

Ref: RA/II/002/17-18/1613



07th August, 2017

To,
The Secretary,
West Bengal Electricity Regulatory Commission
FD-415 A, Poura Bhawan, 3rd Floor,
Sector- III, Bidhannagar,
Kolkata- 700106

8/8/17 17:20 PM

Sub - Reply to Hon'ble Commission query in the matter of 'Application for in-principle clearance' for construction of 3 phase 132 kV Double circuit Transmission line from J K Nagar to Railway Traction Feeding point at Pandaveswar

Kindly Ref – Letter No WBERC/OA-230/16-17/0614 dated 17 July, 2017.

Respected Sir,

We are in receipt of the aforementioned letter, and submit our replies/ clarifications in the manner as under

1. Reply to Para 1

It is submitted that the 132 KV, 3 phase single circuit line from J K Nagar to Pandabeswar TSS for supply of power to Eastern Railway is through Bankola GSS as per clause 3 & 4 of the Agreement entered between IPCL and Eastern Railways..For better appreciation, the relevant clauses are as extracted below.

"Clause (3) - That IPCL shall cater the load by 3 phase, 132 kv Single Circuit Transmission line on Double Circuit Tower from J.K.Nagar to Railway's traction feeding point at Pandabeswar /TSS

Clause (4) - IPCL will sort out Right of Way (ROW) issue from Bankola GSS/J.K Nagar to Railways traction feeding point at Pandabeswar/TSS. However, Railway would extend necessary cooperation wherever practicable "

As regards to the point of supply, it is submitted that as per Clause 5 of the agreement between IPCL and Eastern Railways, - *"The point of supply shall be the outgoing terminal of the first 132 kV isolating device in the J.K.Nagar end of metering point"*.

Accordingly, IPCL would like to submit that it has already submitted detailed drawing of the proposed network in its submission dated 10 June, 2016. For ready reference the same has been attached as **Annexure I** which clearly shows that point of supply is outgoing terminal of first 132 kV isolating device in the J K Nagar end of Metering point. Further, a schematic diagram of the proposed network in the Pandabeswar area is placed as **Annexure II**, and it is requested that both the Annexure's I & II may kindly be kindly taken on record.

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It is submitted that, with Eastern Railways, insisting on receiving supply by a 3 phase, 132 KV Single Circuit transmission line on Double Circuit Tower from J.K.Nagr to Railways traction feeding point at Pandabeswar T/SS, a spare capacity for another circuit was created which would have otherwise remain unutilized.

Accordingly, keeping in mind the growth potential in the area, the difficulty in getting Right of Way to lay down transmission lines in future, and for the purposes of providing for power supply redundancy, the spare capacity of the Double Circuit Tower was proposed to be utilized by laying down another 3 phase 132 KV single circuit line with LILO arrangement enroute to the proposed 132/33 kv S/S at Dhasal and subsequently to the proposed 132/33 kv S/S at Bankola. Thus Bankola S/S would have two no's of 3 phase 132 kv, line one directly from JK Nagar and one through Dhasal S/S, leading to increase in system reliability. Such an arrangement would help IPCL to comply with clause 24 of the agreement between Eastern Railways, which states that "IPCL hereby guarantees 99.95% which is 8755.62 hours per annum availability of power to E.R except for reasons falling within Force Majeure Clause."

IPCL submits that the entire network infrastructure development plan has been conceptualized for optimum utilization of the network to cater to the future load growth, need for system augmentation and for making it ready for future LT network development. It may be noted that, the existing 33/11 KV of Dhasal & Bankola is being integrated with the proposed 132/33kv network for future growth of consumers at 132 KV, 33 KV, 11 KV and LT voltage levels.

