



ORDER

OF THE

WEST BENGAL ELECTRICITY REGULATORY COMMISSION

IN CASE NO. OA- 458 / 23 - 24

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 Rs. 25146.70 Lakh for implementation of different 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:

DR MALLELA VENKATESWARA RAO, CHAIRPERSON

SRI PULAK KUMAR TEWARI, MEMBER

DATE: 13.05.2024



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 Rs. 25146.70 Lakh for implementation of different 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.



FACTS IN BRIEF

- 1.0 The instant petition has been filed by West Bengal State Electricity Transmission Company Limited (in short 'WBSETCL') on 05.07.2023 for the approval of incurring Capital Expenditure to an estimated cost Rs. 25146.70 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 – 458/23–24.
- 2.0 In the application, WBSETCL has submitted the brief description of the following scheme:
 - 2.1 **Construction of Beledurganagar 132/33/11 KV Gas Insulated Substation (GIS) and associated transmission system:**
 - 2.1.1 WBSETCL has proposed for establishment of new 132/33/11 kV GIS at Beledurganagar in the District of 24 Parganas (South) with 4x132 kV Feeder Bays, 2x50 MVA 132/33 KV Transformers, 12 numbers of 33 KV feeder bays, (1x20 + 1x10) MVAR 33 KV Capacitor Bank, 2x6.3 MVA 33/11 KV Transformers (available from system), 8 numbers of 11 KV outgoing feeders, 2 numbers 33/0.415 KV, 315 KVA Station Service Transformer, 2 numbers 33 KV Earthing Transformers, in addition to 2 numbers of 132 KV GIS bays at Sonakhali 132 KV GIS and approximately 33.54 km 132 KV D/C overhead Transmission Line from Sonakhali 132 KV GIS to proposed Beledurganagar 132/33/11 kV GIS in Joynagar-II Block in the District of 24 Parganas, West Bengal.
 - 2.1.2 The existing 220 KV Substation at Lakshmikantapur feeds Joynagar 33/11 KV Substation which is located at a distance of 11km. Present peak load of Joynagar substation is above 34 MVA. Joynagar 33/11 KV Substation has another connectivity with Uttarbhag 33 KV Substation (Subhashgram 220 KV source). The Lakshmikantapur 220 KV Substation further feeds Jamtala 33/11 KV Substation with present maximum demand over 18 MVA through a 33 KV single circuit (S/C) line. Another 33/11 KV Substation at Beliachandi with a load demand of 19 MVA receives power from Lakshmikantapur 220 KV Substation through a 33 KV S/C line. The Majilpur 33/11 kV Substation is located at a radial distance of 12 km from the Lakshmikantapur 220 KV Substation, also fed from this EHV Substation. The present aggregated load demand of these 33 kV Substations is about 90 MVA and these Substations are presently facing low voltage problem due



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to heavily loaded long distance 33 kV lines. Also, another 02 numbers 33/11 kV Substations at Manirhat and Herobhanga proposed by WBSEDCL are in pipeline.

2.1.3 After establishment of proposed Beledurganagar 132/33/11 KV GIS, the above mentioned 33 kV Substations will be fed from Beledurganagar 132 KV GIS with shorter line length as forecasted by WBSEDCL and will off load Lakshmikantapur 220 KV substation at 33 KV level. The 33 KV Bus of the proposed Beledurganagar 132 KV GIS will be operated in N-1 contingency.

2.1.4 WBSETCL has submitted that the project will revive the distribution system in the area, improve overall redundancy in the system and that any contingency can be tackled.

As submitted by WBSETCL, construction of new 132/33 KV GIS at Beledurganagar at District 24 Parganas (South) will add the following benefits:

- a) Improvement in voltage profile, system stability as well as reduction in technical loss in the area.
- 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 and quality of power will promote Industrial development in sector and also promote socio-economic development in the project area.

2.1.5 The proposed Beledurganagar 132 KV GIS is to be set up on the private land of about 3.06 Acre at Mouza-Beledurganagar, Joynagar-II block, under P.S. Bakultala, purchased by the Zilla Parishad and to be handed over to WBSETCL. The project is scheduled to be commissioned in next two years.

