each having one incomer from 125 MVA power transformer & additional Bus Coupler between IIA & IIB. This increased the quantity of Incomers from 2 to 3 and Bus Coupler from 1 to 2. The third Bus Coupler was taken so that future 33 kV Bus Section can be connected to the system without

		requiring the outage of Bus I & Bus IIA & IIB.
Bus PT: 0	Bus PT: 6	Bus PT is standard feature of any Bus-section which have not been specifically mentioned in DPR
Total as per approved DPR: 15	Total actual bays: 36	

48. In view of the above, we are proposing the following amendment for 33 kV Bays at BKC:

- Addition of 36 nos. 33 kV Bays at BKC in the "Existing Bays at Sub-Stations"
- Removal of 25 nos. 33 kV Bays at BKC from the "Proposed List of Bays" (Item 52)

The amendment requested is as shown in the Table below:

Table 11 - Amendment in the 33 kV Bays at BKC Receiving Station

Location: BKC Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
-	-	-		-			
Proposed	52	25 No. of 33 kV Bays at 110 kV BKC Receiving Station		25			
			Addition as modification	11			25 bays were converted from proposed to existing. Additionally, 11 bays (6 bus PT, 2 Capacitor banks, 2 reactors & 1 bus coupler) were commissioned.
			Amendment to existing bays	36	Existing	New	36 No. of 33 kV Bays at 110 kV BKC Receiving Station
			Amendment to proposed bays	-	-	52	Delete

d.) Borivli Receiving Station

49. As per the existing Transmission Licence, there are 14 nos. 220 kV Bays (Item 2 of "Existing Bays at Sub-Stations"), 19 nos. 110 kV Bays (Item 11 of "Existing Bays at Sub-Stations"), 48 nos. 33 kV Bays (Item 32 of "Existing Bays at Sub-Stations") and 20 Nos. 22 kV Bays (Item 42 of "Existing Bays at Sub-Stations") at Borivli Receiving Station.
50. While there is no change in the representation of the 220 kV and 110 kV Bays, following corrections are required for the 33 kV and 22 kV Bays:
- In the Transmission Licence, there are 48 nos. bays represented for 33 kV and 20 nos. bays for 22 kV Bays. However, in actual there are 29 nos. 33 kV Bays and 37 nos. 22 kV Bays at Borivli. This is on account of the following errors:
 - 19 nos. 22 kV bays were erroneously considered as 33 kV. Hence, instead of the actual 29 bays, the no. of 33 kV bays was represented as 48.
 - Similarly, 19 nos. bays which were 22 kV bays were not considered under 22 kV. Further, 2 nos. of additional 22 kV bays were erroneously considered in the Licence. Hence, instead of the actual no. of 37 bays, the number of 22 kV bays was represented as 20 in the Transmission Licence. The SLD of the Station at 33 kV and 22 kV voltage levels have been presented as **Annexure 19** and **Annexure 20** respectively.

In view of the above, we are proposing the following amendment for the 33 kV and 22 kV Bays at Borivli Receiving Station:

- Correction of the bay nos. for 33 kV Bays at Borivli from 48 to 29 (Item No. 32)
- Correction of the bay nos. for 22 kV Bays at Borivli from 20 to 37 (Item No. 42)

The amendment requested is as shown in the Table below:

Table 12 - Amendment in the 33 kV Bays at Borivli Receiving Station

Location: Borivli Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	32	48 No. of 33 kV Bays at 220 kV Borivli Receiving Station		48			
			33 kV/22 kV misclassification	-19			
			Amendment to existing bays	29	Existing	32	29 No. of 33 kV Bays at 220 kV Borivli Receiving Station

Table 13 - Amendment in the 22 kV Bays at Borivli Receiving Station

Location: Borivli Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	42	20 No. of 22 kV Bays at 220 kV Borivli Receiving Station		20			
			Erroneous inclusions	-2			
			33 kV/22 kV misclassification	19			
			Amendment to existing bays	37	Existing	42	37 No. of 22 kV Bays at 220 kV Borivli Receiving Station

e.) Carnac Receiving Station

51. As per the existing Transmission Licence, there are 6 nos. 220 kV Bays (Item 3 of "Existing Bays at Sub-Stations"), 14 nos. 110 kV Bays (Item 12 of "Existing Bays at Sub-Stations"), 47 nos. 33 kV Bays (Item 33 of "Existing Bays at Sub-Stations") and 25 Nos. 22 kV Bays (Item 43 of "Existing Bays at Sub-Stations") at Carnac Receiving Station. Further, there are 11 nos. 110 kV Bays proposed to be added at Carnac Receiving Station (Item 33 of "Proposed List of Bays")
52. There are certain modifications in the number of bays at all voltage levels. The same have been described below:

53. In the 220 kV Bays at Carnac, 2 nos. Line PTs were inadvertently added as bays. The actual no. of 220 kV Bays in Carnac is 4. Accordingly, the amendment required in the Licence is as shown in the Table below:

Table 14 - Amendment in the 220 kV Bays at Carnac Receiving Station

Location: Carnac Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	3	6 No. of 220 kV Bays at 220 kV Carnac Receiving Station		6			
			Line PT excluded	-2			
			Amendment to existing bays	4	Existing	3	4 No. of 220 kV Bays at 220 kV Carnac Receiving Station

54. With respect to the 110 kV Bays, we wish to submit that in actual there are 17 nos. 110 kV bays at Carnac. However, in the Transmission Licence, the 110 kV Bays represented are 14 as 3 nos. 110 kV Bays were inadvertently not included in the Transmission Licence.

55. In view of the above, the amendment required in the Transmission Licence is as shown in the Table below:

Table 15 - Amendment in the 110 kV Bays at Carnac Receiving Station

Location: Carnac Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	12	14 No. of 110 kV Bays at 220 kV Carnac Receiving Station		14			
			Inadvertant omission	3			
			Amendment to existing bays	17	Existing	12	17 No. of 110 kV Bays at 220 kV Carnac Receiving Station

56. With respect to 33 kV Bays at Carnac Receiving Station, we wish to submit that, total 12 bays were added in line with DPR approved by Hon'ble Commission vide letter reference MERC/CAPEX/2012-2013/00082 dated 12th April, 2012 (Refer **Annexure 21**). These

additional bays were commissioned as a part of replacement of existing bus section 1 & 2 in available space at Carnac.

57. Further 1 no. of 33 kV bay was erroneously added in Transmission Licence which needs amendment in the licence. We are attaching SLD of Carnac Receiving Station as **Annexure 22**.

58. In view of the above, the amendment required to the Transmission Licence is as shown in the Table below:

Table 16 - Amendment in the 33 kV Bays at Carnac Receiving Station

Location: Carnac Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	33	47 No. of 33 kV Bays at 220 kV Carnac Receiving Station		47			
-	-	-		-			
			Addition as modification	12			Replacements were made as per DPR: MERC/CAPEX/20122013/00082
			Erroneous inclusions	-1			
			Amendment to existing bays	58	Existing	33	58 No. of 33 kV Bays at 220 kV Carnac Receiving Station

59. With respect to 22 kV Bays at Carnac Receiving Station, we wish to submit that in actual there are 27 nos. 22 kV Bays in Carnac as against 25 nos. 22 kV Bays represented in the Transmission Licence. This is on account of the fact that 2 nos. Bus PT bays of bus section # 4 were not considered as Bays while proposing the Transmission Licence.

60. In view of the above, the amendment required to the Transmission Licence is as shown in the Table below:

Table 17 - Amendment in the 22 kV Bays at Carnac Receiving Station

Location: Carnac Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	43	25 No. of 22 kV Bays at 220 kV Carnac Receiving Station		25			
			Bus PT included	2			
			Amendment to existing bays	27	Existing	43	27 No. of 22 kV Bays at 220 kV Carnac Receiving Station

61. Considering the above, we request the following amendment on the Transmission Licence with respect to Bays at Carnac:

- Correction of the bay nos. for 220 kV Bays at Carnac from 6 to 4 (Item No. 3)
- Correction of the bay nos. for 110 kV Bays at Carnac from 14 to 17 (Item No. 12)
- Correction of bay nos. for 33 kV Bays at Carnac from 47 to 58 (Item No. 33)
- Correction of bay nos. for 22 kV Bays at Carnac from 25 to 27 (Item No. 43)

f.) Central Railway (Wadala) Receiving Station

62. As per the existing Transmission Licence, there are 2 nos. 110 kV Bays (Item 30 of "Existing Bays at Sub-Stations") at Central Railway (Wadala) Receiving Station.

63. There are certain modifications in the number of bays explained as below:

With respect to 110 kV Bays at Central Railway (Wadala) Receiving Station, we wish to submit that in actual there are 4 nos. 110 kV Bays in Central Railway (Wadala) Receiving Station as against 2 nos. 110 kV Bays represented in the Transmission Licence. This is on account of the fact that 2 nos. Bus PT bays were not considered as Bays while proposing the Transmission Licence.

64. In view of the above, the amendment required to the Transmission Licence is as shown in the Table below:

Table 18 - Amendment in the 110 kV Bays at Central Railway (Wadala) Receiving Station

Location: Cetral Railway (Wadala) Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	30	2 No. of 110 kV Bays at Central Railway (Wadala) Receiving Station		2			
			Bus PT included	2			
			Amendment to existing bays	4	Existing	30	4 No. of 110 kV Bays at Central Railway (Wadala) Receiving Station

65. Considering the above, we request the following amendment to the Transmission Licence:

- Correction of the no. of 110 kV Bays at Central Railway (Wadala) Receiving Station from 2 to 4 (Item 30 of "Existing Bays at Sub-Stations").

g.) Chembur Receiving Station

66. As per the existing Transmission Licence, there are 12 nos. 110 kV Bays (Item 13 of "Existing Bays at Sub-Stations"), 32 nos. 22 kV Bays (Item 44 of "Existing Bays at Sub-Stations") and 4 nos. 11 kV Bays (Item 55 of "Existing Bays at Sub-Stations") at Chembur Receiving Station.

67. While there is no change in the representation of the 22 kV and 11 kV Bays, 2 nos. 110 kV Line PTs were inadvertently considered as Bays, thus increasing the no. of Bays represented in Licence as compared to actual. The SLD of Chembur Receiving Station is enclosed as **Annexure 23** to this submission.

68. In view of the above, the following amendment is required for the 110 kV Bays at Chembur Receiving Station:

Table 19 - Amendment in the 110 kV Bays at Chembur Receiving Station

Location: Chembur Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	13	12 No. of 110 kV Bays at 110 kV Chembur Receiving Station		12			
			Line PT excluded	-2			
			Amendment to existing bays	10	Existing	13	10 No. of 110 kV Bays at 110 kV Chembur Receiving Station

69. Considering the above, we request the following amendment to the Transmission Licence:

- Correction of the no. of 110 kV Bays at Chembur Receiving Station from 12 to 10 (Item 13 of "Existing Bays at Sub-Stations").

h.) Dharavi Receiving Station

70. As per the existing Transmission Licence, there are 13 nos. of 220 kV bays (Item 4 of the "Existing Bays at Sub-Stations"), 25 nos. of 110 kV bays (Item 14 of the "Existing Bays at Sub-Stations"), 90 nos. of 33 kV bays (Item 34 of the "Existing Bays at Sub-Stations") and 39 nos. of 22 kV bays (Item 45 of the "Existing Bays at Sub-Stations") at Dharavi Receiving Station. Further, there is 1 no. 220 kV Bay (Item 15 of "Proposed List of Bays") 41 nos. of 110 kV Bays (Item 32 of "Proposed List of Bays") and 50 nos. of 33 kV Bays (Item 57 of "Proposed List of Bays") proposed to be added at Dharavi Receiving Station.

71. While there is no change in the representation of the 220 kV bays, corrections are required in the 110 kV, 33 kV and 22 kV bays as described below:

72. 2 nos. 110 kV bays have been commissioned at Dharavi Receiving Station in line with the approved DPR of "145 kV GIS at BKC", reference MERC/CAP/DPR/17/08/965 dated 9th May, 2008 (refer **Annexure 24**) and 2 nos. 110 kV incoming bays have been commissioned at Dharavi Receiving Station in line with the approved DPR of "145 kV Receiving Station at HDIL Kurla reference MERC/CAPEX/2015-2016/00813 dated 26th October, 2015 (refer **Annexure 25**). Further, 2 nos. of 110 kV bays and 2 nos. of 110 of

Bus PT bays were also commissioned to energize the new outdoor GIS installed at Dharavi to supply power to 110 kV GIS at BKC and 110 kV GIS at HDIL. The SLD of Dharavi Receiving Station at 110 kV voltage level is attached as **Annexure 26**. In view of the above, Transmission Licence is required to be amended to add 8 nos. bays in the existing bays. The proposed amendment is as shown in the Table below:

Table 20 - Amendment in the 110 kV Bays at Dharavi Receiving Station

Location: Dharavi Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	14	25 No. of 110 kV Bays at 220 kV Dharavi Receiving Station		25			
			Addition as modification	8			
			Amendment to existing bays	33	Existing	14	33 No. of 110 kV Bays at 220 kV Dharavi Receiving Station

73. With respect to 33 kV Bays at Dharavi Receiving Station, we wish to submit the following:

- 34 nos. of 22 kV bays were inadvertently considered as part of the 33 kV bays in the Transmission Licence. Hence, the no. of 33 kV Bays in the Existing Bays need to be reduced by 34.
- Further, 15 nos. 33 kV bays were added due to replacement of existing Air Insulated Switchgear (AIS) by Gas Insulated Switchgear in available space at the Dharavi Receiving Station as per the scheme in the approved DPR: MERC/CAPEX/20112012/02926 dated 16th March, 2012 (refer **Annexure 27**).
- Considering the above, the Transmission Licence is required to be amended to change the 33 kV no. of bays, both in the list of "Existing Bays at Sub-Station" and "Proposed List of Bays". The 33 kV Bays at Dharavi will change from 90 to 71 (90-34+15) bays in the "Existing Bays at Sub-Station". The proposed amendment is as shown in the Table below:

Table 21 - Amendment in the 33 kV Bays at Dharavi Receiving Station

Location: Dharavi Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	34	90 No. of 33 kV Bays at 220 kV Dharavi Receiving Station		90			
			Addition as modification	15			Replacements were made as per DPR: MERC/CAPEX/20112012/02926
			Error in 33 kV/22 kV nomenclature	-34			
			Amendment to existing bays	71	Existing	34	71 No. of 33 kV Bays at 220 kV Dharavi Receiving Station

74. With respect to 22 kV Bays at Dharavi Receiving Station, we wish to submit the following:

- As explained above, 34 nos. of 22 kV bays were inadvertently considered as part of the 33 kV bays in the Transmission Licence. Hence, the no. of 22 kV Bays in the "Existing Bays at Sub-Stations" need to be enhanced by 34.
- In view of this the Transmission Licence needs to be amended to increase the no. of 22 kV Bays at Dharavi Receiving Station from 39 to 73 (39+34) in the list of "Existing Bays at Sub-Stations". The proposed amendment is as shown in the Table below:

Table 22 - Amendment in the 22 kV Bays at Dharavi Receiving Station

Location: Dharavi Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	45	39 No. of 22 kV Bays at 220 kV Dharavi Receiving Station		39			
			33 kV/22 kV misclassification	34			
			Amendment to existing bays	73	Existing	45	73 No. of 22 kV Bays at 220 kV Dharavi Receiving Station

75. Considering the above submissions we request the Hon'ble Commission to allow the following amendments with respect to bays at Dharavi Receiving Station in the Transmission Licence:

- Reducing 8 nos. 110 kV Bays from the "Proposed List of Bays" (Item 32 of "Proposed List of Bays ") and adding 8 bays to "Existing Bays at Sub-stations" (Item 14 of "Existing Bays at Sub-stations"). Hence we propose to remove item 32 from proposed Licence.
- Correction in the no. of 33 kV Bays to remove the 22 kV Bay nos. inadvertently added in 33 kV bays. Further, adding 15 bays to "Existing Bays at Sub-stations (Item 34 of "Existing Bays at Sub-stations"), as the same have been commissioned, effectively changing the no. of bays from 90 to 71.
- Correction in the no. of 22 kV Bays from 39 to 73 to add the 22 kV Bay nos. inadvertently added in 33 kV bays (Item 45 of "Existing Bays at Sub-stations").

i.) Grant Road Receiving Station

76. As per the existing Transmission Licence, there are 3 nos. of 110 kV bays (Item 15 of the "Existing Bays at Sub-Stations").

77. While representing the 110 kV Bays at Grant Road, 2 nos. Bus PT bays were not included. Hence, it is proposed to correct the no. of 110 kV Bays from 3 to 5 in the Transmission Licence. The same has been summarised in the Table below:

Table 23 - Amendment in the 110 kV Bays at Grant Road Receiving Station

Location: Grant Road Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	15	3 No. of 110 kV Bays at 110 kV Grant Road Receiving Station		3			
			Bus PT, Cap.Bank etc. included	2			
			Amendment to existing bays	5	Existing	15	5 No. of 110 kV Bays at 110 kV Grant Road Receiving Station

78. We request for the following amendment in the Transmission Licence with respect to Grant Road Receiving Station:

- Correct the no. of 110 kV Bays at Grant Road Receiving Station from 3 to 5 (Item 15 of "Existing Bays at Substations")

j.) Kalyan Receiving Station

79. As per the existing Transmission Licence, there are 18 nos. of 110 kV bays (Item 16 of the "Existing Bays at Sub-Stations") and 21 nos. of 22 kV bays (Item 46 of the "Existing Bays at Sub-Stations") at Kalyan Receiving Station.

80. While there is no change in the representation of the 22 kV bays, there is one correction required in the 110 kV bays at Kalyan Receiving Station as follows:

- Among the 18 nos. 110 kV Bays at Kalyan Receiving Station, 2 nos. of line PTs were included as part of the Bays. The SLD of Kalyan Receiving Station is enclosed as **Annexure 28** to this submission. In view of this, we propose to correct the number of 110 kV bays at the Kalyan Receiving Station from 18 to 16 as summarised in the Table below:

Table 24 - Amendment in the 110 kV Bays at Kalyan Receiving Station

Location: Kalyan Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	16	18 No. of 110 kV Bays at 110 kV Kalyan Receiving Station		18			
			Line PT excluded	-2			
			Amendment to existing bays	16	Existing	16	16 No. of 110 kV Bays at 110 kV Kalyan Receiving Station

81. We request for the following amendment in the Transmission Licence with respect to Kalyan Receiving Station:

- Correct the no. of 110 kV Bays at Kalyan Receiving Station from 18 to 16 (Item 16 of "Existing Bays at Substations")

k.) Bhivpuri Generating Station

82. As per the existing Transmission Licence, there is 1 no. of 110 kV Transmission Bay (Item 37 of the "Proposed List of Bays") proposed at Bhivpuri Generating Station and 1 no. of 110 kV Transmission Bay (Item 36 of the "Proposed List of Bays") proposed at Khopoli Generating Station.
83. Both these transmission bays were meant for establishing the 110 kV Khopoli Bhivpuri transmission tie Line, in line with the DPR approved by the Hon'ble Commission by their letter MERC/TECH-VII/CAPEX/20122013/01644 dated 22nd October, 2012 (refer **Annexure 29**). Further the Khopoli Bhivpuri Tie Line has been commissioned on 31st March 2014 along with the 110 kV Bay at Bhivpuri.
84. The existing 110 kV spare bay at Khopoli, which was part of the Khopoli Generation Station assets, was refurbished and used. Hence, Item 37 of the proposed bays section of the Licence "1 No. of 110 kV Bay at 110 kV Khopoli Generating Station" of the Licence needs to be removed as part of the amendment. The final SLD of the Station has been attached as **Annexure 30**.
85. In view of the above, the Transmission Licence is required to be amended to shift Item 37 in the "Proposed List of Bays" to "Existing Bays at Sub-Stations" as shown in the Table below:

Table 25 - Amendment in the 110 kV Bays at Bhivpuri Generating Station

Location: KB Tie Line 2 at Bhivpuri: 110 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
-	-	-		-			
Proposed	37	1 No. of 110 kV Bay at 110 kV Bhivpuri Receiving Station		1			
			Amendment to existing bays	1	Existing	New	1 No. 110 kV Bay at Bhivpuri Generating Station (for Khopoli Bhivpuri Tie 2 Line)
			Amendment to proposed bays	-	-	37	Delete

86. We request for the following amendment in the Transmission Licence with respect to Khopoli Generating Station:

- Add 1 no. 110 kV Bay at Bhivpuri Generating Station in "Existing Bays at Substations"
- Remove 1 no. 110 kV Bay at Khopoli Generating Station from "Proposed List of Bays" (Item 36 of "Proposed Bays at Sub-Stations")
- Remove 1 no. 110 kV Bay at Bhivpuri Generating Station from "Proposed List of Bays" (Item 37 of "Proposed Bays at Sub-Stations")

I.) Mahalaxmi Receiving Station

87. As per the existing Transmission Licence, there are total 15 nos. of 110 kV bays (Item 19 of the "Existing Bays at Sub-Stations") and 30 nos. of 22 kV bays (Item 48 of the "Existing Bays at Sub-Stations") at Mahalaxmi Receiving Station. Further, there are 5 nos. 220 kV Bays (Item 14 of "Proposed List of Bays") proposed to be added at Mahalaxmi Receiving Station.
88. While there is no change in the representation of the 110 kV bays and the 22 kV bays at Mahalaxmi Receiving Station, there has been an addition of 220 kV Bays and 33 kV Bays at Mahalaxmi Receiving Station which is described below:
- 8 nos. of 220 kV bays have been commissioned in line with the DPR approved by the Hon'ble Commission through their letter reference MERC/CAP/DPR/17/08/227 dated 17th January, 2008 (Kindly refer **Annexure 31**). It may be noted that although the proposed bays in the Transmission Licence mentions 5 nos. 220 kV bays, 2 nos. Bus PT bays which is standard feature of any bus section and 1 no. 220 kV bay was commissioned for future line from proposed GIS at Parel Receiving Station. In view of this, 8 nos. 220 kV Bays are to be considered as a new line item in the "Existing Bays at Substations" at Mahalaxmi Receiving Station. The SLD of the station is attached in **Annexure 32**. Accordingly, the following Table indicates the proposed amendment to the Transmission Licence with regards to the new 220 kV bays at Mahalaxmi Receiving Station.

Table 26 - Amendment in the 220 kV Bays at Mahalaxmi Receiving Station

Location: Mahalaxmi: 220 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
-	-	-		-			
Proposed	14	5 No. of 220 kV Bays at 220 kV Mahalaxmi Receiving Station		5			
			Addition as modification	3			5 bays converted from proposed list to existing as per DPR: MERC/CAP/DPR/17/08/227. Additional 3 bays (2 bus PTs and 1 spare) also commissioned.
			Amendment to existing bays	8	Existing	New	8 No. of 220 kV Bays at 220 kV Mahalaxmi Receiving Station
			Amendment to proposed bays	-	-	14	Delete

- In addition to the above, 22 nos. of 33 kV bays were commissioned at Mahalaxmi Receiving Station in line with the DPR approved by the Hon'ble Commission through letter reference MERC/CAPEX/20102011/00294 dated 13th May, 2010 (Kindly refer **Annexure 33**). It may be noted that these bays were not in the proposed list of Bays in the Transmission Licence.
- Further, we wish to submit that in case of GIS it is difficult to add new bays in future due to practical difficulties at ground conditions. Hence, in anticipation of future requirements in and around the Mahalaxmi receiving station, 2 nos. of 33 kV bays (one for future incomer and one for capacitor bank) were also commissioned. In addition, 6 nos. bus PT bays which are a standard feature of any bus-section have also been additionally commissioned. Accordingly, the following Table indicates the proposed amendment to the Transmission Licence with regards to the new 33 kV bays at Mahalaxmi Receiving Station.

Table 27 - Amendment in the 33 kV Bays at Mahalaxmi Receiving Station

Location: Mahalaxmi Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
			Addition as modification	30			22 bays as per DPR: MERC/CAPEX/2010201 1/00294. Additionally, 6 Bus PT, 1 incomer, 1 capacitor bank were added.
			Amendment to existing bays	30	Existing	New	30 No. of 33 kV Bays at Mahalaxmi Receiving Station

89. Considering the above, we request for the following amendment in the Transmission Licence with respect to Mahalaxmi Receiving Station:

- Add 8 nos. 220 kV Bays at Mahalaxmi Receiving Station in "Existing Bays at Substations"
- Remove 5 nos. 220 kV Bay at Mahalaxmi Receiving Station from "Proposed List of Bays" (Item 14 of "Proposed Bays at Sub-Stations")
- Add 30 nos. 33 kV Bays at Mahalaxmi Receiving Station in "Existing Bays at Substations"

90. In line with commissioning of 220 kV GIS at Mahalaxmi, station has been uprated to 220 kV voltage level. Accordingly the description of Item No. 48 of the License is being sought to be changed from "30 No. of 22 kV Bays at 110 kV Mahalaxmi Receiving Station" to "30 No. of 22 kV Bays at 220 kV Mahalaxmi Receiving Station"

m.) Malad Receiving Station

91. As per the existing Transmission Licence, there are 13 nos. of 110 kV Bays (Item 20 of the "Existing Bays at Sub-Stations") and 26 nos. of 22 kV Bays (Item 49 of the "Existing Bays at Sub-Stations") at Malad Receiving Station. Further, there are 11 nos. 110 kV Bays (Item 43 of "Proposed List of Bays") and 12 nos. of 33 kV Bays (Item 60 of "Proposed List of Bays") proposed to be added at Malad Receiving Station.

92. While there is no change in the representation of the 110 kV bays, the following amendment is required with respect to 22 kV bays:

- 12 nos. of the proposed 33 kV class Bays used for 22 kV have been commissioned at Malad in line with the DPR approved by the Hon'ble Commission through their letter MERC/TECH-VII/CAPEX/20122013/02113 dated 21st December, 2012 (refer **Annexure 34**). Further, one additional bay for future incomer no. 3 has been added as it would be very difficult to add a GIS bay in future.
- Further, 4 nos. of bays were inadvertently considered in the Transmission Licence for controlling 4 Transformers, whereas in actual only 2 bays are used for controlling 4 Transformers at Malad Receiving Station. In view of this, the actual no. of 22 kV Bays at Malad are 24 instead of 26 listed in the Transmission Licence. The SLD of Malad Receiving Station is attached as **Annexure 35**.
- The proposed amendment in the Transmission Licence for Malad Receiving Station at 22 kV voltage is as shown in the Table below:

Table 28 - Amendment in the 22 kV Bays at Malad Receiving Station

Location: Malad Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	49	26 No. of 22 kV Bays at 110 kV Malad Receiving Station		26			
			Addition as modification	13			12 bays were added as per DPR: MERC/TECH-VII/CAPEX/20122013/02113. Additionally 1 incomer bay was commissioned.
			Erroneous inclusions	-2			
			Amendment to existing bays	37	Existing	49	37 No. of 22 kV Bays at 110 kV Malad Receiving Station

93. Considering the above, we request for the following amendment in the Transmission Licence with respect to Malad Receiving Station:

- Update the no. of 22 kV Bays from 26 to 37 considering the additions and deletion of bays explained above. (Item 49 of "Existing Bays at Substations")
- Remove 12 nos. 33 kV Bay at Malad Receiving Station from "Proposed List of Bays" (Item 60 of "Proposed List of Bays")

n.) Mankhurd Receiving Station

94. As per the existing Transmission Licence, there are 9 nos. of 110 kV bays (Item 21 of the "Existing Bays at Sub-Stations") and 15 nos. of 22 kV bays (Item 50 of the "Existing Bays at Sub-Stations"). Further, there are 11 nos. 110 kV Bays (Item 31 of "Proposed List of Bays") and 23 nos. of 33 kV Bays (Item 55 of "Proposed List of Bays") proposed to be added at Mankhurd Receiving Station.
95. While there is no change in the representation of the 22 kV bays, the following amendment is required in the 110 kV bays:
- 7 nos. of 110 kV bays were commissioned during FY 2014-15 out of the 11 nos. of 110 kV bays proposed in the Transmission Licence (Item 31 in the "Proposed - List of Bays"). Accordingly, these bays need to be added to the Existing 9 nos. Bays at Mankhurd Receiving Station (Item 21 in the "Existing - List of Bays").
 - Further, 2 nos. of 110 kV Bus PTs were not considered in the 9 Bays at Mankhurd Receiving Station (Item 21 in the "Existing - List of Bays"). The same need to be included in the Existing Bays.
 - In addition to the above, 4 nos. Line PTs were inadvertently considered in the 9 Bays at Mankhurd Receiving Station (Item 21 in the "Existing - List of Bays"). The same need to be removed from the Existing Bays. The SLD Mankhurd Receiving Station is attached as **Annexure 36**.
 - The net no. of 110 kV Bays at Mankhurd Receiving Station work out to 14 as shown in the Table below:

Table 29 - Amendment in the 110 kV Bays at Mankhurd Receiving Station

Location: Mankhurd Receiving Station: 110 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	21	9 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station		9			
Proposed	31	11 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station		7			
			Line PT excluded	-4			
			Bus PT, Cap.Bank etc. included	2			
			Amendment to existing bays	14	Existing	21	14 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station
			Amendment to proposed bays	2	Proposed	31	Delete

96. Considering the above, we request for the following amendment in the Transmission Licence with respect to Mankhurd Receiving Station:

- Update the no. of 110 kV Bays from 9 to 14 considering the additions and deletion of bays explained above. (Item 21 of "Existing Bays at Substations")

o.) Panvel Receiving Station

97. As per the existing Transmission Licence, there are 4 nos. of 110 kV bays (Item 23 of the "Existing Bays at Sub-Stations") and 10 nos. of 22 kV bays (Item 52 of the "Existing Bays at Sub-Stations").

98. While there is no change in the representation of the 110 kV bays, there is an amendment required in the no. of 22 kV bays at Panvel Receiving Station as follows:

- Out of 10 bays, 3 nos. of outgoing feeder bays of 22 kV at Panvel were part of the transmission Licence. However, due to one case of 1 breaker controlling 2 nos. of outgoing feeders, it is being proposed that 9 nos. of 22 kV Bays should be considered at Panvel as against 10 nos. in the Transmission Licence. The SLD of the station is attached as **Annexure 37**.

- The proposed amendment in the Transmission Licence for Panvel Receiving Station is as shown in the Table below:

Table 30 - Amendment in the 22 kV Bays at Panvel Receiving Station

Location: Panvel Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	52	10 No. of 22 kV Bays at 110 kV Panvel Receiving Station		10			
			Erroneous inclusions	-1			
			Amendment to existing bays	9	Existing	52	9 No. of 22 kV Bays at 110 kV Panvel Receiving Station

99. Considering the above, we request for the following amendment in the Transmission Licence with respect to Panvel Receiving Station:

- Update the no. of 22 kV Bays from 10 to 9 as explained above. (Item 52 of "Existing Bays at Substations")

p.) Parel Receiving Station

100. As per the existing Transmission Licence, there are 20 nos. of 110 kV bays (Item 22 of the "Existing Bays at Sub-Stations"), 56 nos. of 33 kV bays (Item 35 of "Existing Bays at Sub-Stations"), 12 nos. of 22 kV bays (Item 51 of "Existing Bays at Sub-Stations") and 23 nos. of 6.6 kV bays (Item 56 of "Existing Bays at Sub-Stations") at the Parel Receiving Station. Further, there are 7 nos. of 220 kV Bays (Item 21 of "Proposed List of Bays"), 18 nos. of 110 kV Bays (Item 40 of "Proposed List of Bays"), 1 no. of 110 kV Bay (Item 44 of "Proposed List of Bays"), 23 nos. of 33 kV Bays (Item 65 of "Proposed List of Bays") and 12 nos. of 33 kV Bays (Item 70 of "Proposed List of Bays") proposed to be added at Parel Receiving Station.

101. The following amendments are proposed for the Bays at various voltage levels in Parel Receiving Station:

- 1 no. of 110 kV Bay has been commissioned in FY-15 as per DPR approval: MERC/CAPEX/20102011/00295 dated 13th May 2010 (refer **Annexure 38**) and hence is required to be shifted from the Proposed List of Bays to Existing Bays at Parel Receiving Station. Accordingly, the no. of 110 kV Bays at Parel would be 21 as against the 20 in the Transmission Licence. The SLD of the station at 110 kV voltage level is attached as per **Annexure 39**.
- The proposed amendment in the Transmission Licence for Parel Receiving Station at 110 kV voltage is as shown in the Table below:

Table 31 - Amendment in the 110 kV Bays at Parel Receiving Station

Location: Parel Receiving Station: 110 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	22	20 No. of 110 kV Bays at 110 kV Parel Receiving Station		20			
Proposed	44	1 No. of 110 kV Bay at 110 kV Parel Receiving Station		1			
		Amendment to existing bays		21	Existing	22	21 No. of 110 kV Bays at 110 kV Parel Receiving Station
		Amendment to proposed bays		-	-	44	Delete

- 30 nos. of bays at 22 kV voltage level were inadvertently counted under 33 kV making the no. of 33 kV Bays at Parel Receiving Station to 56 nos. as against the actual 26 nos (Item 35 of "Existing Bays at Sub-Stations").
- Further, 10 nos. 33 kV bays of the proposed 12 nos. 33 kV Bays (Item 70 of "Proposed List of Bays") were commissioned during FY 2014-15 at Parel Receiving Station.
- Considering the above two amendments, the total no. of existing 33 kV Bays at Parel Receiving Station works out to 36.
- The proposed amendment in the Transmission Licence for Parel Receiving Station at 33 kV voltage is as shown in the Table below:

Table 32 - Amendment in the 33 kV Bays at Parel Receiving Station

Location: Parel Receiving Station: 33 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	35	56 No. of 33 kV Bays at 110 kV Parel Receiving Station		56			
Proposed	70	12 No. of 33 kV Bays at 110 kV Parel Receiving Station		10			
			33 kV/22 kV misclassification	-30			
			Amendment to existing bays	36	Existing	35	36 No. of 33 kV Bays at 110 kV Parel Receiving Station
			Amendment to proposed bays	2	Proposed	70	Delete

- As explained above, the no. of 22 kV Bays need to be corrected to consider the 30 nos. 22 kV Bays considered under 33 kV in the Transmission Licence; i.e. the 12 nos. 22 kV Bays under Item 51 of "Existing Bays at Sub-Stations" needs to be amended to 42 nos. 22 kV Bays.
- However, the actual no. of 22 kV Bays at Parel Receiving Station are 41. Hence, only 29 Bays need to be added to bring about the correct no. of 22 kV Bays at Parel Receiving Station in item 51 of "Existing Bays at Sub-Stations".
- The proposed amendment in the Transmission Licence for Parel Receiving Station at 22 kV voltage is as shown in the Table below:

Table 33 - Amendment in the 22 kV Bays at Parel Receiving Station

Location: Parel Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	51	12 No. of 22 kV Bays at 110 kV Parel Receiving Station		12			
			Erroneous inclusions	-1			
			33 kV/22 kV misclassification	30			
			Amendment to existing bays	41	Existing	51	41 No. of 22 kV Bays at 110 kV Parel Receiving Station

- With respect to the 11 kV bays at Parel mentioned in the License, we wish to clarify that they have an actual rating of 6.6 kV and hence we submit to the Hon'ble Commission to provide for appropriate amendment to this effect.
- Also, with respect to these 6.6 kV Bays, we wish to submit that in actual there are 28 nos. of 6.6 kV Bays at Parel Receiving Station as against the 23 nos. considered in the Transmission Licence. 5 nos. of the 6.6 kV bays (2 nos. of LT Transformer bays, 2 nos. Bus PT Bays & 1 no. Bus Coupler bay) were inadvertently missed out while submitting for the Transmission Licence.
- The proposed amendment in the Transmission Licence for Parel Receiving Station at 6.6 kV voltage is as shown in the Table below:

Table 34 - Amendment in the 6.6 kV Bays at Parel Receiving Station

Location: Parel Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	56	23 No. of 11 kV Bays at 110 kV Parel Receiving Station		23			
			Erroneous omissions	5			
			Amendment to existing bays	28	Existing	56	28 No. of 6.6 kV bays at 110 kV Parel Receiving Station

102. Considering the above, we request for the following amendment in the Transmission Licence with respect to Parel Receiving Station:

- Update the no. of 110 kV Bays from 20 to 21 considering the commissioning of 1 no. 110 kV Bay at Parel Receiving Station (Item 22 of "Existing Bays at Substations").
- Remove 1 no. 110 kV Bay at Parel Receiving Station from "Proposed List of Bays" (Item 44 of "Proposed List of Bays").
- Update the no. of 33 kV Bays from 56 to 36 at Parel Receiving Station considering the additions and deletions of Bays explained above (Item 35 of "Existing Bays at Substations").

- Update the no. of 22 kV Bays from 12 to 41 at Parel Receiving Station considering the additions and deletions of Bays explained above (Item 51 of "Existing Bays at Substations").
- Update the no. of 6.6 kV Bays from 23 to 28 at Parel Receiving Station considering the additions of Bays explained above (Item 56 of "Existing Bays at Substations").

q.) Powai Receiving Station

103. As per the existing Transmission Licence, there are 9 nos. of 110 kV bays (Item 24 of the "Existing Bays at Sub-Stations") and 27 nos. of 33 kV Bays (Item 36 of "Existing Bays at Sub-Stations") for the Powai Receiving station. Further, there is 1 no. of 110 kV Bay (Item 38 of "Proposed List of Bays") and 11 nos. of 33 kV Bays (Item 59 of "Proposed List of Bays") proposed to be added at Powai Receiving Station.

104. While there is no change in the representation of the 33 kV bays, an amendment is proposed for the 110 kV bays as follows:

- There are total 10 nos. of 110 kV Bays at Powai Receiving Station as against 9 nos. as mentioned in Transmission Licence (Item 24 of the "Existing Bays at Sub-Stations"). One spare incomer bay out of the three spare bays (2 line bays and 1 power transformer bay) of 110 kV voltage level was erroneously missed out in the Transmission Licence in item 24 of "Existing Bays at Sub-Stations". The SLD of the station at 110 kV voltage level is attached in **Annexure 40**.
- In view of this, it is proposed to correct the number of 110 kV Bays at Powai Receiving Station as shown in the Table below:

Table 35 - Amendment in the 110 kV Bays at Powai Receiving Station

Location: Powai Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	24	9 No. of 110 kV Bays at 110 kV Powai Receiving Station		9			
			Erroneous omissions	1			
			Amendment to existing bays	10	Existing	24	No. of 110 kV Bays at 110 kV Powai Receiving Station

105. Considering the above, we request for the following amendment in the Transmission Licence with respect to Powai Receiving Station:

- Update the no. of 110 kV Bays from 9 to 10 at Powai Receiving Station (Item 24 of "Existing Bays at Substations").

r.) Saki Receiving Station

106. As per the existing Transmission Licence, there are 9 nos. of 220 kV bays (Item 6 of the "Existing Bays at Sub-Stations"), 10 nos. of 110 kV bays (Item 25 of "Existing Bays at Sub-Stations"), and 71 nos. of 33 kV bays (Item 38 of "Existing Bays at Sub-Stations"). Further, there are 20 nos. of 110 kV Bays (Item 42 of "Proposed List of Bays") and 12 nos. of 33 kV Bays (Item 69 of "Proposed List of Bays") proposed to be added at Saki Receiving Station.