The proposed LILO arrangement on the proposed 132 kv 3 phase single circuit from JK Nagar to Dhasal, besides optimum network utilization will also lead to better voltage profiling across the area. The proposed 132/33 S/S at Dhasal will augment the existing 33/11 KV S/S at IKRA and NIGHA and will cater to the existing consumers and the future LT expansion plan with is not specific to any consumer. Similarly, the proposed 132/33 KV S/s at Bankola will augment the existing 33/11 KV substation at Bankola and cater to the load growth in Bankola and Haripur S/S. Consequently, network expansion and voltage stability will meet load requirements in the areas of Dobrana, Parasia, Kunustoria, Jamuria, Haripur, Dhasna, Dhandadihi

Sharing of Costs by Railway Authorities

IPCL reiterates that the entire network proposed to be built is not for specific consumers. The Railways being a major consumer, is incidental to the larger plan and that in compliance with Sec 46 of the Electricity Act 2003, and WBERC Regulations, have agreed to share the cost of lines and equipment specific to it.

In compliance to the regulations, Eastern Railway has made payment to IPCL an amount of Rs 13.93 Crore towards construction of the Single Circuit line on a Double Circuit Tower from J K Nagar to Railway's traction feeding point at Pandabeswar TSS. For better appreciation, clause (6) of the Agreement between IPCL and Eastern Railways is as below

Clause 6:

"That E.R will arrange for payment of Rs 13.93 Crores (Rupees thirteen Crores ninety three lakhs) towards the cost of 132 kv transmission line, Bay extension, equipments etc. (hereinafter collectively referred to as a Service Line) and Apparatus necessary for the purpose of giving supply at the point of Pandabeswar TSS"

Accordingly, the line has been constructed as per the requirements of Eastern railways.

Further, IPCL submits that as per the cost sharing principles applicable to railways, the prospective consumers in the area, with large loads will also be liable to pay for the cost of the extended network in proportion to their respective connected loads as per Clause 4 of WBERC (Recovery of Expenditure for Providing New Connections) Regulations 2013,

IPCL further submits that Section 5.8.1 of National Electricity Policy notified by Central Government promotes investments by private sector, extracts of which are as below.

5.8.1 To meet the objective of rapid economic growth and "power for all" including household electrification, it is estimated that an investment of the order of Rs.9,00,000 crores at 2002-03 price level would be required to finance generation, transmission, sub-transmission, distribution and rural electrification projects. Power being most crucial infrastructure, public sector investments, both at the Central Government and State Governments, will have to be stepped up. Considering the magnitude of the expansion of the sector required, a sizeable part of the investments will also need to be brought in from the private sector. The Act creates a conducive environment for investments in all segments of the industry, both for public sector and private sector, by removing barrier to entry in different segments. "

Accordingly, infrastructural development by private players should be promoted to meet the objective of Power for all.

2. Reply to Para No. 2

Reply to Para 2(a) – It is submitted that the transformer rating has been shown in the schematic diagram as in **Annexure II**.

Reply to para 2 (b) – It is submitted that the licensee has submitted the network diagram in its reply to query dated 2nd June 2017 and requests the Hon`ble Commission to take the same on record. Further the schematic diagram as in **Annexure II**.

Reply to para 2 (c) – It is respectfully submitted that 100 MVA proposed load towards Andal is a not a part of the current proposal for construction of 3 phase 132 KV Double Circuit Transmission line from J K Nagar to Railway Traction Feeding point at Pandabeswar.

The 100 MVA proposed load towards Andal is a part of the petition no –OA-241/16-17 for "in principle clearance from WBERC for 220/132/33/11 KV Infrastructural Development at Kalyaneswari and 220/132/33/11/0.4 kv infrastructural development in and around Andal, and already stands included and explained. The petition was submitted on 16th November 2016 and is under adjudication by the Hon`ble WBERC.

Yet for the purpose of explaining it is submitted that the 100 MVA proposed load towards Andal is in context of the load growth in the Bengal Aerotropolis Area (BAPL) which includes the township and the Kazi Nazrul Hasan Airport. It is estimated that power requirement from BAPL would be to the tune of 100 MVA and above.

