

## Annexure 40.1

### Proposal for New 33/11KV PSS at NEW COURT

#### **1.0 Proposal New 33/11KV PSS to improve a Reliable Power supply at NEW COURT under Rourkela Constituency under Sundergarh Dist.**

##### **Proposal:**

33/11kV PSS proposal at 11 KV NEW COURT area under Rourkela Constituency under Sundergarh District.

##### **Requirement/ Need of the proposal:**

**Objective:** To ensure a reliable power supply & mitigation of the overloading condition of the NEW COURT area in Rourkela City.

##### **Existing Scenario:**

- Presently, the New Court area is getting power supply from the existing Power House 33/11 kV substation through the 11kV Old Udit Nagar, New Udit Nagar & New Plant Site feeder.
- The new Court area is growing, and the existing loads are enhanced day to day, whereas Power House PSS has also reached its peak of installed capacity. Two PTRs are Overloaded.
- Currently, PTR-1 & PTR-2 of Power House PSS are getting Overloaded with a loading of 6.4 MVA (80%) & 8.4 MVA(105%) respectively, as well as after LG (@7.31% for 2 Years), both the PTRs will be loaded as 7.4MVA(92%) & 9.7MVA(121%) respectively.
- The existing PH Road PSS has no physical scope for augmentation due to severe space constraints. The substation is bounded by drainage channels (nala) on both sides, restricting any civil expansion or installation of additional equipment such as a new Power Transformer (PTR).
- The 33kV Town feeder(PH Road PSS), which supplies power to critical Rourkela Town areas(Including Administrative offices, Municipality, Civil Court), has been experiencing supply fail from the Rourkela GSS End, severely affecting the reliability of the power supply.

	FY25		FY26 TILL AUG	
GSS	INTERRUPTION COUNT	DOWN TIME(HRS)	INTERRUPTION COUNT	DOWN TIME(HRS)
132/33KV ROURKELA GSS	66	156:10:00	35	96:14:00

- The PH Road PSS having Second Source with Bisra Feeder but Full load of PH Road Can't be shifted to this feeder as this feeder also feeds two PSS.
- There are Six No's of outgoing 11 kV feeders emanating from Power House substation, namely New Udit Nagar, Old Udit Nagar, Power House Road, Plant site, New Plant Site, Old Plant Site, Bisra Road. Non of the feeders havin N-1 connctivity with Other PSS. It is not possible to do planned routine maintenance work, leading to only breakdown maintenance, due to which affects the reliability of the power supply, leading to MU loss and consumer dissatisfaction.
- **Existing FY-25 Loading and projected load at 11kV Feeder:**

PSS	PTR	MVA Capacity	Name of 11 kV feeder	Feeder Capacity	individual Peak LoadingFY-25(Amp)	% loading	individual Peak LoadingFY-27(Amp)	% loading
Power House	1	8	New Plant Side	272	199	73%	229.2	84%
			Old Plant Side	272	137	50%	157.8	58%
Power House	2	8	Bisra Road	237	346	146%	398.4	168%
			Uditnagar Old	237	120	51%	138.2	58%
Power House	3	12.5	Uditnagar New	272	270	99%	310.9	114%
			Power House	272	94	35%	108.2	40%

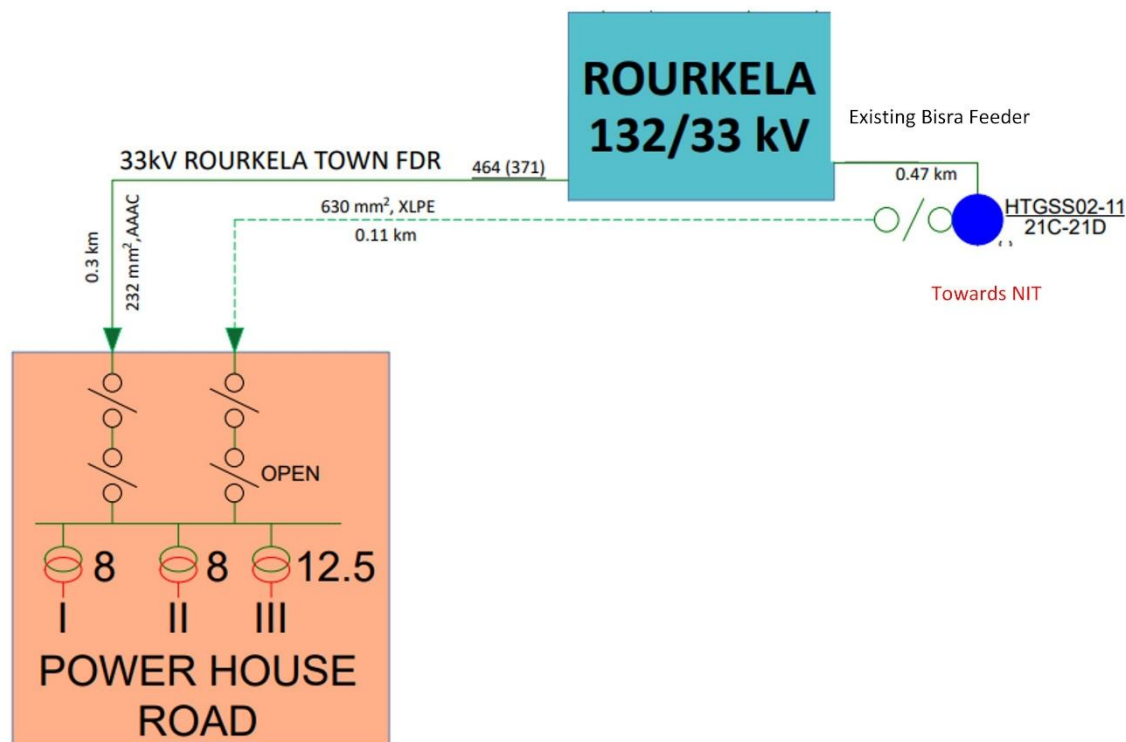
#### PTR Loading of Power House PSS for FY-25

