

ORDER

OF THE

WEST BENGAL ELECTRICITY REGULATORY COMMISSION

IN CASE NO: OA - 426 / 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 RS. 22,875.92 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 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 15.07.2022 for the approval of incurring Capital Expenditure to an estimated cost Rs. 22,875.92 Lakh for implementation of different transmission scheme 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 426/22–23.
- 2.0 In the application, WBSETCL has submitted DPR for each of the three (03) schemes. Brief descriptions of the schemes are given below:
- 2.1 Construction of Saltora 132/33 kV Gas Insulated Substation (GIS) and associated transmission system:
- 2.1.1 WBSETCL has proposed for establishment of new 132/33 kV GIS at Saltora in the District Bankura with 2x31.5 MVA 132/33 kV Transformers, 132 kV GIS module with 4 numbers of 132 kV feeder bays, 12 numbers of 33 kV feeder bays, construction of Double Circuit (D/C) LILO of Raghunathpur Bankura 132kV D/C transmission line at proposed Saltora 132 kV GIS.
- 2.1.2 It is expected that the aggregated demands of adjacent 33/11 kV Substations (Saltora, New Saltora, Chhatna and Santuri), fed from far Substations, will reach about 28 MVA (present peak is 25 MVA) during commissioning of Saltora 132KV GIS during 2024 25. After establishment of proposed Saltora 132/33KV GIS, adjacent 33/11 kV substations will be fed from the new 132/33 KV Substation which will be within the radius of 15 km.
- 2.1.3 132/33 KV Transformers at Bankura 132KV Substation and Raghunathpur 132 KV Substation and upcoming Saltora 132 kV GIS will be operated at N-1 Contingency. Later in future, Saltora 132/33 KV GIS will be connected directly to the proposed Raghunathpur 220 KV Substation and with New Bishnupur 220 KV Substation via Bankura 132 KV Substation.
- 2.1.4 WBSETCL has submitted 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.
 - As submitted by WBSETCL, construction of new 132/33 KV GIS at Saltora at District Bankura 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.
- 2.1.5 The proposed Saltora 132/33 kV GIS is to be set up on 2.12 acres of vacant land within Saltora 33/11 kV Sub-station of WBSEDCL, Bankura District, West Bengal and taking over of 2.12 acres of land is under process. The project is scheduled to be commissioned in next two years within 2024 25.
- 2.1.6 The Saltora 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 Saltora, Chhatna in Bankura district and and Santuri in Purulia district.

2.2.0 Construction of Manikchak 132/33 KV GIS and associated transmission system:

- 2.2.1 WBSETCL has proposed for establishment of 132/33 kV GIS at Manikchak in the District Malda with 2x50 MVA 132/33 kV Transformers, 132 kV GIS module with 4 numbers of 132 kV feeder bays, 10 numbers of 33 kV feeder bays, construction of 132 kv Double Circuit (D/C) transmission line from Malda (PGCIL) 400 kV Sub-Station to proposed Manikchak 132kV GIS.
- 2.2.2 The present EHV sources of the existing 33/11kv Sub-stations in the adjacent areas (Manikchak, Milky and Ratua) are 132/33kV Malda Sub-station and 132/33kV Samsi Sub-station. It is expected that the aggregated demands of these 33/11kV Sub-stations including the upcoming Pakuria and Kalindri 33/11kV S/S may reach about 47 MVA during commissioning of proposed Manikchak 132KV GIS during 2024 25.
- 2.2.3 After establishment of Manikchak 132/33 kV GIS, adjacent 33/11 kV Substations will be fed from Manikchak 132/33 kV GIS. 132/33 kV transformers at Malda 132 kV Substation, Samsi 132 kV Sub-station & upcoming Manikchak 132 kV GIS will be operated at N-1 contingency.
- 2.2.4 WBSETCL has submitted that the project will revive the distribution system in the area, improve overall redundancy in the system and thus any contingency can be tackled.





