



**ORDER
OF THE
WEST BENGAL ELECTRICITY REGULATORY COMMISSION
IN CASE NO. OA-356/20-21**

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. 14490.21 LAKHS FOR ESTABLISHMENT OF GARDWANI 132 KV GAS INSULATED SUBSTATION WITH ASSOCIATED TRANSMISSION SYSTEM AND BERHAMPUR – DOMKAL 132 KV D/C CONNECTIVITY IN TERMS OF REGULATION 2.8.2.3 OF THE WEST BENGAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2011, AS AMENDED.

PRESENT:

**SRI SUTIRTHA BHATTACHARYA, CHAIRPERSON
SRI DURGADAS GOSWAMI, MEMBER
SRI PULAK KUMAR TEWARI, MEMBER**

DATE: 03.05.2021



Certified true Copy



Approval of incurring capital expenditure by the West Bengal State Electricity Transmission Company Limited for establishment of Gardwani 132 KV GIS with associated transmission system and Berhampur – Domkal 132 KV D/C connectivity in terms of regulation 2.8.2.3 of the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011, as amended.



Facts in brief:

1.0 The West Bengal State Electricity Transmission Company Limited (in short 'WBSETCL') has submitted an application vide letter dated 21.01.2021 for approval of incurring capital expenditure of an estimated cost of Rs. 14490.21 Lakh for establishment of 132/33 kV Gas Insulated Sub-station at Gardwani with associated transmission system and establishment of 132 kV D / C connectivity between Berhampur and Domkal as covered under paragraph 2.0 below in terms of regulation 2.8.2.3 of the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011, as amended (in short 'Tariff Regulations'). The application has been registered as Case No. OA – 356 /20 – 21.

2.0 In their application, WBSETCL has submitted DPR for each of the two (2) schemes. Brief descriptions of the schemes are given below:

A) Construction of Gardwani 132/33 kV Gas Insulated Substation (GIS) and associated transmission system (ATS):

WBSETCL has proposed for establishment of new 132/33 kV GIS at Gardwani in the District 24 Parganas (South) with 2x50 MVA 132/33 kV Transformers, 132 kV GIS module with 2 numbers of 132 kV feeder bays, 12 numbers of 33 kV feeder bays, 2x10 MVA 33 kV Capacitor Bank, construction of 132 kV D/c Transmission line from Lakshmikantapur 220 kV substation to proposed Gardwani 132 kV GIS (Route Length – 25 Km) along with construction of 2 numbers of GIS bays at Lakshmikantapur 220 kV substation.

WBSETCL has submitted that the establishment of 132/33 kV Substation at Gardwani with associated transmission system was contemplated to supply adequate, reliable and quality power in and around 33 kV substations of WBSEDCL at Joynagar, Harinarayanpur (Dakshin Barasat), Beliachandi (Gochran) and Jamtala (Kultali). The present aggregated load demand of these substations is about 45 MVA and receives power from Lakshmikantapur 220 kV substation. These substations are facing low





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voltage problem mainly during peak hours due to heavily loaded long distance 33 kV line.

After establishment of the proposed Gardwani 132 kV GIS, these 33 kV substations will be fed from shorter line length which will in turn reduce the over dependency on the sub-transmission system on Lakshmikantapur 220 kV substation. WBSEDCL has projected that the incidental demand on Gardwani 132/33 kV GIS may reach up to 50 MVA during its commissioning.

WBSETCL further submitted that 132 kV D/c line from Lakshmikantapur 220 kV has been primarily contemplated as 132 kV connectivity of Gardwani 132 kV GIS. Further, to improve the reliability of power supply from Gardwani 132 kV GIS another 132 kV D/c connectivity from Sonakhali has been contemplated in the perspective plan of WBSETCL up to 2024 – 25.

WBSETCL stated that establishment of 132 kV GIS in and around Joynagar/ Shyamnagar with associated transmission system was prioritized by WBSEDCL in the Coordination meeting between WBSEDCL and WBSETCL chaired by CMD, WBSEDCL held on 04.01.2017.

