ORDER

OF THE

WEST BENGAL ELECTRICITY REGULATORY COMMISSION

IN CASE NO: OA – 433 / 22 – 23

IN REGARD TO THE APPLICATION SUBMITTED BY THE WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED (WBSETCL) FOR APPROVAL OF INCURRING CAPITAL EXPENDITURE OF AN ESTIMATED COST OF RS. 23,883.42 LAKH FOR IMPLEMENTATION OF DIFFERENT NEW TRANSMISSION SCHEME IN TERMS OF REGULATION 2.8.2.3 AND PARAGRAPH 4.1 (VI) OF SCHEDULE – 2 OF THE WEST BENGAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITION OF TARIFF) REGULATIONS, 2011, AS AMENDED

PRESENT
SRI MALLELA VENKATESWARA RAO, CHAIRPERSON
SRI PULAK KUMAR TEWARI, MEMBER

DATE: 20.02.2023

FACTS IN BRIEF

1.0 The West Bengal State Electricity Transmission Company Limited (in short 'WBSETCL') submitted an application dated 20.09.2022 for the approval of incurring Capital Expenditure to an estimated cost Rs. 23,883.42 Lakh for implementation of different transmission schemes along with the Detailed Project Reports (DPR) in terms of regulation 2.8.2.3 and Paragraph 4.1 (vi) of Schedule – 2 of the West Bengal Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2011, as amended from time to time (in short 'WBERC Tariff Regulations'). The Commission has admitted the application and registered in Case No. OA – 433/22–23.

2.0 WBSETCL, in its application, inter-alia stated the following:

2.1 **Construction of Habibpur 132/33 kV Gas Insulated Substation (GIS) and associated transmission system:**

2.1.1 The Habibpur 132/33 kV GIS is proposed to be set up at Mouza–Bodrail, Malda District, West Bengal. The project is scheduled to be commissioned in next two years within 2024-25.

2.1.2 New Habibpur 132/33 kV Gas Insulated Substation (GIS) will be established with construction of double Circuit (D/C) connectivity with Gazol 220 KV GIS Substation through 2 x 50 MVA 132/33 kV Transformers. The Substation will have: 2 nos. 132 KV feeder bays, 2x50 MVA, 132/33 KV transformers, 10 nos. 33 KV feeder bays and 2x10 MVAR, 33 KV Capacitor Bank. 2 nos. 132 KV GIS Bays at Gazol 220/132 KV GIS will be constructed for 132 KV D/C Connectivity through construction of 132 KV D/C Transmission line from Gazol 220 KV GIS to proposed Habibpur 132 KV GIS.

2.1.3 At present, the Habibpur 33/11 kV substation is connected to Malda 132/33 KV Substation via Rabindra Bhavan 33/11 KV Substation. Another source of Habibpur 33/11kv Substation is Bamangola/Gurnagar 33/11 KV which is connected to Samsi 132/33 KV Substation via Gazol 33/11 KV substation. Mubarakpur 33/11KV substation is connected to both Gazol 220KV GIS and Malda 132/33 KV substation.

Presently, demand of these area is being met from Gazol 220 kV GIS and Malda 132 kV Sub-station. The maximum demand on 132/33 kV transformers at Malda 132 kV Sub-station is around 95% of its installed capacity (3x50 MVA). The maximum demand on 132/33 kV transformers at Gazol 220 kV GIS is around 54% of its installed capacity (2x50 MVA). Establishment of EHV grid

Sub-station in this region seemed essential for betterment of voltage and to cope up future load growth in this vicinity.

After establishment of Habibpur 132/33KV GIS, Bamangola/Gurnagar, Mubarakpur and Kalaibari 33/11 KV Substations will be fed from Habibpur 132/33 KV GIS.

2.1.4 132/33 KV Transformers at Malda, Gazol 220 KV GIS and upcoming Habibpur 132 KV GIS will be operated at N-1 Contingency. Later in future, around 45 MVA load will be connected directly to the 33 KV bus of Habibpur 132/33 KV GIS.