As submitted by WBSETCL construction of the new 132/33 KV GIS at Manikchak at District Malda will add the following benefits:

- a) Additional sale of energy by WBSEDCL in the project command area.
- b) Improvement in voltage profile, system stability as well as reduction in technical loss in the 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.
- 2.2.5 The proposed Manikchak 132/33 kV GIS is envisaged to be constructed on 1.44 acres of spare land available within 33/11 kV substation of WBSEDCL. Considering the urgent requirement of of WBSEDCL, the beneficiary, permissive possession of the land at Manikchak PS has already been taken from WBSEDCL and action has been taken for formal transfer of land complying with regulation 5.11 of West Bengal Electricity Regulatory Commission (Licensing and Condition of License) Regulation, 2013.
- 2.2.6 The project is scheduled to be commissioned in next two years within 2024 25.
- 2.2.7 The project was contemplated to cater load demand in and around Manikchak, Milki, Haripur, Dharampur, Mathurapur, Gopalpur and Bhutni Char areas in Malda District in the Rolling Plan of WBSETCL up to 2025 26 with target year of 2024 25 as approved by the Board of Directors (BoD) of WBSETCL in its 76th meeting held on 28.12.2020.
- 2.3 Construction of 2 nos. 132 kV AIS bays at C. K. Road 132 kV Substation, 132kV D/C transmission line between C. K. Road 132 kV Substation and proposed Goaltore 132 kV Substation of WBSEDCL, D/C connectivity of C. K. Road 132 kV Substation with each Midnapur 220/132 kV Sub-station and Bishnupur 132 kV Sub-station
- 2.3.1 WBSETCL has proposed for construction of 2 nos. 132 kV AIS Bays at C.K.Road 132kV S/S for proposed Goaltore 132 kV AIS Substation of WBSEDCL, construction of 132kV D/C transmission line between C.K.Road 132kV Substation of WBSETCL and proposed Goaltore 132 kV Substation of WBSEDCL as evacuation path of the proposed Goaltore Solar Park, establishment





of 132kV D/C connectivity between C.K.Road 132kV Substation & Midnapur 220 kV Substation and establishment of 132kV D/C connectivity between C.K.Road 132kV Substation & Bishnupur 132 kV Substation.

- 2.3.2 C. K. Road 132 kV Sub-station is presently charged through 132KV S/C Connectivity each from Midnapur 220/132 KV Substation and Bishnupur 132KV Substation by making LILO of one circuit of Midnapur Bishnupur 132KV D/C Line. Now, second circuit will also be made LILO at C. K. Road to establish 132 kV D/C connectivity of C. K. Road with both Midnapur 220/132 kV Substation and Bishnupur 132 kV Sub-station for proper distribution of solar power so generated at 125 MW Goaltore Solar Park of WBSEDCL. This transmission scheme so proposed is to meet the source constraint issue of Paschim Midnapur District by creating strong 132KV source at C.K. Road 132KV Substation backed by 125 MW Goaltore Solar Park of WBSEDCL.
- 2.3.3 WBSETCL has submitted that the project will provide overall redundancy in the system and thus contingency can be tackled in efficient manner.

As submitted by WBSETCL construction of these connectivity will add the following benefits:

- Reduction in probability of occurrence of no power or restricted power due to source constraint/failure of transmission line resulting additional sale by WBSEDCL.
- b) Increase in network reliability resulting reduction in customer interruption frequency index and customer interruption duration index.
- c) Improvement in voltage profile and improvement in system stability & reduction in technical energy loss.
- d) Better reliability & quality of power to promote socio-economic development in the project area.
- 2.3.4 For establishment of above-mentioned connectivity and bay extension at C. K. Road 132 kV Substation end no land is required to be acquired. Space is available at C. K. Road 132 kV Substation to construct new 132 kV AIS bays. For drawal of 132 kV Overhead Line Cost of Way-leave / crop compensation will be arranged as per prevailing norms / within the provision of the turnkey Supply & Erection Order.
- 2.3.5 The project is scheduled to be commissioned in next two years within 2024 25.