2.1.6 The Beledurganagar project is contemplated in Rolling Plan up to 2027-28 (target year 2024-25) which was approved by the BoD, WBSETCL in its 88th meeting held on 29.05.2023 to cater growing demand in and around Beledurganagar area in 24 Parganas (South) district.

3.0 The project cost, as submitted by WBSETCL in the DPR, covered under paragraph 2.0 above is tabulated as under:



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 Rs. 25146.70 Lakh for implementation of different 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.



Sl. No	Description	Amount (Rs lakh)
1	Construction of Beledurganagar 132/33/11 kV GIS with 04 Nos. 132 kV Feeder bays, 2x50 MVA 132/33/ kV Transformers, 12 nos. 33 kV feeder bays, (1x20+1x10) MVAR 33 KV Capacitor Bank, 2x6.3 MVA 33/11 KV Transformers (available from system), 8 nos. 11 KV outgoing feeders, 2 nos. 33/0.415 KV 315 KV Station Service Transformers and 02 nos. 33 KV Earthing Transformers.	5576.22
2	Construction of 2 nos. 132 KV GIS Bay at Sonakhali 132 KV GIS for Beledurganagar 132KV GIS.	478.32
3	Construction of 132 KV D/C Transmission line from Sonakhali 132 KV GIS to proposed Beledurganagar 132 KV GIS (Route Length \cong 33.54 KM).	5503.46
	Total Cost	11558.00
3	Supervision Charge	1155.80
	Total Project Cost including Supervision Charge	12713.80
4	IDC	757.16
	Project Cost Including Supervision Charge & IDC	13470.96

4.0 WBSETCL has further submitted the following:

4.1 The projects are proposed to be funded through WBSETCL's Internal Resources (IR) and through domestic borrowings. The equity component (30%) is proposed to be met through Internal Resources (IR) and the loan component (70%) through domestic borrowings from any Financial Institute. The interest during construction (IDC) is worked out to Rs. 757.16 Lakh with interest rate for the loan @ 9.50% for the domestic funding with a payback period of 9 years 6 months.

4.2 The unit rates for all equipment for transmission lines & substations have been considered from latest cost data obtained from Procurement Department of WBSETCL and inclusive of all Taxes & Duties. For Cash flow study & IRR calculation, 15 years repayment period including Mortarium period of initial 2 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 31.03.2023 and planned up to 2027-28, schematic diagram, financial calculations, detailed estimate for Substation, detailed estimate for Line, Power flow study snaps-shots, approval of the projects, Technical & Administrative Approval Order are considered for reference.

4.3 The target beneficiary of the projects is WBSEDCL. The project is in pre-tender engineering stage.



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 Rs. 25146.70 Lakh for implementation of different 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.



5.0 Up-gradation of Mahachanda 132/33 KV Substation to 220/132/33 KV Substation and Associated Transmission System:

- 5.1 WBSETCL has also proposed for upgradation of Mahachanda 132/33 KV Substation to 220/132 KV GIS in the District of Burdwan (East) with 4 nos. 220 KV feeder bays, 2x160 MVA, 220/132/33 KV Transformers, 220 KV D/C LILO of 220 KV Existing BKTPP–Satgachia D/C Transmission Line at proposed Mahachanda 220 KV Substation.
- 5.2 The existing Mahachanda 132/33 KV Substation has double circuit connectivity with Mankar 132 KV Substation and Burdwan 132 KV Substation. 220 KV Bakreswar – Satgachia D/C Transmission Line passes within 4km (radially) from proposed Mahachanda 220 KV Substation.
- 5.3 Upgradation of Mahachanda 132/33 KV Substation to 220/132 KV in Burdwan will help to meet the 153 MVA demand for bulk power supply at 132 KV level near Dewandighi area in Burdwan. It will also help in reducing the overloaded Mahachanda–Mankar line.
- 5.4 WBSETCL has submitted that the project will revive the distribution system in the area, improve overall redundancy in the system and that N-1 contingency can be tackled.