WBSETCL further stated that the proposed substation will be established in private land of about 3.28 Acre at Mouza: Gardwani which will be purchased from willing seller of the land. WBSETCL has also obtained concurrence of Standing Committee for land on 03.02.2020 and accordingly DM, South 24 Parganas has issued an estimate of Rs. 101.96 Lakh for direct purchase of land.

WBSETCL submitted that the administrative approval to construct Gardwani 132/33 kV GIS and ATS has been accorded by the Board of Directors, WBSETCL in its 69th Meeting held on 12.07.2019.

B) Establishment of 132 kV D/C connectivity between Berhampur & Domkal:





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WBSETCL has proposed for establishment of 132 kV D/C connectivity between Berhampur and Domkal substations by construction of 132 kV D.C Transmission line from Berhampur 132 kV substation to Domkal 132 kV GIS (Route Length – 33 Km Overhead and 1.15 KM UG Cable) along with construction of 2 numbers 132 kV GIS Line Bay at Domkal 132 kV GIS and 2 numbers of 132 kV Line Bay at Berhampur 132 kV substation.

Najirpur 132 kV GIS was commissioned in January, 2016 with 132 kV D/C connectivity from Amtala 132 kV substation. Subsequently, Domkal 132 kV GIS was commissioned in February, 2018 with 132 kV D/C connectivity with Najirpur. Both the 132 kV GIS are drawing feed from Amtala 132 GIS through a 132 kV D/C overhead line that in turn get feed from Rejinagar 220 kV substation through 2 number 132 kV D/C lines. As both the Najirpur and Domkal substations are sufficiently loaded, an alternative source of feed is required to be created for these substations. After establishment of Berhampur to Domkal 132 kV D/C connectivity both Berhampur and Domkal substations will be connected in a ring main. Berhampur 132 substation has 132 kV D/C connectivity each from Gokarna 400 kV substation and Rejinagar 220 kV substation making it a strong connectivity with the grid.

WBSETCL has proposed Berhampur to Domkal 132 kV D/C line to enhance transmission system reliability of the eastern part of District Murshidabad by creating alternative 132 kV source for Domkal 132 kV GIS. Najirpur 132 kV GIS in District Nadia will also be benefitted by the connectivity as it will be a part of 132 kV ring main. During contingency, power can be extended up to Najirpur through this link.

It is submitted that two nos. 132 kV AIS Bays at Berhampur and two nos. GIS bays at Domkal is to be constructed to establish Berhampur – Domkal 132 kV D/C connectivity and space is available at existing switchyard for this extension.





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WBSETCL has submitted that establishment of Berhampur -Domkal 132 kV D/C connectivity was approved by the Board of Directors, WBSETCL in its 76th Meeting held on 28.12.2020.

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:

Sl No	Description	Amount (in Rs Lakh)
A. Establishment of 132/33 kV Gas Insulated Substation at Gardwani and Associated Transmission System		
1	Construction of Gardwani 132/33 kV GIS with 2 number 132 kV feeder bays, 2x50 MVA 132/33 kV Transformers, 12 number 33 kV feeder bays and 2x10 MVA 33 kV Capacitor Bank (including cost of land)	3548.55
2	Construction of 2 number of 132 kV Line Bay at Lakshmikantapur 220 kV Substation for Gardwani 132 kV GIS	186.48
3	132 kV D/c Transmission Line from Lakshmikantapur 220 kV Substation to proposed Gardwani 132 kV GIS (Route Length: 25 Km)	2370.50
4	Supervision Charge	900.54
5	Total Project Cost	7006.07
6	IDC	693.89
7	Project Cost including IDC	7699.96
B. Establishment of Berhampur – Domkal 132 kV D/c Transmission Line including extension of 2 number of 132 kV Feeder Bays each at Berhampur 132/33 kV Substation and Domkal 132 kV GIS		
1	Construction of 2 number of 132 kV GIS Line Bay at Domkal 132 kV substation for D/c connectivity with Berhampur	266.21
2	Construction of 2 number of 132 kV Line Bay at Berhampur 132 kV Substation for D/c connectivity with Domkal	416.84
3	132 kV D/c Transmission Line from Berhampur 132 kV Substation to Domkal 132 kV GIS (Route Length: 33 Km OH & 1.15 Km UG Cable)	4598.12
4	Supervision Charge	792.18
5	Total Project Cost	6073.35
6	IDC	716.90
7	Project Cost including IDC	6790.25
Total Capital Project Cost (A+B)		14490.21





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It was also submitted that 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 target beneficiary of the projects is WBSEDCL.