The power requirement for the BAPL project boundary has been estimated considering phase wise area development and power demand of subsequent upcoming facilities. Following voltage levels are proposed for power distribution:

- 220 kV voltage level is proposed to be selected as main receiving voltage level
- 33 kV voltage level is proposed to be selected as primary distribution voltage for distribution to 33/11 kV substation and major load centers.
- 11 kV voltage is proposed to be selected as secondary distribution voltage for secondary distribution substations and larger consumers such as industries and logistics. IT parks, Hospitals etc.
- 415 volt has been selected for various LT loads.

The Phase wise power requirement is shown in Table as below:

S.No	Phases	Area Development in Acre	Substation -1 load in MW	Substation -2 load in MW	Substation -3 load in MW	Substation -4 load in MW	Substation -5 load in MW	Total Load in Individual Phases in MW
1	Phase - 1	705.22	13.89	2.00	14.37	-	1.60	55.47
2	Phase-2	167.45	0.61	2.76	3.22	-	10.00	28.88
3	Phase-3	265.64	3.30	14.50	-	-	6.77	42.78
4	Phase-4	205.69	-	3.53	-	21.18	0.27	43.48
5	Total	1344	17.80	22.79	17.58	21.18	18.65	98
6	Overall diversity Factor		1.15	1.15	1.15	1.15	1.15	1.15
7	Load Power Factor		0.85	0.85	0.85	0.85	0.85	0.85
8	Total Demand in MVA	1344	31.7	40.6	31.32	37.73	33.2	100

3. Reply to Query No. 3

It is submitted that the overall cost based on the Bill of Quantity submitted as a part of the DPR is Rs 64.51 Crs (excluding IDC & margin money for WC).

As explained in previous paragraphs, the costs have been arrived by taking into account a holistic view of the overall load growth in the area, the need for system augmentation, system strengthening and development of LT networks. The railways requirement is incidental to the whole proposal and not directed for specific consumers. Further, future consumers with large loads, will have to share the network costs as per sec 46 of the Electricity Act and WBERC Regulation pertaining to recovery of expenditure for providing new connections) regulations 2013. Accordingly, the beneficiaries are not limited to Railways alone but in consonance to the aim of overall system infrastructure development for common benefits to all.

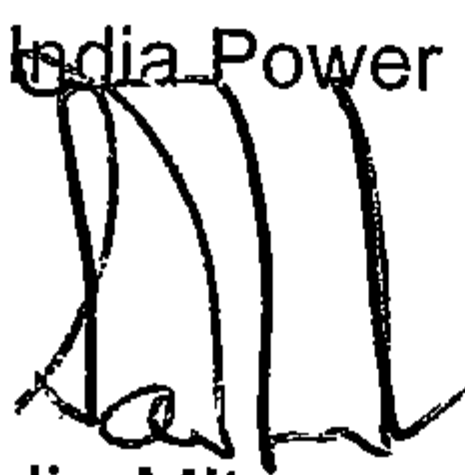
The licensee in accordance to section 46 of the Electricity Act 2003 and WBERC (Recovery of Expenditure for Providing New Connections) Regulation 2013, vide clause 4, have apportioned the costs between Eastern Railways and Others in a manner as below.

Contribution From	Amount (Rs. Crore)	Break Up of Cost allocation	Creore
Eastern Railways	14	Bankola - Panadabeswar 132 kV Line exclusive for Railways	8
		132 kV Metering arrangement for Railways	0.5
		J K Nagar to Bankola 132 kV Line (part finance in % as per Railway loading only)	5.5
Others	50.51	J K Nagar to Bankola 132kV line (remaining cost in % of other loading excl. Railway load)	11.5
		J K Nagar 220/132 kV SS (GIS)	13.55
		Dhasal 132/33 kV S/S with T/F & Tr. Line	13.82
		Bankola 132 /33kV S/S with T/F	10.01
		Renovation of Exstg. D/C Tr. Line from Kalipahari to J K Nagar	1.63

IPCL would like to reiterate that the whole infrastructural development is for system augmentation, LT development and system strengthening purpose to provide better quality services. Pandaveswar project happens to be part of the project as is as per the agreement entered between Eastern Railways and IPCL.