2.1.5 The Habibpur project was contemplated in Rolling Plan up to 2025 – 26 which was approved by the Board of Directors (BoD), WBSETCL in its 76th meeting held on 28.12.2020 to cater growing demand in and around Habibpur, Pannapur, Bulbulchandi and Pakuahat in District Malda.

2.1.6 Establishment of 132 kV Gas Insulated Sub-station at Habibpur is proposed to be constructed on 1.54 Acre Govt. land at Mouza – Bodrail, J.L No.-167, P.S. - Habibpur, District - Malda. Accordingly, Long Trem Settlement (LTS) of the 1.54 Acre Govt. land is executed in favour of WBSETCL for construction of 132 kV GIS and permissive possession of the land has already been obtained from BL & LRO, Habibpur, Malda on 25th March 2021.

WBSETCL has further stated that due to urgent requirement of the beneficiary (WBSEDCL), execution of the project is being initiated after obtaining the permissive possession from BL & LRO, Habibpur without completing necessary formalities of leasing of property but action has been taken regarding preparation of lease deed of land complying with the provision of Regulation 5.11 of West Bengal Electricity Regulatory Commission (Licensing and Condition of License) Regulations, 2013.

2.1.7 The project will be funded through WBSETCL's Internal Resources (IR) and through domestic borrowings. The equity component to be met through IR and the loan component through domestic borrowings from any financial institute in the ratio of 30:70. The interest during construction works out to Rs. 845.73 Lakh (Rs 807.93 lakh + Rs 37.80 lakh) and the interest rate for the loan is @ 9.50% for the domestic funding with a payback period of 9 years 6 months for sub station and Line and 10 years for Bays. Therefore, the total project cost including IDC emerges to Rs. 10901.42 Lakh as follows:

Sl. No.		Description	Amount (₹ in Lakh)
A	i.	Construction of Habibpur 132/33 KV GIS with 2 nos. 132 KV feeder bays, 2x50 MVA, 132/33 KV transformers, 10 nos. 33 KV feeder bays and 2x10 MVAR, 33 KV Capacitor Bank.	3,762.97
	ii.	Construction of 132 KV D/C Transmission line from Gazol 220 KV GIS to proposed Habibpur 132 KV GIS (D/C RL =26.19 km and M/C RL= 0.192 km)	4685.63
	iii.	Total Cost (i + ii)	8,448.60
	iv.	Supervision Charge @ 10% of iii	844.86
	v.	**Total Project Cost (iii + iv)**	**9,293.46**
	vi.	IDC	807.93
	vii.	**Project Cost including IDC of Part A (v + vi)**	**10,101.39**
B	i.	Construction of 2 nos. 132 KV GIS Bays at Gazol 220/132 KV GIS for 132 KV D/C Connectivity with proposed Habibpur 132 KV GIS.	692.94
	ii.	Supervision Charge @ 10% of i	69.29
	iii.	**Total Project Cost (i + ii)**	**762.23**
	iv.	IDC	37.80
	v.	**Project Cost including IDC of Part B (iii + iv)**	**800.03**
Total (A+B)			**10,901.42**

2.1.8 WBSETCL has proposed that the projects will revive the distribution system in the concerned areas, improve overall redundancy in the system and thus any contingency can be tackled.

Construction of the new 132/33 KV GIS at Habibpur at District Malda will add the following benefits:

a) Improvement in voltage profile in the area and in system stability and reduction in technical energy losses.

b) Additional sale of energy by WBSEDCL in the project command area.

c) Enhancement of system reliability, reduction in customer interruption frequency index and customer interruption duration index.

d) Better reliability & quality of power will promote Industrial development in sector

2.2.0 **Upgradation of Raghunathpur 132/33 KV Substation to 220/132/33 KV Substation and Associated Transmission System**:

2.2.1 Existing Raghunathpur 132/33 KV Substation has 132 KV double circuit (D/C) Connectivity with 132 KV Bankura Substation and 132 KV D/C connectivity with Hura 220/132/33 KV Substation.

