

# Introduction

Chhattisgarh State Electricity Board (CSEB) was a part of the erstwhile Madhya Pradesh State Electricity Board (MPSEB) till 2000. It became a separate entity on the formation of the State of Chhattisgarh. The Board functioned as unified entity till December 2008 when the State Government notified a transfer scheme in pursuance of the provisions of part XIII (Sections 131 and 133) of the Electricity Act, 2003 for unbundling it with effect from 1 January 2009. The transfer scheme resulted in the formation of five successor entities for undertaking the functions of the erstwhile Board viz.

- a. Chhattisgarh State Power Holding Company Limited (CSPHCL)
- b. Chhattisgarh State Power Generation Company Limited (CSPGCL)
- c. Chhattisgarh State Power Transmission Company Limited (CSPTCL)
- d. Chhattisgarh State Power Distribution Company Limited (CSPDCL)
- e. Chhattisgarh State Power Trading Company Limited (CSPTraCL)

The functions of generation, transmission, distribution and trading have been allocated to the respective successor entities. All these companies have been envisaged as the wholly owned subsidiaries of Chhattisgarh State Power Holding Company Limited. Chhattisgarh State Power Transmission Company Limited (CSPTCL) as mentioned above has been formed for undertaking the 'transmission function' of CSEB. CSPTCL started operations on 1<sup>st</sup> January 2009.

Later on amendment in the above transfer scheme notified on dated 02.05.2022, Chhattisgarh State Power Holding Company Limited & Chhattisgarh State Power Trading Company Limited has been merged in Chhattisgarh State Power Transmission Company Limited & Chhattisgarh State Power Distribution Company Limited respectively and as on date following three power companies are functioning: -

- a- Chhattisgarh State Power Generation Company Limited (CSPGCL)
- b- Chhattisgarh State Power Transmission Company Limited (CSPTCL)
- c- Chhattisgarh State Power Distribution Company Limited (CSPDCL)

As per Section 39 of Electricity Act, 2003, CSPTCL being a STU is responsible for the following activities:

- a. To undertake transmission of electricity through intra-state transmission system
- b. To discharge all functions of planning and coordination related to intra-state transmission system
- c. To ensure development of an efficient, coordinated and economical system of intra-state transmission line for smooth flow of electricity from a generating station to load centre
- d. To provide non-discriminatory open access of its transmission system for use by any licensee or generating company or any other consumer etc.

  
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Regulation 7 of the CSERC MYT Regulations, 2021 specifies for filing of Capital Investment Plan by the entities; the relevant extract of the Regulation is as under:

“7. CAPITAL INVESTMENT PLAN 7.1. The generating company, STU/ transmission licensee, SLDC and distribution licensee shall file for approval of the Commission a capital investment plan by 31st October 2021. The capital investment plan should cover the entire Control Period, with separate details for each year of the Control Period.

7.2. The capital investment plan may be in respect of new generation projects or transmission/ distribution schemes (for lines, sub stations, bays, etc.) or system operation for capacity addition/ enhancement or renovation of existing capacities on completion of useful life or work required for compliance of law or expenditure incurred to comply with revised emission standards or deferred execution of work included in original scope or efficiency improvement or such works which may be expedient for operation of the system. (a)The capital investment plan shall show separately, on-going projects that will spill over into the Control Period, and such new projects (along with justification) which will commence in the Control Period but may be completed within or beyond the Control Period. The capital investment plan shall contain the scheme details, justification for the work, capitalization schedule, capital structure and cost benefit analysis, if applicable. ....”

In compliance to above, CSPTCL had filed a petition no. 02 of 2022 (M) before Hon'ble CSERC for approval of Capital Investment Plan (in short CIP) for the control period FY 2022-23 to 2024-25. Hon'ble CSERC vide their order dated 27.04.2022 has approved the CIP in respect of CSPTCL. During the regulatory process of above said petition, CSPDCL has requested to include following few number new 132/33KV substations in CIP petition through various UO notes duly recommended by MD, CSPDCL. CSPTCL further through letter no. 313 dated 21.06.2022 submitted proposal for such capital works to be carried out in current control period and has requested to Hon'ble Commission to consider the same for “in principle approval”. Director, CSERC vide letter no. 1019 dated 19.07.2022 has directed to file a petition for approval of additional Capital Investment Plan in the matter. Hence this petition.