107. While there is no change in the representation of the 220 kV bays and 110 kV bays, an amendment is required in the 33 kV Bays. Further, as there are existing 22 kV Bays at Saki Receiving Station, a new Item for 22 kV Bays is required in the "Existing Bays at Sub-Stations". The details are as explained below:

- 46 nos. of 22 kV bays were considered as 33 kV bays in the Transmission Licence. Hence, the no. of 33 kV Bays needs to be reduced from the 71 nos. shown in the Transmission Licence to the actual 25 nos.

- The proposed amendment in the Transmission Licence for Saki Receiving Station at 33 kV voltage level is as shown in the Table below:

Table 36 - Amendment in the 33 kV Bays at Saki Receiving Station

Location: Saki Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	38	71 No. of 33 kV Bays at 220 kV Saki Receiving Station		71			
			33 kV/22 kV misclassification	-46			
			Amendment to existing bays	25	Existing	38	25 No. of 33 kV Bays at 220 kV Saki Receiving Station

- There are in actual 46 nos. 22 kV Bays existing at Saki Receiving Station. The same need to be added as a separate Item under the "Existing Bays at Sub-stations".
- Further, 5 nos. of 22 kV bays have been newly commissioned (4 nos. in FY 2014-15 and 1 no. in FY 2015-16) as per the DPR approved by the Hon'ble Commission through their letter MERC/CAPEX/20102011/01558 dated 8th November, 2010 (Kindly refer **Annexure 41**).
- There are in actual 3 nos of 22 kV capacitor banks, of which, 2 Capacitor Banks were erroneously missed out in the Transmission Licence.
- The same need to be considered in the "Existing Bays at Sub-stations" making the total no. of 22 kV Bays at Saki Receiving Station as 53.
- The proposed amendment in the Transmission Licence for Saki Receiving Station at 22 kV voltage level is as shown in the Table below:

Table 37 - Amendment in the 22 kV Bays at Saki Receiving Station

Location: Saki Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
			Addition as modification	5			0
			Erroneous omissions	2			
			33 kV/22 kV misclassification	46			
			Amendment to existing bays	53	Existing	New	53 No. of 22 kV Bays at Saki Receiving Station

108. Considering the above, we request for the following amendment in the Transmission Licence with respect to Saki Receiving Station:

- Update the no. of 33 kV Bays from 71 to 25 at Saki Receiving Station (Item 38 of "Existing Bays at Substations").
- Add 53 nos. of 22 kV Bays as a separate Item in existing bays at Substations at Saki Receiving Station.

s.) Trombay Generating Station

109. As per the existing Transmission Licence, there are no Transmission Bays listed at Trombay Generating Station in the "Existing Bays at Sub-Stations" section. However, there are 3 nos. 220 kV Bays (Item 17 of "Proposed List of Bays") proposed to be added at Trombay Generating Station.

110. The 3 nos. proposed 220 kV Bays (220 kV Trombay-Salsette 3 Transmission line, 220 kV Trombay-Salsette 4 transmission line and 220 kV Trombay-Dharavi 9) have been commissioned during FY 2014-15 as per approved DPR reference MERC/CAPEX/20102011/01560 dated 9th November, 2010 (refer **Annexure 42**). These bays need to be regularized as the "Existing Bays at Sub-Stations".

111. In addition, 2 nos. 220 kV Bays (1 no. of 220 kV Transfer Breaker at Trombay and 1 no. 220 kV Incomer source for the future 220 kV Antop Hill Receiving Station) have also been commissioned-.

112. The SLD of the station at the 220 kV voltage level is attached in **Annexure 43** to this submission. The details of the 5 nos. 220 kV Bays are as shown in the Table below:

Table 38 - Amendment in the 220 kV Bays at Trombay Generating Station

Location: Trombay							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Proposed	17	3 No. of 220 kV Bays at 220 kV Trombay Receiving Station		3			
			Addition as modification	2			3 bays converted from proposed list to existing. Additional 2 bays (1 transfer breaker at Trombay, 1 source to 220 kV Antop Hill R/S) also commissioned.
			Amendment to existing bays	5	Existing	New	5 No. of 220 kV Bays at 220 kV Trombay Receiving Station
			Amendment to proposed bays	-	-	17	Delete

113. Considering the above, we request Hon'ble Commission for the following amendment in the Transmission Licence with respect to Trombay Generating Station:

- Add 5 nos. of 220 kV Bays as a separate Item for Trombay Generating Station.

t.) Versova Receiving Station

114. As per the existing Transmission Licence, there are 6 nos. of 110 kV Bays (Item 27 of "Existing Bays at Sub-Stations") and 20 nos. of 33 kV Bays (Item 39 of "Existing Bays at Sub-Stations") at Versova Receiving Station. Further, there are 7 nos. of 220 kV Bays (Item 13 of "Proposed List of Bays"), 11 nos. of 110 kV Bays (Item 35 of "Proposed List of Bays"), 21 nos. of 33 kV Bays (Item 49 of "Proposed List of Bays") and 14 nos. of 33 kV Bays (Item 56 of "Proposed List of Bays") proposed to be added at Versova Receiving Station.

115. While there is no change in the representation of the 33 kV Bays, the following amendments are required for the 110 kV Bays:

- 2 nos. of Line PTs were inadvertently considered as part of the Transmission Licence. The detailed SLD has been attached as **Annexure 44**.
- Hence, it is proposed to amend the number of 110 kV bays from 6 to 4 at 110 kV bays at Versova Receiving Station as shown in the Table below:

Table 39 - Amendment in the 110 kV Bays at Versova Receiving Station

Location: Versova Receiving Station							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	27	6 No. of 110 kV Bays at 110 kV Versova Receiving Station		6			
			Line PT excluded	-2			
			Amendment to existing bays	4	Existing	27	4 No. of 110 kV Bays at 110 kV Versova Receiving Station

116. Considering the above, we request Hon'ble Commission for the following amendment in the Transmission Licence with respect to Versova Receiving Station:

- Update the no. of 110 kV Bays from 6 to 4 at Versova Receiving Station (Item 27 of "Existing Bays at Substations").

u.) Vikhroli Receiving Station

117. As per the existing Transmission Licence, there are 10 nos. of 110 kV Bays (Item 28 of "Existing Bays at Sub-Stations") and 46 nos. of 22 kV Bays (Item 54 of "Existing Bays at Sub-Stations"). Further, there are 15 nos. of 400 kV Bays (Item 1 of "Proposed List of Bays"), 1 no. of 400 kV Bay (Item 5 of "Proposed List of Bays"), 22 nos. of 220 kV Bays (Item 9 of "Proposed List of Bays"), 19 nos. of 110 kV Bays (Item 34 of "Proposed List of Bays"), 23 nos. of 33 kV Bays (Item 45 of "Proposed List of Bays"), 34 nos. of 33 kV Bays (Item 58 of "Proposed List of Bays") and 21 nos. of 22 kV Bays (Item 71 of "Proposed List of Bays") proposed to be added at Vikhroli Receiving Station.

118. While there is no change in the representation of the 110 kV Bays, the following amendment is required for the 22 kV Bays at Vikhroli Receiving Station:

- As a part of the dismantling of the outdoor switchyard at the Vikhroli Receiving Station, 4 nos. 22 kV outdoor Transmission Bays were decommissioned and transferred to indoor switchgear.
- Also, there were two cases of 1 breaker controlling 2 nos. of bays. These 2 nos. of bays which have thus been erroneously included in the original License is being sought to be removed as a part of the amendment.
- The detailed SLD of Vikhroli Receiving Station is attached as **Annexure 45** to this submission.
- In view of this, it is proposed to reduce the no. of 22 kV bays from 46 to 40 in Item 54 of "Existing Bays at Sub-Stations" in the Transmission Licence. The amendment proposed is as shown in the Table below:

Table 40 - Amendment in the 22 kV Bays at Vikhroli Receiving Station

Location: Vikhroli Receiving Station: 22 kV voltage level							
Area of Licence	Item No.	As per existing Trans. Lic. No. 1 of 2014	Changes / modification requested	No. of Bays	Area of Licence	Item No.	Amendment sought
Existing	54	46 No. of 22 kV Bays at 110 kV Vikhroli Receiving Station		46			
			Erroneous inclusions	-2			
			Decommissioned	-4			
			Amendment to existing bays	40	Existing	54	40 No. of 22 kV Bays at 110 kV Vikhroli Receiving Station

119. Considering the above, we request Hon'ble Commission for the following amendment in the Transmission Licence with respect to Vikhroli Receiving Station:

- Update the no. of 22 kV Bays from 46 to 42 at Vikhroli Receiving Station (Item 54 of "Existing Bays at Substations").

120. A summary of all the type of amendments to be made in the Licence for Transmission Bays is given in table below:

Table 41 - Summary of amendment to Transmission Bays

Sr. No.	Description	No. of Bays
	As per Existing Transmission Licence	1142
1	Additions as proposed	71
2	Addition as modifications explained in	102
3	Line PTs to be excluded	-12
4	Bus PTs, Cap. Banks etc. to be included	8
5	Inadvertent omissions	13
6	Inadvertent inclusions	-9
7	Decommissioned	-4
	Total no. of bays in Proposed Amendments	1311

Note: Total 129 nos. of 22kV bays erroneously labelled as 33 kV bays are proposed to be migrated which do not have impact on total number of bays

- Considering above, the final “Existing – List of Transmission lines” and “Existing – List of Bays at Sub-Stations” after incorporating all the amendments proposed in this petition is being submitted as **Annexure 46**.
- **Reconciliation with the MYT Order for Transmission Business in Case No. 22 of 2016**

The Hon'ble Commission has on 30th June, 2016 has issued the MYT Order for Transmission Business in Case No. 22 of 2016. As part of the Order, the Hon'ble Commission has approved the Transmission Line length for FY 2015-16. Further, the Hon'ble Commission in this Order has directed Tata Power as follows:

The Commission observed that there has been modification of assets in certain schemes vis-à-vis the assets approved in TPC-T's Licence. In the present Order, the Commission is approving the various ARR expenses corresponding to the revised assets presented in the Petition subject to amendment of the Transmission Licence. TPC-T is directed to submit, within 3 months, an Application for amendment of its Licence accordingly, with details of the revised assets vis-à-vis those in the existing Licence.

Considering the above directive, we are presenting below a reconciliation of the assets in the Transmission Licence and the Transmission Line length and bays approved at the end of FY 2015-16 in the MYT Order for Transmission.

Table 42 - Reconciliation of the Transmission Line Lengths

Particulars	In. Ckt. Km		Remark
	As per Case 22 of 2016	As per Lic. Amendment Petition	
Opening of FY 2014-15	1,139.80	1,139.70	1139.70 is the Ckt. Km as per the Transmission License 1 of 2014
Additions of Ckt. km in FY 2014-15			
110 kV Khopoli-Bhivpuri Transmission Line (28.0 km) from Khopoli Generating Station to Bhivpuri Generating Station	28.67	28.94	As explained in section 15 to 19 of the petition
110 kV Dharavi BKC 4 Transmission Line (6.94 km) from Dharavi Receiving Station to BKC receiving station	6.94	6.94	As explained in section 20 to 24 of the petition
Error in MYT submission (rounding-off error)	-0.97	-	
Closing Ckt. km for FY 2014-15	1,174.44	1,175.58	
Additions of Ckt. km in FY 2015-16			
110 kV Dharavi BKC 3 Transmission Line (6.94 km) from Dharavi Receiving Station to BKC receiving station	-	6.94	As explained in section 20 to 24 of the petition
220 kV Salsette-Saki Transmission Line (9.95 km) from Salsette Receiving Station to Saki Receiving Station		9.06	Line Ckt. Km reconciled based on actuals after line commissioning
220 kV Salsette-Sahar Transmission Line (10.92 km) from Salsette Receiving Station to Sahar Receiving Station	21.80	10.03	
Closing Ckt. km for FY 2015-16	1,196.24	1,201.61	
Points of reconciliation			
Removal of "Saki - Narayan Industrial Estate (NIE) - Sahar" from existing list of the Licence		-4.77	As explained in section 26 to 31 of the petition
Reduction in length of "110 kV Trombay-Dharavi 2 Transmission Line (10.36 km) from Trombay Receiving Station to Dharavi Receiving Station"		-7.52	As explained in section 10 to 13 of the petition
Removal of "110 kV Trombay – HPCL 1 feeder (1.90 km)" from the existing list of the Licence		-1.90	As explained in section 32 to 35 of the petition
Removal of "110 kV Trombay – HPCL 2 feeder (1.90 km)" from the existing list of the Licence		-1.90	As explained in section 32 to 35 of the petition
Total Ckt. km being submitted in Transmission Amendment Petition		1,185.52	

Table 43 - Reconciliation of the Transmission Bays (>66 kV)

Particulars	As per Case 22 of 2016	As per Lic. Amendment Petition
Opening of FY 2014-15	325	333 333 nos. of bays as per Transmission License 1 of 2014. This included 8 nos. of bays of >66 kV of 145 kV receiving station at Bhokarpada (Earlier known as IXORA) receiving station which is not part of the opening figure considered in the MYT Order.
Backbay	-1	These bays have not been considered for the purpose of Capitalization/O&M entitlement/other reasons in the MYT Order in Case 22 of 2016.
Powai	-2	However, for the purpose of Transmission License, these bays have been considered as a part of existing bays. Further, 8 nos. of bays of Bhokarpada receiving station were removed from the opening bays of FY 2014-15 which is an error apparent for which review Petition no. 110 of 2016 has been filed.
Sahar	-2	
Bhokarpada receiving station (Earlier known as IXORA)	-8	
Total nos. of bays removed	-13	0
Opening bays for FY 2014-15	312	333

Additions of bays in FY 2014-15		
Dharavi Receiving Station	4	6
Mankhurd Receiving Station	-	7
Parel Receiving Station	1	1
Trombay Generating Station	-	5
BKC Receiving Station	5	7
110 kV Khopoli-Bhivpuri Tie Line at Khopoli	1	1
Considering Bhokarpada receiving station bays	8	
Total additions of bays in FY 2014-15	19	27
Closing bays for FY 2014-15	331	360
Additions of bays in FY 2015-16		
Mahalaxmi Receiving Station	10	10
Total additions of bays in FY 2015-16	10	10
Closing for FY 2015-16	341	370
Points of reconciliation		
Mahalaxmi Receiving Station 220 kV: 2 nos. of spare bays were already in existence. Hence not added.		-2
BKC Receiving Station 110 kV: 2 no. spare bay added		2
Line PT bays excluded		-12
Bus PT bays, capacitor banks etc. included		8
Inadvertent omissions		4
Net number of bays leading to reconciliation		0
Total being submitted in Transmission Amendment Petition	341	370

Table 44 - Reconciliation of the Transmission Bays (<66 kV)

Particulars	As per Case 22 of 2016	As per Lic. Amendment Petition
Opening of FY 2014-15	782	809 809 nos. of bays as per Transmission License 1 of 2014. This included 27 nos. of bays of <66 kV of 145 kV receiving station at Bhokarpada (Earlier known as IXORA) receiving station which is not part of the opening figure considered in the MYT Order.
Bbay	-3	These bays have not been considered for the purpose of Capitalization/O&M entitlement/other reasons in the MYT Order in Case 22 of 2016.
Saki	-10	However, for the purpose of Transmission License, these bays have been considered as a part of existing bays. Further, 27 nos. of bays of Bhokarpada receiving station were removed from the opening bays of FY 2014-15 which is an error apparent for which review Petition no. 110 of 2016 has been filed.
Bhokarpada receiving station (Earlier known as IXORA)	-27	
	-40	0
Opening for FY 2014-15	742	809
Additions in FY15		
Backbay Receiving Station	11	11 The bays, although commissioned by Tata
Carnac Receiving Station	3	3 Power-T, have not been considered in the MYT
Parel Receiving Station	2	10 Order for
BKC Receiving Station	17	31 Capitalization/O&M
Saki Receiving Station	4	4 entitlement/other reasons. However, for the purpose of Transmission License, these bays have
Considering Bhokarpada receiving station bays	27	- been considered as a part of existing bays.
Total additions in FY 2014-15	64	59
Closing for FY 2014-15	806	868

Additions in FY 2015-16		
Backbay Receiving Station	2	2 The bays, although commissioned by Tata
Carnac Receiving Station	-	9 Power-T, have not been considered in the MYT
Dharavi Receiving Station	11	11 Order for Capitalization/O&M
Malad Receiving Station	13	13 entitlement/other reasons. However, for the
Mahalaxmi Receiving Station	28	28 purpose of Transmission License, these bays have
Saki Receiving Station	1	1 been considered as a part of existing bays.
Total additions in FY 2015-16	55	64
Closing for FY 2015-16	861	932
Points of reconciliation		
Dharavi Receiving Station 33 kV: 4 x 33 kV back to back feeders shifted to GIS		4
BKC Rec. Station 33 kV: 2 Cap. banks, 2 reactors & 1 bus coupler		5
Mahalaxmi Receiving Station 33 kV: 2 additional bus PTs		2 Refer section II-B of the
Bus PTs included		2 Petition
Inadvertent omissions		9
Inadvertent additions		-9
Decommissioned (Vikhroli Receiving Station)		-4
Net number of bays leading to reconciliation		9
Total being submitted in Transmission Amendment	861	941
Petition		

121. During the reconciliation and finalizing of this Application for amendment of Transmission Licence, the following has been observed -

- **27 nos.** bays have been commissioned for Bus PT's which are in service. As the Bus PT is a standard feature of any bus section of GIS, these bays were not specifically mentioned in the approved DPR's. We request Hon'ble Commission to kindly approve such additional bays in the petition.

- **32 nos.** of bays has been commissioned over and above the scope of in-principle approval of DPR by Hon'ble Commission. However these bays were commissioned well within the cost of scheme values approved by the Hon'ble Commission. These bays were commissioned keeping in view future requirement in and around those receiving stations. List of such bays are attached as **Annexure 47** to this submission. Further details of these 32 bays are provided below:
 - **8 nos.** bays has been formally allotted by STU to distribution utilities and have been utilised by the distribution utilities.

 - **13 nos.** bays has been formally allotted by STU to distribution utilities and have not yet been utilised by the distribution utilities.

 - **2 nos.** of bays are reserved for capacitor bank which are yet to be commissioned.

 - **4 nos.** bays below < 66 kV voltage level (1 for Malad and 3 for Dharavi) have been commissioned keeping in view future requirement of the distribution utilities around these areas. It has been intimated to STU for formal allocation of these bays to distribution utilities.

 - **5 nos.** bays above > 66 kV voltage level have been commissioned for future transmission network strengthening.

Tata Power-T is in the process of submission of revised DPR's for approval of all such bays to Hon'ble Commission.

II.C. Amendment required in the "Proposed List of Bays" and "Proposed List of Transmission Lines" in Transmission Licence

122. The changes which have happened with respect to the number of transmission bays as well as in transmission lines across various receiving stations of Tata Power Transmission have been discussed so far in the previous sections. Also, the STU plans for the immediate future envisages certain new developments for the transmission business of Tata Power. In the light of these changes which have already happened and the changes which are anticipated in the future, certain changes in the "Proposed – List of Bays" and "Proposed – List of Transmission lines" section of the Transmission Licence are being proposed as part of **Annexure 48** to this Petition for the amendment of Licence. We request Hon'ble Commission to approve these transmission bays as well as transmission lines which are proposed to be commissioned in future years.

In view of the above, the Applicant respectfully seeks an amendment to its Transmission Licence. In this regard, it is clarified that Tata Power is not seeking amendment to its Licence for balance Transmission system and Receiving Stations

Maintainability of the Application:

123. The instant Application has been filed under Section 18 of the Electricity Act, 2003 and the MERC (Transmission License Conditions) Regulations, 2004 as amended in 2006 seeking an amendment to Tata Power's Transmission License. Relevant provisions of the Act and the Regulations are being reproduced herein below for ease of reference:

Section 18 of the Electricity Act, 2003-

"18. Amendment of License- Where in its opinion the public interest so permits, the Appropriate Commission, may, on the application of the licensee or otherwise, make such alterations and amendments in the terms and conditions of a license as it thinks fit"

Regulation 7 of the Transmission License Conditions Regulations:

"7. Notice of amendment of licence 7.1 A notice pursuant to clause (a) sub-section (2) of Section 18 of the Act shall be published in not less than two (2) daily English language newspapers and two (2) daily Marathi language newspapers in the area of transmission"

In view of the above, it is humbly submitted that this Hon'ble Commission shall discharge its functions given under Section 18 of the Electricity Act and further extend its powers under the above Regulations in order to meet the ends of justice.

The Applicant craves leave of this Hon'ble Commission to furnish any additional data / documentation, if so required by this Hon'ble Commission.

124. It may further be noted that Tata Power has paid the stipulated Transmission License Fees for FY 2016-17 for the said License on 31st March, 2016 vide letter Ref: CREG/MUM/MERC/2016/79 dated 31st March, 2016 and has complied with all the conditions specified in the Transmission License.

Prayers:

125. In view of the facts and circumstances of the case, it is most respectfully prayed that this Hon'ble Commission may be pleased to:

- (a) Admit the present Application along with the attached documents, submitted by Tata Power for amendment of Transmission Licence under Section 18 of the Electricity Act, 2003 and the MERC (Transmission Licence Conditions) Regulations, 2004 including amendments thereof;
- (b) To allow amendment of Tata Power's Transmission Licence as submitted in the above sections of this petition.
- (c) Condone any inadvertent omissions / errors / shortcomings and permit Tata Power to add / change / modify / alter this filing and make further submissions as may be required at a future date;
- (d) Any other relief that Hon'ble commission may deem fit.

Place: Mumbai

Dated: 10th October, 2016

For and on behalf of the Applicant

Annexures - Transmission Licence Amendment Petition of Tata Power-T



महाराष्ट्र विद्युत नियामक आयोग Maharashtra Electricity Regulatory Commission



TRANSMISSION LICENCE NO. 1 of 2014

Dated: 14 August, 2014

Licence granted by the Maharashtra Electricity Regulatory Commission under Section 14 of the Electricity Act, 2003 to The Tata Power Company Limited, having its registered office at Bombay House, 24, Homi Mody Street, Mumbai 400001, to transmit electricity within the Area of Transmission (as defined in this Licence, under Part II, section 3, "Area of Transmission") and with the powers and upon the terms and conditions specified herein.

Part I: General

1. Short Title

This Licence may be called the Transmission Licence for The Tata Power Company Limited (Transmission Licence No. 1 of 2014).

2. Definitions

In this Licence, unless the context otherwise requires,

(a) "Accounting Statement" means for each financial year, accounting statements separately in respect of the Licensed Business and the Other Business, comprising:

- (i) a balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 1956;
- (ii) a profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 1956;
- (iii) a cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
- (iv) a report of the statutory auditors' of the Transmission Licensee; and
- (v) cost records prescribed by the Central Government under Section 209(1)(d) of the Companies Act, 1956,

together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time;

b) "Allocation Statement" means for each financial year, a statement in respect of each of the separate businesses of the Transmission Licensee, showing the amounts of any revenue, cost, asset, liability, reserve or provision, which has been either:

- (i) charged from or to any Other Business together with a description of the basis of that

MERC, Mumbai

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charge; or

(ii) determined by apportionment or allocation between the Transmission Business and any Other Business of the Transmission Licensee, together with a description of the basis of the apportionment or allocation;

(c) "Act" means the Electricity Act, 2003 (36 of 2003);

(d) "Commission" means the Maharashtra Electricity Regulatory Commission;

(e) "Licence" means this licence under which the Transmission Licensee is authorised to conduct the Licensed Business;

(f) "Licensed Business" means the business of establishing or operating transmission lines;

(g) "Other Business" means such other business as is referred to in Section 41 of the Act; and

(h) "Transmission Licensee" means The Tata Power Company Limited in its capacity as operator of the Licensed Business.

Words or expressions used therein and not defined shall have the meanings assigned to them in the Act.

Part II: General Terms and Conditions

3. Area of Transmission

The Licence authorizes the Transmission Licensee to establish and operate the following Transmission Lines, inclusive of related infrastructure:

Existing Transmission Lines:

1. 220 kV Bhira-Dharavi 7 Transmission Line (106.90 km) from Bhira Receiving Station to Dharavi Receiving Station
2. 220 kV Bhira-Dharavi 8 Transmission Line (106.90 km) from Bhira Receiving Station to Dharavi Receiving Station
3. 220 kV Borivali-Aarey 1 Transmission Line (0.47 km) from Borivali Receiving Station to R-Infra Aarey Receiving Station
4. 220 kV Borivali-Aarey 2 Transmission Line (0.51 km) from Borivali Receiving Station to R-Infra Aarey Receiving Station
5. 220 kV Dharavi-Backbay Transmission Line (17.16 km) from Dharavi Receiving Station to Backbay Receiving Station
6. 220 kV Kalwa-Salsette 3 Transmission Line (7.77 km) from Kalwa Receiving Station to Salsette Receiving Station
7. 220 kV Kalwa-Salsette 4 Transmission Line (7.77 km) from Kalwa Receiving Station to Salsette Receiving Station
8. 220 kV Salsette-Borivali 1 Transmission Line (11.07 km) from Salsette Receiving Station to Borivali Receiving Station

9. 220 kV Salsette-Borivali 2 Transmission Line (11.07 km) from Salsette Receiving Station to Borivali Receiving Station
10. 220 kV Tata Borivali-MSETCL Borivali 4 Transmission Line (1.70 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
11. 220 kV Tata Borivali-MSETCL Borivali 5 Transmission Line (1.57 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
12. 220 kV Trombay-Carnac 5 Transmission Line (12.39 km) from Trombay Receiving Station to Carnac Receiving Station
13. 220 kV Trombay-Carnac 6 Transmission Line (12.39 km) from Trombay Receiving Station to Carnac Receiving Station
14. 220 kV Trombay-Dharavi 5 Transmission Line (11.00 km) from Trombay Receiving Station to Dharavi Receiving Station
15. 220 kV Trombay-Dharavi 6 Transmission Line (11.00 km) from Trombay Receiving Station to Dharavi Receiving Station
16. 220 kV Trombay-MSETCL Tie 1 Transmission Line (0.85 km) from Trombay Receiving Station to MSETCL-Trombay Receiving Station
17. 220 kV Trombay-MSETCL Tie 2 Transmission Line (0.85 km) from Trombay Receiving Station to MSETCL-Trombay Receiving Station
18. 220 kV, 3 terminal line Trombay Salsette 1 Backbay Transmission Line (39.45 km) originating at Trombay Receiving Station and terminating at Salsette Receiving Station and Backbay Receiving Station
19. 220 kV Trombay-Dharavi 9 Transmission Line (10.69 km) from Trombay Receiving Station to Dharavi Receiving Station
20. 220 kV Saki-Sahar Transmission Line (2.60 km) from Saki Receiving Station to Sahar Receiving Station
21. 220 kV Kalwa-Salsette 6 Transmission Line (8.93 km) from MSETCL Kalwa Receiving Station to Salsette Receiving Station
22. Intermediate spare section of 220 kV Trombay-Salsette 2 Transmission Line (14.23 km) from Pratiksha Nagar to Location 12 (Near Bhandup Village) kept charged from the Trombay Receiving Station
23. 220 kV Saki-Narayan Industrial Estate (NIE)-Sahar Transmission Line (4.77 km) from Saki Receiving Station to Sahar Receiving Station
24. 110 kV Ambernath-Kalyan 1 Transmission Line (19.85 km) from Ambernath Receiving Station to Kalyan Receiving Station
25. 110 kV Ambernath-Kalyan 2 Transmission Line (19.85 km) from Ambernath Receiving Station to Kalyan Receiving Station

26. 110 kV BMC-Kolshet Transmission Line (18.97 km) from BMC Receiving Station to Kolshet Receiving Station
27. 110 kV Bhira-Davdi Transmission Line (10.13 km) from Bhira Receiving Station to Davdi Receiving Station
28. 110 kV Bhira-Khopoli 2 Transmission Line (50.96 km) from Bhira Receiving Station to Khopoli Receiving Station
29. 110 kV Bhihpuri-Ambarnath 1 Transmission Line (46.48 km) from Bhihpuri Receiving Station to Ambarnath Receiving Station
30. 110 kV Borivali-Malad 1 Transmission Line (7.40 km) from Borivali Receiving Station to Malad Receiving Station
31. 110 kV Borivali-Malad 2 Transmission Line (7.40 km) from Borivali Receiving Station to Malad Receiving Station
32. 110 kV Carnac-Backbay 1 Transmission Line (4.01 km) from Carnac Receiving Station to Backbay Receiving Station
33. 110 kV Carnac-Backbay 2 Transmission Line (4.00 km) from Carnac Receiving Station to Backbay Receiving Station
34. 110 kV Carnac-Grant Road Transmission Line (3.60 km) from Carnac Receiving Station to Grant Road Receiving Station
35. 110 kV Chola-Kalyan 1 Transmission Line (2.50 km) from Chola Receiving Station to Kalyan Receiving Station
36. 110 kV Chola-Kalyan 2 Transmission Line (2.50 km) from Chola Receiving Station to Kalyan Receiving Station
37. 110 kV Dharavi-Mahalaxmi Transmission Line (6.40 km) from Dharavi Receiving Station to Mahalaxmi Receiving Station
38. 110 kV Dharavi-Vikhroli Transmission Line (10.78 km) from Dharavi Receiving Station to Vikhroli Receiving Station
39. 110 kV Kalwa-Kalyan Transmission Line (16.80 km) from MSETCL Kalwa Receiving Station to Kalyan Receiving Station
40. 110 kV, 3 terminal line Kalyan-Kalwa-Salsette 1 Transmission Line (23.30 km) originating at Kalyan Receiving Station and terminating at MSETCL Kalwa Receiving Station and Salsette Receiving Station
41. 110 kV, 3 terminal line Kalyan-Kalwa-Salsette 2 Transmission Line (22.84 km) originating at Kalyan Receiving Station and terminating at MSETCL Kalwa Receiving Station and Salsette Receiving Station
42. 110 kV Khopoli-Bhihpuri Tie Transmission Line (28.67 km) from Khopoli Receiving Station to Bhihpuri Receiving Station

43. 110 kV Khopoli-Davdi Transmission Line (39.84 km) from Khopoli Receiving Station to Davdi Receiving Station
44. 110 kV, 3 terminal line Khopoli-Lodhivali-Chembur Transmission Line (64.60 km) originating at Khopoli Receiving Station and terminating at Lodhivali Receiving Station and Chembur Receiving Station
45. 110 kV Khopoli-Mankhurd Transmission Line (56.27 km) from Khopoli Receiving Station to Mankhurd Receiving Station
46. 110 kV Malad-Versova 1 Transmission Line (6.85 km) from Malad Receiving Station to Versova Receiving Station
47. 110 kV Malad-Versova 2 Transmission Line (6.85 km) from Malad Receiving Station to Versova Receiving Station
48. 110 kV Parel-Carnac Transmission Line (5.41 km) from Parel Receiving Station to Carnac Receiving Station
49. 110 kV Parel-Grant Road Transmission Line (5.20 km) from Parel Receiving Station to Grant Road Receiving Station
50. 110 kV Parel-Mahalaxmi 1 Transmission Line (2.85 km) from Parel Receiving Station to Mahalaxmi Receiving Station
51. 110 kV Parel-Mankhurd Transmission Line (11.10 km) from Parel Receiving Station to Mankhurd Receiving Station
52. 110 kV Parel-Mahalaxmi 2 Transmission line (3.61 km) from Parel Receiving Station to Mahalaxmi Receiving Station
53. 110 kV Salsette-BMC Transmission Line (3.41 km) from Salsette Receiving Station to BMC Receiving Station
54. 110 kV Salsette-Kolshet Transmission Line (10.91 km) from Salsette Receiving Station to Kolshet Receiving Station
55. 110 kV Salsette-Saki 3 Transmission Line (7.80 km) from Salsette Receiving Station to Saki Receiving Station
56. 110 kV Salsette-Saki 4 Transmission Line (7.80 km) from Salsette Receiving Station to Saki Receiving Station
57. 110 kV Salsette-Vikhroli Transmission Line (7.19 km) from Salsette Receiving Station to Vikhroli Receiving Station
58. 110 kV Tata Ambernath-MSETCL Neral Transmission Line (40.35 km) from Ambernath Receiving Station to MSETCL Neral Receiving Station
59. 110 kV Tata Bhiwadi-MSETCL Neral Transmission Line (12.06 km) from Bhiwadi Receiving Station to MSETCL Neral Receiving Station
60. 110 kV Tata Borivali-MSETCL Borivali 1 Transmission Line (2.05 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station

61. 110 kV Tata Borivali-MSETCL Borivali 2 Transmission Line (2.05 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
62. 110 kV Trombay-Carnac 1/3 Transmission Line (12.47 km) from Trombay Receiving Station to Carnac Receiving Station
63. 110 kV Trombay-Chembur 1 Transmission Line (4.30 km) from Trombay Receiving Station to Chembur Receiving Station
64. 110 kV Trombay-Chembur 2 Transmission Line (4.30 km) from Trombay Receiving Station to Chembur Receiving Station
65. 110 kV Trombay-Chembur 3 Transmission Line (7.29 km) from Trombay Receiving Station to Chembur Receiving Station
66. 110 kV Trombay-Dharavi 1 Transmission Line (10.36 km) from Trombay Receiving Station to Dharavi Receiving Station
67. 110 kV Trombay-Dharavi 2 Transmission Line (10.36 km) from Trombay Receiving Station to Dharavi Receiving Station
68. 110 kV Trombay-Parel 1 Transmission Line (9.10 km) from Trombay Receiving Station to Parel Receiving Station
69. 110 kV Trombay-Parel 2 Transmission Line (8.69 km) from Trombay Receiving Station to Parel Receiving Station
70. 110 kV, 3 terminal line Trombay-Parel 3/Carnac 2 Transmission Line (8.59 km) originating at Trombay Receiving Station and terminating at Parel Receiving Station and at Carnac Receiving Station
71. 110 kV Trombay-Parel 4 Transmission Line (10.12 km) from Trombay Receiving Station to Parel Receiving Station
72. 110 kV Salsette-Powai Transmission Line (9.97 km) from Salsette Receiving Station to Powai Receiving Station
73. 110 kV Dharavi-Powai Transmission Line (13.64 km) from Dharavi Receiving Station to Powai Receiving Station
74. 110 kV Khopoli – CRSE 2 Transmission Line (1.02 km) from Khopoli Receiving Station to Central Railway SE Receiving Station
75. Intermediate spare section of the 110 kV Bhira-Khopoli 2 Transmission Line (9.84 km) from Devnhave to Katkarwadi kept charged from Khopoli Receiving Station
76. 110 kV feeders to DISCOMS (4.18 km):
 - a. 110 kV Tata Backbay – BEST 1 feeder (0.14 km)
 - b. 110 kV Tata Backbay – BEST 2 feeder (0.13 km)
 - c. 110 kV Tata Backbay – BEST 3 feeder (0.12 km)
 - d. 110 kV Tata Backbay – Nariman Point 2 Sakharbhavan feeder (1.25 km)

- e. 110 kV BEST Backbay – Nariman Point 1 Sakharbhavan feeder (1.20 km)
- f. 110 kV Mahalaxmi – BEST 1 feeder (0.67 km)
- g. 110 kV Mahalaxmi – BEST 2 feeder (0.67 km)
- 77. 110 kV feeders to Direct Consumers (10.91 km):
 - a. 110 kV Borivali – W Railway 1 feeder (2.70 km)
 - b. 110 kV Borivali – W Railway 2 feeder (2.70 km)
 - c. 110 kV Malad – W Railway 1 feeder (0.15 km)
 - d. 110 kV Malad – W Railway 2 feeder (0.15 km)
 - e. 110 kV Trombay – HPCL 1 feeder (1.90 km)
 - f. 110 kV Trombay – HPCL 2 feeder (1.90 km)
 - g. 110 kV Trombay – BARC 3 feeder (0.65 km)
 - h. 110 kV Trombay – BARC 4 feeder (0.65 km)

Existing Bays at Sub-Stations

- 1. 7 No. of 220 kV Bays at 220 kV Backbay Receiving Station
- 2. 14 No. of 220 kV Bays at 220 kV Borivali Receiving Station
- 3. 6 No. of 220 kV Bays at 220 kV Carnac Receiving Station
- 4. 13 No. of 220 kV Bays at 220 kV Dharavi Receiving Station
- 5. 9 No. of 220 kV Bays at 220 kV Sahar Receiving Station
- 6. 9 No. of 220 kV Bays at 220 kV Saki Receiving Station
- 7. 15 No. of 220 kV Bays at 220 kV Salsette Receiving Station
- 8. 4 No. of 220 kV Bays at MSETCL Receiving Station
- 9. 12 No. of 110 kV Bays at 110 kV Ambernath Receiving Station
- 10. 12 No. of 110 kV Bays at 220 kV Backbay Receiving Station
- 11. 19 No. of 110 kV Bays at 220 kV Borivali Receiving Station
- 12. 14 No. of 110 kV Bays at 220 kV Carnac Receiving Station
- 13. 12 No. of 110 kV Bays at 110 kV Chembur Receiving Station
- 14. 25 No. of 110 kV Bays at 220 kV Dharavi Receiving Station
- 15. 3 No. of 110 kV Bays at 110 kV Grant Road Receiving Station
- 16. 18 No. of 110 kV Bays at 110 kV Kalyan Receiving Station
- 17. 7 No. of 110 kV Bays at 110 kV Kolshet Receiving Station
- 18. 7 No. of 110 kV Bays at 110 kV Dandi Receiving Station
- 19. 15 No. of 110 kV Bays at 110 kV Mahalaxmi Receiving Station