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @7.31%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Power House	PTR-1	8	6.4	80%	7.4	92%
2		PTR-2	8	8.4	105%	9.7	121%
3		PTR-3	12.5	7.4	59%	8.6	68%

#### 33 KV Feeder Loading FY-25

Existing Scenario								
Name of GSS	33kV Feeder Name	Feeder Capacity (MVA)	Peak Loading FY-25 (MVA)	% Loading	Feeder Overloading Status	Projected load FY-27 (MVA)	% Loading	Feeder Overloading Status
Rourkela	Town	26	23	88.46%	OK	26.48	101%	Overload

## Existing SLD: Powerhouse PSS



### Proposed Scenario:

- New 33/11KV PSS at the New Court Area, Proposed to improve power supply reliability and to mitigate overloading in this area.
- 33kV Tapping from 33kV Pilot Project Feeder with LILO arrangement at Proposed NEW COURT PSS.
- 33 KV New Line from PILOT PROJECT FDR with 2Ckm for LILO arrangement.
- Existing 11kV New and Old Udit Nagar Feeder load shifted to the new 11kV outgoing feeder from New Court PSS.
  - a) 11 KV New Court Feeder FDR – 3Ckm
  - b) 11 KV New Ambedkar FDR – 3.5Ckm
  - c) 11 KV New Kachery FDR – 5Ckm

### Proposed FY-27 Loading and projected load at 11 kV Feeder:

Loading after Proposal of PSS (FY-27)			
Name of PSS	11kV Feeder Name	Projected load FY-27 (MVA)	Feeder Overloading Status
NEW COURT	NEW COURT FDR	1.5	OK
NEW COURT	NEW AMBEDKAR FDR	2	OK
NEW COURT	NEW KACHERY FDR	2.5	OK

- After the Proposal of the New 33/11KV PSS at NEW COURT with 3 Numbers of Outgoing feeders, the existing load of Powerhouse PSS is to be shifted to the New PSS of PTR-1 & PTR-2 from Powerhouse PSS.

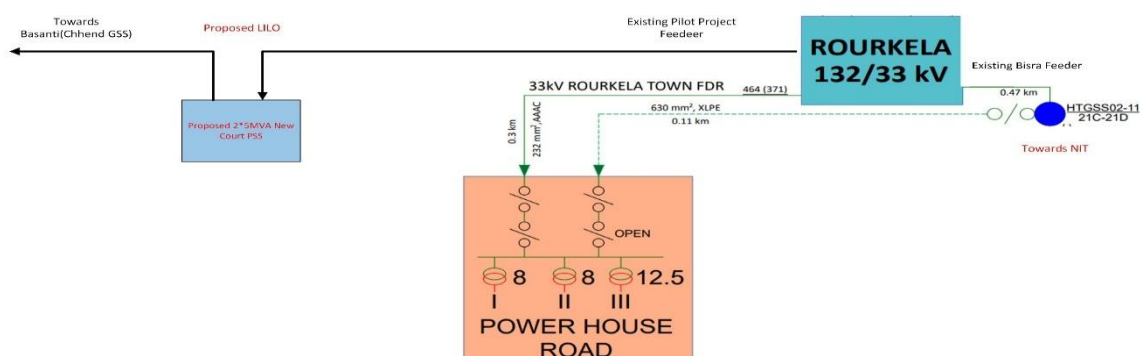
#### Proposed FY-27 Loading and projected load PTRs:

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @7.31%) FY-27		Remarks
				Peak Load	%Loading	
1	Powerhouse	PTR-1	8	5.4	67.5%	2MVA load (New Plant Site) Shifted to New Court PSS
2		PTR-2	8	5.2	65%	1.5MVA load (Old Udit Nagar) shifted to New Court, 3MVA (Bisra Road) Load shifted to Bondhamunda PSS
3		PTR-3	12.5	6.1	49%	2.5MVA Load (New Udit Nagar) Shifted to New Court PSS

#### 33 KV Feeder Loading Proposed FY-27

Proposed Scenario					
Name of GSS	33kV Feeder Name	Feeder Capacity (MVA)	Projected load FY-27 (MVA)	% Loading	Feeder Overloading Status
Rourkela	Town	26	17.48	67%	Ok

#### Proposed 33V Network SLD with 33/11KV NEW COURT PSS:



#### Scope of Work:

- 2.0 CKM of 33 KV 3C, 400Sqmm XLPE Cable for tapping purpose from 33kV Existing Pilot Project feeder with LIL0 Arrangement.
- 33/11KV conventional PSS (33KV Outdoor & 11KV Indoor), includes 2 X 5 MVA PTR capacity, 2 Nos. 33KV Outdoor Bay VCB, 2 No. VCB for PTR protection, 1 No of 100KVA Station Transformer (33/0.4KV), 4 Nos. of Indoor 11KV Breaker for 3 Nos. of Outgoing Proposed feeders.

- New Line (Associated) 11kV, 11.25Ckm, XLPE,3C,1R,300Sqmm using HDD.