WBSETCL has further submitted that the projects are in pre-tender engineering stage and the tender will be published shortly. Letter of Award (LOA) for implementation of the schemes will be placed after obtaining approval from the Commission.

- 4.0 The Commission, after carefully analyzing, admitted the application on 09.02.2021 and directed WBSETCL to publish the gist of their application as approved by the Commission in the newspapers as per requirement of regulation 2.8.2.3 of the Tariff Regulations. WBSETCL accordingly published the gist of the application in (i) The Telegraph (ii) the Sangbad Pratidin and (iii) the Ei Samay on 16.02.2021 inviting suggestions and objections on their application within 14 days (including the date of publication) of publication of the notice in Newspaper. No suggestion and objection was 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 Tariff Regulations, prior approval of the Commission for investment in new transmission project is mandatory after 31.12.2007.
- 6.0 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 6th Control Period for the years 2018 - 19 and 2019 - 20 which was approved by the Commission in the Tariff Order for WBSETCL in Case No. TP - 86/19 - 20 dated 16.12.2020 in terms of regulation 2.9.3 of the Tariff Regulations.





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- 7.0 The Commission observes that the proposed Gardwani 132/33 kV GIS will cater the existing and upcoming consumers reliable and quality power in and around Joynagar, Harinarayanpur (Dakshin Barasat), Beliachandi (Gocharan) and Jamtala (Kultali) in the District 24 Parganas. As far as the connectivity between Berhampur and Domkal is concerned, the Commission observes that this connectivity will enhance transmission system reliability of the Eastern Part of District Murshidabad and will also provide overall redundancy in the system. This connectivity will also benefit District Nadia as it will be a part of ring main between Najirpur, Amtala, Rejinagar, Domkal and Berhampur.

Order:

- 8.0 The Commission after considering all the facts and the project report submitted by WBSETCL approves the investment proposal in terms of regulation 2.8.2.3 of the Tariff Regulations with the details as given below:

Sl No	Description	Amount (in Rs Lakh)
C. Establishment of 132/33 kV Gas Insulated Substation at Gardwani and Associated Transmission System		
1	Construction of Gardwani 132/33 kV GIS with 2 number 132 kV feeder bays, 2x50 MVA 132/33 kV Transformers, 12 number 33 kV feeder bays and 2x10 MVar 33 kV Capacitor Bank (including cost of land)	3548.55
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D. Establishment of Berhampur – Domkal 132 kV D/c Transmission Line including extension of 2 number of 132 kV Feeder Bays each at Berhampur 132/33 kV Substation and Domkal 132 kV GIS		
1	Construction of 2 number of 132 kV GIS Line Bay at Domkal 132 kV substation for D/c connectivity with Berhampur	266.21





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SI No	Description	Amount (in Rs Lakh)
2	Construction of 2 number of 132 kV Line Bay at Berhampur 132 kV Substation for D/c connectivity with Domkal	416.84
3	132 kV D/c Transmission Line from Berhampur 132 kV Substation to Domkal 132 kV GIS (Route Length: 33 Km OH & 1.15 Km UG Cable)	4598.12
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Total Capital Project Cost (A+B)		14490.21

9.0 The Commission also gives the following directions:

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





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- (iv) Original project cost is required to be approved in terms of Regulation 2.8.5 of the 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 place LOA for implementation of the scheme only after receiving possession of the land for the land proposed to be purchased and subject to compliance of Model Code of Conduct of current election process.

10.0 The petition is thus disposed of. Let a copy of the order be served upon WBSETCL.

sd/-

(PULAK KUMAR TEWARI)
MEMBER

sd/-

(DURGADAS GOSWAMI)
MEMBER


sd/-

(SUTIRTHA BHATTACHARYA)
CHAIRPERSON

Certified true Copy

DATED: 03.05.2021




(M. Guha Roy)
Secretary