20. 13 No. of 110 kV Bays at 110 kV Malad Receiving Station
21. 9 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station
22. 20 No. of 110 kV Bays at 110 kV Parel Receiving Station
23. 4 No. of 110 kV Bays at 110 kV Panvel Receiving Station
24. 9 No. of 110 kV Bays at 110 kV Powai Receiving Station
25. 10 No. of 110 kV Bays at 220 kV Saki Receiving Station
26. 21 No. of 110 kV Bays at 220 kV Salsette Receiving Station
27. 6 No. of 110 kV Bays at 110 kV Versova Receiving Station
28. 10 No. of 110 kV Bays at 110 kV Vikhroli Receiving Station
29. 8 No. of 110 kV Bays at 110 kV Ixora Receiving Station
30. 2 No. of 110 kV Bays at Central Railway (Wadala) Receiving Station
31. 11 No. of 33 kV Bays at 220 kV Backbay Receiving Station
32. 48 No. of 33 kV Bays at 220 kV Borivali Receiving Station
33. 47 No. of 33 kV Bays at 220 kV Carnac Receiving Station
34. 90 No. of 33 kV Bays at 220 kV Dharavi Receiving Station
35. 56 No. of 33 kV Bays at 110 kV Parel Receiving Station
36. 27 No. of 33 kV Bays at 110 kV Powai Receiving Station
37. 40 No. of 33 kV Bays at 220 kV Sahar Receiving Station
38. 71 No. of 33 kV Bays at 220 kV Saki Receiving Station
39. 20 No. of 33 kV Bays at 110 kV Versova Receiving Station
40. 27 No. of 33 kV Bays at 110 kV Ixora Receiving Station
41. 20 No. of 22 kV Bays at 110 kV Ambernath Receiving Station
42. 20 No. of 22 kV Bays at 220 kV Borivali Receiving Station
43. 25 No. of 22 kV Bays at 220 kV Carnac Receiving Station
44. 32 No. of 22 kV Bays at 110 kV Chembur Receiving Station
45. 39 No. of 22 kV Bays at 220 kV Dharavi Receiving Station
46. 21 No. of 22 kV Bays at 110 kV Kalyan Receiving Station
47. 16 No. of 22 kV Bays at 110 kV Kolshet Receiving Station
48. 30 No. of 22 kV Bays at 110 kV Mahalaxmi Receiving Station
49. 26 No. of 22 kV Bays at 110 kV Malad Receiving Station
50. 15 No. of 22 kV Bays at 110 kV Mankhurd Receiving Station
51. 12 No. of 22 kV Bays at 110 kV Parel Receiving Station

52. 10 No. of 22 kV Bays at 110 kV Panvel Receiving Station
53. 33 No. of 22 kV Bays at 220 kV Salsette Receiving Station
54. 46 No. of 22 kV Bays at 110 kV Vikhroli Receiving Station
55. 4 No. of 11 kV Bays at 110 kV Chembur Receiving Station
56. 23 No. of 11 kV Bays at 110 kV Parel Receiving Station

Proposed - List of Transmission Lines:

1. 400 kV Kharghar – Vikhroli Transmission Line (23.1 km) from MSETCL Kharghar Receiving Station to Vikhroli Receiving Station
2. 400 kV Dehrand- Vikhroli Transmission Line (51.3 km) from Dehrand Receiving Station to Vikhroli Receiving Station
3. 400 kV Dehrand-Nagothane Transmission Line (45.0 km) from Dehrand Receiving Station to Nagothane Receiving Station
4. 400 kV Panvel-Vikhroli Transmission Line (34.4 km) from Panvel Receiving Station to Vikhroli Receiving Station
5. 400 kV Dehrand-Sewri Transmission Line (57.0 km) from Dehrand Receiving Station to Sewri Receiving Station
6. 400 kV Kudus-Marve Transmission Line (50 km) from Kudus Receiving Station to Marve Receiving Station
7. 400 kV Sewri-Hajiali Transmission Line (10 km) from Sewri Receiving Station to Hajiali Receiving Station
8. 220 kV Trombay-Dharavi Transmission Line (40.0 km) from Trombay to Dharavi to Salsette Receiving Station
9. 220 kV Kalwa-Salsette Transmission Line (13.0 Km) from Kalwa Receiving Station to Salsette Receiving Station
10. LILO of one circuit of existing 220 kV Bhira-Dharavi Transmission Line (1.0 km) at Chunabhatti Receiving Station
11. LILO of two circuits of existing 220 kV Trombay - Dharavi Transmission Line (3.0 km) at Antop Hill, Wadala Receiving Station
12. 220 kV R-Infra Versova – TPC Versova Transmission Line (3.0 km) from R-Infra Versova Receiving Station to TPC Versova Receiving Station
13. LILO of one circuit of existing 220 kV Trombay - Chunabhatti Transmission Line (5.0 km) at Bombay Dyeing, Wadala Receiving Station
14. 220 kV Uran-Sewri Transmission Line (22.0 km) from Uran Receiving Station to Sewri Receiving Station
15. 220 kV Sewri-Mahalaxmi Transmission Line (10.0 km) from Sewri Receiving Station to Mahalaxmi Receiving Station

16. 220 kV Sewri-Parel Transmission Line (5.0 km) from Sewri Receiving Station to Parel Receiving Station
17. 220 kV Sewri-Antop Hill Transmission Line (8.0 Km) from Sewri Receiving Station to Antop Hill Receiving Station
18. 220 kV Sewri-Versova Transmission Line (25.0 Km) from Sewri Receiving Station to Versova Receiving Station
19. LILO of existing 220 kV Trombay-Carnac 5 & 6 Transmission Line (1.0 km) at Sewri Receiving Station
20. LILO of existing 220 kV Trombay-Backbay Transmission Line (1.0 km) at Sewri Receiving Station
21. 220 kV Mira Road Transmission Line (4.0 km) from R-Infra Mira Road Receiving Station to Tata Mira Road (West) Receiving Station.
22. 220 kV Vikhroli (East) – Vikhroli (West) Transmission Line (4.0 km) from Vikhroli (East) Receiving Station to Vikhroli (West) Receiving Station
23. 220 kV R-Infra Mira Road - Dahisar (East) Transmission Line (8.0 km) from R-Infra Mira Road Receiving Station to Tata Dahisar (East) Receiving Station
24. 220 kV Vikhroli-Sahar Transmission Line (8.0 km) from Vikhroli Receiving Station to Sahar Receiving Station.
25. 220 kV Marve-Versova Transmission Line (14 km) from Marve Receiving Station to Versova Receiving Station
26. 220 kV Borivali (East) - Dahisar (East) Transmission Line (5 km) from Tata Borivali (East) Receiving Station to Dahisar (East) Receiving Station
27. 220 kV Saki-Versova Transmission Line (10 km) from Saki Receiving Station to Versova Receiving Station
28. LILO of existing 220 kV MSETCL Trombay-Tata Trombay Transmission Line (1 km) at Trombay Generating Station
29. LILO of existing 220 kV Dharavi-Backbay Transmission Line (6.0 km) at Mahalaxmi Receiving Station
30. 110 kV Khopoli-Bhivpuri Transmission Line (28.0 Km) from Khopoli Receiving Station to Bhivpuri Receiving Station
31. 110 kV Saki-Powai Transmission Line (4 Km) from Saki Receiving Station to Powai Receiving Station
32. 110 kV Dharavi - Mithi River Transmission Line (2.5 km) from Dharavi Receiving Station to Mithi River Receiving Station
33. 110 kV Mithi River-HDIL Kurla Transmission Line (4.0 km) from Mithi River Receiving Station to HDIL Kurla Receiving Station

34. 110 kV Dharavi - BKC Transmission Line (2.0 km) from Dharavi Receiving Station to BKC Receiving Station
35. 110 kV Dharavi-Worli Transmission Line (12.0 km) from Dharavi Receiving Station to Worli Receiving Station
36. 110 kV Mahalaxmi-Worli Transmission Line (12.0 km) from Mahalaxmi Receiving Station to Worli Receiving Station
37. LILO of existing 110 kV Lodhivali - Chembur Transmission Line (2. 0 km) at Chembur Tapping Strucuture/ Trombay Colony Receiving Station
38. 110 kV Tata Chunabhatti – Wadala Truck Terminal Transmission Line (15.0 km) from Tata Chunabhatti Receiving Station to Wadala Truck Terminal Receiving Station
39. 110 kV Backbay- Carnac Transmission Line (5 km) from Backbay Receiving Station to Carnac Receiving Station

Proposed List of Bays:

1. 15 No. of 400 kV Bays at 400 kV Vikhroli Receiving Station
2. 8 No. of 400 kV Bays at 400 kV Marve Receiving Station
3. 1 No. of 400 kV Bay at 400 kV Panvel Receiving Station
4. 1 No. of 400 kV Bay at 400 kV MSETCL Kharghar Receiving Station
5. 1 No. of 400 kV Bay at 400 kV Vikhroli Station
6. 2 No. of 400 kV Bays at 400 kV Dehrand Receiving Station
7. 2 No. of 400 kV Bays at 400 kV Nagothane Receiving Station
8. 7 No. of 400 kV Bays at 400 kV Sewri Receiving Station
9. 22 No. of 220 kV Bays at 400 kV Vikhroli Receiving Station
10. 10 No. of 220 kV Bays at 400 kV Marve Receiving Station
11. 9 No. of 220 kV Bays at 220 kV Chunabhatti Receiving Station
12. 6 No. of 220 kV Bays at 220 kV Antop Hill, Wadala Receiving Station
13. 7 No. of 220 kV Bays at 220 kV Versova Receiving Station
14. 5 No. of 220 kV Bays at 220 kV Mahalaxmi Receiving Station
15. 1 No. of 220 kV Bay at 220 kV Dharavi Receiving Station
16. 2 No. of 220 kV Bays at 220 kV Salsette Receiving Station
17. 3 No. of 220 kV Bays at 220 kV Trombay Receiving Station
18. 1 No. of 220 kV Bay at 220 kV Kalwa Receiving Station
19. 1 No. of 220 kV Bay at 220 kV Salsette Receiving Station
20. 17 No. of 220 kV Bays at 400 kV Sewri Receiving Station

21. 7 No. of 220 kV Bays at 220 kV Parel Receiving Station
22. 7 No. of 220 kV Bays at 220 kV Bombay Dyeing, Wadala Receiving Station
23. 7 No. of 220 kV Bays at 220 kV Mira Road (West) Receiving Station
24. 7 No. of 220 kV Bays at 220 kV Vikhroli (West) Receiving Station
25. 7 No. of 220 kV Bays at 220 kV Dahisar (East) Receiving Station
26. 10 No. of 110 kV Bays at 220 kV Chunabhatti Receiving Station
27. 5 No. of 110 kV Bays at 110 kV HDIL Kurla Receiving Station
28. 8 No. of 110 kV Bays at 110 kV BKC Receiving Station
29. 7 No. of 110 kV Bays at 110 kV Worli Receiving Station
30. 7 No. of 110 kV Bays at 110 kV Chembur Tapping Structure/ Trombay Colony Receiving Station
31. 11 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station
32. 41 No. of 110 kV Bays at 110 kV Dharavi Receiving Station
33. 11 No. of 110 kV Bays at 110 kV Carnac Receiving Station
34. 19 No. of 110 kV Bays at 110 kV Vikhroli Receiving Station
35. 11 No. of 110 kV Bays at 110 kV Versova Receiving Station
36. 1 No. of 110 kV Bay at 110 kV Khopoli Receiving Station
37. 1 No. of 110 kV Bay at 110 kV Bhivpuri Receiving Station
38. 1 No. of 110 kV Bay at 110 kV Powai Receiving Station
39. 7 No. of 110 kV Bays at 400 kV Sewri Receiving Station
40. 18 No. of 110 kV Bays at 220 kV Parel Receiving Station
41. 7 No. of 110 kV Bays at 110 kV Wadala Truck Terminal Receiving Station
42. 20 No. of 110 kV Bays at 110 kV Saki Receiving Station
43. 11 No. of 110 kV Bays at 110 kV Malad Receiving Station
44. 1 No. of 110 kV Bay at 110 kV Parel Receiving Station
45. 23 No. of 33 kV Bays at 400 kV Vikhroli Receiving Station
46. 23 No. of 33 kV Bays at 400 kV Marve Receiving Station
47. 17 No. of 33 kV Bays at 220 kV Chunabhatti Receiving Station
48. 17 No. of 33 kV Bays at 220 kV Antop Hill, Wadala Receiving Station
49. 21 No. of 33 kV Bays at 220 kV Versova Receiving Station
50. 23 No. of 33 kV Bays at 220 kV Bombay Dyeing, Wadala Receiving Station
51. 23 No. of 33 kV Bays at 110 kV HDIL Kurla Receiving Station

52. 25 No. of 33 kV Bays at 110 kV BKC Receiving Station
53. 23 No. of 33 kV Bays at 110 kV Worli Receiving Station
54. 24 No. of 33 kV Bays at 110 kV Chembur Tapping Structure/ Trombay Colony Receiving Station
55. 23 No. of 33 kV Bays at 110 kV Mankhurd Receiving Station.
56. 14 No. of 33 kV Bays at 110 kV Versova Receiving Station
57. 50 No. of 36 kV Bays at 110 kV Dharavi Receiving Station
58. 34 No. of 33 kV Bays at 110 kV Vikhroli Receiving Station
59. 11 No. of 33 kV Bays at 110 kV Powai Receiving Station
60. 12 No. of 33 kV Bays at 110 kV Malad Receiving Station
61. 12 No. of 33 kV Bays at 220 kV Backbay Receiving Station
62. 10 No. of 33 kV Bays at 220 kV Borivali Receiving Station
63. 23 No. of 33 kV Bays at 400 kV Sewri Receiving Station
64. 23 No. of 33 kV Bays at 220 kV Mira Road (West) Receiving Station
65. 23 No. of 33 kV Bays at 220 kV Parel Receiving Station
66. 23 No. of 33 kV Bays at 220 kV Vikhroli (West) Receiving Station
67. 23 No. of 33 kV Bays at 220 kV Dahisar (East) Receiving Station
68. 23 No. of 33 kV Bays at 110 kV Wadala Truck Terminal Receiving Station
69. 12 No. of 33 kV Bays at 110 kV Saki Receiving Station
70. 12 No. of 33 kV Bays at 110 kV Parel Receiving Station
71. 21 No. of 22 kV Bays at 110 kV Vikhroli Receiving Station

NOTE:

The Transmission Licensee shall execute Connection Agreements with the other Licensees regarding the interconnection points of the above lines / bays, defining and documenting therein the exact details of the boundaries and interface points.

4. Commencement and Term of Licence

The Licence shall come into force from the 16th day of August, 2014 and, unless revoked earlier by the Commission in accordance with the provisions of Section 19 of the Act, shall remain in force for the period of 25 years as specified under sub-section (8) of Section 15 of the Act.

5. Duties

- 5.1. The Transmission Licensee shall comply with all the applicable provisions of the Act, the Rules prescribed thereunder and all Regulations, Orders and directions issued by the Commission from time to time.
- 5.2. The Transmission Licensee shall as soon as practicable, report to the Commission;
- i. any significant change in its circumstances which may affect the Transmission Licensee's ability to meet its obligations under the Act, the Rules and Regulations thereunder, directions and Orders issued by the Commission, agreements or the Licence;
 - ii. any material breach, or likelihood thereof, of the provisions of the Act, the Rules and the Regulations thereunder, directions and Orders issued by the Commission, agreement or the Licence, which was reasonably within its knowledge, along with the reasons therefor, as soon as practicable; and
 - iii. any change in management control or major change in the shareholding pattern of the Transmission Licensee.

Explanation I – for the purpose of this clause, “management control” shall include the right to appoint majority of the directors or to control the management or policy decisions of the Transmission Licensee, including by virtue of shareholding or management rights or shareholders' agreement or partnership deed or trust deed or voting agreement or in any other manner;

Explanation II – for the purpose of this clause, “major change in shareholding pattern” shall mean the acquisition, by such person as specified in Regulation 7 of the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 1997, as in force from time to time, of such per cent of shares or voting rights in the Transmission Licensee as would entail a disclosure under sub-regulation (1) of that Regulation.

- 5.3. The Transmission Licensee shall seek the approval of the Commission before creating any encumbrance on the assets of the Licensed Business, except where such encumbrance is created for the purpose of the Licensed Business.
- 5.4. The Transmission Licensee may engage any of its subsidiaries or holding company or a subsidiary of such holding company to provide any goods or services to the Transmission Licensee in connection with the Licensed Business, subject to the following conditions:
- i. that the transaction shall be undertaken on an “arm's-length basis” and at a value that is fair and reasonable in the circumstances, which for the purposes of this clause, shall mean with respect to any specific transaction, substantially on terms that would be obtained between the Transmission Licensee and a third party unrelated to and unconnected with the Transmission Licensee;
 - ii. that the Transmission Licensee shall report to the Commission, for each financial year, the details of all transactions of the nature referred to in this Regulation entered into during the financial year; and

**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No.1, Wold Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
 Tel. : 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
 E-mail : mercindia@mercindia.org.in

No MERC/CAP/DPR/17/06 1006

9th May, 2007

M/s.Tata Power Company Ltd.,
 Regulations Department ,
 Corporate Center A,
 34 Sant Tukaram Road ,
 Carnac Mumbai 400009

**Subject: In Principle clearance of the investment scheme for 220 kV Trombay –
 Dharavi- Salsette Lines**

- Ref:** 1) TPC letter No: Reg/ARR/06/0076 dated 12th April 2006
 2) TPC letter No: Reg/ARR/06/0082 dated 27th April 2006
 3) SICOM letter No: IAG/CAPEX/06-07 dated 20th Feb 2007
 4) TPC letter No: EH/TL-T5/093 dated 23rd Feb 2007
 5) TPC letter No: EH/TL-T5/109 dated 23rd Feb 2007
 6) TPC letter No: EH/TL-T5/109 dated 23rd Feb 2007

Dear Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/ARR/06/0082 dated 12th April 2006.

The scheme has been evaluated with reference to the guidelines submitted by the Commission on 9th Feb, 2005. I am directed to convey in principle the approval of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.

Please note that this in principle clearance should not be construed as the final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review particularly in the context of actual cost incurred, scope and objective achieved etc. ex post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date along with their ARR petition or during the tariff determination process at the appropriate time.

Contd...2/-

No MERC/CAP/DPR/17/06 /1006

9th May, 2007

TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in principle clearance and the actuals.

With Regards,



Yours faithfully,

Secretary, MERC

Encl: Annexure & Appendix A

Cc:

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West), Mumbai 400 056.

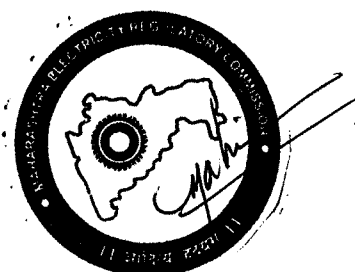
The General Secretary,
Thane Belapur Industries
Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 7001.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan,
Civil Lines, Nagpur 440 001.

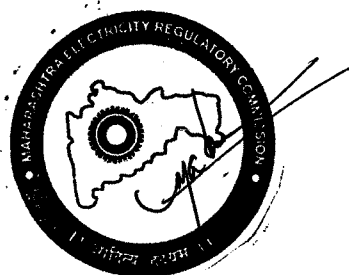
Shri A.D. Mahajan
SICOM Ltd.,
Nirmal Building,
Nariman Point,
Mumbai 400 021.

Annexure
Brief Particular of the scheme for
220 KV TROMBAY-DHARAVI-SALSETTE LINES
As approved in-principle
(Based on particulars furnished in DPR)

1 Name of the scheme	220 kV Trombay- Dharavi-Salsette-Lines
2 Estimated Cost	Rs.153.18 Cr (Break up of cost as per Appendix A)
3 ROI / Cost Benefit	The major benefits are reduction of T&D Loss by 10 MU's and reduction of wheeling charges to be payable to MSETCL. The impact on Tariff would be increase by 1.27 Paise/kWh during the year 2010 and will reduce to 0.65 Paise/kWh by FY 2020.
4 Scope of work in brief	<ul style="list-style-type: none"> i) Dismantling of 2x110 kV circuits between Trombay-Dharavi-Salsette. ii) Construction of 4x220kV lines on multi-circuit towers between Trombay-Salsette (25 km) iii) Laying of 220 kV Underground Cable from Pratiksha Nagar to Dharavi. iv) Installation of 245 kV GIS cable bay at Salsette R/S and procurement of 2 sets of protection and control panel for Salsette R/S and 1 set for Dharavi R/S.
5 Objective/ Justification	<ul style="list-style-type: none"> i) The objective is to meet the energy demand growth at Dharavi and at Salsette. ii) The scheme is for augmentation of transmission lines to 220 kV lines to take care of additional demand of Mumbai area. Besides this, the transmission at higher voltage will reduce the system losses as compared to the 110 kV lines. The probability of faults will reduce. iii) The addition of 220 kV lines will help in continuity of power supply in South Mumbai under exigency of low generation at Trombay. iv) Due to construction of 220 kV lines, wheeling of power through MSETCL network will also be reduced.
6 Funding Arrangement	Internal Resources



7 Time frame	The project will be completed within the period of about 36 months w.e.f January 2007 and will be completed in January 2010.												
Phasing out of expenditure	<p>The phasing of the expenditure is as follows.</p> <table><tr><th>Financial Year</th><th>Amount in Rs.Cr.</th></tr><tr><td>2007-2008</td><td>8.50</td></tr><tr><td>2008-2009</td><td>94.00</td></tr><tr><td>2009-2010</td><td>50.68</td></tr><tr><td colspan="2"><hr/></td></tr><tr><td>Total</td><td>153.18</td></tr></table>	Financial Year	Amount in Rs.Cr.	2007-2008	8.50	2008-2009	94.00	2009-2010	50.68	<hr/>		Total	153.18
Financial Year	Amount in Rs.Cr.												
2007-2008	8.50												
2008-2009	94.00												
2009-2010	50.68												
<hr/>													
Total	153.18												

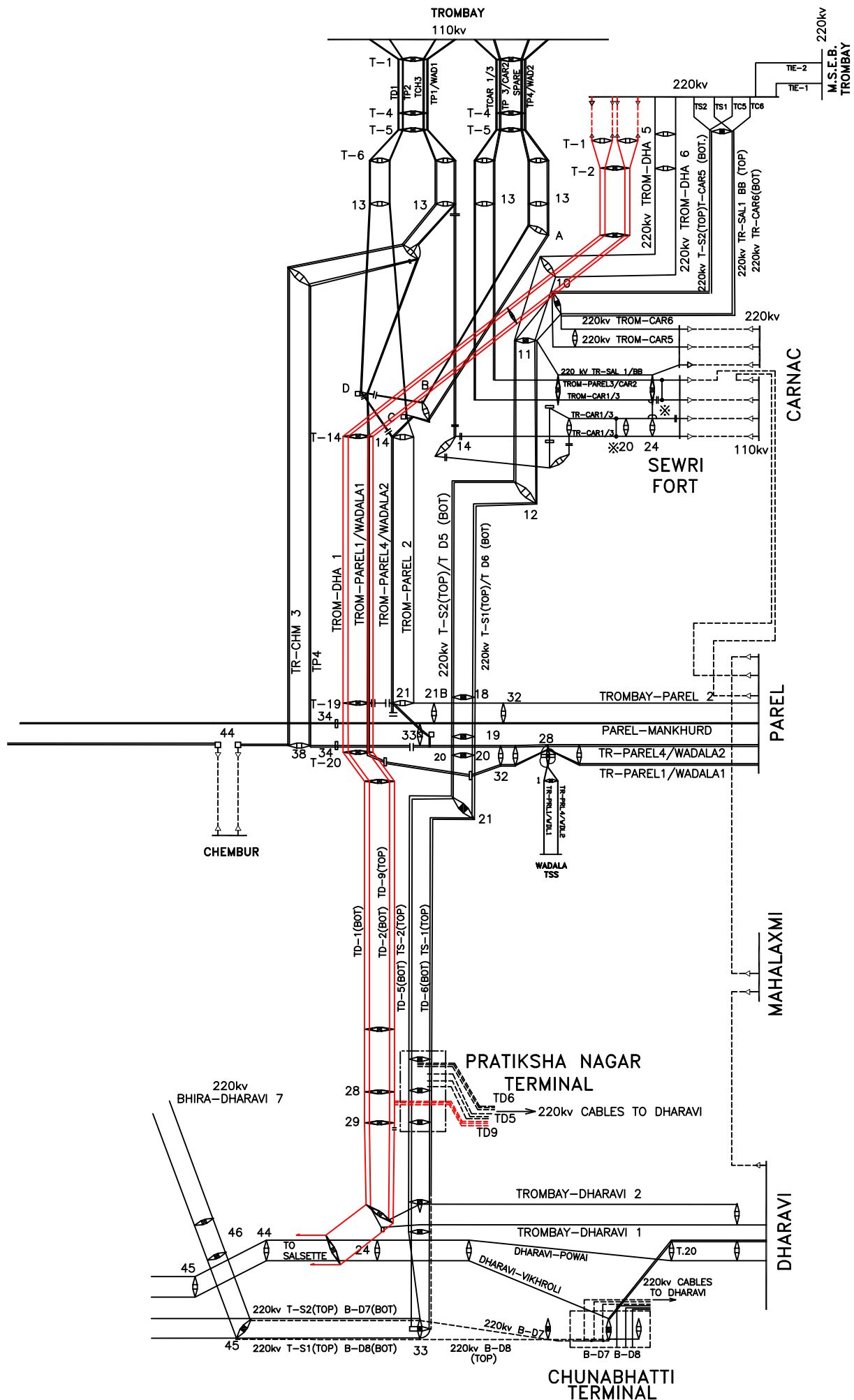


APPENDIX A**SCHEME FOR 220 kV TROMBAY –DHARAVI-SALSETTE LINES**
Break up of the Project Cost Estimate

Sr.No	Description	Rs.Cr.
A	Land	0.00
B	Preliminary Expenses	0.00
C	Transmission Lines and Accessories	83.00
D	Cable and Accessories	10.87
E	GIS and Accessories	11.25
F	Civil and Structural works	27.60
G	Consultancy Services	1.30
H	Contingencies	4.02
I	GRAND TOTAL	138.04
J	IDC	15.14
K	Total project cost (Incl. IDC)	153.18



Single Line Diagram 110 kV Trombay-Dharavi 2 Transmission line Annexure 3





MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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E-mail : mercindia@mercindia.org.in

MERC

MERC/TECH-VII/CAPEX/20122013/01644

Date: 22 October, 2012

✓ The Managing Director,
Tata Power Company Ltd,
Bombay House, 24, Homi Modi Street,
Fort, Mumbai-400001.

*Vidyaadhar
Wagle*

Subject- In-principle clearance of Investment scheme submitted by TPC-T for "Stringing of second 110 kV line in the existing 110 kV Transmission line between Khopoli and Bhihpuri generating stations".

Ref- TPC letter No.: REG/MERC/12/214 Dated 11 July, 2012.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter no. REG/MERC/12/214 Dated 11 July, 2012.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey In-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A.
2. Please note that this In-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC-T should submit quarterly progress report by 20th day of the first month of next quarter giving the status of implementation of the schemes in terms of expenditure incurred and item wise physical progress achieved during the implementation of the schemes.
4. As per the Directives of the Commission vide Order dated 3rd September 2010 (Case No 97 of 2009 of TPC-T, Page no. 39, Para 3.5) TPC-T as well as all other Transmission Utilities in Maharashtra State should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.



5. *Since, this is a replacement scheme, TPC-T to ensure that the equity component of the original cost of the replaced asset is knocked off from the equity base.*
6. Asset created after execution of the schemes should be maintained separately in the Asset register.
7. Immediately after completion / commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the In-principle clearance and the actual.



Sincerely,

(Kuldip N. Khawarey)
Secretary, MERC

Encl: Annexure, Appendix A
Cc to:

The General Secretary,
Thane Belapur Industries Association,
Plot No. P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai - 400 701.

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune - 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (W), Mumbai - 400 056.

The President,
Vidarbha Industries Association,
1st Floor, Udyog Bhawan,
Civil Lines,
Nagpur - 440 001.

Appendix-A
“Stringing of second 110 kV line in the existing 110kV
Transmission line between Khopoli and Bhivpuri Generating Stations”
Detailed Cost Estimate

Sr No.	Description	Unit	Quantity	Rate Rs in Lakhs	Total Rs in Lakhs
Bay at Khopoli					
1.	Material(for Bus PT &LA shifting)				
1.	110 kV Lightning Arrestor	No.	3	0.5	1.5
2.	110 kV Potential Transformer	No.	3	3.6	10.8
3.	Structures for existing LA-1 & PT-1		6	0.6	3.6
4.	110 kV Isolator without earth switch-1250 Amp.	No.	1	3	3.0
5.	Structure for 110 kV Isolator 1250 A	No.	1	1.5	1.5
Sub Total-A					20.4
Material for (CRSE line shifting)					
1.	110 kV cable sealing End(630 sq mm XLPE) cable	No.	6	5.5	33.0
2.	110 kV single phase XPLE cable between CRSE#2 isolator to PASS Bay(630 sq mm)	Mtrs	450	0.1	45.0
3.	145 kV Pass	No.	1	132.0	132.0
4.	96 kV LA	No.	3	0.5	1.5
5.	110 kV Potential Transformer		1	3.6	3.6
6.	Structures for Cable sealing end, LA & PT		10	0.6	6.0
7.	Protection Panel	No.	1	10.0	10.0
Sub Total-B					231.1
Material(for New Khop-Bhiv line Bay)					
1.	110 kV cable sealing End(1600sq mm)	No.	6	5.5	33.0
2.	110 kV single phase XPLE(1600 sq mm)cable between T#108 to CRSE#2Bay	Mtrs	750	0.17	127.5
3.	96 kV LA	No.	3	0.5	1.5
4.	110 kV Potential Transformer	No.	1	3.6	3.6
5.	Structures for Cable sealing end, LA & PT	No.	10	0.6	6.0
6.	RADSS Bus Fault Relay	No.	1	15.0	15.0
7.	110 kV Isolator without earth switch-1250 Amp.	No.	2	3	6.0
8.	110 kV Isolator with earth switch-1250 Amp.	No.	1	3.9	3.9



Sr. No.	Description	Unit	Quantity	Unit Rate	Total Cost
9.	Bus support,CT,PT,Isolator & Breaker clamps	Lot	1	5.0	5.0
10.	11/4 inch IPS heavy duty copper bus for Bays	Lot	1	5.0	5.0
11.	Control Cables	Lot	1	5.0	5.0
Sub Total-C					211.5
Sub Total A+B+C(Material Cost)					463.0
Services at Khopoli					
1.	Foundation for PASS,PT,Cable termination & LA structures	Lot	1	10.0	10.0
2.	Installation,Testing,Commissioning services for PASS,PT,Cable termination & LA	Lot	1	25.0	25.0
3.	Installation,Testing,Commissioning services for cable laying & protection panels	Lot	1	5.0	5.0
4	Installation,Testing,Commissioning services for Bus fault relay& commissioning of entire station	Lot	1	10.0	10.0
5.	Service for SCADA integration at Khopoli & Load control centre,Trombay	Lot	1	5.0	5.0
Total of Services(At Khopoli)					55.0
Total of Material & Service for Bay at Khopoli					518.0



Sr No.	Description	Unit	Quantity	Rate Rs in Lakhs	Total Rs in Lakhs
Bay at Bhivpuri					
1.	110 kV Isolator between BS IV-V & BS V-VI for Bus section -2500 Amps	No.	2	3.0	6.0
2.	110 kV Bus fault relay	No.	1	15.0	15.0
3.	Protection Panel	No.	1	10.0	10.0
4.	110 kV Isolator without earth switch-1250 Amp.	No.	2	3.0	6.0
5.	110 kV Isolator with earth switch-1250 Amp.	No.	1	3.9	3.9
6.	110 kV breaker-3150 Amp.	No.	1	10.0	10.0
7.	110 kV CT-200-1200-800/5A	No.	3	2.5	7.5
8.	110 kV line PT	No.	1	3.6	3.6
9.	GI structure for CT,PT	No.	4	0.6	2.4
10.	GI structure for Isolators	No.	5	1.5	7.5
11.	2.5 inch IPS heavy duty copper Bus for main Bus extension	Lot	1	10.0	10.0
12.	2 inch IPS heavy duty copper Bus for transfer Bus extension	Lot	1	8.0	8.0
13.	1 1/4 inch IPS heavy duty copper Bus for Bays	Lot	1	5.0	5.0
14.	Control cables	Lot	1	5.0	5.0
15.	Bus support structures	No.	12	0.2	2.4
16.	Bus support insulators	No.	12	0.2	2.4
17.	Bus support,CT,PT,isolator & breaker clamps	Lot	1	10.0	10.0
18.	A2 structure for line	No.	1	10.0	10.0
Total of Material at Bhivpuri					124.7
Service at Bhivpuri					
1.	Foundation for Breaker, CT, PT, Isolator, Bus support structures	Lot	1	10.0	10.0
2.	Installation, Testing, Commissioning services for Breaker, CT, PT, Isolator, Bus support insulators along with structures for all equipments	Lot	1	15.0	15.0
3.	Installation,Testing,Commissioning services for cable laying & protection panels	Lot	1	5.0	5.0
4.	Installation,Testing,Commissioning services for Bus fault relay& commissioning of entire station	Lot	1	10.0	10.0



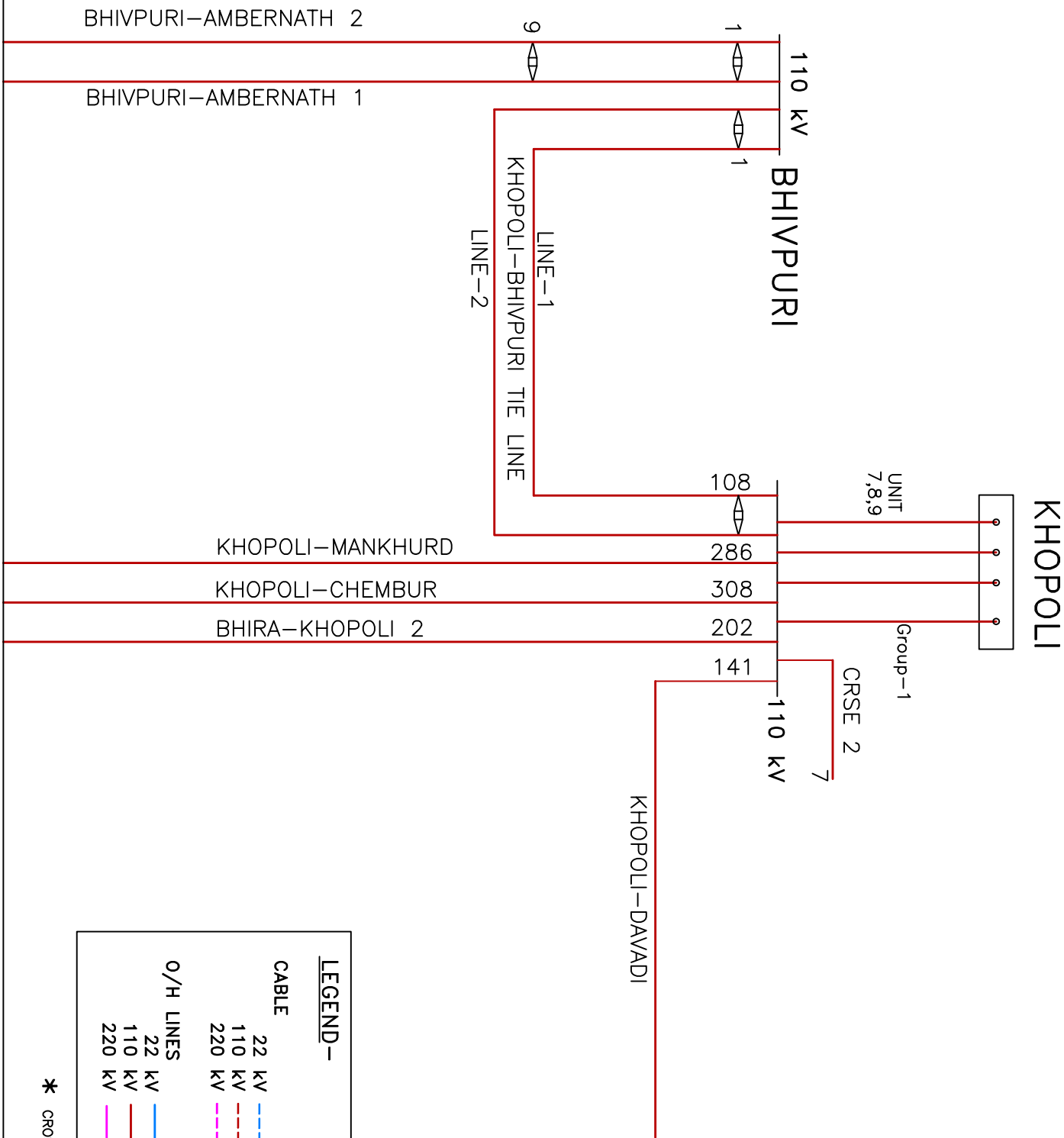
5.	Service for SCADA integration at Bhivpuri & Load control centre, Trombay	Lot	1	5.0	5.0
	Total of Services				45.0
	Total of Material & Services for Bay at Bhivpuri				169.7
	Total of Material & Services for Bay at Khopoli				518.0

Sr. No.	Description	Total Cost			
1.	Total of Material & Services for Bay at Khopoli	518.0			
2.	Total of Material & Services for Bay at Bhivpuri	169.7			
	Total of Material & Services for Bays at Khopoli & Bhivpuri	687.7			
Sr. No.	Description	Unit	Quantity	Unit rate Rs. in Lakhs	Total Cost Rs. in Lakhs
Transmission Line					
Material					
1.	220 kV DF type tower at Bhivpuri end	MT	60	1.0	60.0
2.	Modification to tower # 108 at Khopoli	Mt	10	1.0	10.0
3.	Conductor 0.15 Wolf ACSR	Km	180	1.61	289.8
4.	Insulators 11 kV 90 KN anti fog ball & socket	No.	6000	0.007	42.00
5.	Suspension hardware assembly for Wolf ACSR	Set	210	0.10	21.0
6.	Tension hardware assembly for Wolf ACSR	Set	300	0.15	45.0
7.	0.15 Wolf ACSR mid span joint	No.	100	0.002	0.20
8.	0.15 Wolf ACSR repair sleeve	No.	60	0.001	0.06
9.	0.15 ACSR spacers	No.	500	0.001	0.50
10.	Vibration damper for 0.15 Wolf ACSR	No.	1500	0.001	1.50
11.	Conductor 0.2 Panther ACSR	Km	30	2.0	60.0
12.	Insulators 11 kV 90 KN antifog ball & socket	No.	2000	0.007	14.0
13.	Suspension hardware assembly for PantherACSR	Set	70	0.10	7.0
14.	Tension hardware assembly for PantherACSR	Set	100	0.15	15.0
15.	0.2 Panther ACSR mid span joint	No.	35	0.002	0.07
16.	0.15 Wolf ACSR repair sleeve	No.	20	0.001	0.02
	Total of Material				566.15



Services for Transmission Line					
Sr. No.	Description	Unit	Quantity	Unit Rate Rs. In Lakhs	Total Cost Rs. In Lakhs
1.	Stringing of 2X0.15 Wolf ACSR and removal of one phase of 0.2 ACSR Panther	Ckt km	29	2.5	72.50
2.	Stringing of 0.2 ACSR one Phase conductor	km	29	1.0	29.0
Sub-Total					101.50
Total of Material & Services for Transmission Line					667.65
Consultancy @2%					23
Staff Cost@5% of Material & Services					68
EPC Cost @10% of Material & Services					137.8
Add Contingency@2%					29
IDC-Interest During Construction					114
Total Project Cost(Rs. in Lakh)					1727





**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No.1, Wold Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

Tel. : 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in

E-mail : mercindia@mercindia.org.in

MERC/CAP/DPR/17/08 /965

9th May 2008

Shri V.H. Wagale
Dy General Manager,
Tata Power Company Ltd.
Regulations Department,
Corporate Center A,
34 Sant Tukaram Road,
Carnac, Mumbai 400009

Subject- In-principle Clearance of the Scheme for establishing 145 kV Gas Insulated Switchgear at BKC

Ref- i)TPC letter No: REG/MERC-SUB/07/026/dated 14th March 2007

ii)TPC letter No. REG/MERC-SUB/08/16/dated 21st January 2008

iii) TPC letter No.REG/MERC/08/79/dated 16th April 2008.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/MERC-SUB/08/16/dated 21st January 2008

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.