**Proposed Cost with Estimate Break-up:**

TP WESTERN ODISHA DISTRIBUTION LIMITED		
Name of the Division:-	RED, ROURKELA	
Name of the Sub-Division :	SDO-2	
Name of the Work:-	33/11KV PSS proposal at 11 KV NEW COURT area.	
Names of Schemes: -	TPWODL CAPEX (FY 26-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>		
Sl. No.	Description	Amount
1	PART A: Construction of Bay VCB OD	1,13,06,500.58
2	PART-B: 1. Installation of 33/11KV Station Trf	12,11,025.516
3	PART-C: Installation of 33/11KV PTR	1,99,82,606.71
4	PART-D Construction of 11KV Bay VCB OD 11 KV OG	1,71,89,67.484
5	PART-E PSS (Control Room Inside)	2,84,25,112.74
6	PART-F Civil & Scada	3,27,55,302.00
8	PART-G Construction of 2.0 Ckm 33KV New Line using 3C, 400 sqmm XLPE Cable	1,82,74,516.00
9	PART-H Construction of 11.5Ckm 11 kV New Line 11kV,3C, 1R, XLPE,300Sqmm Cable using HDD	7,02,27,739.54
	<b>Total Amount</b>	18,21,82,803.09
	<b>Total Amount (In Cr.)</b>	18.22
<b>Total estimated cost is Rs 18.22 Crore. (On TPWODL Capex Scheme)</b>		

Cost Estimate: ₹ 18.22Cr.

**Physical Target:**

March 2027

### Cost-Benefit Analysis:

Cost Benefit Analysis at CDB cost inclusive of taxes - New 33/11kV, PSS at New Court(2*5MVA)							
Year	Anticipated loads in MVA at Load Growth of 7.31%	Anticipated loads in MW at Load Growth of 7.31%	cost benefit on account of new loads(Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads(Running Charges) = $D*1000*days*hrs*LF*(sellig\ price - Purchase\ price)$	Total benefit (Rs)	Cumulative Benefit(Rs)	Revenue per day (Rs)
FY 27	6.00	5.25	12,60,000.00	65,53,575.00	78,13,575.00	78,13,575.00	21,407.05
FY 28	6.44	5.63	13,52,106.00	70,32,641.33	83,84,747.33	1,61,98,322.33	22,971.91
FY 29	6.91	6.05	14,50,944.95	75,46,727.41	89,97,672.36	2,51,95,994.70	24,651.16
FY 30	7.41	6.49	15,57,009.02	80,98,393.19	96,55,402.21	3,48,51,396.91	26,453.16
FY 31	7.96	6.96	16,70,826.38	86,90,385.73	1,03,61,212.11	4,52,12,609.02	28,386.88
<b>Calculations</b>					<b>Value</b>	<b>Unit</b>	
Total Cost of Scheme (with Taxes)					<b>18,21,82,803</b>	Rs	18.0755538
Revenue per day					<b>24,774.03</b>	Rs	
Payback Period of Scheme Years					<b>20.28</b>	Years	
% RR					<b>4.93</b>	%	

### Benefit to the system and consumers

- Improvement in Reliable Power supply from two PSS.
- Overload Mitigation & reduce dependency on PH road PSS.
- Providing N-1 reduces the risk of long outages and improves system reliability.
- Enables easier switching operations during faults or planned outages.

## **Annexure 40.2**

### **Proposal for New 33/11 kV PSS at DAINCHA**

#### **1.0 Proposal New 33/11KV PSS to improvement reliable Power supply at Daincha under Rairakhhol Constituency under Sambalpur Dist.**

##### **Proposal:**

33/11KV PSS proposal at Daincha area under Rairakhhol Constituency to mitigate Low Voltage issue and Reliable power supply at Sambalpur District.

##### **Requirement/ Need of the proposal:**

**Objective:** To ensure reliable power supply & mitigation of Undervoltage condition of Daincha area under Rairakhhol Constituency under Sambalpur Dist .

**“TPWODL not only concerned about to meet the growing demands but identified the areas i.e. Daincha for providing reliable power supply and generate demand by establishment of New MSME, Agro Allied industries in Rural region. The project will also meet the Enhancement of Socio economic development, generation of Rural Employment and Reduction regional Disparity.”**

##### **Existing Scenario:**

- Existing 11KV Daincha feeder (approx. 153 Ckm), which also passes through a forest zone, the feeder is experiencing severe reliability issues.
- At present, 11 KV Daincha Feeder Emanates from 33/11 KV Naktiduel PSS with existing 34 Sqmm ACSR conductor approximate 35 Amp current flow in this feeder which causing Undervoltage (9.9 KV) at tailend of the feeder.
- The trunk conductor size of 11 kV Daincha feeder emanating from Naktiduel PSS is 34 sq.mm AAAC.
- Multiple break-down on 11kV feeder is encountered which hampers the reliability of power supply. Total 195 Nos. of Tripping Interruptions occurred in last FY 2024 – 25.
- These frequent interruptions have resulted in public dissatisfaction towards DISCOM, along with a significant number of consumer complaints.