- 2.3.6 Establishment of C. K. Road Goaltore 132 kV D/C line with HTLS conductor was contemplated in the Rolling Plan of WBSETCL up to 2025 26 as approved by the Board of Directors (BoD) of WBSETCL in its 76th meeting held on 28.12.2020. Administrative approval for establishment of 2 nos. 132 kV AIS bay at C. K. Road Sub-station, C. K. Road Goaltore 132 kV D/C line with HTLS conductor and D/C connectivity of C. K. Road 132 kV Substation with each Midnapur 220 kV Sub-station and Bishnupur 132 kV Sub-station was accorded by the Board of Directors, WBSETCL in its 82nd meeting held on 6th June 2022.
- 3.0 The project cost, as submitted by WBSETCL in the DPR, for each of the schemes, covered under paragraph 2.0 above are tabulated as under:

SI. No	Description	Amount (Rs lakh)
4	Saltora 132/33 kV Gas Insulated Substation (GIS) and associated transmission system	
1	Construction of Saltora 132/33 KV GIS with 4 nos. 132 KV feeder bays, 2x31.5 MVA 132/33 KV transformers, 12 nos. 33 KV feeder bays.	3018.19
2	Construction of D/C LILO of Raghunathpur – Bankura 312 KV D/C transmission line at proposed Saltora 132 KV GIS (D/C RL =14.75 km)	1668.24
3	Total Cost (1+2)	4686.43
4	Supervision Charge @ 10% of 3	468.64
5	Total Project Cost (3+4)	5155.07
6	IDC	466.40
7	Project Cost including IDC (5+6)	5621.47
В	Manikchak 132/33 KV GIS and associated transmission system	
1	Construction of Manikchak 132/33 kV GIS with 4 nos. 132 kV Bays, 2x50 MVA 132/33 kV Transformers, 10 nos. 33 kV feeder bays.	4057.06
2	Construction of 132 kV D/C transmission line from Malda (PGCIL) 400 kV Sub-station to proposed Manikchak 132 kV GIS (D/C O/H RL \simeq 24.00 Km and D/C UG Cable RL \simeq 0.05 Km).	3505.46
3	Total Cost (1+2)	7562.52
4	Supervision Charge @ 10% of 3	756.26
5	Total Project Cost (3+4)	8318.78
6	IDC	754.06





SI. No	Description	Amount (Rs lakh)
7	Project Cost including IDC (5+6)	9072.84
С	Construction of 2 nos. 132 kV AIS bays at C. K. Road 132 kV Substation and associated transmission lines	
1	Construction of 2 nos. 132 kV AIS Bays at C. K. Road 132 kV Sub-station of WBSETCL for proposed Goaltore 132/33 kV Sub-station of WBSEDCL.	219.95
2	132 kV D/C Transmission line (with HTLS conductor) from C. K. Road 132 kV Sub-station of WBSETCL to proposed Goaltore 132 kV Sub-station of WBSEDCL (D/C RL ≈ 29.632 Km).	6227.54
3	Establishment of 132 kV D/C connectivity between (I) Midnapur 220 kV Sub-station & C. K. Road 132 Kv Sub-station and (II) Bishnupur 132 kV Sub-station & C. K. Road 132 kV Sub-station (D/C RL ≈ 5.916 Km & S/C RL ≈ 0.300 Km).	313.68
4	Total Cost (1+2+3)	6761.17
5	Supervision Charge @10% of (4)	676.12
6	Total Project Cost (4+5)	7437.29
7	IDC	744.32
8	Project Cost including IDC (6+7)	8181.61
9	Total (A+B+C)	22,875.92

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 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 as on 23.11.2021 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 present and as on 31.03.2026, schematic diagram, financial calculations, detailed estimate for





Sub-station, detailed estimate for Line, Power flow study snaps-shots, approval of the projects, Technical & Administrative Approval Order are enclosed for reference.

- 4.3 The target beneficiary of the projects is WBSEDCL. The projects are in pre-tender engineering stage.
- The Commission, after carefully analyzing, admitted the application on 17.08.2022 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 Millennium Post (iii) the 'Aajkaal' and (iv) the 'Ei Samay' and in their website on 28.08.2022 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:

- 6.0 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.
- 7.0 The Commission noted that the project submitted in the 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.
- 8.0 Commission observes that the proposed Saltora 132/33 kV GIS is to be set up on 2.12 acres of vacant land within Saltora 33/11 kV Sub-station of WBSEDCL and taking over of 2.12 acres of land is under process. Similarly, the proposed Manikchak 132/33 kV GIS is envisaged to be constructed on the spare land available within 33/11 kV substation of WBSEDCL. 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 132/33 kV GIS at Saltora will cater growing load demand in and around Saltora, Chhatna in the district Bankura and Santuri in the district Purulia and supply adequate, reliable & quality power supply in the vicinity.