2. Please note that this in principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.

3.TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

4.Assets created after execution of the scheme should be maintained separately in the Asset register.

Con2....

Regulations Dept
Inward No. 166
Date 13.5.08

9th May 2008

5.Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,

(P.B.Patil)
for Secretary, MERC

Encl: Annexure, Appendix

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,

Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,

Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dynyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure
Brief particular of the Scheme
For establishing 145 kV Gas Insulated Switchgear at BKC
As approved in-principal
(Based on Particulars furnished in DPR)

2.a) Name of the Scheme	Establishing 145 kV Gas Insulated Switchgear at BKC (Revised Scheme)										
b) Scheme code no.	TPC-T/FY08/03										
2.Estimated Cost	Rs.230.50 Cr. (Break up of cost as per Appendix)										
3.ROI / Cost benefit	To meeting the projected load growth of existing and the prospective customers, including REL in the BKC area. Further, the T&D losses will be reduced and improves the reliability. As per cost benefit analysis, an increase in transmission tariff to the distribution utilities on completion of the project to the extent of 0.89 Paise / unit is expected. This will drop down to about 0.63 Paise / unit progressively in about 10 years period.										
4.Brief Scope of Work	<ul style="list-style-type: none"> • Procurement of the land. • Procurement & installation of 6nos. 145 kV GIS bays & 33 kV GIS with accessories • Procurement and installation 110/33 kV, 2X 75 MVA transformers, with accessories • Procurement and installation of 110 kV Power Cables with accessories. • Civil works for 110 kV & 33 kV GIS Building 										
5.a) Objective	To enhance the existing station capacity by 130 MVA to meet the growing loads of Bandra – Kurla Complex area including the requirements of REL for that area.										
b) Justification	Without the proposed completion of the project it is Not possible to meet the growing load requirement of the existing and prospective consumers of BKC area fed by TPC directly as well REL-D outlet requirement for their consumers in that BKC area.										
6. Funding Arrangement	From either internal resources or through borrowings from reputed financial institutions.										
7.Time frame/ Phasing of expenditure	<p>Time period - 24 months</p> <table> <tr> <th>Year</th><th>Expenditure</th></tr> <tr> <td>2009-10</td><td>Rs. 150.81 Crores.</td></tr> <tr> <td>2010-11</td><td>Rs. 79.69 Crores</td></tr> <tr> <td colspan="2">-----</td></tr> <tr> <td>Total</td><td>Rs. 230.50 Crores.</td></tr> </table> <p>Year of capitalization- FY 2011</p>	Year	Expenditure	2009-10	Rs. 150.81 Crores.	2010-11	Rs. 79.69 Crores	-----		Total	Rs. 230.50 Crores.
Year	Expenditure										
2009-10	Rs. 150.81 Crores.										
2010-11	Rs. 79.69 Crores										

Total	Rs. 230.50 Crores.										



Appendix

Scheme for Establishing 145 kV Gas Insulated Switchgear at BKC

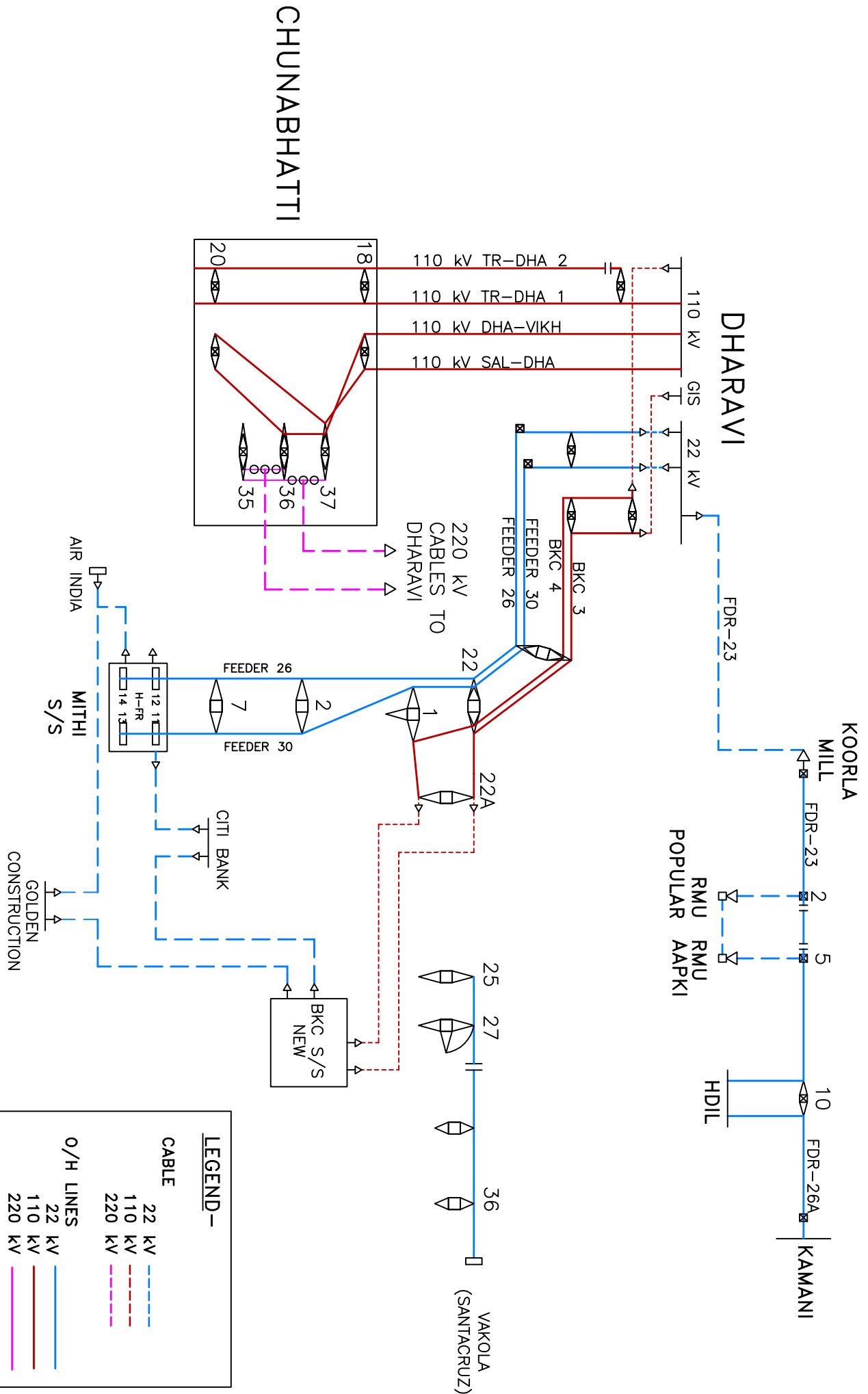
Break up of project Cost

Sr. No.	Item Description	Rs. Cr
1	Land	140.00
2	Other substation electrical equipment excluding GIS	23.60
3	145 kV GIS with accessories	18.00
4	33 kV GIS with accessories	12.16
5	110 kV Power cable with accessories	5.75
6	Civil and related works	4.60
7	Consultancy Services	1.00
8	Contingency	5.75
9	IDC	19.64
10	Total Project Cost (incl. IDC)	230.50

Total Rs.230.50 Cr.



Single Line Diagram of 110 kV DHaravi-BKC line 3 & 4



MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.

PHONE : (O) 022-2659 5000 / 8595
(P) 022-2659 2227
FAX : 022- 2659 2297
E-Mail: cestu@mahatransco.in



Office of the
CE (STU)
'Prakashganga', MSETCL
Plot no. C-19, E-Block,
Bandra Kurla Complex, Bandra (I)
Mumbai - 400051

P/ST/302/Tata/4337

Date: 24-4-07

To,
✓ M/s Tata Power Company Ltd.,
Regulations Department Corporate Centre,
'A' 34 Sant Tukaram Road,
Carnac Bander, Mumbai -400 009.

Sub:- Validation and Verification of Detailed Project Reports of various
Transmission Schemes of TPC by MSETCL as STU.

Ref:- Your office letter No.RBG/MSETCL/07/50 dated 4th April 2007.

Dear Sir,

On the above context this is to inform you that, the Detail Project Reports for
the following transmission Schemes submitted by TPC are found generally in order.

- 1) Land for new receiving stations
- 2) Installation of new 75 MVA power transformer at Malad
- 3) 145 kV GIS at Versova
- 4) Installation of additional ICT with 33 kV outlets at Dharavi
- 5) 33 kV supply to BEST from Parel receiving station
- 6) Upgrading of 110 kV transmission lines for system strengthening
- 7) Establishing 220 kV GIS receiving station at Mahalaxmi
- 8) Establishing 145 kV GIS receiving switchgear at BKC
- 9) Establishing 220 kV GIS at Saki and upgrading of transmission lines.
- 10) Upgrading of 110 kV transmission lines by high capacity super conductor.

Thanking You,

Yours faithfully,

Chief Engineer (STU)

**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

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E-mail : mercindia@mercindia.org.in

No MERC/CAP/DPR/17 /07/ 2536

4th December 2007

Shri V.H.Wagle,
Sr.Manager, Regulations
Tata Power Company Ltd.
Regulations Department,
Corporate Center A,
34 Sant Tukaram Road,
Carnac Bunder,
Mumbai 400009

*cc: Mr D. Raina
Mr. S-G-Patkar
Mr Rakesh Singh
cc: Mr A. Sethi*

**Subject- In-principle Clearance of the Scheme for 220 kV GIS at Saki and Uprating
of Transmission lines**

Ref-Letter No: REG/MERC-SUB/07/026 dated 14th March 2007

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/MERC-SUB/07/026 dated 14th March 2007.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

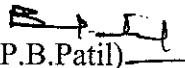
No MERC/CAP/DPR/17/07/2536

4th December 2007

4. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actuals.



Yours Faithfully,


(P.B.Patil)

Secretary, MERC

Encl: Annexure , Appendix A

c.c. to Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

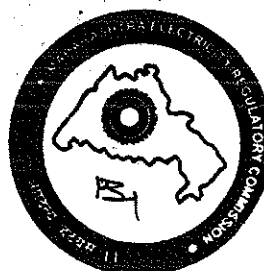
The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Shri A.D. Mahajan,
Senior Manager,
SICOM Limited,
Nirmal, 1st Floor, Nariman Point,
Mumbai – 400 021

Annexure
Brief particulars of the Scheme
for 220kV GIS at Saki and Uprating of Transmission lines
As approved in principle
(Based on the particulars furnished in DPR)

1. Name of the Scheme	220 kV GIS at Saki and uprating of transmission lines
2. Estimated Cost	Rs. 195.05 crore. (Break up of cost as per Appendix A)
3. ROI / Cost benefit	As per cost benefit analysis, an increase in transmission tariff to the distribution utilities to the extent of 0.42 Paise / unit is expected.
4. Brief Scope of Work	<p>At Salsette R/S</p> <p>Addition of two 220 kV bays on existing GIS and laying of 220 kV cable.</p> <p>220kV Salsette –Saki line</p> <p>i) Installation of 7.2 km. four circuit transmission line with “MOOSE and BISON” conductor for 220 kV and 110 kV line respectively from Salsette to Narayan Industrial Estate. At Narayan Estate installation of 220 kV overhead line to underground cable Tap – off arrangement</p> <p>ii)Laying of 1.5 km 220 kV cable from Narayan Estate to Saki R.S.</p> <p>At Saki R/S</p> <p>i) Installation of 220kV double bus GIS bays (2 I/C+BC+ 6 O/G).</p> <p>ii) Installation of two nos. of ICT, 220/110/33 kV with capacity 250/200/75MVA</p> <p>iii) Installation of 33kV GIS with single bus, two incomer, one bus coupler and 18 out going feeders.</p> <p>iv) Laying of 110kV under ground XLPE cable, Extension of 110 kV bus Section III and interconnection of Hybrid GIS switchgear with ICT.</p>

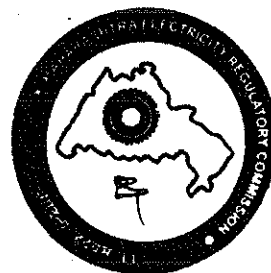


5. Objective/ Justification	To improve the supply reliability and to meet demand growth of the distribution utilities. To provide N-1 transformation redundancy at Saki R/S as per State Grid Code Regulation No 9.6												
6. Funding Arrangement	The project will be funded through internal accruals												
7. Time frame/ Phasing of Expenditure	<p>Time period - 36 months</p> <table> <tr> <th>Year</th><th>Expenditure</th></tr> <tr> <td>2007-08</td><td>Rs. 13.20 Cr.</td></tr> <tr> <td>2008-09</td><td>Rs. 54.61 Cr.</td></tr> <tr> <td>2009-10</td><td>Rs.127.24 Cr.</td></tr> <tr> <td colspan="2"><hr/></td></tr> <tr> <td>Total</td><td>Rs. 195.05 Cr.</td></tr> </table>	Year	Expenditure	2007-08	Rs. 13.20 Cr.	2008-09	Rs. 54.61 Cr.	2009-10	Rs.127.24 Cr.	<hr/>		Total	Rs. 195.05 Cr.
Year	Expenditure												
2007-08	Rs. 13.20 Cr.												
2008-09	Rs. 54.61 Cr.												
2009-10	Rs.127.24 Cr.												
<hr/>													
Total	Rs. 195.05 Cr.												



Appendix A**Scheme for
220kV GIS at Saki and Uprating of Transmission lines****(Break up of the project cost)**

Sr. No.	<u>Item Description</u>	Rs. Lakhs
1	220 kV U/G cables with accessories	4000.00
2	220 kV GIS with accessories at Saki	3600.00
3	250 MVA, 220/110/33 kV Transformer with accessories	3000.00
4	Civil Works	1445.00
5	33kV GIS with accessories	935.00
6	220 kV GIS bays with accessories	800.00
7	Conductor, insulator, hardware for overhead line	720.00
8	Erection, testing & commissioning services	625.00
9	110/33 kV cable with accessories	300.00
10	Control & protection Panels	250.00
11	110 kV GIS Hybrid switch gear	150.00
12	220 kV Overhead-Under ground terminations	120.00
13	Land at Narayan Industrial estate	120.00
14	Consultancy services	350.00
15	Contingency	1644.00
16	IDC	1418.90
17	TOTAL PROJECT COST (incl. IDC)	19504.90

Total Rs. 195.05Cr.



MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20092010/00313

March 17, 2010

✓
Shri, V.H. Wagale
Senior Manager, Regulations
The Tata Power Company Ltd.
Corporate Center,
34 Sant Tukaram Road,
Carnac, Mumbai 400009

Sub: In- Principle clearance of the investment scheme of TPC-T for 245 kV GIS at Sahar (Airport).

Ref: 1) REG/MERC-SUB/09/141 dated 15th June 2009.
2) E-mail dated 26th February 2010.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no dated 15th June 2009.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A & Annexure A.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.
4. Asset created after execution of the scheme should be maintained separately in the Asset register.

March 17, 2010

5. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actuals.



Yours Faithfully,

(K.N. Khawarey)
Secretary, MERC

Encl: Annexure A & Appendix A.
c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure A
Installation of 245 kV GIS at Sahar (Airport)

A) Particulars furnished in the Feasibility Report by TPC-T

1.	a) Name of the Scheme	Installation of 245 kV GIS at Sahar (Airport)	
	b) Scheme code No.	TPC-T/FY10/04	
2.	Estimated Cost	Rs. 167.28 Cr. (Break up as per Appendix A)	
3.	ROI / Cost Benefit	To Cater rapid increasing load in Marol, Saki and Andheri (East) areas & Airport area.	
4.	Brief Scope of Work	Installation & Commissioning of i) 220 / 33 kV 125 MVA Transformer – 2 nos. ii) 220 kV 1C x 1200 Sq.mm cable – 15 km. iii) 220 kV GIS Bays – 5 nos iv) 33 kV GIS Bays – 23 Nos.	
5.	Objective / Justification	1. To meet Power requirement of MIAL of about 100 MVA in Phase by 2014. 2. To meet the future load demand of Mumbai suburban areas in “K-East”& “L” wards and Andheri (E) area.	
6.	Funding Arrangement	From internal sources or by borrowing from reputed lending institutions.	
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in March 2012.	
		Year	Amount (Rs. Cr.)
		2009-10	0.86
		2010-11	18.89
		2011-12	147.53
		Total	167.28

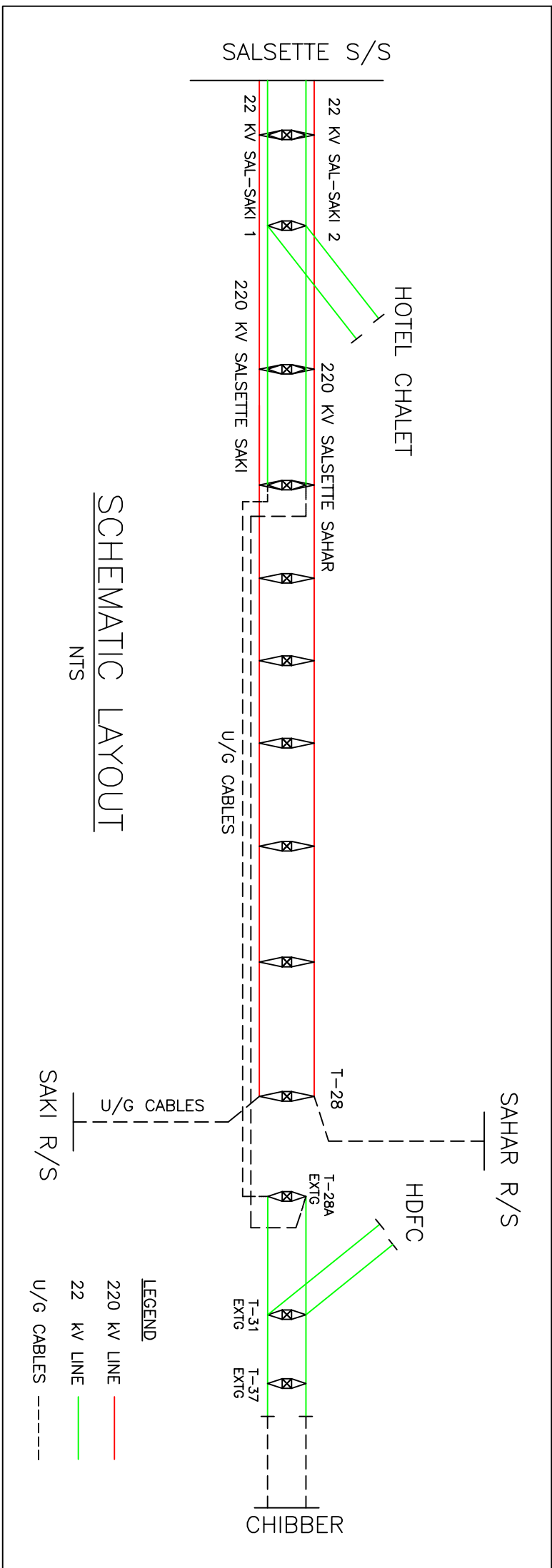


Appendix- A

Installation of 245 kV GIS at Sahar (Airport)
Breakup of Cost Estimates

Amount (Rs.in Lakhs)					
Sr.No.	Description	Qty	Unit	Rate	Total
1	Preliminary works, soil investigation,survey, design and engineering	1	LS	200	200
2	125 MVA, 220/33kV Transformerwith OLTC, RTCC and NGT	2	set	1200	2400
3	220kV Gas Insulated Bus Duct	120	M	1.35	162
4	220kV, 1C X 1200 sq. mm Cu XLPE cables, terminations and laying. 6 km	6000	M	1.2	7200
5	220kV GIS Bay, 2 I/C, 2 O/G & 1 BC & space for 1 O/G and 1 incoming	5	Nos	400	2000
6	33 kV GIS bays complete with CTs, disconnections, equipment (23 bays)BCU/ BCPU	23	Nos.	30	690
7	33kV Capacitor Bank	2	No's	28	56
8	33kV Reactor(25MVAR)	0	No's	300	0
9	33kV Bus PT complete	2	No's	9	18
10	33kV, 1 C X 630 Sq. mm Cu- XLPE cables	1	KM	15	15
11	33kV cable terminations 2 bays	6	Set	8	48
12	Protection panel for 220kV GIS bays (including differential, directional o/c & BF etc.)	5	Set	15	75
13	Aux. System (lighting, earthing, cable trays, lightning, fire detection system) - lump sum	1	LS	200	200
14	LV Power & control cables	1	LS	100	100
15	SCADA complete with acc.	1	LS	220	220
16	Installation, testing & commissioning of all equipments	1	LS	300	300
17	Civil work for transformer including trenches, foundations of transformer, outdoor eqpt	1	LS	900	900
18	Miscellaneous costs and provision for contingencies				294
19	IDC				1850
20	Total Project Cost				16728
				Say	167.28 Cr





**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No.1, Wold Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

Tel. : 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in

E-mail : mercindia@mercindia.org.in

No MERC/CAP/DPR/18/2185

October 16, 2007

Shri J.D.Kulkarni,
Dy General Manager,
Tata Power Company Ltd.
Regulations Department
Corporate Center A
34 Sant Tukaram Road
Carnac, Mumbai 400009

① MS. SRM - PI. Circular
to Mr. DAS/AS/DBR/SGP/USB & others

② MS. MT - PI. file.

6/19/10

Subject: In-principle clearance of the scheme for 110 kV Power Supply to HPCL**Ref : REG/MERC-SUB/06/225 dated 22nd December 2006**

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no. REG/MERC-SUB/06/225 dated 22nd December 2006 and subsequent correspondence on the subject.

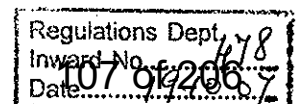
1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle approval of this scheme subject to the following:

'From subsequent clarification furnished by TPC, it is noted that the 110 kV cable being laid for releasing additional load to HPCL, can be used to cater the load of other consumers in near by area in future.'

2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.

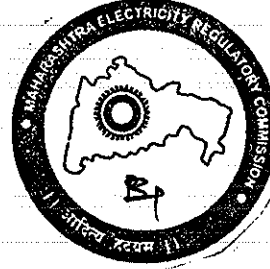
3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

Contd..2/-




October 16, 2007

4. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actuals.



Yours Faithfully,


(P.B. Patil)
Secretary, MERC

Encl: Annexure , Appendix A

c.c. to Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

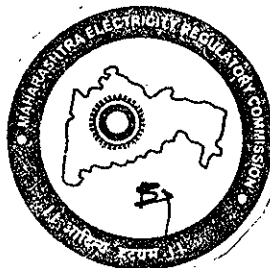
Shri A.D. Mahajan,
Senior Manager,
SICOM Limited,
Nirmal, 1st Floor, Nariman Point,
Mumbai – 400 021

Annexure

**Brief particular of the scheme for
110 kV Power Supply to HPCL by
As approved in-principal**

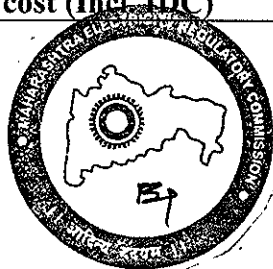
(Particulars furnished in DPR)

1 Name of the scheme	110 kV power supply to Hindustan Petroleum Corporation Ltd. (HPCL) refinery at Mahul, Chembur, Mumbai.								
2 Estimated Cost	Rs. 20.41 Crore								
3 ROI / Cost Benefit	Decrease in tariff of around 2 Paise / Unit is envisaged.								
4 Scope of work in brief	1) Installation of two 110 kV out door bays at TPC's 110 kV switchyard, Trombay. 2) Laying of 110 kV cable from Trombay to proposed 110 kV GIS sub station at HPCL end.								
5 Objective Justification	To provide 110 kV power supply to HPCL refinery for feeding the additional load requirement. 1) Feeding load on 110 kV instead of 22 kV voltage will result in higher reliability 2) Being continuous process industry 100% redundancy is necessary 3) Supply at 110 kV will reduce Transmission losses.								
6 Funding Arrangement	Consumer's contribution Rs.2.00 Cr. Balance 18.41 Cr. will be funded from internal resources.								
7 Time frame Phasing out of expenditure	Total Duration - 23 months Expected to be commissioned in 30 June 2007 <table> <tr> <td>Years</td><td>Expenditure</td></tr> <tr> <td>2006 – 2007</td><td>Rs 18.03 Cr</td></tr> <tr> <td>2007 – 2008</td><td>Rs 2.38Cr.</td></tr> <tr> <td></td><td>Rs 20.41 Cr.</td></tr> </table>	Years	Expenditure	2006 – 2007	Rs 18.03 Cr	2007 – 2008	Rs 2.38Cr.		Rs 20.41 Cr.
Years	Expenditure								
2006 – 2007	Rs 18.03 Cr								
2007 – 2008	Rs 2.38Cr.								
	Rs 20.41 Cr.								



APPENDIX A**Scheme for
110 KV Power Supply to HPCL by****Break up of the Project Cost**

Sr. No	Particulars	Cost in Rs.Cr.
1	110 Kv bays & accessories	1.36
2	110 kV cable & accessories	10.49
3	Cable lying & Installation & civil work.	4.23
4	Miscellaneous, testing & commissioning	0.495
	Sub Total	16.575
5	Consultancy Service	1.71
6	Contingencies	1.1148
7	Grand total	19.40
	IDC	1.01
	Total project cost (Incl. IDC)	20.41

Total Rs. 20.41Cr.





महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

MERC/TECH-VII/CAPEX/20122013/02113

THE TATA POWER CO.

Date: 21 December, 2012

RECEIVED ON

07 JAN 2013

AT _____ HRS. BY _____
MD'S OFFICE

To,
The Managing Director,
Tata Power Company Ltd,
Bombay House, 24, Homi Modi Street,
Fort, Mumbai-400001.

Vidyaadhar Wagle

Subject- In-principle clearance of Investment scheme submitted by TPC-T for "Installation of additional 33 kv bays at Borivali, Malad and Backbay Receiving Station".

Ref- TPC letter No.: CREG-MUMMERC/12/262 Dated 8 October, 2012.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter no. CREG-MUMMERC/12/262 Dated 8 October, 2012.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC-T should submit quarterly progress report by 20th day of the first month of next quarter giving the status of implementation of the schemes in terms of expenditure incurred and item wise physical progress achieved during the implementation of the schemes.
4. As per the Directives of the Commission vide Order dated 3rd September 2010 (Case No 97 of 2009 of TPC-T, Page no. 39, Para 3.5) TPC-T as well as all other Transmission Utilities in Maharashtra State should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.



5. Asset created after execution of the schemes should be maintained separately in the Asset register.
6. Immediately after completion / commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Sincerely

(Kuldip N. Khawarey)
Secretary, MERC

Encl: Annexure, Appendix A
Cc to:

The General Secretary,
Thane Belapur Industries Association,
Plot No. P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai - 400 701.

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune - 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (W), Mumbai - 400 056.

The President,
Vidarbha Industries Association,
1st Floor, Udyog Bhawan,
Civil Lines,
Nagpur - 440 001.

Annexure-A
Summary Appraisal of TATA Power Company Ltd. Scheme for
“Installation of additional bays at Borivali, Malad & Backbay R/s”

A) Particulars furnished in the Feasibility Report by MSETCL

1.	a) Name of the Scheme	Installation of additional bays at Borivali, Malad & Backbay R/s	
	b) Scheme code No.	TPC-T/FY13/04	
2.	Estimated Cost	Rs.22.86 Cr.(Proposed for Approval) (Break up as per Appendix A)	
3.	ROI/ Cost Benefit	No direct monetary benefit is envisaged.	
4.	Brief Scope of Work	1) Installation of one new 33kV GIS shall be installed in vacant space available in existing 22/33kV Switchgear Room at Borivli. 2) Install & commission the additional 22 kV bus section in adjacent room & interconnection with bus section. Shift third transformer feed as incomer to the third bus section at Malad. 3) At Backbay Dismantle the wall in front of existing 33 kV GIS. Remove the existing toilet and level the floor. Extend existing bus section on both ends by 6 bays each.	
5.	Objective /Justification	Due to continuous load growth in these areas at the rate of 5 to 6% per annum, it has become necessary to provide additional 22 KV & 33 kV outlets to meet this increasing demand as requested by R Infra, TPC (D) at Borivli, Malad and by BEST, TPC (D) at Backbay The extended outlets also ensure proper capacity utilization and uninterrupted power supply to Discoms.	
6.	Funding Arrangement	It is proposed to fund the project from borrowing from external resources/financial institutions. Debt/Equity Ratio = 70%/30%	
7.	Time Frame/ Phasing of expenditure	The project is scheduled from April 2013. Duration of project from placing of the orders for material procurement & services up to completion of project is estimated to be around 18 Months.	
		Financial Year	Expenditure in Amount (` Lakhs.)
		2013-14	1798.67
		2014-15	487.03
		Total	2285.70



Appendix – A

“ Installation of additional bays at Borivali, Malad & Backbay R/s

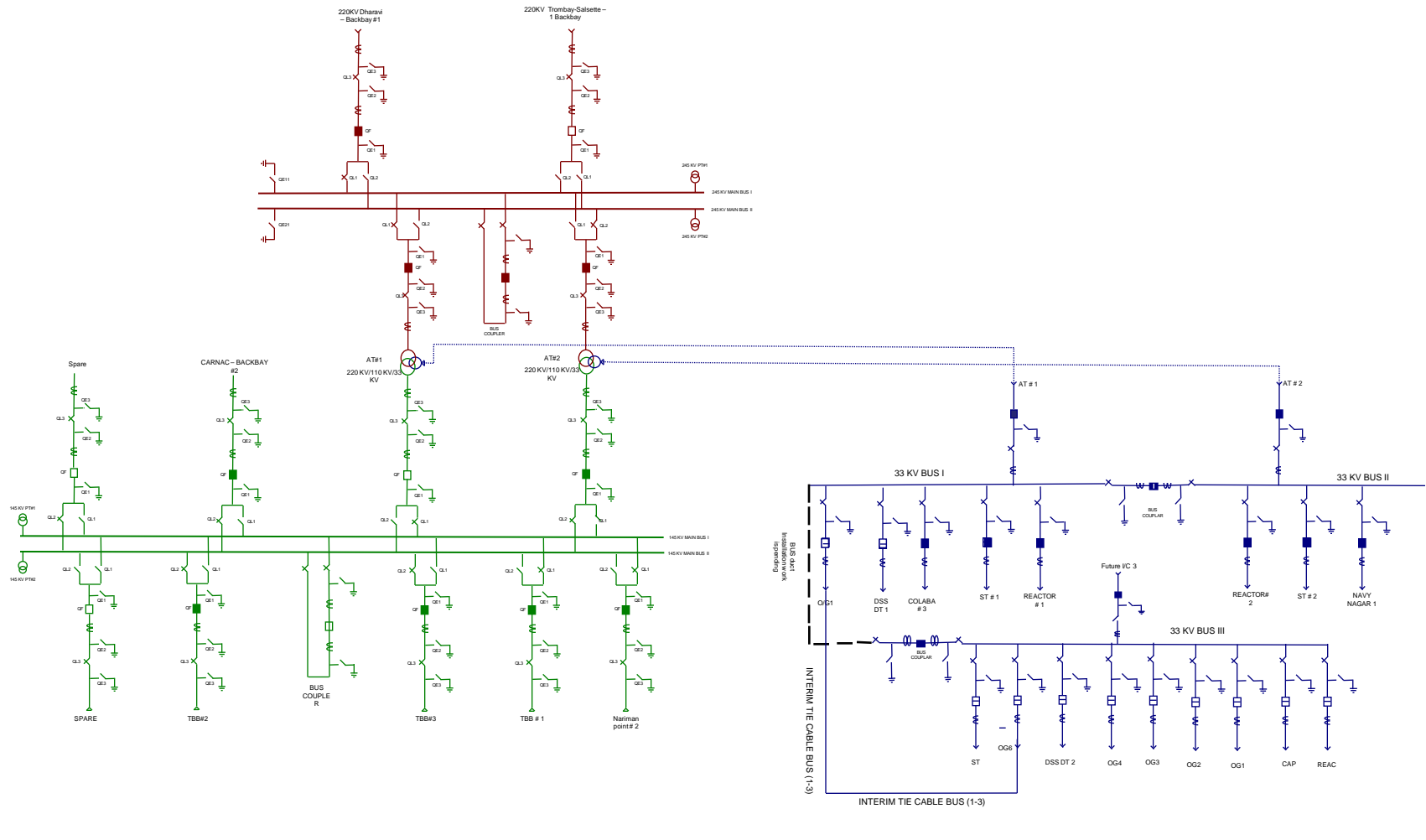
(All Price are in rs. Lakhs)

Sr No	Description	UoM	Per unit cost	Backbay		Borivali		Malad	
				Qty	Item Price	Qty	Item Price	Qty	Item Price
1	Civil works for 33kv Installation			1	20	1	20	1	20
2	Procurement of 33kV GIS complete with CTs, Dummy panels disconnections, BCU/BCPU equipment	Rs Lakhs/ bay	43.75	12	525	9	393.75	10	437.5
3	Additional PT's required for Protection and Meterting	Rs Lakhs/ bay	1.8	2	3.6	2	3.6	2	3.6
4	33kV, DURESKA, bus duct	LS		LS	100	LS	50	LS	100
5	Installation of 33kV cable terminations for bays	Rs Lakhs/ bay	0.25	12	3	9	2.25	10	2.5
6	Aux system (earthing, cable trays, lightning etc)	LS	10	LS	10	LS	10	LS	10
7	LV Power & Control cables	LS	20	LS	20	LS	20	LS	20
8	Services for SCADA integration Trombay, Carnac, Borivali, Malad	LS	20	LS	20	LS	20	LS	20
9	Installation, erection, testing & commissioning of all equipments	LS	20	LS	20	LS	20	LS	20
10	Consultancy services (@ 2%) [10=2%*Sum(1:9)]	@ 2%			14.432		10.792		12.672
11	Staff Cost (@ 5%) { 11=5% * sum(1:9) }	@ 5 %			36.08		26.98		31.68
12	Provision for contingencies @ 2% { 12=2%*sum(1:11) }	@2%			15.44		11.55		13.56
13	IDC						217.72		
14	Total Project Cost { 12 + 13 }				787.6		588.9		691.5

Total of All three Scheme Rs. 2285.7 Lakhs (Rs. 22.86 Crs.)



Single Line Diagram of Backbay Receiving Station



**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No.1, Wold Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

Tel. : 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in

E-mail : mercindia@mercindia.org.in

MERC/CAP/DPR/17/08 / 965

9th May 2008

Shri V.H. Wagale
Dy General Manager,
Tata Power Company Ltd.
Regulations Department,
Corporate Center A,
34 Sant Tukaram Road,
Carnac, Mumbai 400009

Subject- In-principle Clearance of the Scheme for establishing 145 kV Gas Insulated Switchgear at BKC

Ref- i)TPC letter No: REG/MERC-SUB/07/026/dated 14th March 2007
ii)TPC letter No. REG/MERC-SUB/08/16/dated 21st January 2008
iii) TPC letter No.REG/MERC/08/79/dated 16th April 2008.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/MERC-SUB/08/16/dated 21st January 2008

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
- 3.TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.
- 4.Assets created after execution of the scheme should be maintained separately in the Asset register.

Con2....