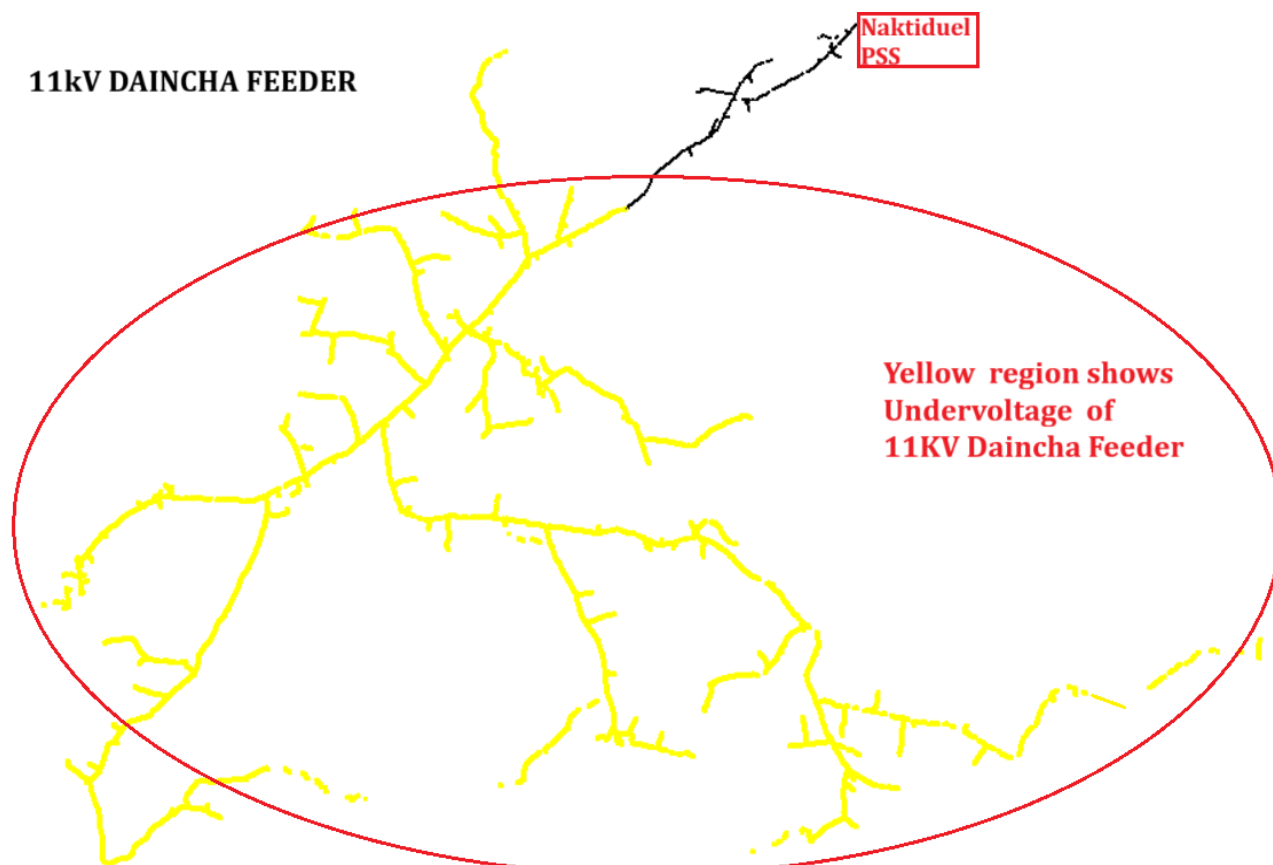
**Existing FY25 Loading and projected load at 11 kV Daincha Feeder:**

Existing Scenario								
Name of PSS	11kV Feeder Name	Feeder Capacity (MVA)	Peak Loading FY25 (MVA)	% Loading	Feeder under voltage Status	Projected load FY27 (MVA)	% Loading	Feeder Under voltage Status
NAKTIDUEL	DAINCHA	2.8	0.8	28.5%	Under Voltage	0.94	33.5%	Under Voltage

**Tripping interruption Data of 11kV Daincha Feeder during FY 2024-25:**

11 Kv Feeder Name	Voltage Level	Interruption Type	MU's Affected	Total Connected Consumers	SAIDI (In Hrs)	SAIFI	Power Purchase Cost Per Unit	Mu Affected Cost (In Lac.)	Remarks
DAINCHA	11KV	Tripping/ Breakdown	0.17055	3544	262.38	188.65	4.105	7.0010	Customer Dissatisfaction

**Existing SLD : 11 KV DAINCHA feeder**





## Load Flow Study of existing scenario in Cyme Software

At PSS Sending End :

Load Flow Box 11KV DAINCHA FEEDER							
Overhead Line - 78760322							
	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	99.929	10.996	6.346	42.601	460.901	376.872	265.325
B	99.991	10.997	6.350	31.494	200.006	183.138	80.392
C	99.972	10.995	6.349	31.328	198.927	180.128	84.415
Total:					856.048	740.138	430.133

At Feeder Tail End :

Load Flow Box 11KV DAINCHA FEEDER							
Cable - 67567640							
	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	84.1	10.1	5.3	0.2	1.0	0.9	0.5
B	98.5	9.9	6.3	0.2	1.2	1.0	0.6
C	93.9	9.9	6.0	0.2	1.1	0.9	0.6
Total:					3	3	2

### Proposed Scenario:

- To Improve Reliability, Public and Political Issues and huge public pressure Propose New 33/11KV PSS (2\*3.15)KVA at Daincha GP to improve power supply reliability and to Mitigate Low voltage in this area.
- 33KV Tapping from 33KV Naktiduel Feeder with LILO arrangement at Propose Daincha PSS.
- 33 KV New Line from NAKTIDUEL FDR – 2.0 CKM with LILO arrangement.
- Existing 11KV Daincha feeder segregate into 4 Numbers of new 11Kv outgoing feeder propose namely
  - 11 KV NEW DAINCHA FDR – 37.0 CKM
  - 11 KV SIMLIPAL FDR – 36.5 CKM
  - 11 KV TANDABIRA FDR – 37.0 CKM
  - 11 KV GOSARAMAL FDR - 45.0 CKM

NOTE : 11 KV DAINCHA FDR (FROM NAKTIDUEL PSS) – 24.0 CKM

### 33KV and 11KV New Line details:-

Division	Proposed PSS NAME	TYPE AND CAPACITY	VOLTAGE RATING	PROPOSED FEEDER NAME	Termination Point (1) Location	Termination point (2) Location	Proposed Length (in CKm)	New feeder Length (in CKm)	Area Benefitted	Constituency	Reason for PSS Proposal
SEED	Proposed New 33/11KV DAINCHA PSS	2 x 5 MVA	33KV	NAKTIDUEL FEEDER	Daincha	At Daincha (Propose PSS location)	2		Gosaramal, Haripur, Kamlanali, Badmalsuri, Daincha etc	Raidhakhol	33KV LILO from 33KV Naktiduel feeder
			11KV	11 KV NEW DAINCHA FDR - PLAN	Daincha PSS	Near Daincha Village	1.2	37	Daincha, Laija, Chhatarapur, Muturumunda, Ttarbeda, Dhunkchhali	Raidhakhol	Under Voltage Daincha