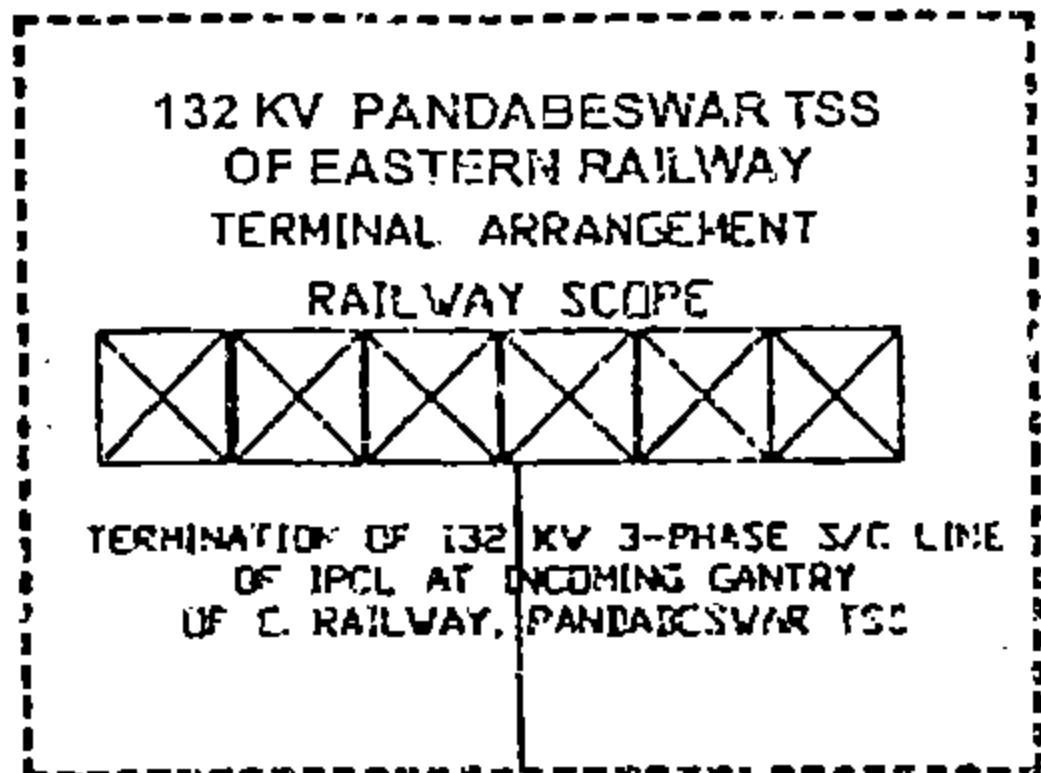
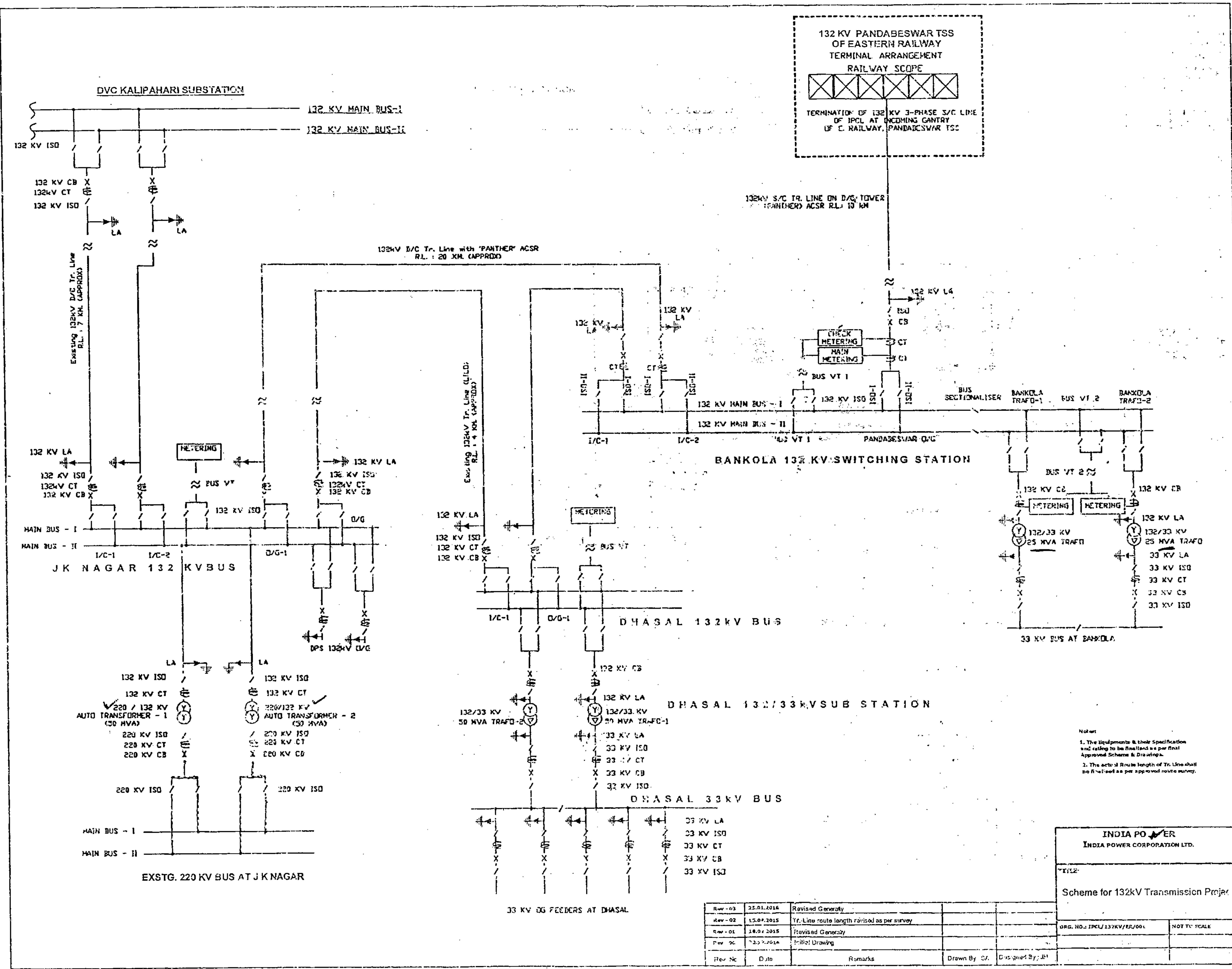
The Hon`ble Commission is humbly requested to acknowledge the receipt of the above clarifications and allow the petition filed for "in principle clearance" for construction of 3 phase 132 KV line from JK Nagar to Pandabeswar/TSS.

Thanking You
Yours faithfully,
For India Power Corporation Limited


Sandip Mitra

Vice President-Regulatory Affairs and Budget
India Power Corporation Limited
(Formerly known as DPSC Ltd)

Encl.: As above



- Notes:
1. The equipments & their Specification and rating to be finalized as per final Approved Scheme & Drawings.
 2. The actual Route length of Tr. Line shall be fixed as per approved route survey.

INDIA POWER CORPORATION LTD.	
Sector-V Salt Lake City Kolkata-700 091	
Scheme for 132kV Transmission Project	
ORG. NO.: IPCL/132KV/EP/001	NOT TO SCALE

Rev - 03	25.01.2016	Revised Generally			
Rev - 02	15.07.2015	Tr. Line route length revised as per survey			
Rev - 01	18.04.2015	Revised Generally			
Rev - 00	23.07.2014	Initial Drawing			
Rev No	Date	Remarks	Drawn By	Checked By	