Regulations Dept
Inward No. 166
Date 13.5.08

9th May 2008

5.Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,

(P.B.Patil)
for Secretary, MERC

Encl: Annexure, Appendix

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,

Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,

Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure
Brief particular of the Scheme
For establishing 145 kV Gas Insulated Switchgear at BKC
As approved in-principal
(Based on Particulars furnished in DPR)

2.a) Name of the Scheme	Establishing 145 kV Gas Insulated Switchgear at BKC (Revised Scheme)										
b) Scheme code no.	TPC-T/FY08/03										
2.Estimated Cost	Rs.230.50 Cr. (Break up of cost as per Appendix)										
3.ROI / Cost benefit	To meeting the projected load growth of existing and the prospective customers, including REL in the BKC area. Further, the T&D losses will be reduced and improves the reliability. As per cost benefit analysis, an increase in transmission tariff to the distribution utilities on completion of the project to the extent of 0.89 Paise / unit is expected. This will drop down to about 0.63 Paise / unit progressively in about 10 years period.										
4.Brief Scope of Work	<ul style="list-style-type: none"> • Procurement of the land. • Procurement & installation of 6nos. 145 kV GIS bays & 33 kV GIS with accessories • Procurement and installation 110/33 kV, 2X 75 MVA transformers, with accessories • Procurement and installation of 110 kV Power Cables with accessories. • Civil works for 110 kV & 33 kV GIS Building 										
5.a) Objective	To enhance the existing station capacity by 130 MVA to meet the growing loads of Bandra – Kurla Complex area including the requirements of REL for that area.										
b) Justification	Without the proposed completion of the project it is Not possible to meet the growing load requirement of the existing and prospective consumers of BKC area fed by TPC directly as well REL-D outlet requirement for their consumers in that BKC area.										
6. Funding Arrangement	From either internal resources or through borrowings from reputed financial institutions.										
7.Time frame/ Phasing of expenditure	<p>Time period - 24 months</p> <table> <tr> <th>Year</th><th>Expenditure</th></tr> <tr> <td>2009-10</td><td>Rs. 150.81 Crores.</td></tr> <tr> <td>2010-11</td><td>Rs. 79.69 Crores</td></tr> <tr> <td colspan="2"><hr/></td></tr> <tr> <td>Total</td><td>Rs. 230.50 Crores.</td></tr> </table> <p>Year of capitalization- FY 2011</p>	Year	Expenditure	2009-10	Rs. 150.81 Crores.	2010-11	Rs. 79.69 Crores	<hr/>		Total	Rs. 230.50 Crores.
Year	Expenditure										
2009-10	Rs. 150.81 Crores.										
2010-11	Rs. 79.69 Crores										
<hr/>											
Total	Rs. 230.50 Crores.										



Appendix

Scheme for Establishing 145 kV Gas Insulated Switchgear at BKC

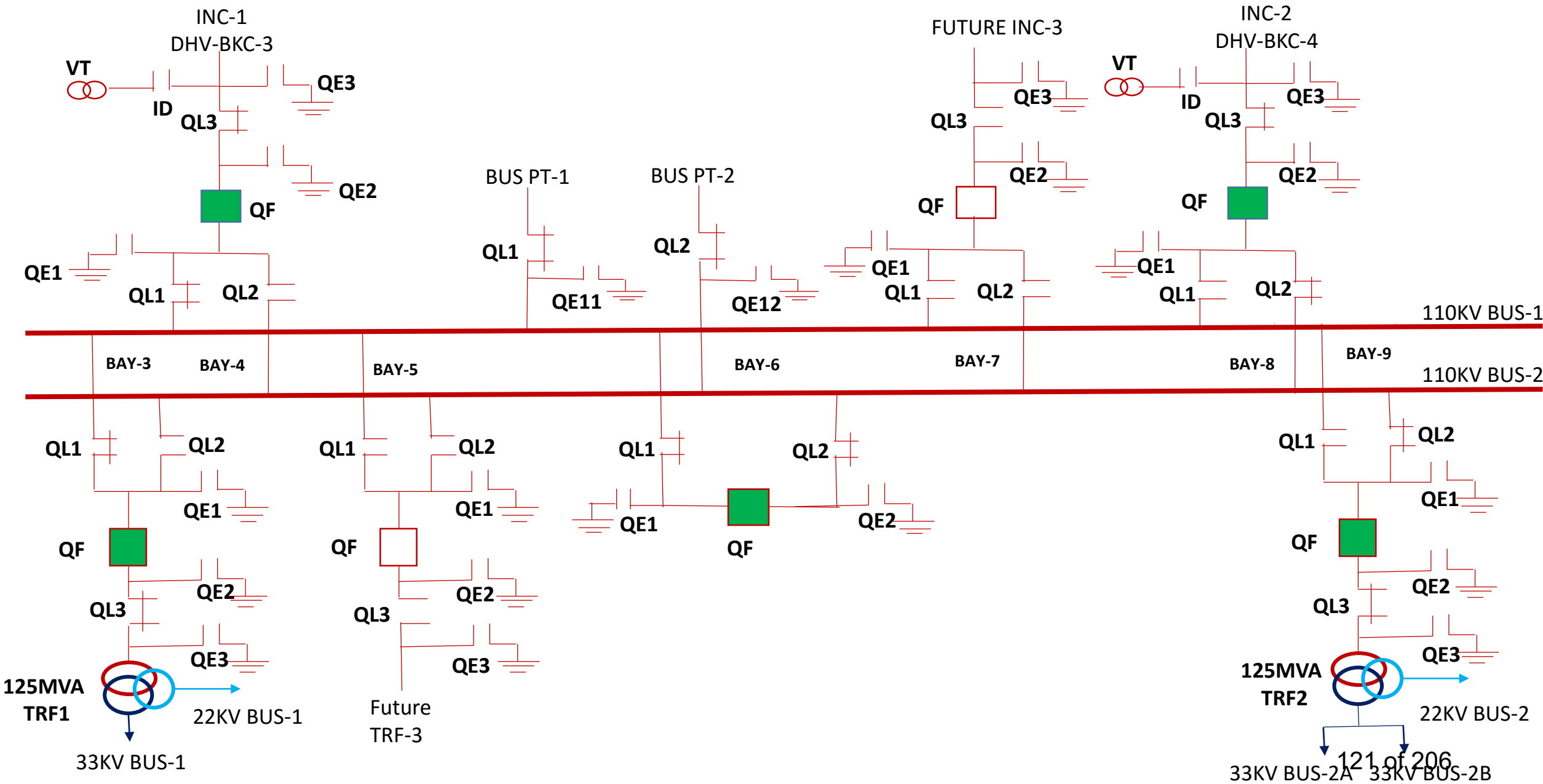
Break up of project Cost

Sr. No.	Item Description	Rs. Cr
1	Land	140.00
2	Other substation electrical equipment excluding GIS	23.60
3	145 kV GIS with accessories	18.00
4	33 kV GIS with accessories	12.16
5	110 kV Power cable with accessories	5.75
6	Civil and related works	4.60
7	Consultancy Services	1.00
8	Contingency	5.75
9	IDC	19.64
10	Total Project Cost (incl. IDC)	230.50

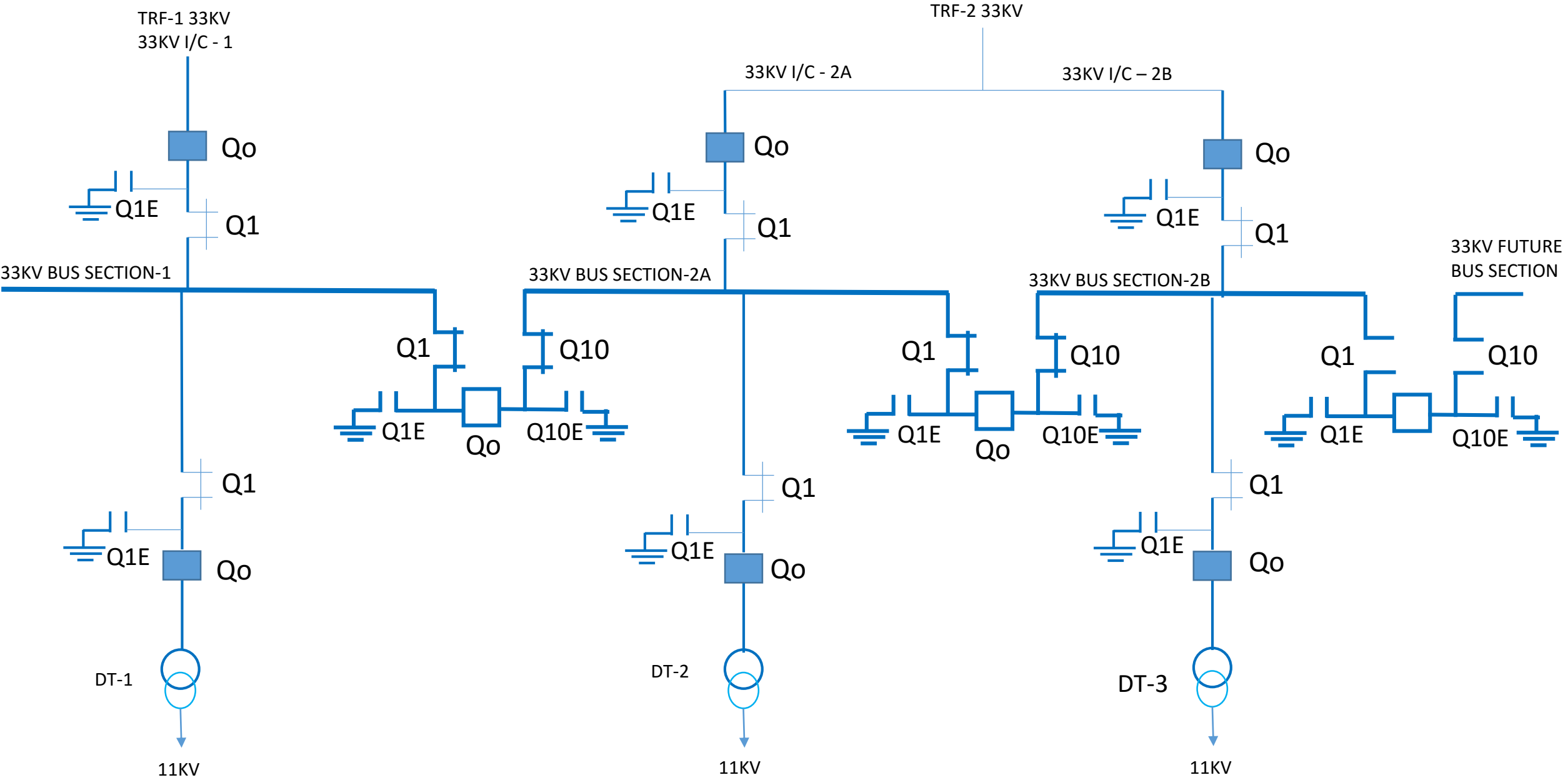
Total Rs.230.50 Cr.



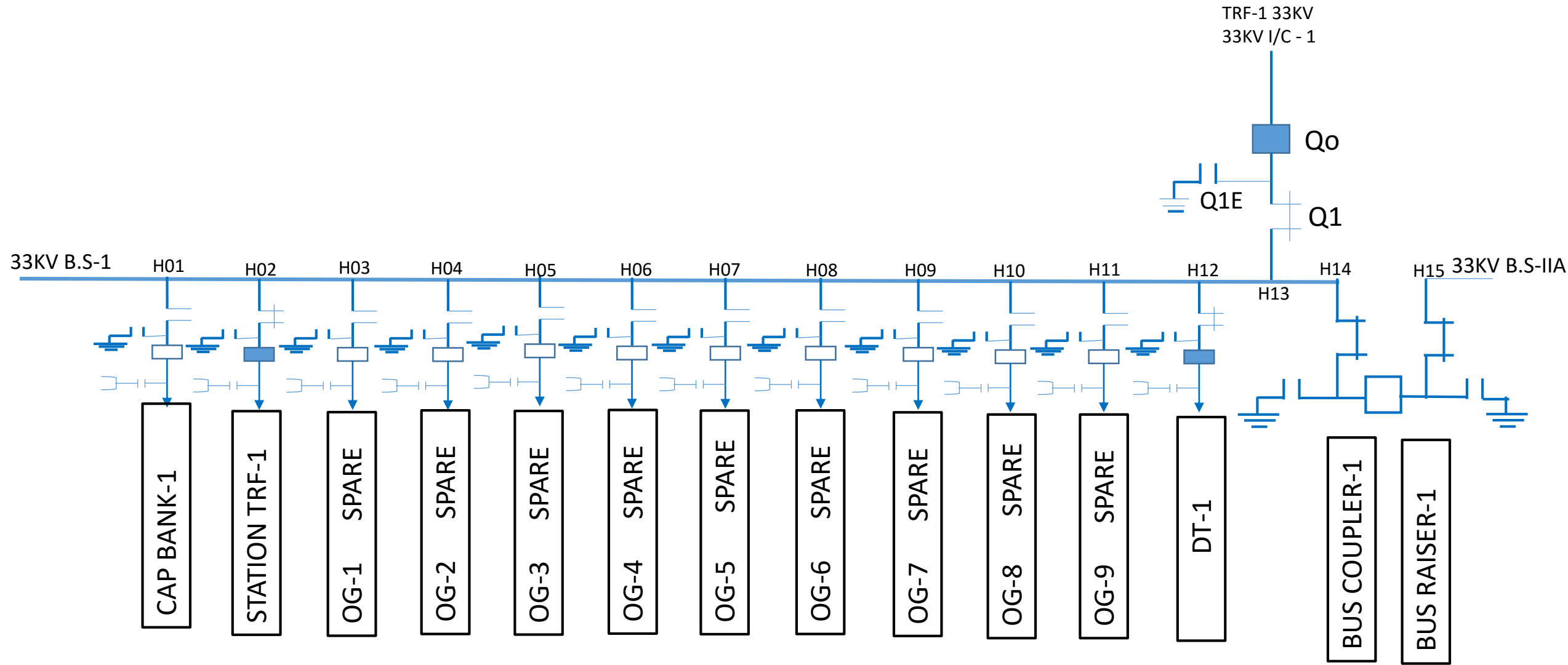
BKC 110KV GIS SLD



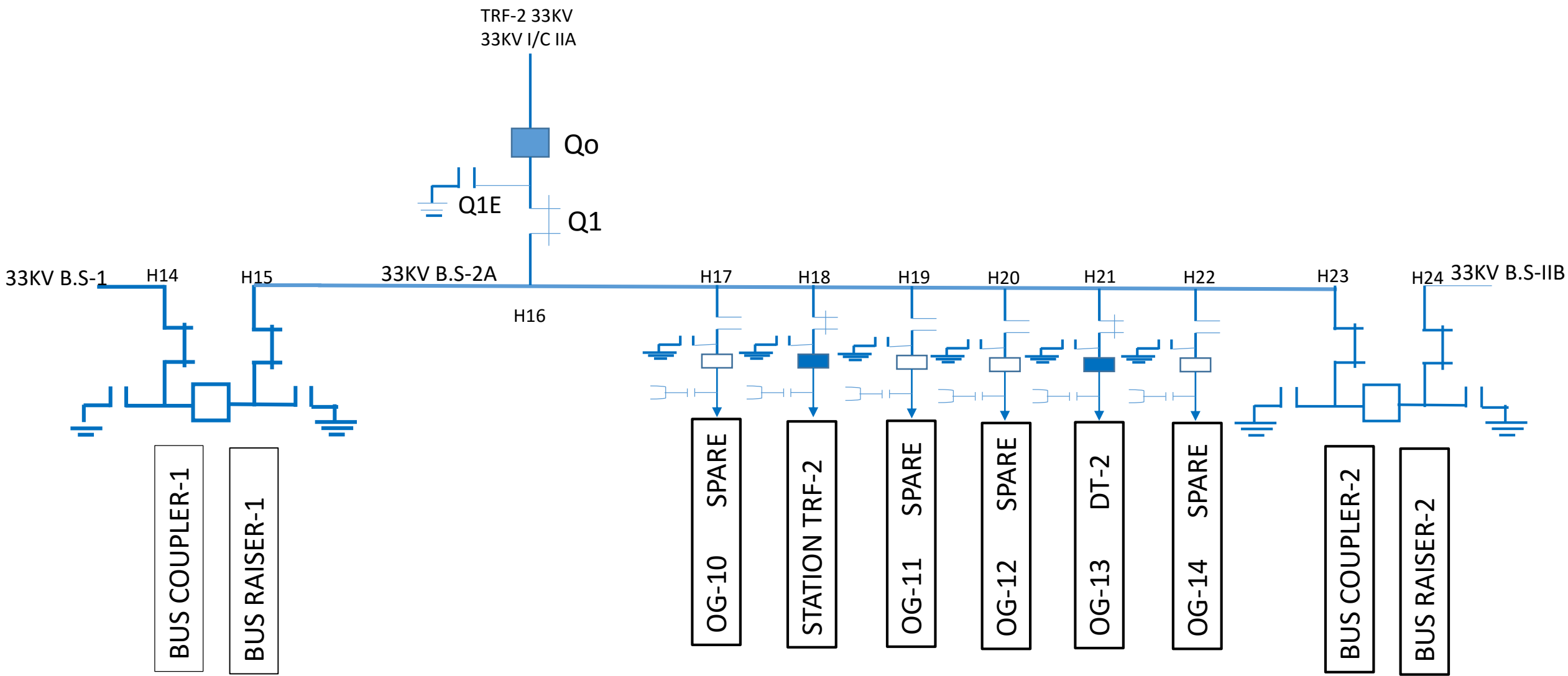
BKC S/S 33KV OVERVIEW



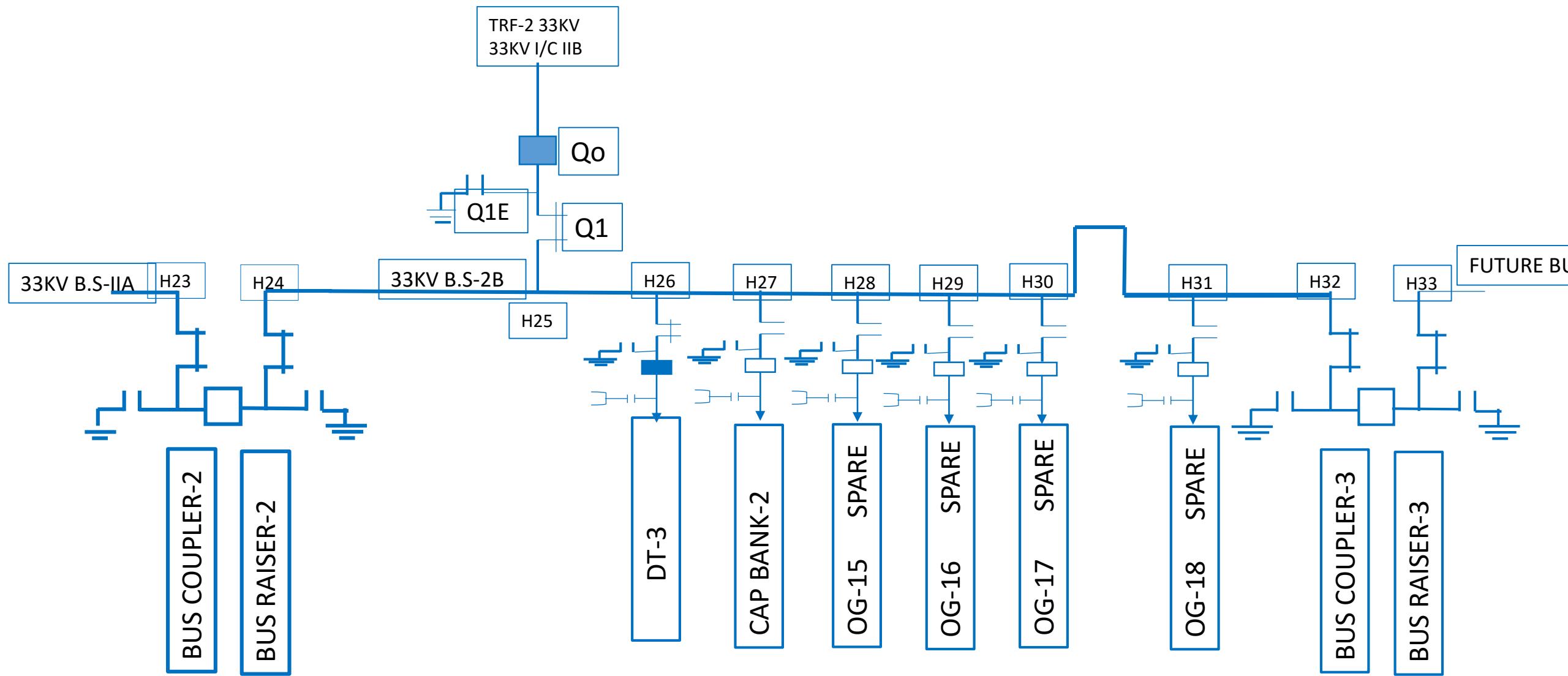
BKC 33KV BUS SECTION-1



BKC 33KV BUS SECTION-2A



BKC 33KV BUS SECTION-2B





MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED

Name of Office:	Office of the Chief Engineer (State Transmission Utility)
Office Address:	Prakashganga, 5 th floor / 'A' Wing, Plot C -19, E - block, BKC, Bandra (E), Mumbai:- 400051.
Contact No.:	(O) 022 - 2659 5176, (P) 022 – 2659 5175, Fax: 022 – 26591222
E-Mail Id:	cestu@mahatransco.in , cestu@maharashtrastu.com
Website:	www.mahatransco.in , www.maharashtrastu.com

MSETCL/CO/STU/302B/

14504-

Date: 8 NOV 2013

To,

Tata Power Company Ltd

Corporate Engineering CENTEC,
4th Floor, Technopolis Knowledge Park,
Mahakali Caves Road,
Andheri (East), Mumbai-400 093

Kind Atten: Mr. D B Rane

Sub: Approval of Revised scope of 110 KV GIS at Bandra Kurla Complex (BKC).

Ref: 1) Y.O.L. No. Engg/TRM/STU dated 27/09/2013
2) DPR Approval Letter by STU vide letter P/ST/302/Tata/4337 dated 24.04.07
3) Approval letter by MERC vide letter MERC/CAP/DPR/17/08/965 dated 09.05.2008
4) 5 years business plan for MMR region submitted to MERC by Standing Committee Dec 2011.

Dear Sir,

This has reference to your office letter regarding approval for revised cost of 110 KV GIS at Bandra Kurla Complex (BKC) cited u/r 1). Vide letter cited u/r 2), this office has approved your DPR for construction of 110 KV GIS substation at Bandra Kurla Complex (BKC), which includes land procurement, installation of 110 KV GIS and installation of 2 X 75 MVA 110/33 kV Power Transformers.

Also, the 5 Year STU plan for the year 2012-13 to 2016-17 and the MMR five years plan, includes the scope of 110 KV GIS substation at BKC.

However, existing customers at BKC DSS are fed from 22 kV and 11 kV through 2 X 20 MVA, 22/11 kV transformers. Hence, to take care of these old customers the proposed 2 X 75 MVA, 110/33 kV transformers needs to be replaced by 2 X 125 MVA, 110/33/22 kV and 1 X 125 MVA, 110/33/11 kV three winding power transformers.

The above modification is needed to feed the existing as well as new customers. Hence, the above scheme is technically validated and approved. This change will be included in the STU plan in the next revision.

Thanking you.

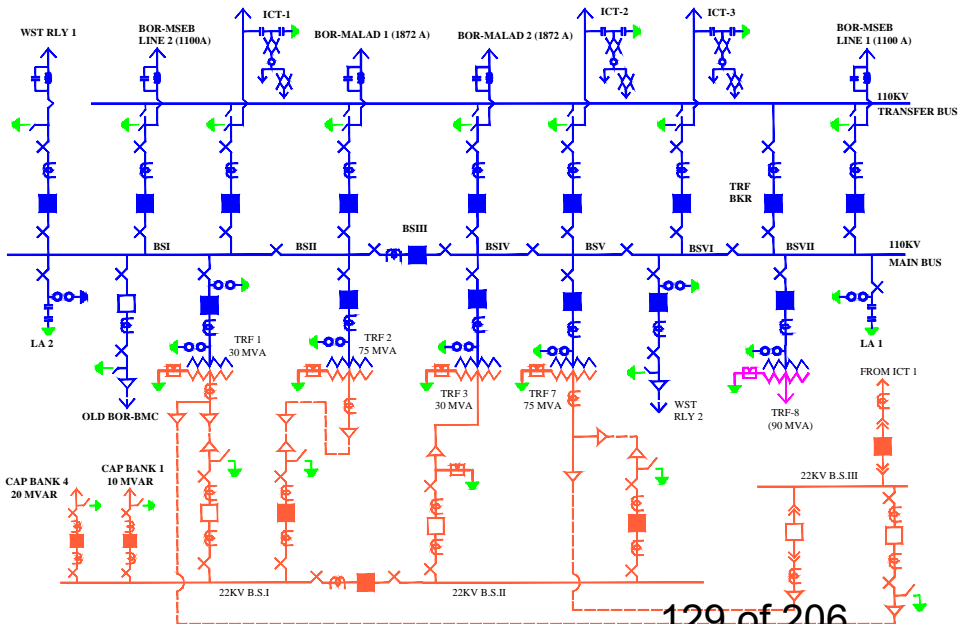
Yours faithfully,



Chief Engineer
State Transmission Utility

Copy s.w.r.t:

- 1) Director (Operation), MSETCL, Prakashganga, Mumbai
- 2) Executive Director (Operation) MSETCL, Prakashganga, Mumbai
- 3) The Secretary, MERC, Mumbai-400005



129 of 206

**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in

E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20122013/00082

April 12, 2012

✓ The Managing Director,
The Tata Power Company Ltd,
Bombay House,
24, Homi Mody Street,
Fort, Mumbai 400 001

Sub: In-principle clearance of the investment scheme of TPC-T for**a) Replacement of 22 kV Bus Sections I & III****b) Replacement of 33 kV Bus Sections I & II
at Carnac R/S.****Ref: REG/MERC/11/154 dated 30th June, 2011.**

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter under reference.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure A and the breakup of the project cost is given in Appendix-A.

2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.

3. Since, this is a replacement scheme; TPC-T should ensure that the equity component of the original cost of the replaced asset is knocked off from the equity base.

4. As per the Directive of the Commission vide Order dated 3rd September 2010 (Case no 96 of 2009) TPC-T should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset

replacement is passed on in the desired manner to the consumers, and take the same into consideration by the Commission in the next Order.


5. TPC-T should submit quarterly progress report indicating the name of the scheme, approved cost and the cost incurred till the last quarter. TPC-T should also submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

6. Asset created after execution of the scheme should be maintained separately in the Asset register.

7. Immediately after completion/commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,


(Kuldip N. Khawarey)
Secretary, MERC

Encl: Annexure-A & Appendix-A.
c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai GrahakPanchayat,
GrahakBhavan,
SantDnyaneshwarMarg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, UdyogBhawan, Civil Lines,
Nagpur 440 001.

Annexure-A

**Brief particulars of the scheme for
Replacement of 22 kV Bus Sections I, III & 33 kV Bus Sections I, II at Carnac R/S**

Particulars furnished in the Feasibility Report by TPC-T

1.	a) Name of the Scheme b) Scheme code No.	Replacement of 22 kV Bus Sections I, III & 33 kV Bus Sections I, II at Carnac R/S. TPC-T/FY12/02		
2.	Estimated Cost	Rs. 23.61 Cr. (As estimated by TPC-T) (Break up as per Appendix A)		
3.	ROI / Cost Benefit	No direct monetary benefit is envisaged as the scheme is proposed to replace the old outdated equipment of the existing Carnac receiving substation.		
4.	Brief Scope of Work	a) Replacement of 22 kV Bus Sections I & III with 33 kV GIS Bus Sections I & III (operated at 22 kV) b) Replacement of 33 kV AIS Bus Sections I to II with 33 kV GIS Bus Sections		
5.	Objective / Justification	1. As the existing switchgear being more than 17 Years old and does not have spares available, the replacement is required. 2. To supply reliable power to customers. 3. To cater the present and future load demand by strengthening the existing transmission network. 4. To reduce interruptions due to fault.		
6.	Funding Arrangement	Internal accruals or from reputed leading institutions.		
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in FY-14.		
	Year	Replacement of 22 kV Bus I, III	Replacement of 33 kV Bus I, II	Amount (Rs.Cr.)
	2011-12	7.40	-	7.40
	2012-13	1.46	12.52	13.98
	2013-14	-	2.23	2.23
	Total	8.86	14.75	23.61



Appendix-A

Replacement of 22 kV Bus Sections I & III at Carnac R/S
Break Up of Cost Estimate

Sr. No.	Description	Qty	Unit	Amt. in Rs. Lakhs	
				Unit Price	Item Price
1	Civil works for 33 kV GIS Installation	1	LS	28	28
2	Procurement of 33 kV GIS complete with CTs, Dummy Panels disconnections, BCU/ BCPU equipment (17 bays)	2	Set	272	544
3	33 kV, 1 C X 630 Sq. mm Cu-XLPE cables	2000	M	0.04	80
4	Installation of 33 kV cable terminations for bays	20	Set	0.3	6
5	Aux. System (earthing, cable trays, etc) - lump sum	1	LS	24	24
6	LV Power & control cables	1	LS	28	28
7	Services for SCADA integration Trombay, Dharavi, Carnac	1	LS	21	21
8	Installation, erection, testing & commissioning of all equipments	1	LS	36	36
9	Consultancy Services	1	LS	4	4
10	Staff cost @ 2% of material cost				36
	Sub-Total				807
11	Contingencies @ 2%				16
12	IDC				63
	Project Cost (A)				886
	Say Rs. Crores			8.86	



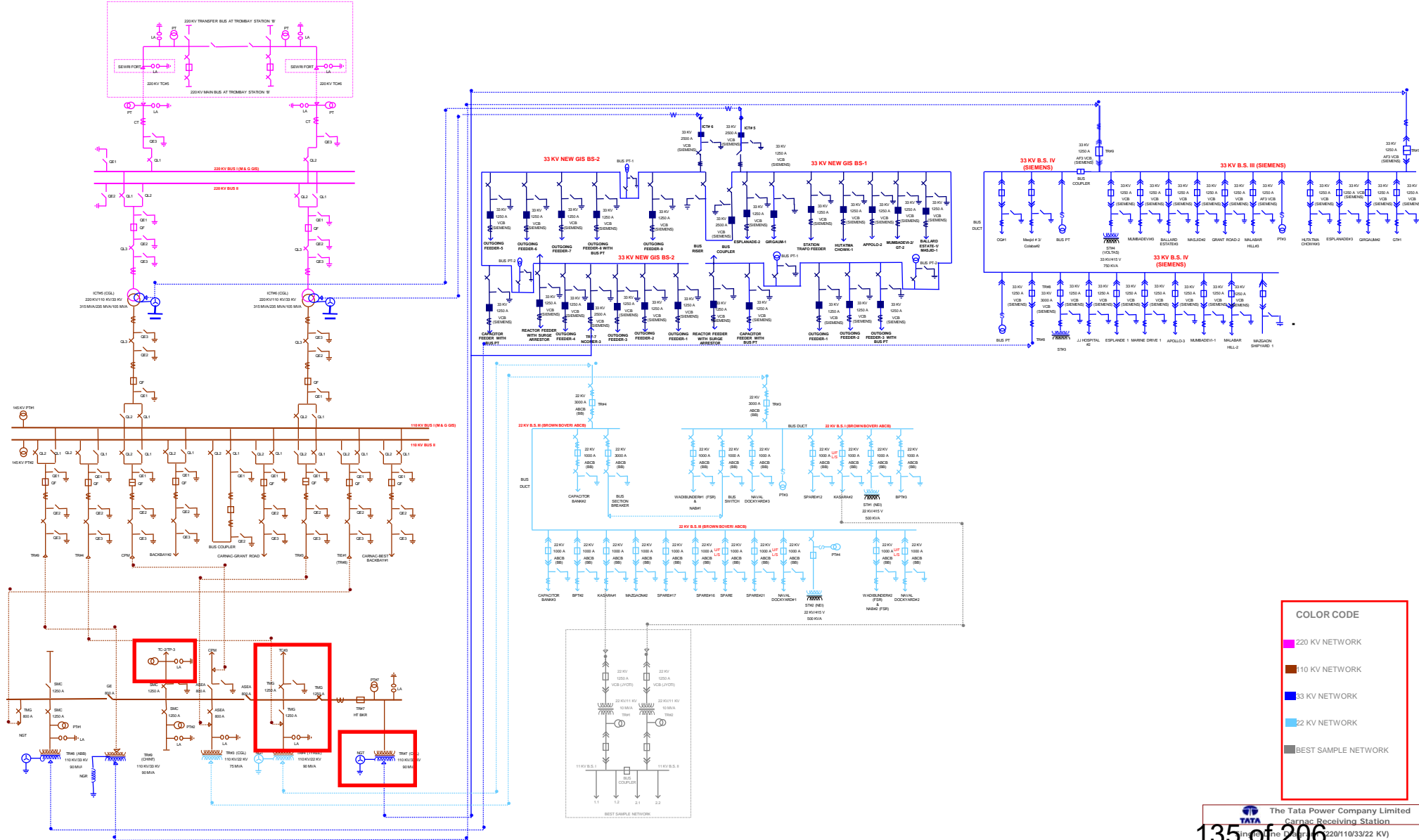
Replacement of 33 kV Bus Sections I & II at Carnac R/S
Break Up of Cost Estimate

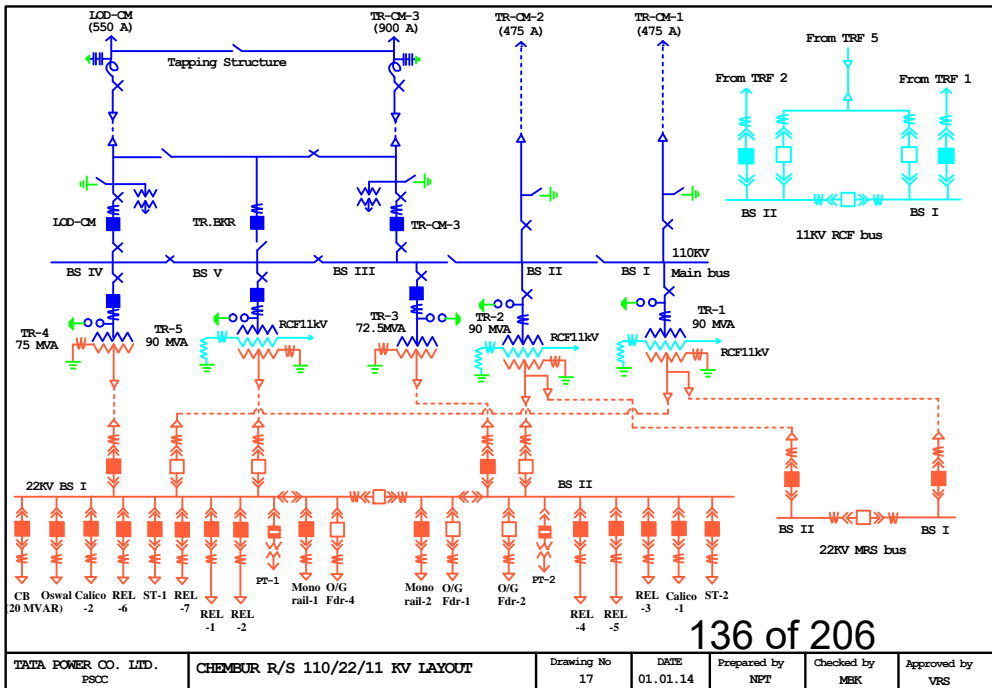
Amt. in Rs. Lakhs					
Sr. No.	Description	Qty	Unit	Unit Price	Item Price
1	Civil works for 33 kV GIS Installation	1	LS	40	40
2	Procurement of 33 kV GIS complete with CTs, Dummy Panels disconnections, BCU/ BCPU equipment (29 bays)	2	Set	464	928
3	33 kV, 1 C X 630 Sq. mm Cu- XLPE cables	4500	M	0.04	180
4	Installation of 33 kV cable terminations for bays	20	Set	0.25	5
5	Aux. System (earthing, cable trays, etc) - lump sum	1	LS	24	24
6	LV Power & control cables	1	LS	28	28
7	Services for SCADA integration Trombay, Dharavi, Carnac	1	LS	36	36
8	Installation, erection, testing & commissioning of all equipments	1	LS	36	36
9	Consultancy Services	1	LS	4	4
10	Staff cost		LS		60
	Sub-Total				1341
11	Contingencies @ 2%				27
12	IDC				107
	Project Cost (B)				1475
	Say Rs. Crores			14.75	

Sr. No.	Scheme Details	Project Cost (in Crs.)
1	Replacement of 22 kV Bus Sections I & III (A)	8.86
2	Replacement of 33 kV Bus Sections I & II (B)	14.75
	Total Project Cost (A+B)	23.61



CARNAC RECEIVING STATION SINGLE LINE DIAGRAM (220/110/33/22 KV)





**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No.1, Wold Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

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E-mail : mercindia@mercindia.org.in

MERC/CAP/DPR/17/08 / 965

9th May 2008

Shri V.H. Wagale
Dy General Manager,
Tata Power Company Ltd.
Regulations Department,
Corporate Center A,
34 Sant Tukaram Road,
Carnac, Mumbai 400009

Subject- In-principle Clearance of the Scheme for establishing 145 kV Gas Insulated Switchgear at BKC

Ref- i)TPC letter No: REG/MERC-SUB/07/026/dated 14th March 2007
ii)TPC letter No. REG/MERC-SUB/08/16/dated 21st January 2008
iii) TPC letter No.REG/MERC/08/79/dated 16th April 2008.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/MERC-SUB/08/16/dated 21st January 2008

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
- 3.TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.
- 4.Assets created after execution of the scheme should be maintained separately in the Asset register.

Con2....