Division	Proposed PSS NAME	TYPE AND CAPACITY	VOLTAGE RATING	PROPOSED FEEDER NAME	Termination Point (1) Location	Termination point (2) Location	Proposed Length (in CKm)	New feeder Length (in CKm)	Area Benefitted	Constituency	Reason for PSS Proposal
			11KV	11 KV SIMLIPAL FDR - PLAN	Daincha PSS	At Reamali - Redakhola Road	2	36.5	Simlipal, Lusura, Saradhapur, Chandrapasi	Raidhakhol	Feeder
			11KV	11 KV TANDABIRA FDR - PLAN	Daincha PSS	Near Tandabira Vill.	3	25	Tandabira, Pandrisila, Lampafuli, Pathuria, Badmalsuri	Raidhakhol	
			11KV	11 KV GOSARAMAL FDR - PLAN	Daincha PSS	Gosaramal near to Gram Panchayat	10	45	Gosaramal, Bhalijharan, Haripur, Dhatukimal, Landimal	Raidhakhol	

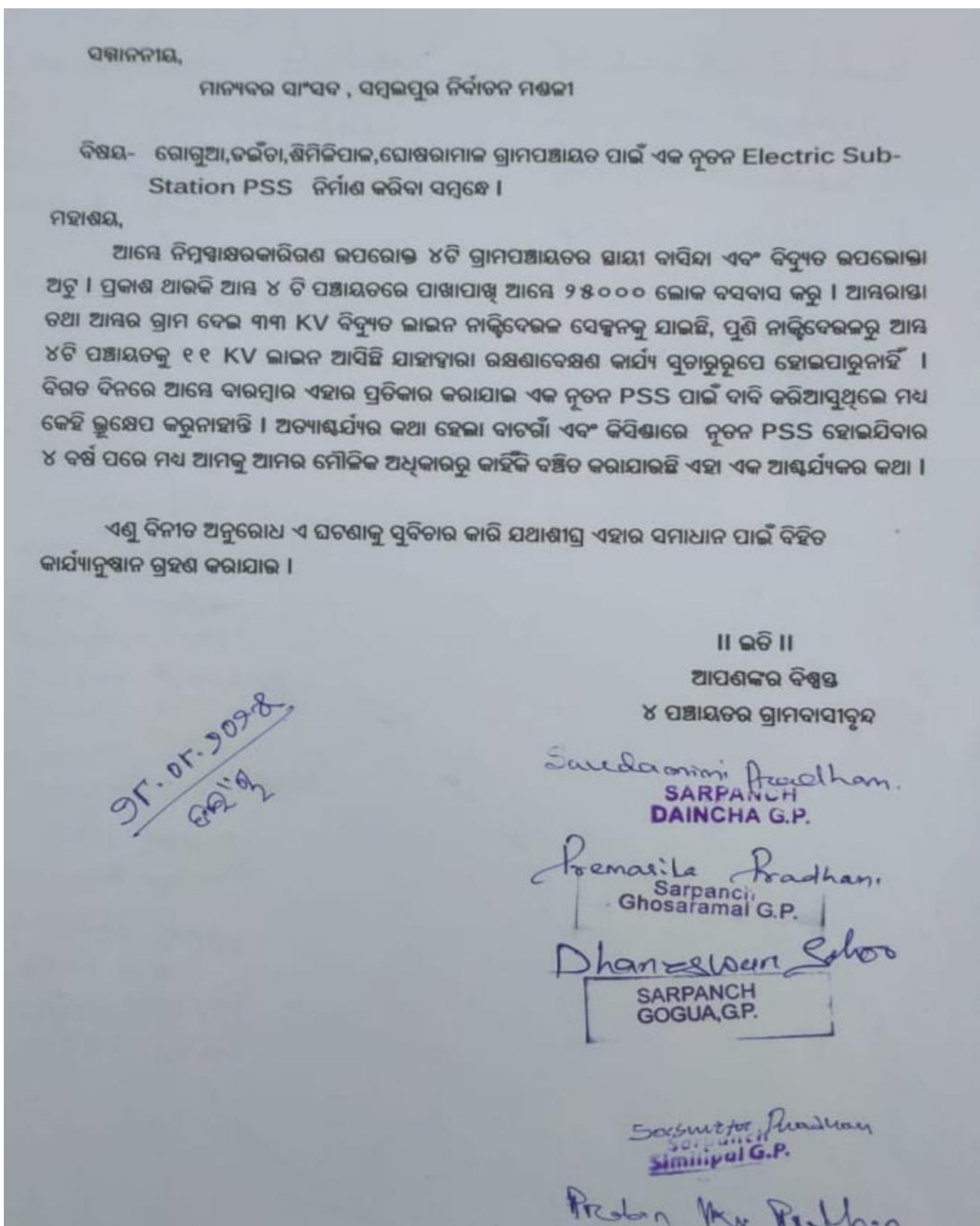
**Proposed Summer'27 Loading and projected load at 11 kV Feeder:**