As submitted by WBSETCL, upgradation of new 220 KV GIS at Mahachanda at District Burdwan (East) will add the following benefits:

- Improvement in voltage profile, system stability as well as reduction in technical loss in the area.
 - Additional sale of energy by WBSEDCL in the project command area.
 - Enhancement of system reliability, reduction in customer interruption frequency index and customer interruption duration index.
 - Better reliability and quality of power will promote Industrial development in sector and also promote socio-economic development in the project area.
- 5.5 The proposed 220 KV GIS at Mahachanda is to be set up within the vacant space available within Mahachanda 132/33 KV substation of WBSETCL. The project is scheduled to be commission by 2024–25.
- 5.6 The Mahachanda upgradation project has been contemplated in the Rolling Plan of WBSETCL for the year up to 2027–28 (target year 2024-25) which was approved by the BoD, WBSETCL in its 85th meeting held on 16.11.2022.



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 Rs. 25146.70 Lakh for implementation of different 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.



6.0 The project cost, as submitted by WBSETCL in its DPR covered under paragraph 5.0 is tabulated as under:

Sl. No	Description	Amount (Rs lakh)
1	Construction of 220/132 kV GIS at Mahachanda 132 KV Substation with 4 Nos. 220 kV Feeder bays and 2x160 MVA, 220/132/33 kV Transformers	5910.64
2	Construction of 220 KV D/C LILO of 220 KV Existing BKTPP – Satgachia D/C Transmission Line at proposed Mahachanda 220 KV Substation. (D/C OH RL≈1.203 Km, M/C OH RL≈ 4.779 Km and M/C UG RL≈0.3 Km)	3712.82
	Total Cost	9623.46
3	Supervision Charge	962.34
	Total Project Cost	10585.80
4	IDC	1089.94
	Project Cost Including Supervision Charge & IDC	11675.74

7.0 WBSETCL has further submitted the following:

- 7.1 The project is proposed to be funded through WBSETCL's Internal Resources (IR) and through domestic borrowings. The equity component (30%) is proposed to be met through Internal Resources (IR) and the loan component (70%) through domestic borrowings from any Financial Institute. The interest during construction (IDC) is worked out to Rs. 1090.00 Lakh with interest rate for the loan @ 9.50% for the domestic funding with a payback period of 9 years 6 months.
- 7.2 The unit rates for all equipment for transmission lines & substations have been considered from latest cost data obtained from Procurement Department of WBSETCL and 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 31.03.2023 and planned up to 2027-28, schematic diagram, financial calculations, detailed estimate for Substation, detailed estimate for Line, Power flow study snaps-shots, approval of the projects, Technical & Administrative Approval Order are considered for reference.
- 7.3 The target beneficiary of the projects is WBSEDCL. The project is in pre-tender engineering stage.



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 Rs. 25146.70 Lakh for implementation of different 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.



8.0 The Commission, after carefully analyzing, admitted the application on 05.09.2023 and directed WBSETCL to publish the gist of their application as approved by the Commission in the newspapers and 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) 'Bartaman' and 'Aajkal' on 22.09.2023 and 23.09.2023 and also 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

9.0 The Commission observes that, in terms of Regulation 2.8.2.3 of the 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.

10.0 The Commission noted that the projects submitted in the application have been considered in the Rolling Plan 2023-24 to 2027-28 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 which was admitted by the Commission in Case No. TP - 99/22 – 23.

2.0 Commission observes that the proposed Beledurganagar 132/33/11 kV GIS is to be set up on private land at Mouza–Beledurganagar, Joynagar-II Block purchased by the Zilla Parishad and to be handed over to WBSETCL. The Commission also observes that the Mahachanda 220/132/33 KV upgradation project is to be set up within the vacant space available within Mahachanda 132/33 KV substation of WBSETCL. The Commission further observes the following:

The proposed projects of 132/33/11 kV GIS at Beledurganagar and 220/132/33 KV Mahachanda upgradation will cater growing load demand in and around the areas in the District of 24 Parganas (South) and District of Burdwan (East) respectively to supply adequate, reliable & quality power supply in the vicinity.