The proposed 132/33 kV GIS at Manikchak with 132 kV D/C transmission line from Malda (PGCIL) 400KV Sub-station to proposed Manikchak 132 kV GIS will cater growing load demand in and around Manikchak, Milki, Haripur, Dharampur, Mathurapur, Gopalpur and Bhutni Char areas in District Malda and will supply adequate, reliable & quality power supply in the vicinity.

Construction of C. K. Road – Goaltore 132 kV D/C Line will provide evacuation system for proposed Solar Park of 125 MW of WBSEDCL at Goaltore, strong 132 kV source for Birsingha 132 kV Sub-station and an alternative source for Bishnupur 132 kV Sub-station.

Order:

10.0 The Commission after considering all the facts and the project report submitted by WBSETCL, accords initial approval of the investment proposal in terms of regulation 2.8.2.3 of the WBERC Tariff Regulations with the details as given below subject to approval of project cost in terms of regulation 2.8.5 of the WBERC Tariff Regulations:

SI. No	Description	Amount (Rs lakh)
	to the total N.C. I will tail Substation (CIS) and associated transmission system	
Α	Saltora 132/33 kV Gas Insulated Substation (GIS) and associated transmission system	
1	Construction of Saltora 132/33 KV GIS with 4 nos. 132 KV feeder bays, 2x31.5 MVA 132/33 KV transformers, 12 nos. 33 KV feeder bays.	3018.19
2	Construction of D/C LILO of Raghunathpur – Bankura 312 KV D/C transmission line at proposed Saltora 132 KV GIS (D/C RL =14.75 km)	1668.24
3	Total Cost (1+2)	4686.43
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2	Construction of 132 kV D/C transmission line from Malda (PGCIL) 400 kV Sub-station to proposed Manikchak 132 kV GIS (D/C O/H RL \simeq 24.00 Km and D/C UG Cable RL \simeq 0.05 Km).	3505.46
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C 1	Construction of 2 nos. 132 kV AIS bays at C. K. Road 132 kV Substation and associated transmission lines Construction of 2 nos. 132 kV AIS Bays at C. K. Road 132 kV Sub-station of WBSETCL for proposed Goaltore 132/33 kV Sub-station of WBSEDCL.	219.95
1	Goaltore 132/33 kV Sub-station of WBSEDCL. 132 kV D/C Transmission line (with HTLS conductor) from C. K. Road 132 kV Sub-station of WBSETCL to	6227.54
2	proposed Goaltore 132 kV Sub-station of WBSEDCL (D/C RL ≈ 29.632 Km).	
3	Establishment of 132 kV D/C connectivity between (I) Midnapur 220 kV Sub-station & C. K. Road 132 kV Sub-station and (II) Bishnupur 132 kV Sub-station & C. K. Road 132 kV Sub-station (D/C RL ≈ 5.916 Km & S/C RL ≈ 0.300 Km).	313.68
4	Total Cost (1+2+3)	6761.17
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6	Total Project Cost (4+5)	7437.29
7	IDC	744.32
8	Project Cost including IDC (6+7)	8181.6

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 substation 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.
- (vi) WBSETCL shall take prior approval from the Commission before taking over or acquiring by purchase of the land at Saltora 33 kV Sub station and Manikchak 33 kV sub-station of WBSEDCL in terms of regulation 5.11 of the West Bengal Electricity Regulatory Commission (Licensing and Condition of License) Regulation, 2013.
- 12.0 The petition is thus disposed of. Let a copy of the order be served upon WBSETCL.

Sd/-(PULAK KUMAR TEWARI) MEMBER Sd/-(MALLELA VENKATESWARA RAO) CHAIRPERSON

Dated: 20.02.2023

Sd/-SECRETARY