Loading after Proposal of PSS (Summer'27)					
Name of PSS	11kV Feeder Name	Feeder Capacity (MVA)	Projected load Summer'27 (MVA)	Feeder Overloading Status	Remarks
DAINCHA	NEW DAINCHA FDR	2.8	0.3	OK	Expected load 1.0 MVA is expected from the PHC, Megalift, LI Points, RWSS Department and new HT consumers
DAINCHA	SIMLIPAL FDR	2.8	0.12	OK	
DAINCHA	TANDABIRA FDR	2.8	0.12	OK	
DAINCHA	GOSARAMAL FDR	2.8	0.16	OK	

**NOTE :**

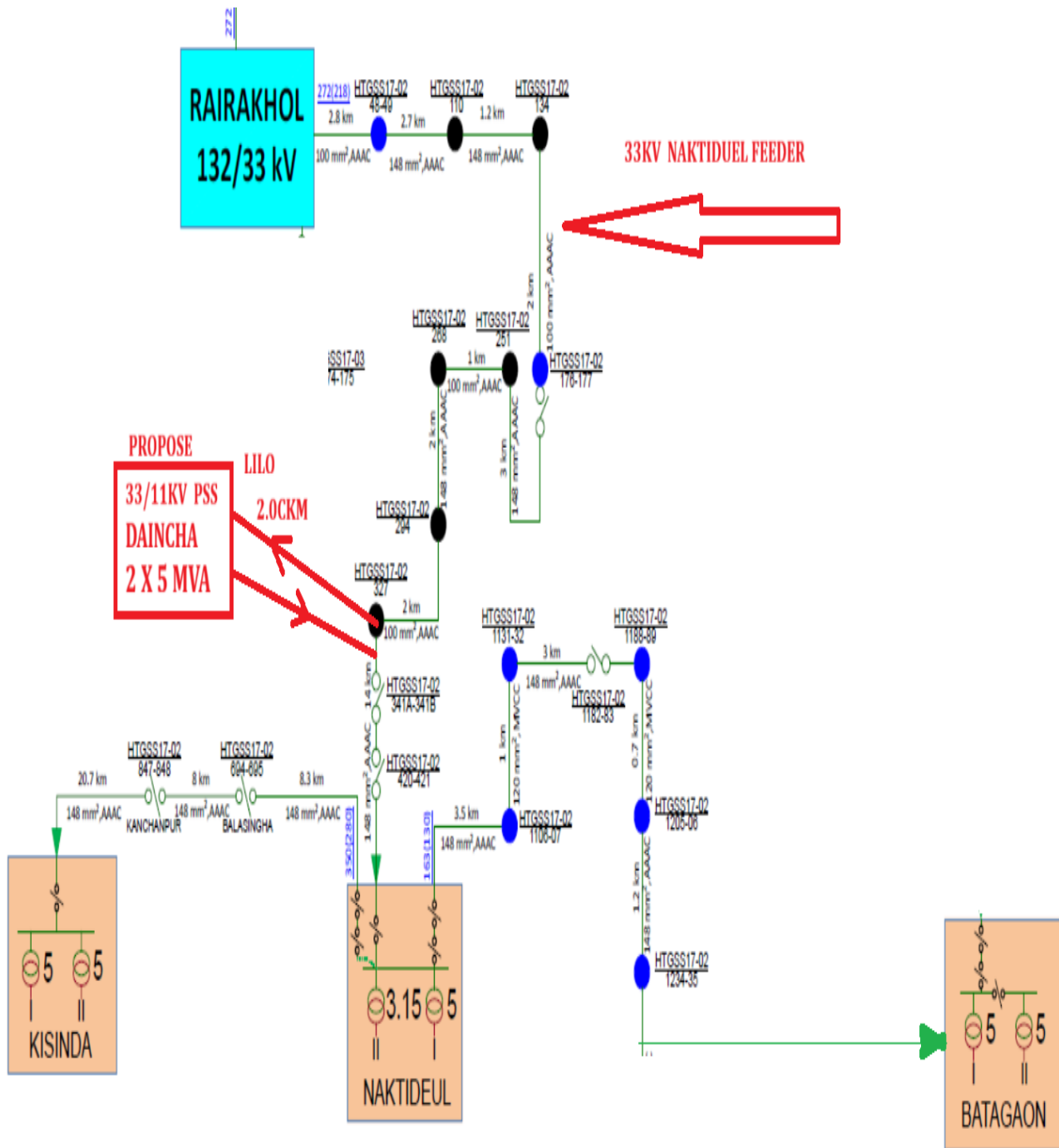
- Public representatives (Gram Sarpanch) of Gosarmal, Gogua, Daincha, and Simlipal complain for Reliable 11KV Power supply to consumers.