2.2.2 At present, Santaldih Thermal Power Station (STPS) of WBPDCL has 220 KV single circuit (S/C) connectivity with Asansol, J.K. Nagar, Chandil, New Bishnupur & Hura 220 KV Substation and 132 KV D/C connectivity with Purulia 132 KV Substation. There happens reduction of generation by 50 – 75 MW at STPS even if only one feeder goes out of service at any point of time would incur financial loss for WBPDCL.

2.2.3 For proper evacuation of power from STPS of WBPDCL, Raghunathpur 132 KV Substation will be upgraded to 220 KV by construction of the following:

(i) Raghunathpur 220 KV GIS with 2 x 160 MVA, 220/132 KV Transformers and 4 nos. 220 KV feeder bays (2 for STPS-Raghunathpur D/C, 1 for Raghunathpur – Hura S/C and 1 for Raghunathpur – Bishnupur S/C)

(ii) 2 nos. 220 KV line Bays at Hura 220 KV Substation for proposed Raghunathpur 220 KV GIS (one for 220 kv STPS – Hura line another for 220 kv Raghunathpur – Hura line)

(iii) 220 KV D/C transmission line from 220 KV switchyard of STPS to proposed Raghunathpur 220 KV GIS along with modification of existing network for establishment of 220 KV STPS–Hura D/C, Hura–Raghnathpur S/C, Hura–New Bishnupur S/C and Raghunathpur– New Bishnupur S/C for reorientation of connectivity of STPS with Raghunathpur, Hura & New Bishnupur.

2.2.4 In the upgradation mentioned above, reorientation of connectivity of STPS with Raghunathpur, Hura & New Bishnupur is also considered to resolve the feeder constraint of STPS.

Post reorientation of connectivity will modify: (i) STPS – Hura 220 KV S/C to STPS – Hura 220 KV conductor and tower STPS – New Bishnupur 220 KV S/C, (ii) Hura – Raghunathpur 132 KV D/C having 220 KV conductor and tower to Hura – Raghunathpur 220KV S/C and (iii) the remaining portion of Hura – Raghunathpur 132 KV D/C having 220 KV conductor & tower and for New Bishnupur – STPS 220 KV S/C is utilized to establish Raghunathpur – New Bishnupur 220 KV S/C.

2.2.5 Upgradation of Raghunathpur 132 KV Substation to 220 KV GIS with 220 KV D/C Transmission line from Santaldih Thermal Power Station (STPS) of WBPDCL to proposed Raghunathpur 220 KV GIS has been contemplated in the Approved Rolling Plan up to 2025 – 26 which was accorded by BoD of WBSETCL in its 76th meeting held on 28.12.2020.

2.2.6 WBSETCL has stated that for upgradation of the sub-station no land is required to be acquired since it will be constructed within the vacant space available within Raghunathpur 132/33 kV sub-station of WBSETCL.

2.2.7 The project will be funded through WBSETCL's Internal Resources (IR) and through domestic borrowings. The equity component to be met through IR and the loan component through domestic borrowings from any financial institute in the ratio of 30:70. The interest during construction (IDC) works out to be Rs. 1056.91 Lakh (Rs 708.11 lakh + Rs 348.80 lakh) and the interest rate for the loan is @ 9.50% for the domestic funding with a payback period of 9 years 6 months. Therefore, the total project cost including IDC emerges to Rs. 12,982 Lakh as follows:

Sl. No.		Description	Amount (₹ in Lakh)
A	i.	Upgradation on Raghunathpur 132 KV Substation to 220 KV by construction of Raghunathpur 220 KV GIS with 4 nos. 220 KV feeder bays and 2x160 MVA 220/132 KV Transformers.	5,728.08
	ii.	Construction of 2 nos. 220 KV line Bays at Hura 220 KV Substation for proposed Raghunathpur 220 KV GIS.	319.59
	iii.	Total Cost (i + ii)	6047.67
	iv.	Supervision Charge @10% of iii	604.77
	v.	Project Cost (iii+iv)	6,652.44
	vi.	IDC	708.11
	vii.	**Project Cost including IDC & Supervision of part A (v + vi)**	**7,360.55**
	i.	Construction of 220 KV D/C transmission line from 220 KV switchyard of STPS to proposed Raghunathpur 220 KV GIS within the premises of Raghunathpur 132 KV Substation (RL= 22.14 km D/C OH and RL= 0.555 km D/C UG Cable) along with modification of existing network for establishment of 220 KV STPS–Hura D/C, Hura–Raghnathpur S/C, Hura–New Bishnupur S/C and Raghunathpur– New Bishnupur S/C.	4,793.32
	ii.	Supervision Charge	479.33

Sl. No.		Description	Amount (₹ in Lakh)
B.	iii.	Project Cost (i+ii)	5,272.65
	iv.	IDC	348.80
	v.	**Project Cost including IDC & Supervision of part B (iii + iv)**	**5,621.45**
Total (A+B)			**12,982.00**

2.2.8 WBSETCL has proposed that scheme will facilitate proper power evacuation of STPS of WBPDCL, revive the transmission system in the area by providing reliable source to existing and proposed substations, improve operation flexibility and redundancy, promote reliability of the system and consumer satisfaction.

Upgradation of the Substation 220 KV GIS at Raghunathpur at District Purulia will add the following benefits:

a) Proper evacuation of power generated at Santaldih Thermal Power Station of WBPDCL.

b) Improvement in voltage profile and stability and reduction in technical energy losses.

c) Enhancement of system reliability, reduction in customer interruption frequency index and customer interruption duration index.

d) Better reliability & quality of power will promote Industrial development in sector as well as socio-economic development in the area.

3.0 WBSETCL has further submitted the following:

3.1 The unit rates for all equipment for transmission lines & substations have been considered from latest cost data (which was prepared based on the unit equipment rate obtained from Procurement Department of WBSETCL as on 23.11.2021, average of unit rates of latest three LOAs and PWD rate) and are inclusive of all Taxes & Duties. For Cash flow study & IRR calculation, 15 years repayment period including Mortarium period of initial 3 years is considered. Life span of the asset is considered 25 years for the Substation asset and 35 years for the line asset. Power Map of West Bengal as on 31.08.2021, single line diagram, financial calculations, detailed estimate for Sub-station, detailed estimate for Line, detailed estimate for Bay, Power flow study snaps-shots, BOD approval of the projects, Technical & Administrative Approval Order are

enclosed for reference.

3.2 WBSEDCL is the target beneficiary of the projects. The projects are in pre-tender engineering stage.

4.0 The Commission, after carefully analyzing, admitted the application on 01.11.2022 and directed WBSETCL to publish the gist of their application as approved by the Commission in the newspapers as also in the website of WBSETCL as per requirement of regulation 2.8.2.3 of the WBERC Tariff Regulations. WBSETCL accordingly published the gist of the application in (i) The Telegraph (ii) the 'Times of India' (iii) the 'Aajkaal' and (iv) the 'Bartaman' on 20.11.2022 and in their website inviting suggestions and objections on their application within 21 days (including the date of publication) of publication of the notice in Newspaper. No suggestion and objection were received by the Commission within the stipulated time-period.

OBSERVATIONS OF THE COMMISSION

5.0 The Commission observes that, in terms of Regulation 2.8.2.3 of WBERC Tariff Regulations, approval of the Commission for investment in new transmission project is mandatory after 31.12.2007. The Commission also observes that the regulation inter-alia specifies approval of the project shall be taken before investment is made in order to minimize the investment risk.