**BRIEF DETAILS OF CAPITAL INVESTMENT APPROVED THROUGH ORDER DATED 27.04.2022: -**

Capital investment approved by Hon'ble CSERC vide their order dated 27.04.2022 in respect of CSPTCL CIP for FY 2022-23 to 2024-25 under various schemes are tabulated below: -



Amount in Rs Crs

S No.	Scheme	Scheme Provision	FY 23	FY 24	FY 25
1	Spill Over Works	2873.79	897.48	654.52	145.9
2	New Normal Development Scheme (State)	2199.75	632	953.64	569.81
3	New Normal Development Scheme (Central)	1606.19	331.5	720.79	526.9
4	Total	6679.73	1860.98	2328.95	1242.61

During the regulatory process of above said petition and after approval on petition, CSPDCL has requested to construct following few number new 132/33KV substations through various UO notes duly recommended by MD, CSPDCL. Technical feasibility for construction of above said substation was examined by CSPTCL and accordingly following proposal of construction of new 132/33KV sub station, its associated line along with scheme provision are tabulated below: -

SN	Name of Proposed 132/33KV Substation	Capacity in MVA/ Route Length of line in KM	Scheme Provision in Rs Crs
1	132/33 KV Substation, Jeora-Sirsa, District – Durg	2x 40 MVA	26.00
	132 KV DCDS line from 220/132KV substation, Semaria +02 No. 132KV feeder bays at 220KV Substation, Semaria	19 KM	18.98
2	132/33 KV Substation, Maharajpur, Distt- Rajnandgaon	2x 40 MVA	26.00
	LILO of 132KV Dongargarh-Kiranapur Line	41 KM	28.94
3	132/33KV Substation, Jamgaon (R), South Patan, Distt- Durg	2x 40 MVA	26.00
	132 KV DCDS line from 220/132KV substation Patan +02 No. 132KV feeder bays at 220 KV substation, Patan.	20 KM	19.40

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4	132/33KV Substation, Anda, Distt- Durg	2x 40 MVA	26.00
	132 KV DCDS line from 220/132KV substation Patan +02 No. 132KV feeder bays at 220 KV substation, Patan.	31 KM	28.42
5	132/33KV Substation, Tarekela Tahsil-Pithora Distt-Mahasamund	2x 40 MVA	26.00
	LILO of one circuit of 132KV Saraipali-Sarangarh DCDS line	28 KM	22.96
<b>TOTAL ( in Rs Crs)</b>			<b>248.70</b>

Detail justification for construction of above mentioned substations are being submitted hereunder for kind perusal :-

### 132/33 KV Substation Jeora-Sirsa District-Durg

At present power supply of Durg block is being fed by 33 KV Litiya feeder emanating from 132/33 KV S/s Dhamdha and secondly, from 33 KV Jeora Sirsa feeder from 132/33 KV S/s Kurud. The Voltage Regulation of existing 33 KV Litiya feeder emanating from 132/33 KV Dhamdha S/s is 22.98% and Voltage Regulation of existing 33 KV Jeora feeder emanating from 132/33 KV Kurud S/s is 13.98% which is higher than the norms of CSPDCL. Also the total length of 33 KV Litiya feeder is 32 Km and maximum load recorded on this feeder is 17 MW and similarly total length of 33 KV Jeora Sirsa feeder is 25.0 Km and maximum load recorded on this feeder is 12.5 MW. Keeping in view industrial growth in nearby area of Jeora Sirsa and uninterrupted Power Supply to IIT Bhilai (Kutelabhata) and future Industrial growth, CSPDCL has proposed to construct a new 132/33 KV Substation Jeora-Sirsa with transformation capacity of 2X40 MVA.

Details of maximum and average load on all 33 KV feeders emanating from 132/33 KV Substation Dhamdha and Kurud are as under: -

#### (A) 132/33 KV Substation at Dhamdha (2X40 MVA)

S.No.	Name of 33 KV Feeder	Average Load (Ampere)	Maximum Load (Ampere)
1	Dhamdha	100	280
2	Dargaon	110	280

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3	Parpodi	80	220
4	Litiya	120	340
5	Saja	80	240
6	Nankatti	40	170
7	PGCIL	100	240

(B) 132/33 KV Substation at Kurud (2X40 MVA)

S.No.	Name of 33 KV Feeder	Average Load (Ampere)	Maximum Load (Ampere)
1	Junwani	10	200
2	N.T.R.O	10	150
3	Jewara Sirsa	10	260
4	Sunder Nagar	30	110
5	Kailash Nagar	10	150
6	Mother Teresa	10	170
7	Kurud Ind.	10	130
8	Nandini Road ind	10	240
9	SLDC back- up	ON	ON

Also there is no space available for additional 33 KV feeders at 132/33 KV Substation Dhamdha and 132/33 KV Substation Kurud. It is to mention that 04 No. 33 K feeders will be fed through new proposed 132/33 KV Substation Jeora Sirsa. The details of which are as under: -

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