**Public grievance due to Low voltage issue :-**

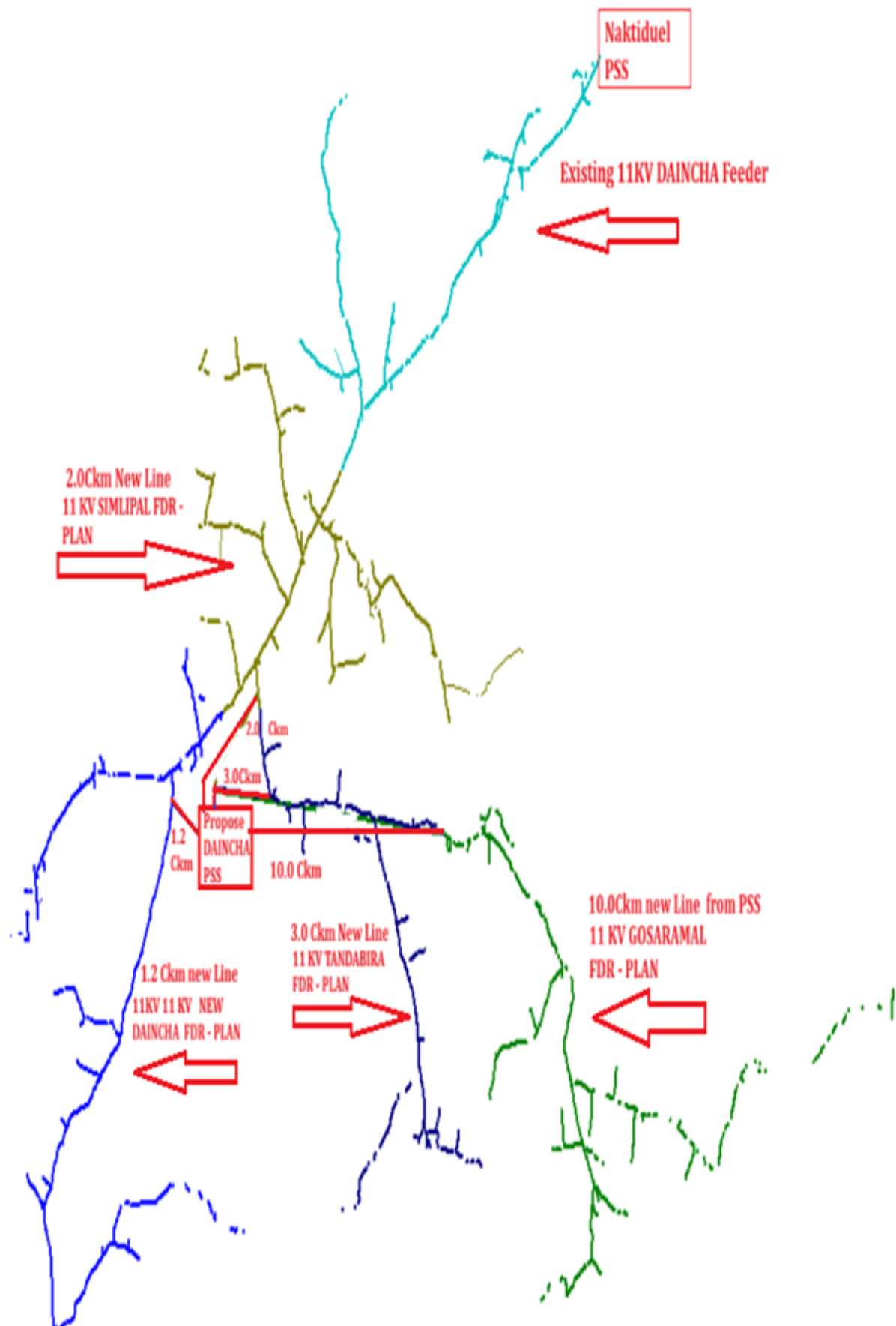


- After Proposal of New 33/11KV PSS at Daincha with 4 Numbers of Outgoing feeder, Existing 11KV DAINCHA feeder length reduce to 24.0 Ckm from 153 Ckm along with 4 New 11KV Feeder which will reduce numbers of tripping and low voltage issue.
- It also provide N-1 power supply at Daicha Area connected from Other 11KV Feeders.

**Proposed 33V Network SLD with 33/11KV DAINCHA PSS:**



**Proposed 11KVSLD:**



## Load Flow Study of proposed scenario in Cyme Software:

### 1) 11 KV NEW DAINCHA FDR – 37.0 CKM

Load Flow Box

Source - 11KV NEW DAINCHA - FEEDER

	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	100.00	11.00	6.35	18.74	157.13	124.76	95.51
B	100.00	11.00	6.35	12.77	81.08	67.99	44.16
C	100.00	11.00	6.35	12.78	81.15	67.92	44.40
Total:					319.12	260.68	184.07

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






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### 2.) 11 KV SIMLIPAL FDR – 36.5 CKM

Load Flow Box

Source - 11KV GOSARMAL - FEEDER

	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	100.00	11.00	6.35	6.43	72.57	66.34	29.42
B	100.00	11.00	6.35	4.95	31.43	31.29	-2.95
C	100.00	11.00	6.35	4.90	31.15	31.03	-2.69
Total:					130.84	128.66	23.79








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### 3) 11 KV TANDABIRA FDR – 37.0 CKM

Load Flow Box

Source - 11KV TANDABIRA - PLAN FDR

	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	100.00	11.00	6.35	6.99	44.42	39.19	20.90
B	100.00	11.00	6.35	3.89	24.72	23.74	6.91
C	100.00	11.00	6.35	3.89	24.71	23.71	6.95
Total:					93.35	86.64	34.75








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### 4) 11 KV GOSARAMAL FDR - 45.0 CKM

Load Flow Box

Source - 11KV SIMLIPAL - FEEDER

	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	100.00	11.00	6.35	8.80	119.42	92.83	75.12
B	100.00	11.00	6.35	6.76	42.95	35.85	23.65
C	100.00	11.00	6.35	6.80	43.18	35.73	24.25
Total:					205.34	164.41	123.02

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**NOTE : 11 KV DAINCHA FDR (FROM NAKTIDUEL PSS) – 24.0 CKM**

Load Flow Box							
Source - 41645203_11KV DAINCHA							
	V base	kVLL	kVLN	i (A)	kVA	kW	kVAR
A	100.00	11.00	6.35	9.28	58.91	50.48	30.37
B	100.00	11.00	6.35	4.59	29.14	27.53	9.56
C	100.00	11.00	6.35	4.59	29.14	27.47	9.70
Total:					116.58	105.48	49.64