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 Rs. 25146.70 Lakh for implementation of different 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.



ORDER

12.0 The Commission after consideration all the facts and the project reports submitted by WBSETCL, accords approval of the investment proposal in terms of regulation 2.8.2.3 of the West Bengal Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2011, as amended with the details as given below subject to approval of project cost in terms of regulation 2.8.5 of the WBERC Tariff Regulations:

Sl. No	Description	Amount (Rs lakh)		
1	A	i. Construction of Beledurganagar 132/33/11 kV GIS with 04 Nos. 132 kV Feeder bays, 2x50 MVA, 132/33/ kV Transformers, 12 nos. 33 kV feeder bays, (1x20+1x10) MVAR 33 KV Capacitor Bank, 2x6.3 MVA 33/11 KV Transformers (available from system), 8 nos. 11 KV outgoing feeders, 2 nos. 33/0.415 KV, 315 KV Station Service Transformers and 02 nos. 33 KV Earthing Transformers.	5576.22	
		ii. Construction of 2 nos. 132 KV GIS Bay at Sonakhali 132 KV GIS for Beledurganagar 132KV GIS.	478.32	
		Total Cost	6054.54	
		iii. Supervision Charge (@ 10%)	605.45	
		Total Project Cost including Supervision Charge	6659.99	
	B	iv. IDC	396.63	
		Project Cost Including IDC & Supervision Charge of part A	7056.62	
		i. Construction of 132 KV D/C Transmission Line from Sonakhali 132 KV GIS to proposed Beledurganagar 132 KV GIS (D/C OH RL= 33.54 Km)	5503.46	
		ii. Supervision Charge (@ 10%)	550.35	
		Total Project Cost including Supervision Charge	6053.81	
	iii. IDC	360.53		
	Project Cost Including IDC & Supervision Charge of part B	6414.34		
	Total Project Cost Including IDC & Supervision Charge of (A+B)		13470.96	
	2	A	i. Construction of 220/132 kV GIS at Mahachanda 132 KV Substation with 4 Nos. 220 kV Feeder bays and 2x160 MVA, 220/132/33 kV Transformers	5910.64
			ii. Supervision Charge	591.06
Total Project Cost including Supervision			6501.70	
iii. IDC		669.43		



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 Rs. 25146.70 Lakh for implementation of different 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.



Sl. No	Description	Amount (Rs lakh)
	Project Cost Including IDC & Supervision Charge of part A	7171.13
B	i. Construction of 220 KV D/C LILO of 220 KV existing BKTPP – Satgachia D/C Transmission Line at proposed Mahachanda 220 KV Substation. (D/C OH RL=1.203 Km, M/C OH RL= 4.779 Km and M/C UG RL=0.3 Km)	3712.82
	ii. Supervision Charge	371.28
	Total Project Cost including Supervision Charge	4084.10
	iii. IDC	420.51
	Project Cost Including IDC & Supervision Charge of part B	4504.61
	Total Project Cost Including IDC & Supervision Charge of (A+B)	11675.74
	Grand Total	25146.70

13.0 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.

Original project cost shall be scrutinized by the commission in terms of Regulation 2.8.5 of the WBERC Tariff Regulations.



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 Rs. 25146.70 Lakh for implementation of different 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.



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

14.0 The Petition is thus disposed of.

15.0 A copy of the order shall be posted in the website of the Commission.

16.0 A copy of this order be served upon WBSETCL.

17.0 WBSETCL shall download the copy of the order from the website of the Commission and act on it. Certified copy of the order, if applied for, be given to the parties on completion of formalities laid down in the West Bengal Electricity Regulatory Commission (Conduct of Business) Regulations, 2013, as amended and on submission of necessary fees.

Sd/-

(PULAK KUMAR TEWARI)
MEMBER

Sd/-

(MALLELA VENKATESWARA RAO)
CHAIRPERSON

Dated: 13.05.2024

Sd/-
(SECRETARY)