Regulations Dept
Inward No. 166
Date 13.5.08

9th May 2008

5.Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,

(P.B.Patil)
for Secretary, MERC

Encl: Annexure, Appendix

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,

Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,

Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dynyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure
Brief particular of the Scheme
For establishing 145 kV Gas Insulated Switchgear at BKC
As approved in-principal
(Based on Particulars furnished in DPR)

2.a) Name of the Scheme	Establishing 145 kV Gas Insulated Switchgear at BKC (Revised Scheme)										
b) Scheme code no.	TPC-T/FY08/03										
2.Estimated Cost	Rs.230.50 Cr. (Break up of cost as per Appendix)										
3.ROI / Cost benefit	To meeting the projected load growth of existing and the prospective customers, including REL in the BKC area. Further, the T&D losses will be reduced and improves the reliability. As per cost benefit analysis, an increase in transmission tariff to the distribution utilities on completion of the project to the extent of 0.89 Paise / unit is expected. This will drop down to about 0.63 Paise / unit progressively in about 10 years period.										
4.Brief Scope of Work	<ul style="list-style-type: none"> • Procurement of the land. • Procurement & installation of 6nos. 145 kV GIS bays & 33 kV GIS with accessories • Procurement and installation 110/33 kV, 2X 75 MVA transformers, with accessories • Procurement and installation of 110 kV Power Cables with accessories. • Civil works for 110 kV & 33 kV GIS Building 										
5.a) Objective	To enhance the existing station capacity by 130 MVA to meet the growing loads of Bandra – Kurla Complex area including the requirements of REL for that area.										
b) Justification	Without the proposed completion of the project it is Not possible to meet the growing load requirement of the existing and prospective consumers of BKC area fed by TPC directly as well REL-D outlet requirement for their consumers in that BKC area.										
6. Funding Arrangement	From either internal resources or through borrowings from reputed financial institutions.										
7.Time frame/ Phasing of expenditure	<p>Time period - 24 months</p> <table> <tr> <th>Year</th><th>Expenditure</th></tr> <tr> <td>2009-10</td><td>Rs. 150.81 Crores.</td></tr> <tr> <td>2010-11</td><td>Rs. 79.69 Crores</td></tr> <tr> <td colspan="2"><hr/></td></tr> <tr> <td>Total</td><td>Rs. 230.50 Crores.</td></tr> </table> <p>Year of capitalization- FY 2011</p>	Year	Expenditure	2009-10	Rs. 150.81 Crores.	2010-11	Rs. 79.69 Crores	<hr/>		Total	Rs. 230.50 Crores.
Year	Expenditure										
2009-10	Rs. 150.81 Crores.										
2010-11	Rs. 79.69 Crores										
<hr/>											
Total	Rs. 230.50 Crores.										



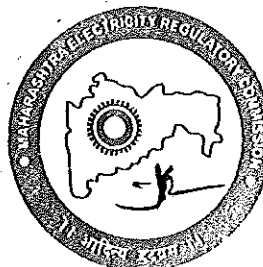
Appendix

Scheme for Establishing 145 kV Gas Insulated Switchgear at BKC

Break up of project Cost

Sr. No.	Item Description	Rs. Cr
1	Land	140.00
2	Other substation electrical equipment excluding GIS	23.60
3	145 kV GIS with accessories	18.00
4	33 kV GIS with accessories	12.16
5	110 kV Power cable with accessories	5.75
6	Civil and related works	4.60
7	Consultancy Services	1.00
8	Contingency	5.75
9	IDC	19.64
10	Total Project Cost (incl. IDC)	230.50

Total Rs.230.50 Cr.





महाराष्ट्र विद्युत नियामक आयोग

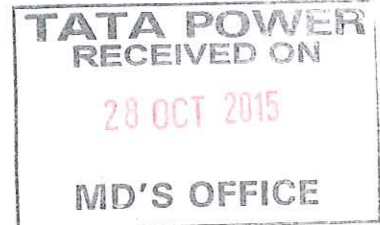
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2015-2016/00813

Date - 26 October, 2015

To,
 ✓ Shri Anil Sardana
 Managing Director,
 ✓ Tata Power Company Ltd,
 Bombay House,
 24, Homi Mody Street,
 Fort, Mumbai 400 001

Dr. Ashok Gelli
cc: Dr. Ravi Kulkarni
Dr. Bhaskar Sankar
Anil
18/10



Subject: - Revised in-principal approval of Capital expenditure scheme submitted by TPC-T for 145 kV receiving station at HDIL Kurla. Total cost of the scheme is Rs. 188.53 Crore.

Ref: -

- Earlier - In-principle approval of the Commission dated 26 November, 2010.
- TPC-T submitted revised DPR for in-principle approval on 5 March, 2015.
- Data gaps communicated to TPC-T dated 20 April, 2015.
- Reply of data gaps submitted by TPC dated 16 June, 2015 & 23 July, 2015.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter No. CREG/MUM/MERC/47 dated 05 March, 2015.

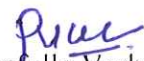
- The revised Capital expenditure scheme for 145 kV receiving station at HDIL Kurla, under TPC-T with scope of work amounting to Rs. 188.53 has been evaluated with reference to the guidelines circulated by the Commission on 9 Feb, 2005. I am directed to convey in-principle clearance of the scheme. The particulars of the revised scheme as approved in principle are outlined in the Annexure "A" and the breakup of the project cost is given in Appendix "A".
- Please note that this In-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with its ARR Petition or during the tariff determination process at the appropriate time.
- TPC-T should submit quarterly progress report indicating the name of the scheme, approved cost and the cost incurred till the last quarter. TPC-T should also submit half yearly report giving the status of implementation of the scheme in terms of expenditure

incurred and item wise physical progress achieved during the implementation of the scheme.

- 4) As per the Directives of the Commission vide Order dated 3rd September 2010 (Case No. 97 of 2009 of TPC-T, Page no. 39, Para 3.5) TPC-T as well as all other Transmission Utilities in Maharashtra State should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.
- 5) Details of assets created after execution of the scheme should be maintained separately in the Asset Register.
- 6) Immediately after completion/commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the in-principle clearance and the actuals.
- 7) The Commission vide its Order dated 14 August, 2014 in Case No. 112 of 2014, granted a Transmission License to TPC-T under Alternative 2 (i.e. Line Specific), in accordance with the MERC (Transmission License Conditions) Regulations, 2004 for a period of 25 years from 16 August, 2014. The proposed bays at switching stations are not part of the Licence issued by the Commission. Considering above facts and circumstances, in-principle approval is granted to the DPR subject to the amendment of the Transmission Licence.



Yours Sincerely,


(Prafulla Varhade)
Director (EE), MERC

Encl: Annexure-A & Appendix A

CC:-Consumer Representatives:

Prayas (Energy Group)
Amrita Clinic, Athvale Corner,
Lakdipool-karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.
E-mail: peg@prayaspune.org

The General Secretary,
Thane Belapur Industries Association,
Rabale Village, Post Ghansoli,
Plot P-14, MIDC,
Navi Mumbai 400 701
E-mail: tbia@vsnl.com

Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dynaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West), Mumbai 400 056
E-mail: mgpanchayat@yahoo.com

Maharashtra Chamber of Commerce,
Industry & Agriculture,
Oricon House, 6th floor,
12 K. Dubash Marg, Fort, Mumbai - 400 001
(Nashik Branch)
E-mail : maccia.nsk@gmail.com

Vidarbha Industries Association,
1st Floor, Udyog Bhavan,
Civil Line, Nagpur 440 001.
E-mail: rkengg@gmail.com

The Chief Engineer (STU),
Maharashtra State Electricity
Transmission Co. Ltd.,
Prakashganga, Plot No. C-19,
Bandra – Kurla Complex,
Bandra (East),
Mumbai 400 051.

ANNEXURE – ‘A’

Summary Appraisal of TPC-T's Scheme for

**“Revised Capital expenditure scheme for 145 kV receiving station at
HDIL Kurla.”**

A) Particulars furnished in the Feasibility Report by TPC-T

1.	a) Name of the Scheme	“Revised Capital expenditure scheme for 110 kV receiving station at HDIL Kurla.”	
	b) Scheme code No.	TPC-T/FY15-16/ No.04	
2.	Estimated Cost	Rs. 188.53 Crore to be borne by TPC. (Break up as per Appendix A)	
3.	ROI / Cost Benefit	a) The commissioning of 145 kV GIS at HDIL, Kurla would cater to the increasing load in the vicinity. b) Indirect savings accrued by going for GIS with minimum acquisition of land, considering that land cost at Mumbai is at a premium. c) To improve the voltage profile and reduce the transmission system losses.	
4.	Brief Scope of Work	1. Installation of 110 kV GIS bays with CTs, PTs, Disconnectors and LCPs - 8 Nos. 2. 33 kV GIS bays complete with CTs, PTs and BCU/BCPU – 31 Nos. 3. 33 kV Capacitor bank – 20 MVAR 4. Installation of 110/33kV 125 MVA Transformers - 2 Nos 5. SCADA with accessories, Protection panel, metering panel, communication panel. 6. 110 kV 1600/630 Sqmm 1C-XLPE cable with accessories – 24 km. 7. Civil work- GIS building, foundation, cable trenches, 110 kV line tower, gantry structure etc.	
5.	Objective / Justification	1. To save the space by installation of 145 kV GIS. 2. To install new GIS bays which will meet the needs of future load requirement. 3. To improve reliability of system. 4. To reduce the maintenance cost.	
6.	Funding Arrangement	It is proposed to fund the project from internal sources or by borrowing from reputed lending institutions. Debt/Equity Ratio = 70/30	
7.	Time Frame / Phasing of Expenditure.(TPC-T part)	Work is scheduled to be completed in March 2018	
		Year	Amount (Rs. Cr.)
		2015-16	47.15
		2016-17	52.20
		2017-18	89.18
		Total	188.53



B) Observations / Comments on FR

1.	Prudence of Investment / Technical Justification	<p>a) Installation of 145 kV GIS at HDIL, Kurla will save the space and will cater the needs of future requirement.</p> <p>b) The reliability of system will be improved.</p> <p>c) Installation of 145 kV GIS will reduce the maintenance cost of the system.</p> <p>d) It will facilitate power supply Mumbai suburban's without any interruption.</p>
2.	Reasonability of Cost Estimate	The rates of various items considered in the cost estimate are based on the latest Schedule of Rates of 2014-15 of TPC-T and prevailing orders issued by the TPC-T and seems to be reasonable.
3.	Comments on Cost Benefit Analysis	<p>a) The commissioning of 145 kV GIS at HDIL, Kurla would lead to saving of space & maintenance cost.</p> <p>b) Improved Reliability.</p> <p>c) Improved availability and redundancy.</p> <p>d) To meet the increasing demand of the region.</p>
4.	Discrepancy / Shortcomings Observed	Complied by TPC-T.
5.	Remarks / Specific Comments, if any	a) The scheme is technically justified.



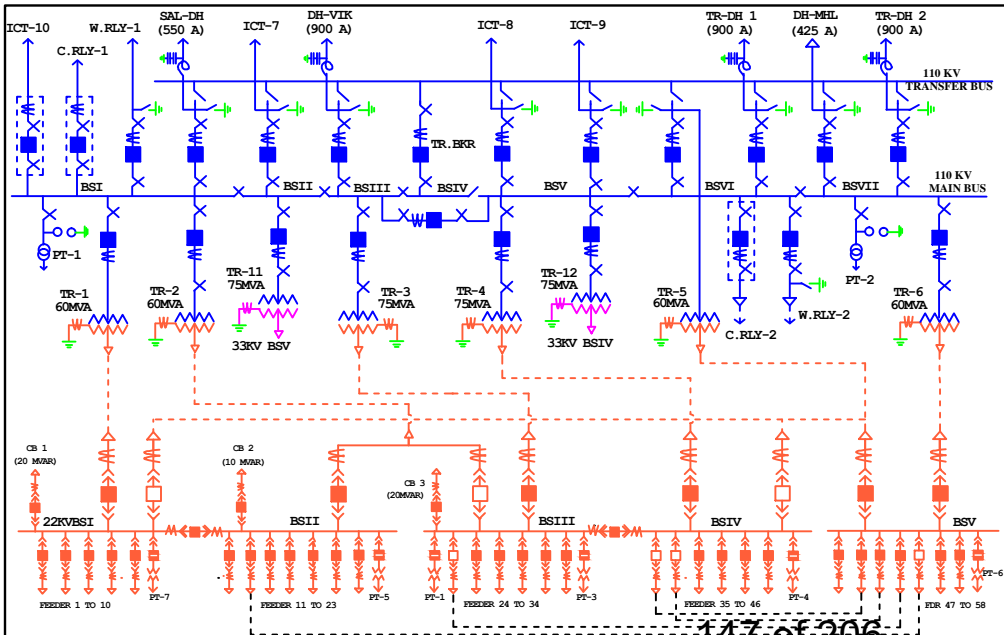
Appendix – ‘A’

“Revised Capital expenditure scheme for 110 kV receiving station at HDIL Kurla.”

Detailed Cost Estimate :-

Sr No.	Particulars	Total in Lakh
1	Installation of 110 kV GIS bays with CTs, PTs, Disconnectors and LCPs - 8 Nos.	2200
2	33 kV GIS bays complete with CTs, PTs and BCU/BCPU – 31 Nos.	1500
3	33 kV Capacitor bank – 20 MVAR	60.00
4	Installation of 110/33kV 125 MVA Transformers - 2 Nos	1600
5	Civil work for GIS Building, transformer including trenches and related works	2400
6	SCADA with accessories, Protection panel, metering panel, communication panel.	545
7	33 kV Power cables and control cables	35
8	Electrical, Mechanical Aux. Equipment, misc electrical equipments.	1000
9	110kV, 1600/630 sqmm, 1 C, XLPE Cables with Accessories (24 Km)	5000
10	110kV Line tower & gantry structure including accessories and installation	250
11	Land	1000
12	Erection, Commissioning, and Testing Services	700
13	Consultancy Services (Design Engineering & Drawings.)	200
14	Staff Cost @ 5%	824.50
15	Contingency @ 5 %	865.73
16	IDC -Interest During Construction	673.03
	Total Project Cost	18853.26
	Say Rs. 188.53 Crore	







MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
E-mail : mercindia@mercindia.org.in

MERC

MERC/CAPEX/20112012/02926



March 16, 2012

Maheshwar Wagle
✓ The Managing Director
The Tata Power Company Ltd,
Bombay House,
24, Homi Mody Street,
Fort, Mumbai 400 001

Sub: In- Principle clearance of the investment scheme – Replacement of 33 kV Bus Sections I-V at Dharavi R/S.

Ref: REG/MERC/11/249 dated 12th September, 2011.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter under reference.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure A and the breakup of the project cost is given in Appendix-A.

2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.

3. Since, this is a replacement scheme, TPC-T should ensure that the equity component of the original cost of the replaced asset is knocked off from the equity base.

4. As per the Directive of the Commission vide Order dated 3rd September 2010 (Case no 96 of 2009) TPC-T should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and take the same into consideration by the Commission in the next Order.

5. TPC-T should submit quarterly progress report indicating the name of the scheme, approved cost and the cost incurred till the last quarter. TPC-T should also submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

6. Asset created after execution of the scheme should be maintained separately in the Asset register.

7. Immediately after completion/commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,

(Kuldip W. Khawarey)
Secretary, MERC

Encl: Annexure-A & Appendix-A.
c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Mumbai Grahak Panchayat,
GrahakBhavan,
SantDnyaneshwarMarg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400 056.

The President,
Vidarbha Industries Association,
1st floor, UdyogBhawan, Civil Lines,
Nagpur 440 001.

Annexure-A
Brief particulars of the scheme for
Replacement of 33 kV Bus Sections at Dharavi R/S

Particulars furnished in the feasibility Report by TPC-T

1.	a) Name of the Scheme	Replacement of 33 kV Bus Sections at Dharavi R/S.	
	b) Scheme code No.	TPC-T/FY12/04	
2.	Estimated Cost	Rs. 26.10 Cr. (As estimated by TPC-T) (Break up as per Appendix A)	
3.	ROI / Cost Benefit	No direct monetary benefit is envisaged as the scheme is proposed to replace the old outdated equipment of the existing Dharavi receiving substation.	
4.	Brief Scope of Work	Installation of 33 kV GIS comprises of 7 Nos. outgoing feeders, one breaker each for Capacitor bank, Reactor, Bus coupler & Incomers per Bus.	
5.	Objective / Justification	1. As the existing switchgear being more than 17 Years old and does not have spares available, the replacement is required. 2. To supply reliable power to customers. 3. To cater the present and future load demand by strengthening the existing transmission network. 4. To reduce interruptions due to fault.	
6.	Funding Arrangement	30 % equity and 70% Loan from external sources like reputed leading institutions.	
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in FY-15.	
		Year	Amount (Rs.Cr.)
		2012-13	10.61
		2013-14	10.48
		2014-15	5.01
		Total	26.10



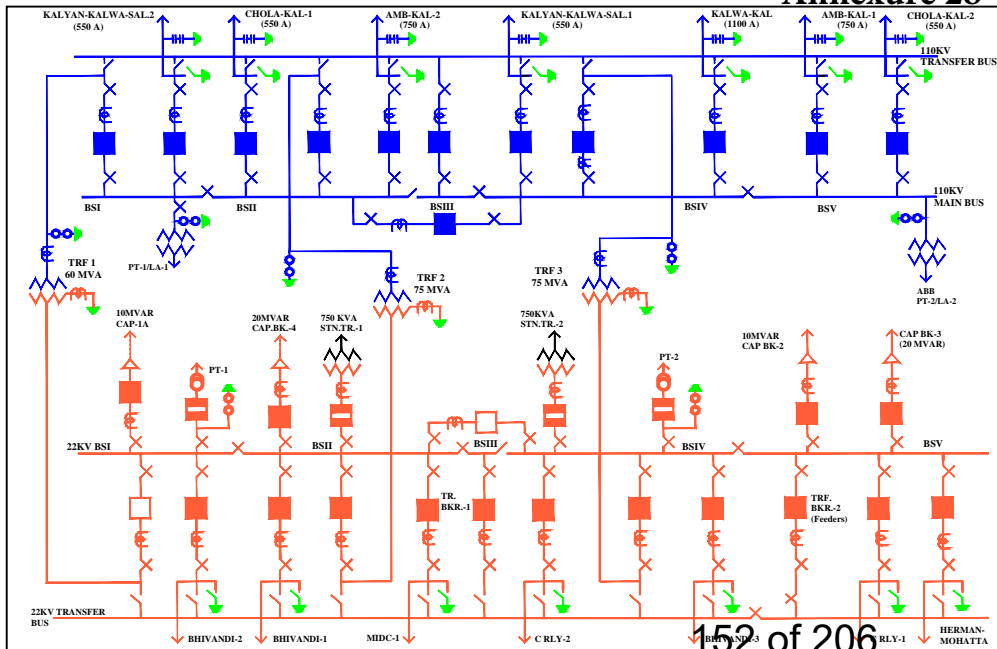
Appendix-A

Replacement of 33 kV Bus Sections at Dharavi R/S
Break Up of Cost Estimate

Sr. No.	Description	Qty	Unit	Amt. in Rs. Lakhs	
				Unit Price	Item Price
1	Civil works for 33 kV GIS Installation	5	LS	20	100
2	Procurement of 33 kV GIS complete with CTs, Dummy Panels disconnections, BCU/ BCPU equipment (10 bays)	54	Set	30	1620
3	33 kV, 1 C X 630 Sq. mm Cu- XLPE cables	1300	M	0.04157	54.04
4	Installation of 33 kV cable terminations for bays	20	Set	0.4	8
5	Aux. System (earthing, cable trays, lightning, etc) - lump sum	1	LS	50	50
6	LV Power & control cables	1	LS	100	100
7	Services for SCADA integration Trombay, Dharavi, Borivali	54	LS	1.25	67.50
8	Installation, erection, testing & commissioning of all equipments	1	LS	100	100
9	Consultancy Services @ 1%	1	LS	20.85	21
10	Staff cost @ 15% of material cost				300
	Sub-Total				2420.54
11	Contingencies @ 2%				48.41
12	IDC				149
	Total Project Cost				2610
	Say Rs. Crores				26.10



Annexure 28



152 of 206



MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
Tel.: 022-2216 3964/2216 3965/2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
E-mail : mercindia@mercindia.org.in

MERC

MERC/TECH-VII/CAPEX/20122013/01644

Date: 22 October, 2012

✓ The Managing Director,
Tata Power Company Ltd,
Bombay House, 24, Homi Modi Street,
Fort, Mumbai-400001.

*Vidyaadhar
Wagle*

Subject- In-principle clearance of Investment scheme submitted by TPC-T for "Stringing of second 110 kV line in the existing 110 kV Transmission line between Khopoli and Bhihpuri generating stations".

Ref- TPC letter No.: REG/MERC/12/214 Dated 11 July, 2012.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter no. REG/MERC/12/214 Dated 11 July, 2012.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey In-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A.
2. Please note that this In-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC-T should submit quarterly progress report by 20th day of the first month of next quarter giving the status of implementation of the schemes in terms of expenditure incurred and item wise physical progress achieved during the implementation of the schemes.
4. As per the Directives of the Commission vide Order dated 3rd September 2010 (Case No 97 of 2009 of TPC-T, Page no. 39, Para 3.5) TPC-T as well as all other Transmission Utilities in Maharashtra State should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.



5. *Since, this is a replacement scheme, TPC-T to ensure that the equity component of the original cost of the replaced asset is knocked off from the equity base.*
6. Asset created after execution of the schemes should be maintained separately in the Asset register.
7. Immediately after completion / commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the In-principle clearance and the actual.



Sincerely,

(Kuldip N. Khawarey)
Secretary, MERC

Encl: Annexure, Appendix A
Cc to:

The General Secretary,
Thane Belapur Industries Association,
Plot No. P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai - 400 701.

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune - 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (W), Mumbai - 400 056.

The President,
Vidarbha Industries Association,
1st Floor, Udyog Bhawan,
Civil Lines,
Nagpur - 440 001.

Appendix-A
“Stringing of second 110 kV line in the existing 110kV
Transmission line between Khopoli and Bhivpuri Generating Stations”
Detailed Cost Estimate

Sr No.	Description	Unit	Quantity	Rate Rs in Lakhs	Total Rs in Lakhs
Bay at Khopoli					
1.	Material(for Bus PT &LA shifting)				
1.	110 kV Lightning Arrestor	No.	3	0.5	1.5
2.	110 kV Potential Transformer	No.	3	3.6	10.8
3.	Structures for existing LA-1 & PT-1		6	0.6	3.6
4.	110 kV Isolator without earth switch-1250 Amp.	No.	1	3	3.0
5.	Structure for 110 kV Isolator 1250 A	No.	1	1.5	1.5
Sub Total-A					20.4
Material for (CRSE line shifting)					
1.	110 kV cable sealing End(630 sq mm XLPE) cable	No.	6	5.5	33.0
2.	110 kV single phase XPLE cable between CRSE#2 isolator to PASS Bay(630 sq mm)	Mtrs	450	0.1	45.0
3.	145 kV Pass	No.	1	132.0	132.0
4.	96 kV LA	No.	3	0.5	1.5
5.	110 kV Potential Transformer		1	3.6	3.6
6.	Structures for Cable sealing end, LA & PT		10	0.6	6.0
7.	Protection Panel	No.	1	10.0	10.0
Sub Total-B					231.1
Material(for New Khop-Bhiv line Bay)					
1.	110 kV cable sealing End(1600sq mm)	No.	6	5.5	33.0
2.	110 kV single phase XPLE(1600 sq mm)cable between T#108 to CRSE#2Bay	Mtrs	750	0.17	127.5
3.	96 kV LA	No.	3	0.5	1.5
4.	110 kV Potential Transformer	No.	1	3.6	3.6
5.	Structures for Cable sealing end, LA & PT	No.	10	0.6	6.0
6.	RADSS Bus Fault Relay	No.	1	15.0	15.0
7.	110 kV Isolator without earth switch-1250 Amp.	No.	2	3	6.0
8.	110 kV Isolator with earth switch-1250 Amp.	No.	1	3.9	3.9



Sr. No.	Description	Unit	Quantity	Unit Rate	Total Cost
9.	Bus support,CT,PT,Isolator & Breaker clamps	Lot	1	5.0	5.0
10.	11/4 inch IPS heavy duty copper bus for Bays	Lot	1	5.0	5.0
11.	Control Cables	Lot	1	5.0	5.0
Sub Total-C					211.5
Sub Total A+B+C(Material Cost)					463.0
Services at Khopoli					
1.	Foundation for PASS,PT,Cable termination & LA structures	Lot	1	10.0	10.0
2.	Installation,Testing,Commissioning services for PASS,PT,Cable termination & LA	Lot	1	25.0	25.0
3.	Installation,Testing,Commissioning services for cable laying & protection panels	Lot	1	5.0	5.0
4	Installation,Testing,Commissioning services for Bus fault relay& commissioning of entire station	Lot	1	10.0	10.0
5.	Service for SCADA integration at Khopoli & Load control centre,Trombay	Lot	1	5.0	5.0
Total of Services(At Khopoli)					55.0
Total of Material & Service for Bay at Khopoli					518.0



Sr No.	Description	Unit	Quantity	Rate Rs in Lakhs	Total Rs in Lakhs
Bay at Bhivpuri					
1.	110 kV Isolator between BS IV-V & BS V-VI for Bus section -2500 Amps	No.	2	3.0	6.0
2.	110 kV Bus fault relay	No.	1	15.0	15.0
3.	Protection Panel	No.	1	10.0	10.0
4.	110 kV Isolator without earth switch-1250 Amp.	No.	2	3.0	6.0
5.	110 kV Isolator with earth switch-1250 Amp.	No.	1	3.9	3.9
6.	110 kV breaker-3150 Amp.	No.	1	10.0	10.0
7.	110 kV CT-200-1200-800/5A	No.	3	2.5	7.5
8.	110 kV line PT	No.	1	3.6	3.6
9.	GI structure for CT,PT	No.	4	0.6	2.4
10.	GI structure for Isolators	No.	5	1.5	7.5
11.	2.5 inch IPS heavy duty copper Bus for main Bus extension	Lot	1	10.0	10.0
12.	2 inch IPS heavy duty copper Bus for transfer Bus extension	Lot	1	8.0	8.0
13.	1 1/4 inch IPS heavy duty copper Bus for Bays	Lot	1	5.0	5.0
14.	Control cables	Lot	1	5.0	5.0
15.	Bus support structures	No.	12	0.2	2.4
16.	Bus support insulators	No.	12	0.2	2.4
17.	Bus support,CT,PT,isolator & breaker clamps	Lot	1	10.0	10.0
18.	A2 structure for line	No.	1	10.0	10.0
Total of Material at Bhivpuri					124.7
Service at Bhivpuri					
1.	Foundation for Breaker, CT, PT, Isolator, Bus support structures	Lot	1	10.0	10.0
2.	Installation, Testing, Commissioning services for Breaker, CT, PT, Isolator, Bus support insulators along with structures for all equipments	Lot	1	15.0	15.0
3.	Installation,Testing,Commissioning services for cable laying & protection panels	Lot	1	5.0	5.0
4.	Installation,Testing,Commissioning services for Bus fault relay& commissioning of entire station	Lot	1	10.0	10.0



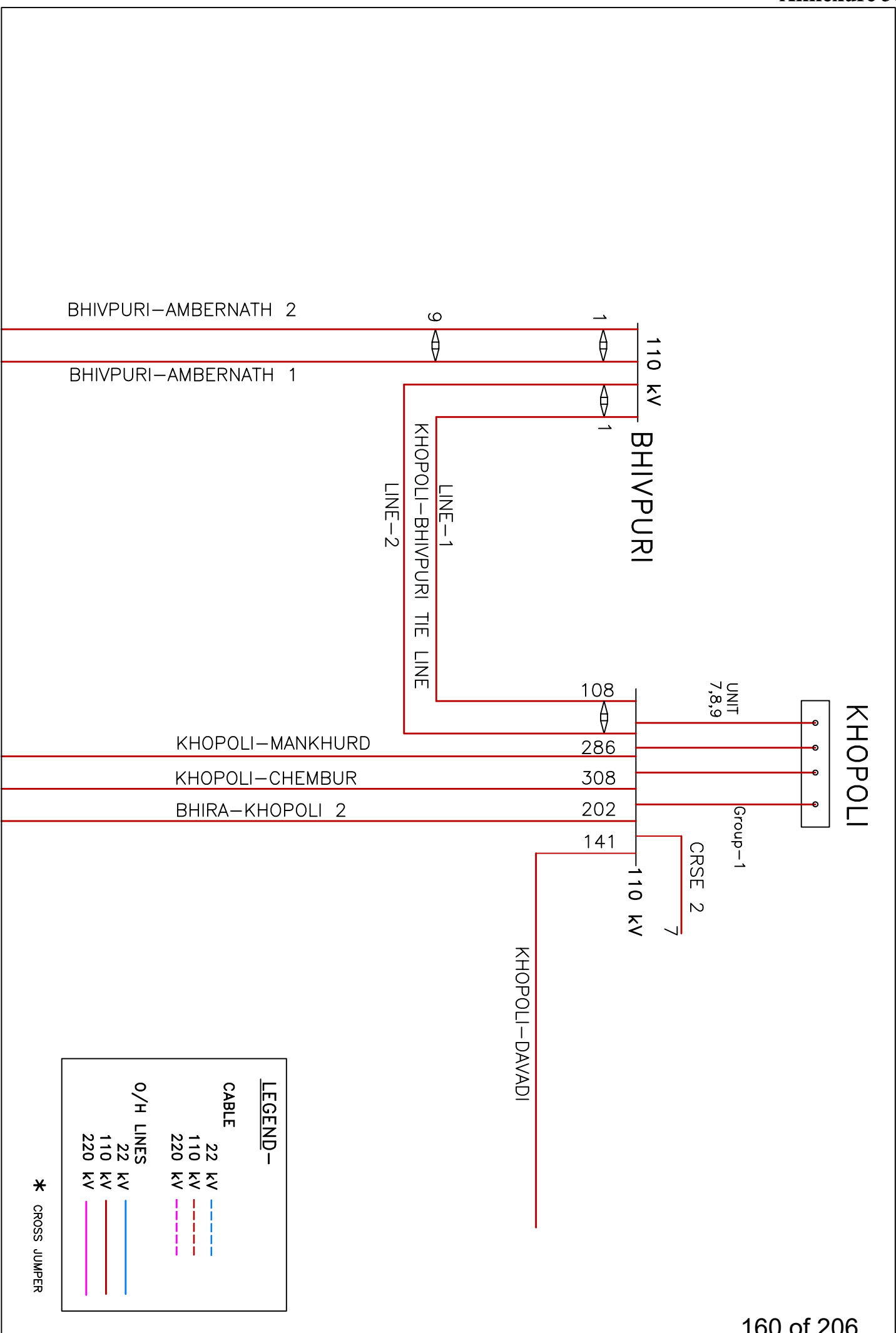
5.	Service for SCADA integration at Bhivpuri & Load control centre, Trombay	Lot	1	5.0	5.0
	Total of Services				45.0
	Total of Material & Services for Bay at Bhivpuri				169.7
	Total of Material & Services for Bay at Khopoli				518.0

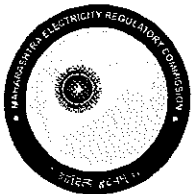
Sr. No.	Description				Total Cost
1.	Total of Material & Services for Bay at Khopoli				518.0
2.	Total of Material & Services for Bay at Bhivpuri				169.7
Total of Material & Services for Bays at Khopoli & Bhivpuri					687.7
Sr. No.	Description	Unit	Quantity	Unit rate Rs. in Lakhs	Total Cost Rs. in Lakhs
Transmission Line					
Material					
1.	220 kV DF type tower at Bhivpuri end	MT	60	1.0	60.0
2.	Modification to tower # 108 at Khopoli	Mt	10	1.0	10.0
3.	Conductor 0.15 Wolf ACSR	Km	180	1.61	289.8
4.	Insulators 11 kV 90 KN anti fog ball & socket	No.	6000	0.007	42.00
5.	Suspension hardware assembly for Wolf ACSR	Set	210	0.10	21.0
6.	Tension hardware assembly for Wolf ACSR	Set	300	0.15	45.0
7.	0.15 Wolf ACSR mid span joint	No.	100	0.002	0.20
8.	0.15 Wolf ACSR repair sleeve	No.	60	0.001	0.06
9.	0.15 ACSR spacers	No.	500	0.001	0.50
10.	Vibration damper for 0.15 Wolf ACSR	No.	1500	0.001	1.50
11.	Conductor 0.2 Panther ACSR	Km	30	2.0	60.0
12.	Insulators 11 kV 90 KN antifog ball & socket	No.	2000	0.007	14.0
13.	Suspension hardware assembly for PantherACSR	Set	70	0.10	7.0
14.	Tension hardware assembly for PantherACSR	Set	100	0.15	15.0
15.	0.2 Panther ACSR mid span joint	No.	35	0.002	0.07
16.	0.15 Wolf ACSR repair sleeve	No.	20	0.001	0.02
Total of Material					566.15



Services for Transmission Line					
Sr. No.	Description	Unit	Quantity	Unit Rate Rs. In Lakhs	Total Cost Rs. In Lakhs
1.	Stringing of 2X0.15 Wolf ACSR and removal of one phase of 0.2 ACSR Panther	Ckt km	29	2.5	72.50
2.	Stringing of 0.2 ACSR one Phase conductor	km	29	1.0	29.0
Sub-Total					101.50
Total of Material & Services for Transmission Line					667.65
Consultancy @2%					23
Staff Cost@5% of Material & Services					68
EPC Cost @10% of Material & Services					137.8
Add Contingency@2%					29
IDC-Interest During Construction					114
Total Project Cost(Rs. in Lakh)					1727





**MERC**

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
 13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
 Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
 E-mail : mercindia@mercindia.org.in

MERC/CAP/DPR/17/08

/227

January 17, 2008

SRM
 Shri V.H. Wagale,
 Senior Manager, Regulations
 The Tata Power Company Ltd.
 Corporate Center,
 34 Sant Tukaram Road,
 Carnac, Mumbai 400009.

**Subject- In-principle Clearance of the Scheme for Installation of 220 kV GIS
 Receiving Station at Mahalaxmi**

Ref-Letter No: REG/MERC-SUB/07/026 dated 14th March 2007

Sir,

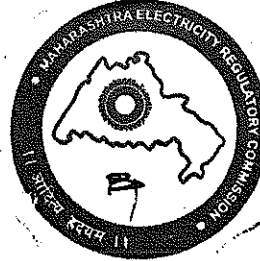
This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no REG/MERC-SUB/07/026 dated 14th March 2007.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

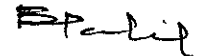
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January 17, 2008

4. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation incost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Yours Faithfully,


(P.B. Patil)

Secretary, MERC

Encl: Annexure, Appendix A

Shri A.D. Mahajan / Shri M.N. Bapat,
SICOM Ltd.,
Nirmal Building,
Nariman Point, Mumbai 400 021.

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West), Mumbai 400 056.

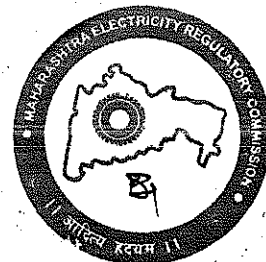
The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 7001.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan,
Civil Lines, Nagpur 440 001.

Brief particulars of the Scheme
Installation of 220 kV GIS Receiving Station at Mahalaxmi

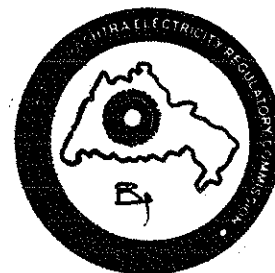
As approved in principle
(Based on the particulars furnished in DPR)

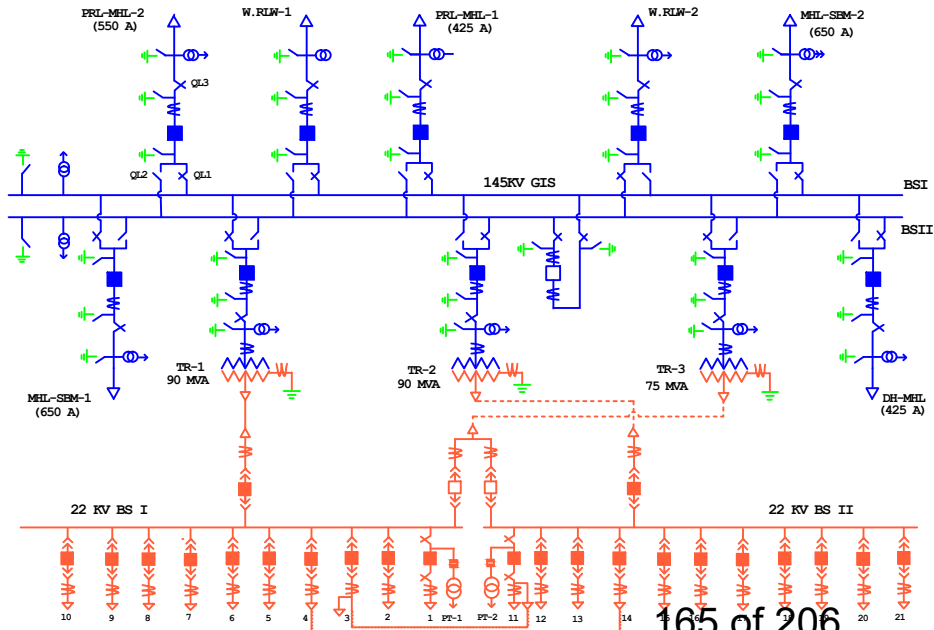
1. (a) Name of the Scheme	Installation of 220 kV Receiving Station at Mahalaxmi										
(b) Scheme code no.	TPC-T/FY05/01										
2. Estimated Cost	Rs.63.58 Crore. (Break up of cost as per Appendix)										
3. ROI / Cost benefit	As per the cost benefit analysis on completion of the project an increase in transmission tariff to the distribution utility to the extent of 0.28 Paise/unit is expected.										
4. Brief Scope of Work	The brief scope of work is as follows, 1) Installation of 220 kV GIS 5 bays. 2) Installation of 220/110/22 kV ICT of rating 250/200/75 MVA 3) LILO of Dharavi –Backbay 220 kV cable in the proposed GIS										
5.Objective/ Justification	To strengthen the 110 kV system and to provide reliable supply to Railways/BEST and at 22 kV for other direct consumers. By installing 220 kV GIS and ICT it is possible to draw mowrer power at 220 kV through 220 kV Dharavi – Backbay line instead of at 110 kV from Parel and Dharavi R.S. this will also reduce the T&D loss.										
6. Funding Arrangement	The project will be funded through internal accruals.										
7.Time frame/ Phasing of Expenditure	The project shall be completed in 24 months. <table> <tr> <td>Year</td><td>Expenditure</td></tr> <tr> <td>2009-2010</td><td>Rs. 9.49 Cr.</td></tr> <tr> <td>2010-2011</td><td>Rs. 54.09 Cr.</td></tr> <tr> <td colspan="2"><hr/></td></tr> <tr> <td>Total</td><td>Rs. 63.58 Cr.</td></tr> </table>	Year	Expenditure	2009-2010	Rs. 9.49 Cr.	2010-2011	Rs. 54.09 Cr.	<hr/>		Total	Rs. 63.58 Cr.
Year	Expenditure										
2009-2010	Rs. 9.49 Cr.										
2010-2011	Rs. 54.09 Cr.										
<hr/>											
Total	Rs. 63.58 Cr.										