6.0 The Commission has noted that the upgradation of Raghunathpur 132/33 kV Sub-station to 220/132/33 kV Substation and Associated Transmission System project submitted in the instant application have been considered in the perspective plan submitted by WBSETCL along with their Multi Year Tariff Application for the 7th Control Period for the years 2020 – 21, 2021 – 22 and 2022 – 23 which was approved by the Commission in the Tariff Order for WBSETCL in Case No. TP - 90/19 - 20 dated 25.06.2021 in terms of regulation 2.9.3 of the WBERC Tariff Regulations.

7.0 The Commission has noted that the Habibpur 132/33 kV Gas Insulated Substation (GIS) and associated transmission system project submitted in the application have been considered in the Rolling Plan submitted by WBSETCL along with their Multi Year Tariff Application for the 8th Control Period for the years 2023 – 24, 2024 – 25 and 2025 – 26 and the tariff petition is admitted by the Commission.

8.0 Commission observes that the proposed upgradation of the Raghunathpur 132/33 kV sub-station will be constructed within the vacant space available within Raghunathpur 132/33 kV sub-station of WBSETCL but Habibpur 132/33 kV Gas Insulated Substation (GIS) is to be set up on 1.54 acres of vacant land of Govt. of West Bengal and taking over of this land is under process. In terms of regulation 5.11 of the West Bengal Electricity Regulatory Commission (Licensing and Condition of License) Regulation, 2013, WBSETCL is required to take prior approval from the Commission before taking over or acquiring by purchase of the land.

9.0 The Commission further observes the following:

The proposed Habibpur 132/33 kV Gas Insulated Substation (GIS) at Bodrail, Malda District will cater growing load demand in and around Habibpur, Pannapur, Bulbulchandi and Pakuahat in District Malda and will supply adequate, reliable & quality power in the vicinity for existing and prospective consumers.

The proposed upgradation of Raghunathpur 132/33 kV Sub-station to 220/132/33 kV Substation and associated transmission system will facilitate proper evacuation of power from Santaldih Thermal Power Station (STPS) of WBPDCL and schedule generation of STPS will not be interrupted due to outage of any one feeder of STPS. The scheme will be beneficial to mitigate source constraint of Bankura 132 kV Sub-station and proposed Saltora 132/33 kV GIS and to cater future load growth in the vicinity.

ORDER

10.0 The Commission after consideration all the facts and the project reports submitted by WBSETCL in their petition dated 20.09.2022, accords initial approval of the investment proposal of Rs. 23,883.42 Lakh (Rs 10901.42 lakh + Rs 12982.00 lakh) in terms of regulation 2.8.2.3 of the WBERC Tariff Regulations subject to approval of project cost in terms of regulation 2.8.5 of the WBERC Tariff Regulations.

11.0 The Commission also gives the following directions:

(i) For the purpose of capitalization WBSETCL will have to seek approval of the Commission for the project cost along with actual interest during construction and all actual expenditure incurred or apportioned to the project cost on account of spares, transportation, insurance, tax, establishment charges, tools and plants, audit and accounts, maintenance and losses during construction and consultancy charges and also any actual expenditure met out of

contingency. WBSETCL is to provide the cost break-up of each scheme showing the actual vis-à-vis estimation included in the total project cost as above.

(ii) WBSETCL shall ensure proper metering arrangement in line with Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time and arrangement for real time data display at SLDC control room before energization of the sub-station and associated Transmission Systems.

(iii) On completion of each project WBSETCL shall submit the COD and a benefit analysis of the project separately before the Commission.

(iv) Original project cost is required to be approved in terms of Regulation 2.8.5 of the WBERC Tariff Regulations. Commission may disallow any excess of project cost on capitalization over approved cost if it finds the justifications furnished are not adequate.

(v) In case of escalation in project cost in any scheme, WBSETCL shall take due approval from the Commission before capitalization of assets.

12.0 The Petition is thus disposed off. Let a copy of this order be served upon WBSETCL.

Sd/-
(PULAK KUMAR TEWARI)
MEMBER

Sd/-
(MALLELA VENKATESWARA RAO)
CHAIRPERSON

Dated: 20.02.2023

Sd/-
SECRETARY