Appendix A**Scheme for
Installation of 220 kV GIS Receiving Station at Mahalaxmi****(Break up of the project cost)**

Sr. No.	<u>Item Description</u>	Rs. Lac
1	220 kV GIS & Accessories	2162.00
2	Other sub station electrical equipment excluding GIS	2019.00
3	Civil Works	1073.00
4	220 kV cable with Accessories	326.00
5	110 kV cable and Accessories	152.00
6	Consultancy services	60.00
7	Contingency	290.00
8	IDC	276.34
9	Total	6358.34

Total Rs. 63.58 Cr.





MERC

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 E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20102011/00294

May 13, 2010

Shri, V.H. Wagle
 Senior Manager, Regulations
 The Tata Power Company Ltd.
 Corporate Center,
 34 Sant Tukaram Road,
 Carnac, Mumbai 400009

Sub: In- Principle clearance of the investment scheme of TPC-T Addition of ICT # 5 and 33 kV GIS at Mahalaxmi.

Ref:1) Reg/MERC/09/56 dated 12/03/2009.

2) Reg/MERC/09/50 dated 16/02/2010.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no dated 15th June 2009.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A & Annexure A.

2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.

3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

May 13, 2010

5. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actuals.



Yours Faithfully,

(K.N. Khawarey)
Secretary, MERC

Encl: Annexure A & Appendix A.

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
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1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure A
Addition of ICT # 5 and 33 kV GIS at Mahalaxmi.

A) Particulars furnished in the Feasibility Report by TPC-T

1.	a) Name of the Scheme	Addition of ICT # 5 and 33 kV GIS at Mahalaxmi.	
	b) Scheme code No.	TPC-T/FY10/06	
2.	Estimated Cost	Rs. 39.00 Cr. (As estimated by TPC-T) Rs. 39.00 Cr. (Proposed for In-principle approval) (Break up as per Appendix A)	
3.	ROI / Cost Benefit	After Capitalisation of this project transmission tariff would increase by 0.07 Paise/unit.	
4.	Brief Scope of Work	Installation & Commissioning of i. 250/200/75 MVA, 220/110/33 kV ICT. ii. 110 kV IC x 1600 Sq.mm cable. iii. 33 kV IC x 630 sq.mm. Cable. iv. 33 kV GIS Bays – 22 Nos. All related protection, control and auxiliary equipments.	
5.	Objective/ Justification	The project is to provide redundancy to ICT#4 as per State Grid Code Regulations, cater to the new loads and the phased replacement of 22 kV to 33 kV as per the requirement of BEST.	
6.	Funding Arrangement	From internal sources or by borrowing from reputed lending institutions	
7.	Time Frame/ Phasing of Expenditure	Work is scheduled to be completed in March 2013.	
		Year	Amount (Rs. Cr.)
		2010-11	0.14
		2011-12	3.84
		2012-13	35.00
		Total	39.00



Appendix- A
Addition of ICT # 5 and 33 kV GIS at Mahalaxmi.
Breakup of Cost Estimates

Sr. No.	Description	Unit	Qty	Rate	Amt (Rs. Lakhs)
1	Preliminary works, investigation, design and engineering	LS	1	100	100
2	250/200/75 MVA, 220/110/33kV Transformer with OLTC, RTCC and NGT	set	1	1766	1766
3	220kV Gas Insulated Bus Duct	M	90	1.35	121.5
4	110kV, 1C X 1600 sq. mm Cu XLPE cables (approx. 0.65 km assumed)@ 13000/- p m	M	650	0.13	84.5
5	110kV Cable accessories incl. joints, outdoor terminations and cable sealing ends 6 @ 5 lakh per sealing end	Set	6	5	30
6	110kV GIS Bay	No.s	1	220	220
7	33 kV GIS bays complete with CTs, disconnectors, BCU / BCPU equipment.	Nos.	22	30	660
8	33kV Capacitor Bank	No's	2	28	56
9	33kV Reactor(25MVar)	No's	0	300	0
10	33kV Bus PT complete	No's	2	4.5	9
11	33kV, 1 C X 630 Sq. mm Cu- XLPE cables	KM	1	15	15
12	33kV-cable-terminations 2 bays	Set	6	8	48
13	Protection panel for 110kV GIS bays (including differential, directional o/c & BF etc.)	Set	1	15	15
14	Aux. System (lighting, earthing, cable trays, lightning, fire detection system) - lump sum	LS		15	15
15	LV Power & control cables	LS		15	15
16	SCADA complete with acc.	LS		220	220
17	Installation, testing & commissioning of all equipments	LS			250
18	Civil work for ICT including trenches, foundations of transformer, outdoor eqpt.		1	40	40
19	Sub-Total				3665
20	Miscellaneous costs. price escalation and provision for contingencies @ 1 %				36.65
21	IDC				199
22	Total Project Cost				3900
		Sav	Rs. Cr.		39



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

MERC/TECH-VII/CAPEX/20122013/02113

THE TATA POWER CO. LTD.

Date: 21 December, 2012

RECEIVED ON

07 JAN 2013

AT _____ HRS. BY _____
MD'S OFFICE

To,
The Managing Director,
Tata Power Company Ltd,
Bombay House, 24, Homi Modi Street,
Fort, Mumbai-400001.

Vidyaadhar Wagle

Subject- In-principle clearance of Investment scheme submitted by TPC-T for "Installation of additional 33 kv bays at Borivali, Malad and Backbay Receiving Station".

Ref- TPC letter No.: CREG-MUMMERC/12/262 Dated 8 October, 2012.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter no. CREG-MUMMERC/12/262 Dated 8 October, 2012.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A to the Annexure.
2. Please note that this in principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC-T should submit quarterly progress report by 20th day of the first month of next quarter giving the status of implementation of the schemes in terms of expenditure incurred and item wise physical progress achieved during the implementation of the schemes.
4. As per the Directives of the Commission vide Order dated 3rd September 2010 (Case No 97 of 2009 of TPC-T, Page no. 39, Para 3.5) TPC-T as well as all other Transmission Utilities in Maharashtra State should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.



5. Asset created after execution of the schemes should be maintained separately in the Asset register.
6. Immediately after completion / commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.



Sincerely

(Kuldip N. Khawarey)
Secretary, MERC

Encl: Annexure, Appendix A
Cc to:

The General Secretary,
Thane Belapur Industries Association,
Plot No. P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai - 400 701.

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune - 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (W), Mumbai - 400 056.

The President,
Vidarbha Industries Association,
1st Floor, Udyog Bhawan,
Civil Lines,
Nagpur - 440 001.

Annexure-A
Summary Appraisal of TATA Power Company Ltd. Scheme for
“Installation of additional bays at Borivali, Malad & Backbay R/s”

A) Particulars furnished in the Feasibility Report by MSETCL

1.	a) Name of the Scheme	Installation of additional bays at Borivali, Malad & Backbay R/s	
	b) Scheme code No.	TPC-T/FY13/04	
2.	Estimated Cost	Rs.22.86 Cr.(Proposed for Approval) (Break up as per Appendix A)	
3.	ROI/ Cost Benefit	No direct monetary benefit is envisaged.	
4.	Brief Scope of Work	1) Installation of one new 33kV GIS shall be installed in vacant space available in existing 22/33kV Switchgear Room at Borivli. 2) Install & commission the additional 22 kV bus section in adjacent room & interconnection with bus section. Shift third transformer feed as incomer to the third bus section at Malad. 3) At Backbay Dismantle the wall in front of existing 33 kV GIS. Remove the existing toilet and level the floor. Extend existing bus section on both ends by 6 bays each.	
5.	Objective /Justification	Due to continuous load growth in these areas at the rate of 5 to 6% per annum, it has become necessary to provide additional 22 KV & 33 kV outlets to meet this increasing demand as requested by R Infra, TPC (D) at Borivli, Malad and by BEST, TPC (D) at Backbay The extended outlets also ensure proper capacity utilization and uninterrupted power supply to Discoms.	
6.	Funding Arrangement	It is proposed to fund the project from borrowing from external resources/financial institutions. Debt/Equity Ratio = 70%/30%	
7.	Time Frame/ Phasing of expenditure	The project is scheduled from April 2013. Duration of project from placing of the orders for material procurement & services up to completion of project is estimated to be around 18 Months.	
		Financial Year	Expenditure in Amount (` Lakhs.)
		2013-14	1798.67
		2014-15	487.03
		Total	2285.70



Appendix – A

“ Installation of additional bays at Borivali, Malad & Backbay R/s

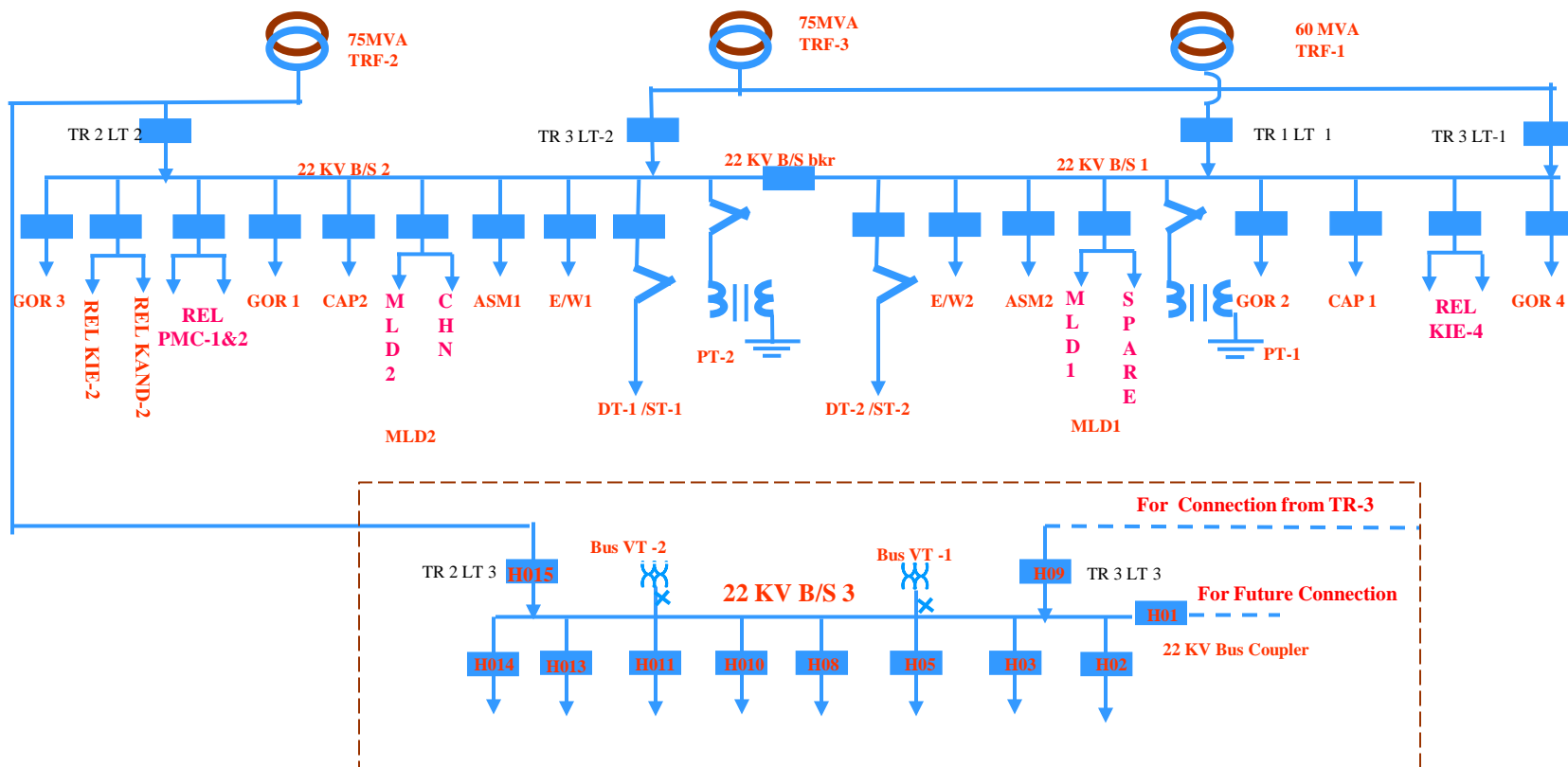
(All Price are in rs. Lakhs)

Sr No	Description	UoM	Per unit cost	Backbay		Borivali		Malad	
				Qty	Item Price	Qty	Item Price	Qty	Item Price
1	Civil works for 33kv Installation			1	20	1	20	1	20
2	Procurement of 33kV GIS complete with CTs, Dummy panels disconnections, BCU/BCPU equipment	Rs Lakhs/ bay	43.75	12	525	9	393.75	10	437.5
3	Additional PT's required for Protection and Meterting	Rs Lakhs/ bay	1.8	2	3.6	2	3.6	2	3.6
4	33kV, DURESKA, bus duct	LS		LS	100	LS	50	LS	100
5	Installation of 33kV cable terminations for bays	Rs Lakhs/ bay	0.25	12	3	9	2.25	10	2.5
6	Aux system (earthing, cable trays, lightning etc)	LS	10	LS	10	LS	10	LS	10
7	LV Power & Control cables	LS	20	LS	20	LS	20	LS	20
8	Services for SCADA integration Trombay, Carnac, Borivali, Malad	LS	20	LS	20	LS	20	LS	20
9	Installation, erection, testing & commissioning of all equipments	LS	20	LS	20	LS	20	LS	20
10	Consultancy services (@ 2%) [10=2%*Sum(1:9)]	@ 2%			14.432		10.792		12.672
11	Staff Cost (@ 5%) { 11=5% * sum(1:9) }	@ 5 %			36.08		26.98		31.68
12	Provision for contingencies @ 2% { 12=2%*sum(1:11) }	@2%			15.44		11.55		13.56
13	IDC						217.72		
14	Total Project Cost { 12 + 13 }				787.6		588.9		691.5

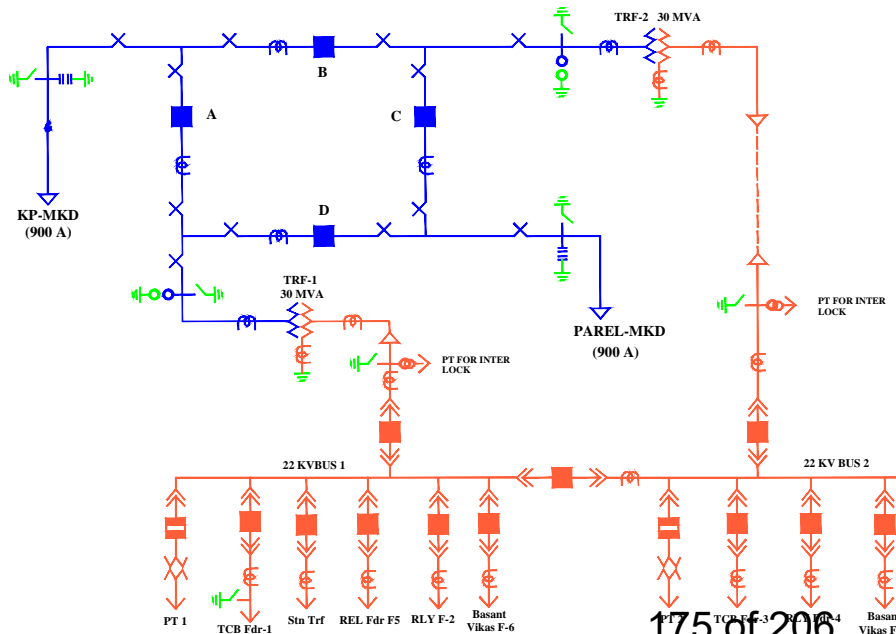
Total of All three Scheme Rs. 2285.7 Lakhs (Rs. 22.86 Crs.)

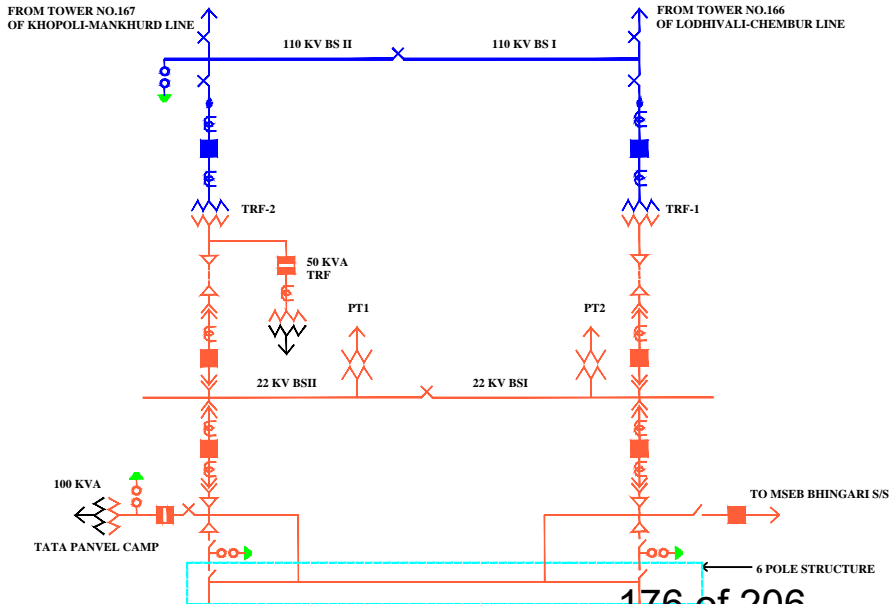


Single Line Diagram of 22 kV Tata Power Malad Sub Station



New GIS Bus Section







MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
 13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
 Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
 E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20102011/00295

May 13, 2010

Shri, V.H. Wagle
 Senior Manager, Regulations
 The Tata Power Company Ltd.
 Corporate Center,
 34 Sant Tukaram Road,
 Carnac, Mumbai 400009

Sub: In- Principle clearance of the investment scheme of TPC-T Installation of 1 no. 75 MVA, 110/33 kV transformer and 33 kV GIS at Parel R/S.

Ref: 1) Reg/MERC/09/67 17/03/2009.

2) Reg/MERC/09/50 dated 16/02/2010.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC vide letter no dated 15th June 2009.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Appendix A & Annexure A.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.
4. Asset created after execution of the scheme should be maintained separately in the Asset register.

May13, 2010

5. Immediately after completion / commissioning of the scheme, TPC should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actuals.



Yours Faithfully,

(K.N. Khawarey)
Secretary, MERC

Encl: Annexure-A & Appendix-A.

c.c. to
Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West),
Mumbai 400-056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines.
Nagpur 440 001.

Annexure A
Installation of 1 no. 75 MVA, 110/ 33 kV transformer and
33 kV GIS at Parel R/S.

A) Particulars furnished in the Feasibility Report by TPC-T

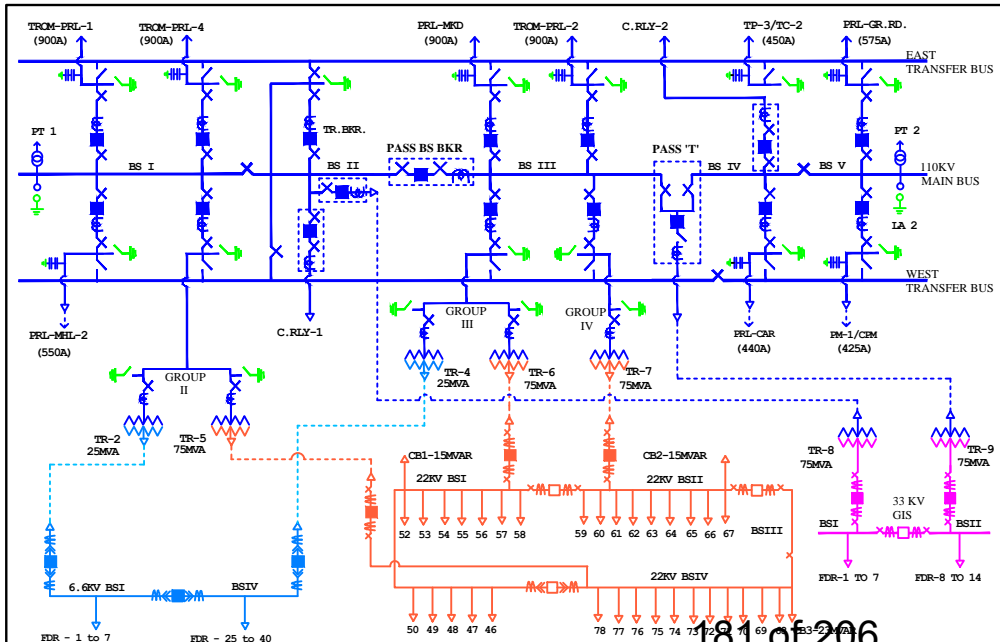
1.	a) Name of the Scheme	Installation of 1 no. 75 MVA, 110/ 33 kV transformer and 33 kV GIS at Parel R/S.	
	b) Scheme code No.	TPC-T/FY09/10	
2.	Estimated Cost	Rs. 24.00 Cr. (Break up as per Appendix A)	
3.	ROI / Cost Benefit	As per the cost benefit analysis on completion of the project an increase in transmission tariff to the distribution utility to the extent of 0.04 Paise/unit is expected.	
4.	Brief Scope of Work	Installation & Commissioning of Installation & Commissioning of i. 75 MVA, 110/33 kV Transformer along with PASS. ii. 110 kV 1C*1000 Sq.mm cable. iii. 33 kV GIS Bays – 14 Nos. iv. 33 kV 1C*630 sq.mm. Cable. All related protection, control and auxiliary equipments.	
5.	Objective / Justification	Parel R/S mainly caters to BEST load in and around Parel. BEST has requested for 21 nos. 33 kV outlets for shifting their existing 22 kV load to 33 kV. In addition a rapid increase in load is envisaged due to development of residential and commercial complexes coming up in Parel area. The firm capacity of Parel will be inadequate to meet the future demand. Hence, the project is proposed.	
6.	Funding Arrangement	From internal sources or by borrowing from reputed lending institutions	
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in March 2012.	
		Year	Amount (Rs. Cr.)
		2009-10	0.47
		2010-11	3.91
		2011-12	19.62
		Total	24.00

Appendix- A
(Breakup of cost estimates)

Installation of 1 no. 75 MVA, 110/ 33 kV transformer and 33 kV GIS at Parel R/S.

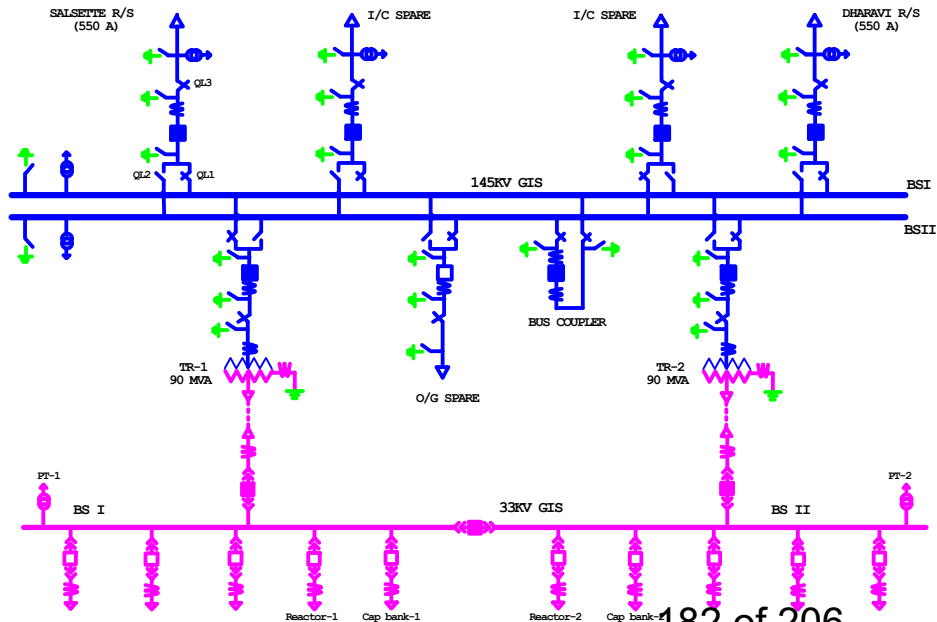
Sr. No.	Description	Qty	Unit	Rate	Amt (Lakhs)
A	110kV GIS & Auxiliaries				
1	110kV hybrid S/G (Double Bus PASS) bay complete with CTs, PTs, disconnectors, CPP & without 110kV Cable Termination	1	Nos.	200	200
2	36kV GIS bays complete with CTs, disconnectors, BCU / BCPU	14	Nos.	30	420
3	33kV Bus PT complete	2	set	4.5	9
4	33KV Capacitor Bank(20MVAR)	1	set	28	28
5	33KV Reactor(25MVAR)	0	set	300	0
6	75MVA, 110/33kV Transformers Including Installation , Testing & Cable termination.	1	Nos.	810	810
7	Civil Works for 33kV GIS Building, foundations, misc. works	1	LS	120	120
8	SCADA complete with acc	15	Bays	10	150
9	Fibre Optic Cable & Terminal Equipment	1	LS	10	10
10	Protection panel for 110kV GIS bays (including differential, directional o/c & BF etc.)	0	Nos.	15	0
11	Trivector Meters & Metering Panels	0	LS	15	0
12	Control cables	1	LS	12	12
13	Power Cables- 33kV, 1Cx630 sq. mm, Cu, XLPE	1	LS	19	19
14	Electrical Auxiliaries (SSTs, ACDB, DCDB, Batteries, Charges UPS, Earthing, Lighting etc.)	0	LS	200	0
15	Mechanical Auxiliaries (HVAC, Fire Hydrant, Fire Detection & Alarm, Lifts, OH Crane etc.)	1	LS	100	100
16	Bus Posts, BP insulators, clamps, bus bars, earthing & other miscellaneous	1	set	13	13
17	Installation & commissioning services for 145kV PASS & 33kV GIS & its auxiliaries.	1	LS	120	120
	Sub-Total I				2011
B	110kV Cable System				
1	110kV, 1C X 1000 sq. mm. XLPE, Cu cable (approx.0.067 km route length) & acc.	0.2	Kms	140	28
2	110kV terminations at both ends	1	set	25	25
3	Laying, termination & supervision charges	1	LS	10	10
4	Civil works including trenching, cable joint bays, road crossings & re-instatement	1	LS	80	80
	Sub-Total II				143
C	Design, engineering & preparation of drawings	1	LS	45	45
	Sub-Total III (A+B+C)				2199
D	Contingency @ 2.5 %				55
E	IDC				146
	Sub-Total IV (D+E)				201
	GrandTotal (III+IV)				2400





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Annexure 40



182 of 206

**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
 Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in
 E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20102011/1558**8th November, 2010**

Shri, V.H. Wagle
 Deputy General Manager, Regulations
 The Tata Power Company Ltd.
 Dharavi Receiving Station
 Matunga, Mumbai 400 019

**Subject: In- Principle clearance of the investment scheme - Replacement of 22 kV
 Bus Sections - 1 & 2 with 33 kV GIS at Saki Naka Andheri (East).**

Ref: REG/MERC/09/56 dated 12th March, 2009.

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter No.REG/MERC/09/56 dated 12th March 2009.

1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Annexure-A & Appendix-A.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. Since this is a replacement scheme, TPC-T to ensure that the equity component of the original cost of the replaced asset is knocked off from the equity base.
4. As per the Directive of the Commission vide Order dated 3rd September 2010 (Case No 96 of 2009) TPC-T should submit all the relevant details in the case of replacement schemes for all years from FY 2005-06 onwards for the Commission to ensure that the impact of such asset replacement is passed on in the desired manner to the consumers, and taken into consideration by the Commission in the next Order.

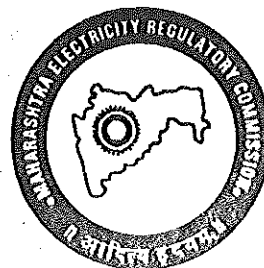
8th November, 2010

5. TPC-T should submit quarterly progress report indicating the name of the scheme, approved cost and the cost incurred till the last quarter. TPC-T should also submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.

6. Asset created after execution of the scheme should be maintained separately in the Asset register.

7 Immediately after completion/commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.

Yours Faithfully,



(K.N. Khawarey)
Secretary, MERC

Encl: Annexure-A & Appendix-A.

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West), Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure-A

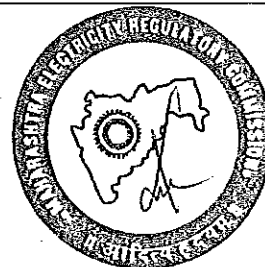
**Summary Appraisal of TPC-T's Scheme for
Replacement of 22 kV Bus Sections - 1 & 2 with 33 kV GIS
at
Saki Naka Andheri (East).**

A) Particulars furnished in the Feasibility Report by TPC-T

1.	a) Name of the Scheme b) Scheme code No.	Replacement of 22 kV Bus Sections - 1 & 2 with 33 kV GIS at Saki Naka Andheri (East). TPC-T/FY09/07
2.	Estimated Cost	Rs. 11.78 Cr. (Break up as per Appendix A)
3.	ROI / Cost Benefit	The commissioning of 33 kV GIS at Saki Receiving Station would lead to saving of space & maintenance cost.
4.	Brief Scope of Work	<p>Replacement of following 22 kV feeders on Bus Sections – 1 & 2 by 33 kV GIS at Saki:</p> <p>Bus Section No. 1.</p> <ol style="list-style-type: none"> 1. Bus Sectionalizer between Bus Sec. -1 & Bus Sec. -2 # Feeder No. 16. 2. Marol -1 & Marol -3 # Feeder No. 17. 3. Cap. Bank -1 & 2 # Feeder No. 18. 4. Airport -1 & MIDC -3 # Feeder No. 19. 5. I/C from Tr. No. 1 # Feeder No. 20. 6. 7 nos for feeding new loads <p>Bus Section No. 2.</p> <ol style="list-style-type: none"> 7. Bus Sectionalizer between Bus Sec.- 2 & Bus Sec.- 3 # Feeder No. 11. 8. Vihar -1 & MIDC -2 # Feeder No. 12. 9. I/C from Tr. No. 2 # Feeder No. 13. 10. Airport -2 & Vile Parle -2 # Feeder No. 14. 11. Chandivali -1 # Feeder No. 15. 12. One no feed from Station Transformer - 2 13. 6 nos for feeding new loads



5.	Objective / Justification	5.1. To save the space by installation of 33 kV GIS.	
		5.2. To install new GIS bays which will meet the needs of future load requirement.	
		5.3. To improve reliability of system as a result of GIS.	
		5.4. To reduce the maintenance cost.	
6.	Funding Arrangement	From internal sources or by borrowing from reputed lending institutions.	
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in March 2012.	
		Year	Amount (Rs. Cr.)
		2010-11	0.08
		2011-12	11.70
		Total	11.78



Appendix-A

**Replacement of 22 kV Bus Sections – 1 & 2 with 33 kV GIS
at
Saki Naka Andheri (East)**

Breakup of Cost Estimates

					Amount (Rs.in Lakhs)
Sr.No	Particulars	Qty	Unit	Unit Price	Amount
1	36 kV GIS bays complete with CT's disconnectors & BCU/BCPU.	24	Nos.	30	720
2	33 kV Bus PT	2	Set	4.5	9
3	SCADA complete with A/C	24	Bays	10	240
4	Fibre Optics Cable & Terminal Equipment	1	LS	50	50
5	Trivector Meters & Metering Panels	1	LS	15	15
6	33 kV Power Cables & Control Cables	1	LS	20	20
7	Installation & Commissioning services for 33 kV GIS & its auxiliaries	1	LS	38.4	38.4
	Sub-Total - I				1092.4
8	Design, engineering & preparation of drawings	1	LS	20	20
	Sub-Total - II				1112.4
9	Contingency @ 1%				11.124
10	IDC				55
	Sub Total - III				66.124
	Total			Lakhs	1178.54
				Say Rs. Cr.	11.78



**MERC****MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.

Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 ♦ Fax : 022-2216 3976 ♦ Website : www.mercindia.org.in

E-mail : mercindia@mercindia.org.in

MERC/CAPEX/20102011/01560

9th November, 2010

✓ Shri, V.H. Wagle
Deputy General Manager, Regulations
The Tata Power Company Ltd.
Dharavi Receiving Station
Matunga, Mumbai 400 019

Sub: In- Principle clearance of the investment scheme – Construction of 3 New 220kV Line bays at Trombay for Trombay –Dharavi-Salsette-Saki lines by TPC-T

Ref: REG/MERC/10/92 dated 5th April 2010

Sir,

This has reference to the Detailed Project Report for the captioned scheme submitted by TPC-T vide letter No.REG/MERC/10/92 dated 5th April 2010.

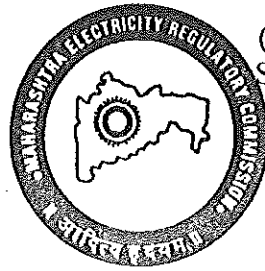
1. The scheme has been evaluated with reference to the guidelines circulated by the Commission on 9th Feb. 2005. I am directed to convey in-principle clearance of this scheme. The particulars of the scheme as approved in principle are outlined in the Annexure and the breakup of the project cost is given in Annexure-A & Appendix-A.
2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process / ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex-post after implementation of the scheme. TPC-T will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.
3. TPC-T should submit quarterly progress report indicating the name of the scheme, approved cost and the cost incurred till the last quarter. TPC-T should also submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.
4. Asset created after execution of the scheme should be maintained separately in the Asset register.

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5. Immediately after completion/commissioning of the scheme, TPC-T should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc so as to facilitate a comparison between the in-principle clearance and the actual.

Yours Faithfully,



(K.N. Khawarey)
Secretary, MERC

Encl: Annexure-A & Appendix-A.

c.c. to

Prayas Energy Group,
Amrita Clinic, Athawale Corner,
Lakdipool-Karve Road Junction,
Deccan Gymkhana, Karve Road,
Pune 411 004.

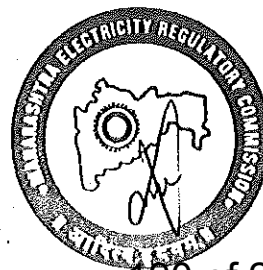
The President,
Mumbai Grahak Panchayat,
Grahak Bhavan,
Sant Dnyaneshwar Marg,
Behind Cooper Hospital,
Vile Parle (West), Mumbai 400 056.

The General Secretary,
Thane Belapur Industries Association,
Plot No.P-14, MIDC,
Rabale Village, PO Ghansoli,
Navi Mumbai 400 701.

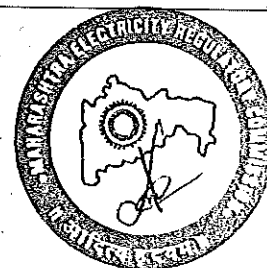
The President,
Vidarbha Industries Association,
1st floor, Udyog Bhawan, Civil Lines,
Nagpur 440 001.

Annexure-A**Construction of three new 220 kV line bays for Trombay – Dharavi – Salsette- Saki lines****A) Particulars furnished in the Feasibility Report by TPC-T**

1.	a) Name of the Scheme b) Scheme code No.	Construction of three new 220 kV line bays at Trombay for Trombay – Dharavi – Salsette- Saki lines by TPC-T TPC-T/FY10/10
2.	Estimated Cost	Rs. 31.39 Cr. (Break up as per Appendix A)
3.	ROI / Cost Benefit	These bays are required for terminating Trombay –Dharavi, Trombay Saki and Trombay – Salsette lines (approved by MERC) which are in advanced stage of construction a Trombay end
4.	Brief Scope of Work	<ol style="list-style-type: none"> 1. 3 Nos 220kV Hybrid Switchgear with CTs, isolators. 2. The output of all the three bays shall be taken underground through cables & terminated on the take-off gantry. 3. To implement this scheme, 220kV circuit, 1C * 1200 sq mm, Cu, XLPE cables of 4.5 km route length are proposed to be laid.
5.	Objective / Justification	<ol style="list-style-type: none"> 1. The work is already in progress for Trombay-Dharavi #9, Trombay-Salsette # 3 and Trombay-Saki # 1 lines which are MERC approved project. 2. Line outages are not possible with existing configuration and tripping of any line will result in the overloading of other lines in the system. 3. The power evacuation of Trombay Generation will continue to face line loading problems with N-1 condition of lines and other system disturbances like islanding etc. 4. The Transmission system reliability will deteriorate due to load growth and reduced maintenance due to non availability of outages on the existing lines.



6.	Funding Arrangement	From internal sources or by borrowing from reputed lending institutions.	
7.	Time Frame / Phasing of Expenditure	Work is scheduled to be completed in March 2012.	
		Year	Amount (Rs. Cr.)
		FY 2011(Mar. 2011)	1.35
		FY 2012 (Aug. 2011)	14.85
		FY 2012 (Jan. 2012)	10.04
		FY 2013 (Jun. 2012)	5.15
		Total	31.39



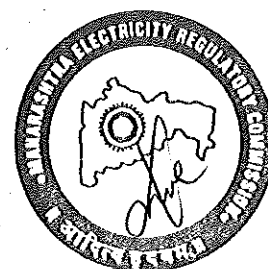
APPENDIX A

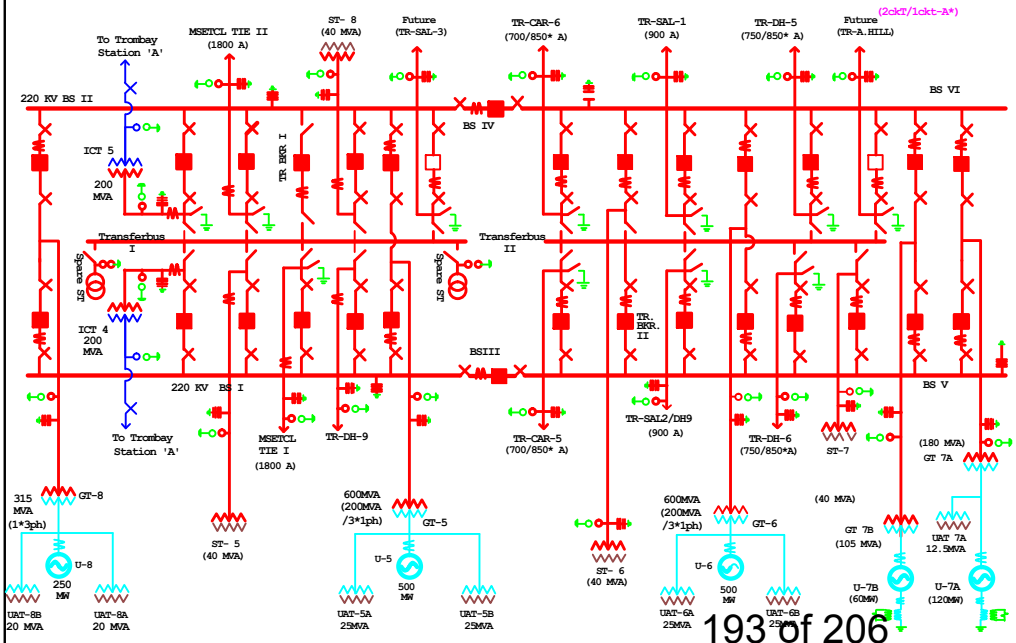
Construction of 3 new 220 kV line bays for Trombay–Dharavi–Salsette- Saki lines

Break Up of Cost estimates

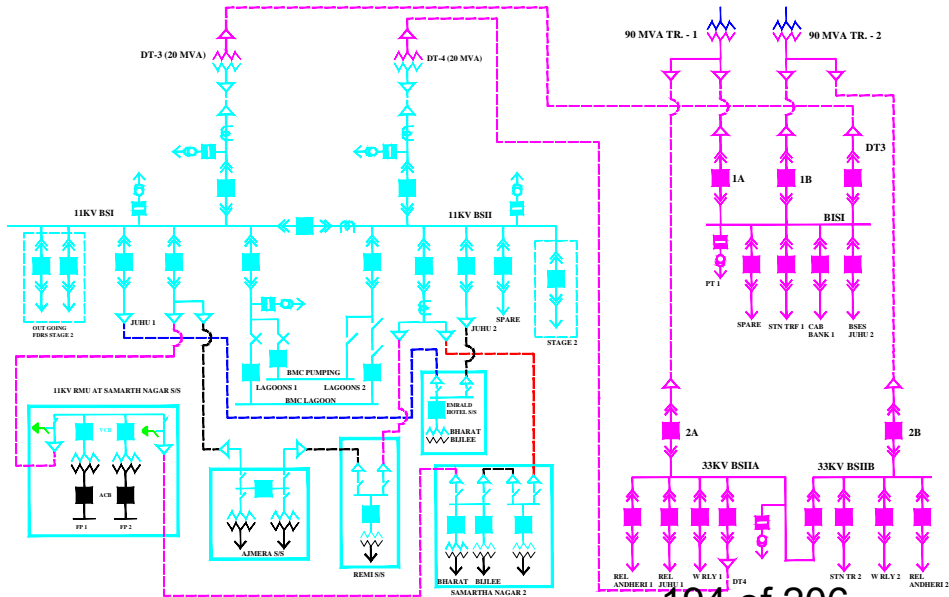
All prices in Rs. Crs

Sr. No.	Description	Qty	Unit	Unit Price	Item Price
A Construction of 3 New 220kV bays at Trombay					
1.	Supply of 3 complete Hybrid Switchgear bays including CTs, LAs, Bus post etc.	1	LS	12.00	12.00
2.	Dismantling, Control, erection, testing and commissioning services for above 3 220 kV bays.	1	LS	1.0	1.0
3.	Civil foundations for 3 nos. 220 kV bays, manpower Charges etc.	1	LS	1.5	1.5
4.	Consultancy services	1	LS	0.25	0.25
5.	Man-power charges	1	LS	0.25	0.25
6.	Miscellaneous expenses	1	LS	.30	.30
	Sub Total A				15.30
B Laying of new 220kV cables at Trombay					
1.	Supply of 220 XLPE kV cables including cable sealing ends – 4.5 Kms	1	LS	10	10
2.	Services for cable laying / supervisory services	1	LS	2	2
3.	Civil works for cable laying including trenching	1	LS	1	1
4.	Man-power charges	1	LS	0.11	0.11
	Sub-Total B				13.11
	Total (A+B)				28.41
C	Contingency				0.57
D	Interest During Construction				2.41
	Sub-total (C+D)				2.98
	Total (A+B+C+D)				31.39

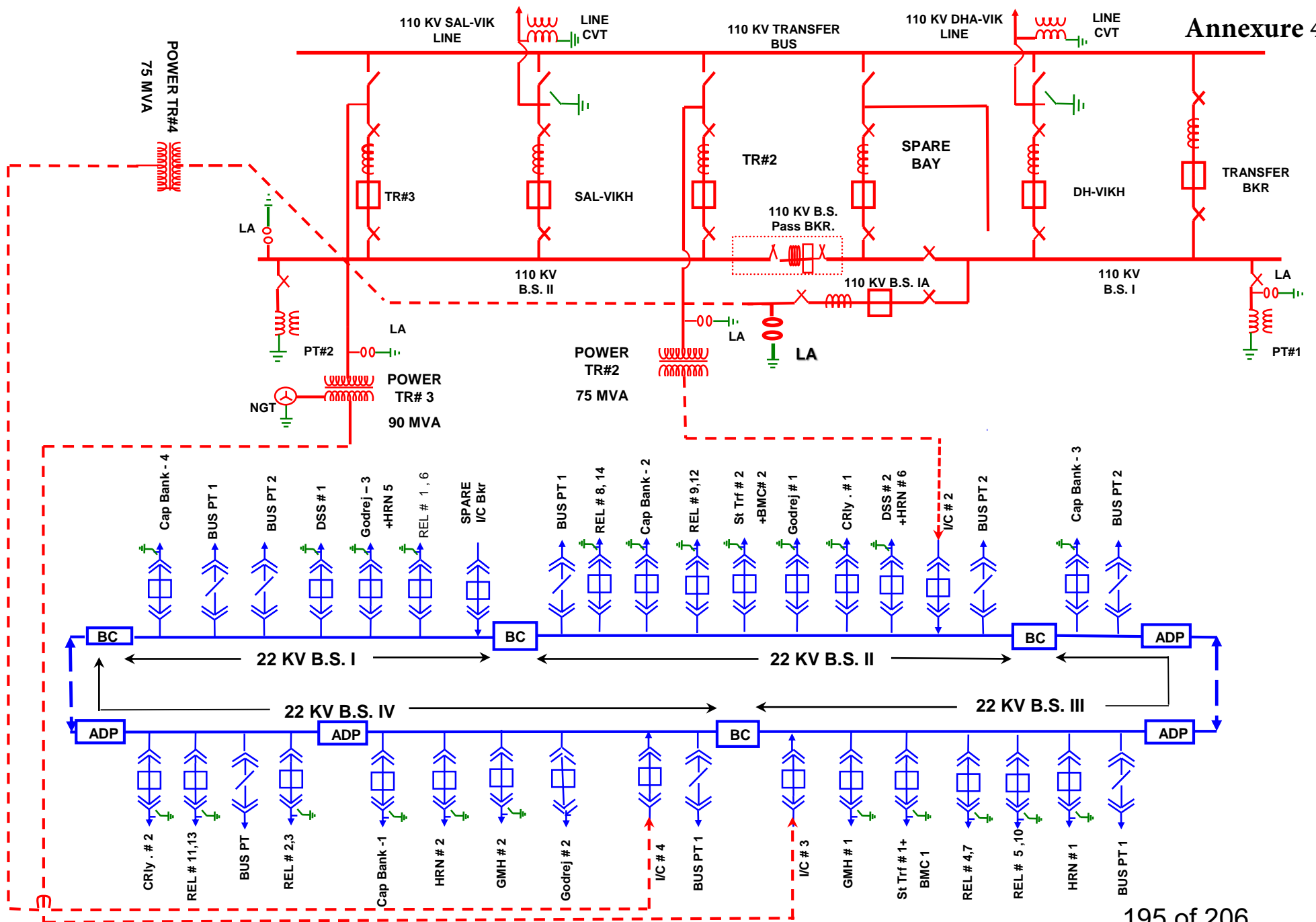




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“Existing Transmission lines” and “Existing Bays at substations” after incorporating all the amendments proposed in this petition

Existing Transmission Lines

Sr. No.	Description
1	220 kV Bhira-Dharavi 7 Transmission Line (106.90 km) from Bhira Generating Station to Dharavi Receiving Station
2	220 kV Bhira-Dharavi 8 Transmission Line (106.90 km) from Bhira Generating Station to Dharavi Receiving Station
3	220 kV Borivali-Aarey 1 Transmission Line (0.47 km) from Borivali Receiving Station to R-Infra Aarey Receiving Station
4	220 kV Borivali-Aarey 2 Transmission Line (0.51 km) from Borivali Receiving Station to R-Infra Aarey Receiving Station
5	220 kV Dharavi-Backbay Transmission Line (17.16 km) from Dharavi Receiving Station to Backbay Receiving Station
6	220 kV Kalwa-Salsette 3 Transmission Line (7.77 km) from Kalwa Receiving Station to Salsette Receiving Station
7	220 kV Kalwa-Salsette 4 Transmission Line (7.77 km) from Kalwa Receiving Station to Salsette Receiving Station
8	220 kV Kalwa-Salsette 6 Transmission Line (8.93 km) from MSETCL Kalwa Receiving Station to Salsette Receiving Station
9	220 kV Saki-Sahar Transmission Line (2.60 km) from Saki Receiving Station to Sahar Receiving Station
10	220 kV Salsette-Borivali 1 Transmission Line (11.07 km) from Salsette Receiving Station to Borivali Receiving Station
11	220 kV Salsette-Borivali 2 Transmission Line (11.07 km) from Salsette Receiving Station to Boriavli Receiving Station
12	220 kV Salsette-Sahar Transmission Line (10.03 km) from Salsette Receiving Station to Sahar Receiving Station
13	220 kV Salsette-Saki Transmission Line (9.06 km) from Salsette Receiving Station to Saki Receiving Station
14	Intermediate spare section of 220 kV Trombay Salsette#2 Transmission Line (14.23 km) from Pratiksha Nagar to Location 12 (Near Bhandup Village) kept charged from the Trombay Generating Station
15	220 kV Tata Borivali-MSETCL Borivali 4 Transmission Line (1.70 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
16	220 kV Tata Borivali-MSETCL Borivali 5 Transmission Line (1.57 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
17	220 kV Trombay-Carnac 5 Transmission Line (12.39 km) from Trombay Generating Station to Carnac Receiving Station
18	220 kV Trombay-Carnac 6 Transmission Line (12.39 km) from Trombay Generating Station to Carnac Receiving Station

- 19 . 220 kV Trombay-Dharavi 5 Transmission Line (11.00 km) from Trombay Generating Station to Dharavi Receiving Station
- 20 . 220 kV Trombay-Dharavi 6 Transmission Line (11.00 km) from Trombay Generating Station to Dharavi Receiving Station
- 21 . 220 kV Trombay-Dharavi 9 Transmission Line (10.69 km) from Trombay Generating Station to Dharavi Receiving Station
- 22 . 220 kV Trombay-MSETCL Tie 1 Transmission Line (0.85 km) from Trombay Generating Station to MSETCL-Trombay Generating Station
- 23 . 220 kV Trombay-MSETCL Tie 2 Transmission Line (0.85 km) from Trombay Generating Station to MSETCL-Trombay Generating Station
- 24 . 220 kV 3 terminal line Trombay Salsette 1 Backbay Transmission Line (39.45 km) originating at Trombay Generating Station and terminating at Salsette Receiving Station and Backbay Receiving Station
- 25 . 110 kV Ambernath-Kalyan 1 Transmission Line (19.85 km) from Ambernath Receiving Station to Kalyan Receiving Station
- 26 . 110 kV Ambernath-Kalyan 2 Transmission Line (19.85 km) from Ambernath Receiving Station to Kalyan Receiving Station
- 27 . 110 kV Bhira-Davdi Transmission Line (10.13 km) from Bhira Generating Station to Davdi Receiving Station
- 28 . 110 kV Bhira-Khopoli 2 Transmission Line (50.96 km) from Bhira Generating Station to Khopoli Generating Station
- 29 . 110 kV Bhivpuri-Ambernath 1 Transmission Line (46.48 km) from Bhivpuri Generating Station to Ambernath Receiving Station
- 30 . 110 kV BMC-Kolshet Transmission Line (18.97 km) from BMC Receiving Station to Kolshet Receiving Station
- 31 . 110 kV Borivali-Malad 1 Transmission Line (7.40 km) from Borivali Receiving Station to Malad Receiving Station
- 32 . 110 kV Borivali-Malad 2 Transmission Line (7.40 km) from Borivali Receiving Station to Malad Receiving Station
- 33 . 110 kV Carnac-BEST-Backbay 1 Transmission Line (4.01 km) from Carnac Receiving Station to Backbay Receiving Station
- 34 . 110 kV Carnac-Backbay 2 Transmission Line (4.00 km) from Carnac Receiving Station to Backbay Receiving Station
- 35 . 110 kV Carnac-Grant Road Transmission Line (3.60 km) from Carnac Receiving Station to Grant Road Receiving Station
- 36 . 110 kV Chola-Kalyan 1 Transmission Line (2.50 km) from Chola Receiving Station to Kalyan Receiving Station
- 37 . 110 kV Chola-Kalyan 2 Transmission Line (2.50 km) from Chola Receiving Station to Kalyan Receiving Station
- 38 . 110 kV Dharavi BKC 3 Transmission Line (6.94 km) from Dharavi Receiving Station to BKC receiving station
- 39 . 110 kV Dharavi BKC 4 Transmission Line (6.94 km) from Dharavi Receiving Station to BKC receiving station

- 40 . 110 kV Dharavi-Mahalaxmi Transmission Line (6.40 km) from Dharavi Receiving Station to Mahalaxmi Receiving Station
- 41 . 110 kV Dharavi-Powai Transmission Line (13.64 km) from Dharavi Receiving Station to Powai Receiving Station
- 42 . 110 kV Dharavi-Vikhroli Transmission Line (10.78 km) from Dharavi Receiving Station to Vikhroli Receiving Station
- 43 . 110 kV Kalwa-Kalyan Transmission Line (16.80 km) from MSETCL Kalwa Receiving Station to Kalyan Receiving Station
- 44 . 110 kV 3 terminal line Kalyan-Kalwa-Salsette 1 Transmission Line (23.30 km) originating at Kalyan Receiving Station and terminating at MSETCL Kalwa Receiving Station and Salsette Receiving Station
- 45 . 110 kV 3 terminal line Kalyan-Kalwa-Salsette 2 Transmission Line (22.84 km) originating at Kalyan Receiving Station and terminating at MSETCL Kalwa Receiving Station and Salsette Receiving Station
- 46 . 110 kV Khopoli – CRSE 2 Transmission Line (1.02 km) from Khopoli Generating Station to Central Railway SE Receiving Station
- 47 . 110 kV Khopoli-Bhivpuri Tie 1 Transmission Line (28.67 km) from Khopoli Generating Station to Bhivpuri Generating Station
- 48 . 110 kV Khopoli-Davdi Transmission Line (39.84 km) from Khopoli Generating Station to Davdi Receiving Station
- 49 . 110 kV 3 terminal line Khopoli-Lodhivali-Chembur Transmission Line (64.60 km) originating at Khopoli Generating Station and terminating at Lodhivali Receiving Station and Chembur Receiving Station
- 50 . 110 kV Khopoli-Bhokarpada-Mankhurd Transmission Line (56.27 km) from Khopoli Generating Station to Mankhurd Receiving Station
- 51 . 110 kV Khopoli-Bhivpuri Tie 2 Transmission Line (28.94 km) from Khopoli Generating Station to Bhivpuri Generating Station
- 52 . 110 kV Malad-Versova 1 Transmission Line (6.85 km) from Malad Receiving Station to Versova Receiving Station
- 53 . 110 kV Malad-Versova 2 Transmission Line (6.85 km) from Malad Receiving Station to Versova Receiving Station
- 54 . 110 kV Parel-Carnac Transmission Line (5.41 km) from Parel Receiving Station to Carnac Receiving Station
- 55 . 110 kV Parel-Grant Road Transmission Line (5.20 km) from Parel Receiving Station to Grant Road Receiving Station
- 56 . 110 kV Parel-Mahalaxmi 1 Transmission Line (2.85 km) from Parel Receiving Station to Mahalaxmi Receiving Station
- 57 . 110 kV Parel-Mahalaxmi 2 Transmission Line (3.61 km) from Parel Receiving Station to Mahalaxmi Receiving Station
- 58 . 110 kV Parel-Mankhurd Transmission Line (11.10 km) from Parel Receiving Station to Mankhurd Receiving Station
- 59 . 110 kV Salsette-BMC Transmission Line (3.41 km) from Salsette Receiving Station to BMC Receiving Station

- 60 . 110 kV Salsette-Kolshet Transmission Line (10.91 km) from Salsette Receiving Station to Kolshet Receiving Station
- 61 . 110 kV Salsette-Powai Transmission Line (9.97 km) from Salsette Receiving Station to Powai Receiving Station
- 62 . 110 kV Salsette-Saki 3 Transmission Line (7.80 km) from Salsette Receiving Station to Saki Receiving Station
- 63 . 110 kV Salsette-Saki 4 Transmission Line (7.80 km) from Salsette Receiving Station to Saki Receiving Station
- 64 . 110 kV Salsette-Vikhroli Transmission Line (7.19 km) from Salsette Receiving Station to Vikhroli Receiving Station
- 65 . Intermediate spare section of the 110 kV Bhira-Khopoli 2 Transmission Line (9.84 km) from Devnhave to Katkarwadi kept charged from Khopoli Generating Station

- 66 . 110 kV Tata Ambarnath-MSETCL Neral Transmission Line (40.35 km) from Ambarnath Receiving Station to MSETCL Neral Receiving Station
- 67 . 110 kV Tata Bhivpuri-MSETCL Neral Transmission Line (12.06 km) from Bhivpuri Generating Station to MSETCL Neral Receiving Station
- 68 . 110 kV Tata Borivali-MSETCL Borivali 1 Transmission Line (2.05 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
- 69 . 110 kV Tata Borivali-MSETCL Borivali 2 Transmission Line (2.05 km) from Borivali Receiving Station to MSETCL Borivali Receiving Station
- 70 . 110 kV Trombay-Carnac 1/3 Transmission Line (12.47 km) from Trombay Generating Station to Carnac Receiving Station
- 71 . 110 kV Trombay-Chembur 1 Transmission Line (4.30 km) from Trombay Generating Station to Chembur Receiving Station
- 72 . 110 kV Trombay-Chembur 2 Transmission Line (4.30 km) from Trombay Generating Station to Chembur Receiving Station
- 73 . 110 kV Trombay-Chembur 3 Transmission Line (7.29 km) from Trombay Generating Station to Chembur Receiving Station
- 74 . 110 kV Trombay-Dharavi 1 Transmission Line (10.36 km) from Trombay Generating Station to Dharavi Receiving Station
- 75 . Spare circuit of 110 kV Dharavi-Somaiya Plot Transmission Line (2.84 km) from Dharavi Receiving Station to Somaiya Plot (Tower Location 33)
- 76 . 110 kV Trombay-Parel 1 Transmission Line (9.10 km) from Trombay Generating Station to Parel Receiving Station
- 77 . 110 kV Trombay-Parel 2 Transmission Line (8.69 km) from Trombay Generating Station to Parel Receiving Station
- 78 . 110 kV 3 terminal line Trombay-Parel 3/Carnac 2 Transmission Line (8.59 km) originating at Trombay Generating Station and terminating at Parel Receiving Station and at Carnac Receiving Station
- 79 . 110 kV Trombay-Parel 4 Transmission Line (10.12 km) from Trombay Generating Station to Parel Receiving Station
- 80 . **110 kV feeders to DISCOMS (4.18 km):**
 - a . 110 kV Tata Backbay – BEST 1 feeder (0.14 km)

- b . 110 kV Tata Backbay – BEST 2 feeder (0.13 km)
- c . 110 kV Tata Backbay – BEST 3 feeder (0.12 km)
- d . 110 kV Tata Backbay – Nariman Point 2 Sakharbhavan feeder (1.25 km)
- e . 110 kV BEST Backbay – Nariman Point 1 Sakharbhavan feeder (1.20 km)
- f . 110 kV Mahalaxmi – BEST 1 feeder (0.67 km)
- g . 110 kV Mahalaxmi – BEST 2 feeder (0.67 km)
- 81 . **110 kV feeders to Direct Consumers (7.01 km):**
 - a . 110 kV Borivali – W Railway 1 feeder (2.70 km)
 - b . 110 kV Borivali – W Railway 2 feeder (2.70 km)
 - c . 110 kV Malad – W Railway 1 feeder (0.15 km)
 - d . 110 kV Malad – W Railway 2 feeder (0.15 km)
 - e . 110 kV Trombay – BARC 3 feeder (0.65 km)
 - f . 110 kV Trombay – BARC 4 feeder (0.65 km)

Existing Bays at Sub-stations

Item No.	Description
1 .	7 No. of 220 kV Bays at 220 kV Backbay Receiving Station
2 .	14 No. of 220 kV Bays at 220 kV Borivali Receiving Station
3 .	4 No. of 220 kV Bays at 220 kV Carnac Receiving Station
4 .	13 No. of 220 kV Bays at 220 kV Dharavi Receiving Station
5 .	8 No. of 220 kV Bays at 220 kV Mahalaxmi Receiving Station
6 .	4 No. of 220 kV Bays at MSETCL Receiving Station
7 .	9 No. of 220 kV Bays at 220 kV Sahar Receiving Station
8 .	9 No. of 220 kV Bays at 220 kV Saki Receiving Station
9 .	15 No. of 220 kV Bays at 220 kV Salsette Receiving Station
10 .	5 No. of 220 kV Bays at 220 kV Trombay Generating Station
11 .	12 No. of 110 kV Bays at 110 kV Ambarnath Receiving Station
12 .	12 No. of 110 kV Bays at 220 kV Backbay Receiving Station
13 .	9 No. of 110 kV Bays at 110 kV BKC Receiving Station.
14 .	19 No. of 110 kV Bays at 220 kV Borivali Receiving Station
15 .	17 No. of 110 kV Bays at 220 kV Carnac Receiving Station
16 .	4 No. of 110 kV Bays at Central Railway (Wadala) Receiving Station
17 .	10 No. of 110 kV Bays at 110 kV Chembur Receiving Station
18 .	7 No. of 110 kV Bays at 110 kV Davdi Receiving Station
19 .	33 No. of 110 kV Bays at 220 kV Dharavi Receiving Station
20 .	5 No. of 110 kV Bays at 110 kV Grant Road Receiving Station
21 .	8 No. of 110 kV Bays at 110 kV Bhokarpada Receiving Station
22 .	16 No. of 110 kV Bays at 110 kV Kalyan Receiving Station
23 .	1 No. 110 kV Bay at Bhivpuri Generating Station (for Khopoli Bhivpuri Tie 2 Line)

- 24 . 7 No. of 110 kV Bays at 110 kV Kolshet Receiving Station
- 25 . 15 No. of 110 kV Bays at 110 kV Mahalaxmi Receiving Station
- 26 . 13 No. of 110 kV Bays at 110 kV Malad Receiving Station
- 27 . 14 No. of 110 kV Bays at 110 kV Mankhurd Receiving Station
- 28 . 4 No. of 110 kV Bays at 110 kV Panvel Receiving Station
- 29 . 21 No. of 110 kV Bays at 110 kV Parel Receiving Station
- 30 . 10 No. of 110 kV Bays at 110 kV Powai Receiving Station
- 31 . 10 No. of 110 kV Bays at 220 kV Saki Receiving Station
- 32 . 21 No. of 110 kV Bays at 220 kV Salsette Receiving Station
- 33 . 4 No. of 110 kV Bays at 110 kV Versova Receiving Station
- 34 . 10 No. of 110 kV Bays at 110 kV Vikhroli Receiving Station
- 35 . 24 No. of 33 kV Bays at 220 kV Backbay Receiving Station
- 36 . 36 No. of 33 kV Bays at 110 kV BKC Receiving Station
- 37 . 29 No. of 33 kV Bays at 220 kV Borivali Receiving Station
- 38 . 58 No. of 33 kV Bays at 220 kV Carnac Receiving Station
- 39 . 71 No. of 33 kV Bays at 220 kV Dharavi Receiving Station
- 40 . 27 No. of 33 kV Bays at 110 kV Bhokarpada Receiving Station
- 41 . 30 No. of 33 kV Bays at 220 kV Mahalaxmi Receiving Station
- 42 . 36 No. of 33 kV Bays at 110 kV Parel Receiving Station
- 43 . 27 No. of 33 kV Bays at 110 kV Powai Receiving Station
- 44 . 40 No. of 33 kV Bays at 220 kV Sahar Receiving Station
- 45 . 25 No. of 33 kV Bays at 220 kV Saki Receiving Station
- 46 . 20 No. of 33 kV Bays at 110 kV Versova Receiving Station
- 47 . 22 No. of 22 kV Bays at 110 kV Ambarnath Receiving Station
- 48 . 37 No. of 22 kV Bays at 220 kV Borivali Receiving Station
- 49 . 27 No. of 22 kV Bays at 220 kV Carnac Receiving Station
- 50 . 32 No. of 22 kV Bays at 110 kV Chembur Receiving Station
- 51 . 73 No. of 22 kV Bays at 220 kV Dharavi Receiving Station
- 52 . 21 No. of 22 kV Bays at 110 kV Kalyan Receiving Station
- 53 . 16 No. of 22 kV Bays at 110 kV Kolshet Receiving Station
- 54 . 30 No. of 22 kV Bays at 220 kV Mahalaxmi Receiving Station
- 55 . 37 No. of 22 kV Bays at 110 kV Malad Receiving Station
- 56 . 15 No. of 22 kV Bays at 110 kV Mankhurd Receiving Station
- 57 . 9 No. of 22 kV Bays at 110 kV Panvel Receiving Station
- 58 . 41 No. of 22 kV Bays at 110 kV Parel Receiving Station
- 59 . 53 No. of 22 kV Bays at 220 kV Saki Receiving Station
- 60 . 33 No. of 22 kV Bays at 220 kV Salsette Receiving Station
- 61 . 40 No. of 22 kV Bays at 110 kV Vikhroli Receiving Station
- 62 . 4 No. of 11 kV Bays at 110 kV Chembur Receiving Station
- 63 . 28 No. of 6.6 kV bays at 110 kV Parel Receiving Station

Annexure 47

Voltage Level (kV)	Name of Receiving Station	Bays Exceeding DPR Approval	STU allocation	Remarks
22	Malad Receiving Station	1	Pending with STU	for future transmission network strengthening
33	Carnac Receiving Station	10	Alloted	6 nos. outlets are allotted to TPC-D and 2 nos. are allotted to BEST. 2 nos. reserved for capacitor bank.
33	BKC Receiving Station	3	Alloted	All bays are allotted to DISCOMs by STU
33	Mahalaxmi Receiving Station	2	Alloted	All bays are allotted to DISCOMs by STU
33	Dharavi Receiving Station	10	To be applied for outlets	5 nos. bays are allotted to DISCOMs by STU and 2 nos. of bays for capacitor bank. 3 bays are for future transmission network strengthening
110	Dharavi Receiving Station	2	EHV bays	for future transmission network strengthening
110	BKC Receiving Station	1	EHV bays	for future transmission network strengthening
220	Trombay Receiving Station	2	EHV bays	for future transmission network strengthening
220	Mahalaxmi Receiving Station	1	EHV bays	for future transmission network strengthening
TOTAL		32		

“Proposed – List of Transmission lines” and “Proposed – List of Bays” after incorporating all the amendments proposed in this petition

Proposed - List of Transmission Lines

Sr. No.	Description
1	400 kV Dehrand-Nagothane Transmission 1 Line (38.0 km) from Dehrand Receiving Station to Nagothane Receiving Station
2	400 kV Dehrand-Nagothane Transmission 2 Line (38.0 km) from Dehrand Receiving Station to Nagothane Receiving Station
3	400 kV Dehrand-Sewri Transmission Line (57.0 km) from Dehrand Receiving Station to Sewri Receiving Station
4	400 kV Kharghar – Vikhroli Transmission Line (21.1 km) from MSETCL Kharghar Receiving Station to Vikhroli Receiving Station
5	400 kV Kudus-Marve Transmission Line (100 km) from Kudus Receiving Station to Marve Receiving Station
6	400 kV Panvel-Vikhroli Transmission Line (34.4 km) from Panvel Receiving Station to Vikhroli Receiving Station
7	400 kV Sewri-Hajiali Transmission Line (10 km) from Sewri Receiving Station to Hajiali Receiving Station
8	LILO of 400 kV Talegaon-Kalwa Line (13 km) at Vikhroli
9	220 kV Kalwa-Salsette Transmission Line (13.0 km) from Kalwa Receiving Station to Salsette Receiving Station
10	LILO of one circuit of existing 220 kV Bhira-Dharavi Transmission Line (1.0 km) at Chunabhatti Receiving Station
11	LILO of existing 220 kV Dharavi-Backbay Transmission Line (6.0 km) at Mahalaxmi Receiving Station
12	LILO of existing 220 kV MSETCL Trombay-Tata Trombay Transmission Line (1 km) at Trombay Generating Station (PST)
13	LILO of existing 220 kV Trombay-Backbay Transmission Line (1.0 km) at Sewri Receiving Station
14	LILO of existing 220 kV Trombay-Carnac 5 Transmission Line (1.0 km) at Sewri Receiving Station
15	LILO of existing 220 kV Trombay-Carnac 6 Transmission Line (1.0 km) at Sewri Receiving Station
16	LILO of one circuit of existing 220 kV Trombay - Chunabhatti Transmission Line (5.0 km) at Wadala Receiving Station
17	LILO of two circuits of existing 220 kV Trombay - Dharavi Transmission Line (3.0 km) at Antop Hill Receiving Station

- 18 . 220 kV Marve-Versova Transmission Line (14 km) from Marve Receiving Station to Versova Receiving Station
- 19 . 220 kV R Infra Mira Road - Dahisar (East) 1 Transmission Line (8.0 km) from R-Infra Mira Road Receiving Station to Tata Dahisar (East) Receiving Station
- 20 . 220 kV R Infra Mira Road - Dahisar (East) 2 Transmission Line (8.0 km) from R-Infra Mira Road Receiving Station to Tata Dahisar (East) Receiving Station
- 21 . 220 kV Mira Road Transmission Line (10.0 km) from R-Infra Ghodbunder Road Receiving Station to Tata Mira Road (West) Receiving Station
- 22 . 220 kV R-Infra Versova – TPC Versova 1 Transmission Line (3.0 km) from R-Infra Versova Receiving Station to TPC Versova Receiving Station
- 23 . 220 kV R-Infra Versova – TPC Versova 2 Transmission Line (3.0 km) from R-Infra Versova Receiving Station to TPC Versova Receiving Station
- 24 . 220 kV Sahar to Goregaon (East) Transmission line (8 km) from Tata Sahar to Goregaon R/S
- 25 . 220 kV Saki-Versova Transmission Line (10 km) from Saki Receiving Station to Versova Receiving Station
- 26 . 220 kV Sewri-Antop Hill Transmission Line (8.0 km) from Sewri Receiving Station to Antop Hill Receiving Station
- 27 . 220 kV Sewri-Mahalaxmi Transmission Line (10.0 km) from Sewri Receiving Station to Mahalaxmi Receiving Station
- 28 . 220 kV Sewri-Parel 1 Transmission Line (5.0 km) from Sewri Receiving Station to Parel Receiving Station
- 29 . 220 kV Sewri-Parel 2 Transmission Line (5.0 km) from Sewri Receiving Station to Parel Receiving Station
- 30 . 220 kV Sewri-Versova 1 Transmission Line (25.0 km) from Sewri Receiving Station to Versova Receiving Station
- 31 . 220 kV Sewri-Versova 2 Transmission Line (25.0 km) from Sewri Receiving Station to Versova Receiving Station
- 32 . 220 kV Borivali (East) - Dahisar (East) Transmission Line (5 km) from Tata Borivali (East) Receiving Station to Dahisar (East) Receiving Station
- 33 . 220 kV Tata Borivali to Goregaon (East) Transmission line (8 km) from Tata Borivali to Goregaon R/S
- 34 . 220 kV Trombay-Dharavi-Salsette 1 Transmission Line (25.0 km) from Trombay to Dharavi to Salsette Receiving Station
- 35 . 220 kV Trombay-Dharavi-Salsette 2 Transmission Line (25.0 km) from Trombay to Dharavi to Salsette Receiving Station
- 36 . 220 kV Uran-Sewri Transmission Line (22.0 km) from Uran Receiving Station to Sewri Receiving Station
- 37 . 220 kV Vikhroli (East) – Vikhroli (West) 1 Transmission Line (4.0 km) from Vikhroli (East) Receiving Station to Vikhroli (West) Receiving Station

- 38 . 220 kV Vikhroli (East) – Vikhroli (West) 2 Transmission Line (4.0 km) from Vikhroli (East) Receiving Station to Vikhroli (West) Receiving Station
- 39 . 220 kV Vikhroli-Sahar Transmission Line (8.0 km) from Vikhroli Receiving Station to Sahar Receiving Station.
- 40 . 110 kV Backbay - Carnac Transmission Line (5 km) from Backbay Receiving Station to Carnac Receiving Station
- 41 . 110 kV Chunabhatti-BKC Transmission Line (8 km) from Chunabhatti Receiving Station to BKC Receiving Station
- 42 . 110 kV Dharavi-Kurla 1 Transmission Line (5.0 km) from Mithi River Receiving Station to Kurla Receiving Station
- 43 . 110 kV Dharavi-Kurla 2 Transmission Line (5.0 km) from Mithi River Receiving Station to Kurla Receiving Station
- 44 . 110 kV Saki-Powai Transmission Line (4 km) from Saki Receiving Station to Powai Receiving Station

Proposed List of Bays

Item No.	Description
1 .	2 No. of 400 kV Bays at 400 kV Dehrand Receiving Station
2 .	8 No. of 400 kV Bays at 400 kV Marve Receiving Station
3 .	2 No. of 400 kV Bay at 400 kV MSETCL Kharghar Receiving Station
4 .	4 No. of 400 kV Bays at 400 kV Nagothane Receiving Station
5 .	1 No. of 400 kV Bay at 400 kV Panvel Receiving Station
6 .	7 No. of 400 kV Bays at 400 kV Sewri Receiving Station
7 .	16 No. of 400 kV Bays at 400 kV Vikhroli Receiving Station
8 .	6 No. of 220 kV Bays at 220 kV Antop Hill Receiving Station
9 .	7 No. of 220 kV Bays at 220 kV Wadala Receiving Station
10 .	9 No. of 220 kV Bays at 220 kV Chunabhatti Receiving Station
11 .	9 No. of 220 kV Bays at 220 kV Dahisar (East) Receiving Station
12 .	1 No. of 220 kV Bay at 220 kV Dharavi Receiving Station
13 .	9 No. of 220 kV Bays at 220 kV Goregaon (East) Receiving Station
14 .	1 No. of 220 kV Bay at 220 kV Kalwa Receiving Station
15 .	10 No. of 220 kV Bays at 400 kV Marve Receiving Station
16 .	7 No. of 220 kV Bays at 220 kV Mira Road (West) Receiving Station
17 .	28 no. of 220 kV Bays at Navi Mumbai International Airport Switching Station
18 .	7 No. of 220 kV Bays at 220 kV Parel Receiving Station
19 .	1 No. of 220 kV Bay at 220 kV Salsette Receiving Station
20 .	17 No. of 220 kV Bays at 400 kV Sewri Receiving Station

- 21 . 7 No. of 220 kV Bays at 220 kV Versova Receiving Station
- 22 . 22 No. of 220 kV Bays at 400 kV Vikhroli Receiving Station
- 23 . 9 No. of 220 kV Bays at 220 kV Vikhroli (West) Receiving Station
- 24 . 11 No. of 110 kV Bays at 110 kV Carnac Receiving Station
- 25 . 10 No. of 110 kV Bays at 220 kV Chunabhatti Receiving Station
- 26 . 41 No. of 110 kV Bays at 110 kV Dharavi Receiving Station
- 27 . 5 No. of 110 kV Bays at 110 kV Kurla Receiving Station
- 28 . 11 No. of 110 kV Bays at 110 kV Malad Receiving Station
- 29 . 18 No. of 110 kV Bays at 220 kV Parel Receiving Station
- 30 . 14 No. of 110 kV Bays at 110 kV Saki Receiving Station
- 31 . 7 No. of 110 kV Bays at 400 kV Sewri Receiving Station
- 32 . 11 No. of 110 kV Bays at 110 kV Versova Receiving Station
- 33 . 19 No. of 110 kV Bays at 110 kV Vikhroli Receiving Station
- 34 . 17 No. of 33 kV Bays at 220 kV Antop Hill Receiving Station
- 35 . 13 no. of 33 kV Bays at BKC Receiving Station
- 36 . 23 No. of 33 kV Bays at 220 kV Wadala Receiving Station
- 37 . 14 No. of 33 kV Bays at 220 kV Borivali Receiving Station
- 38 . 17 No. of 33 kV Bays at 220 kV Chunabhatti Receiving Station
- 39 . 27 No. of 33 kV Bays at 220 kV Dahisar (East) Receiving Station
- 40 . 50 No. of 33 kV Bays at 110 kV Dharavi Receiving Station
- 41 . 27 No. of 33 kV Bays at 220 kV Goregaon (East) Receiving Station
- 42 . 23 No. of 33 kV Bays at 110 kV Kurla Receiving Station
- 43 . 23 No. of 33 kV Bays at 110 kV Mankhurd Receiving Station.
- 44 . 23 No. of 33 kV Bays at 400 kV Marve Receiving Station
- 45 . 23 No. of 33 kV Bays at 220 kV Mira Road (West) Receiving Station
- 46 . 23 No. of 33 kV Bays at 220 kV Parel Receiving Station
- 47 . 11 No. of 33 kV Bays at 110 kV Powai Receiving Station
- 48 . 12 No. of 33 kV Bays at 110 kV Saki Receiving Station
- 49 . 23 No. of 33 kV Bays at 400 kV Sewri Receiving Station
- 50 . 21 No. of 33 kV Bays at 220 kV Versova Receiving Station
- 51 . 14 No. of 33 kV Bays at 110 kV Versova Receiving Station
- 52 . 23 No. of 33 kV Bays at 400 kV Vikhroli Receiving Station
- 53 . 34 No. of 33 kV Bays at 110 kV Vikhroli Receiving Station
- 54 . 27 No. of 33 kV Bays at 220 kV Vikhroli (West) Receiving Station