**Scope of Work:**

- 2.0 CKM of 232 Sqmm AAAC Conductor tapping from 33KV Naktiduel feeder with LILO Arrangement.
- 33/11KV conventional PSS( 33KV Outdoor & 11KV Indoor), includes 2 X 3.15 MVA PTR capacity, 2 Nos. 33KV Outdoor Bay VCB ,2 No. VCB for PTR protection, 1 No of 100KVA Station Transformer (33/0.4KV) 4 Nos. of Indoor 11KV Breaker for 4 Nos. of Outgoing Proposed feeders.
- 16.2 CKM of 100 Sqmm AAAC Conductor for Four Numbers of Outgoing feeder. Due to forest area 3.5Ckm Cover conductor propose and 12.7 Ckm Bare Conductor Propose.
  - a) 1.2 Ckm for 11 KV NEW DAINCHA FDR
  - b) 2.0 Ckm for 11 KV SIMLIPAL FDR
  - c) 3.0 Ckm for 11 KV TANDABIRA FDR
  - d) 10.0 Ckm for 11 KV GOSARAMAL FDR

**Proposed Cost with Estimate Break-up:**

ANNEXURE-12.1		
TP WESTERN ODISHA DISTRIBUTION LIMITED		
Name of the Division :-	SEED	
Name of the Sub-Division : -	Rairakhol	
Name of Section:-	Rairakhol	
Name of the Work :-	33/11KV PSS proposal at 11 KV Daincha area under Rairakhol Constituency under Sambalpur District.	
Names of Schemes: -	TPWODL CAPEX (FY 26-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>		
Sl. No.	Description	Amount
1	PART A: Construction of Bay VCB OD	11306500.58
2	PART-B: 1. Installation of 33/11KV Station Trf(33/0.4KV)	1211025.516
3	PART-C: Installation of 33/11KV PTR (2*3.15 KVA)	16615310.71
4	PART-D Construction of 11KV Bay VCB OD 11 KV OG	1718967.484
5	PART-E PSS (Control Room Inside)	28425112.74
6	PART-F Civil & Scada	32755302.00
8	PART-G Construction of 2.0 Ckm 33KV New Line 232Sqmm AAA Bare Conductor	6347833.00
9	PART-H Construction of 3.5 Ckm 11KV New Line using 100Sqmm AAA Bare Conductor	8223859.00
10	PART-I Construction of 11KV New Line using 100Sqmm AAA Cover Conductor	26748153.00
	Total Amount	133352064
	Total Amount (In Cr.)	13.34 Cr.
Total estimated cost is Rs.13.34 Crore. (On TPWODL Capex Scheme)		

Cost Estimate: ₹ 13.34 Cr. (For detailed BoQ refer Annexure-12.1)

**Physical Target:**

March 2027



### Cost Benefit Analysis:

33/11KV DAINCHA PSS								
Stage	PSS	11kV Feeder	Peak Loading (kW)	Losses at peak loading (kW)	Avg. Loss reduction (kW) (LLF -0.470)	Unit saved annually (kWH)	Annual saving (Rs Lacs) (Rs 4.105/Unit)	Remarks
Before Proposal	Naktiduel	Daincha	817	98	34	299304	12.3	33/11KV PSS proposal at Daincha area under Rairakhol Constituency to mitigate Low Voltage issue and Reliable power supply at Sambalpur District.
After Proposal	Daincha PSS	1. New Daincha Fdr	260.7	8.74				Undervoltage Mitigation
	Daincha PSS	2. Simlipal Fdr	164.4	5.96				Undervoltage Mitigation
	Daincha PSS	3. Tandabira Fdr	86.6	2.70				Undervoltage Mitigation
	Daincha PSS	4. Gosaramal Fdr	128.7	5.00				Undervoltage Mitigation
	Daincha PSS	5. Daincha Fdr (Naktiduel PSS)	251.5	3.32				Undervoltage Mitigation

Revenue Return Sheet - DAINCHA PSS				
Sr. No.	Description	Formula	Value	UoM
A	Total cost of scheme	-	1,333.52	Rs. Lac
B	Load due to load growth	-	99.83	kVA
C	Total kW due to load growth	$1.732 \times 33 \times B \times \text{Pf}$	87	kW
D	Total units consumed yearly (Load x days x Hrs x load factor)	$C \times 365 \times 24 \times \text{LF}$	519593	kWH
E	Power Purchase cost per unit	-	4.105	Rs.
F	Avg. Power Sale cost per unit	-	5.53	Rs.
G	Diff. (Sale-purchase)	F-E	1.425	Rs.
H	Revenue owing to serving load growth	$G / (D \times 10^5)$	7.40	Rs. Lac
I	Revenue owing to tech. loss reduction	Refer Technical Loss Calculation	12.30	Rs. Lac
J	Net Revenue Collected	H+I	19.70	Rs. Lac
K	% revenue return	$(J/A) \times 100$	1.5	%
L	Pay Back Period	$100/K$	67.68	Years

**Benefit to the system and consumers:**

- Improvement in SAIDI & SAIFI i.e. Reliable Power supply.
- Reduces voltage drops across long feeders.
- Maintains proper voltage levels at consumer ends.
- Increased System Reliability with Reduction of Breakdown/tripping's.
- Reduced Distribution Losses i.e.  $I^2R$  losses.
- Undervoltage mitigation of Existing 11 KV Daincha feeder.
- Providing N-1 connectivity during faults or maintenance,
- Reduces the risk of long outages and improves system resilience.
- The above arrangement will help to Extends electricity supply to remote and underserved regions.

## ANNEXURE 41

## 1. POWER TRANSFORMER OVERLOADING MITIGATION AT CIVIL TOWNSHIP SUBSTATION

**PROPOSAL:**

Addition of 1 no of 33/11kV, 8 MVA Power Transformer at Civil Township 33/11kV Substation in RSED division of Rourkela circle to mitigate overloading condition.

**REQUIREMENT/NEED OF PROPOSAL:**

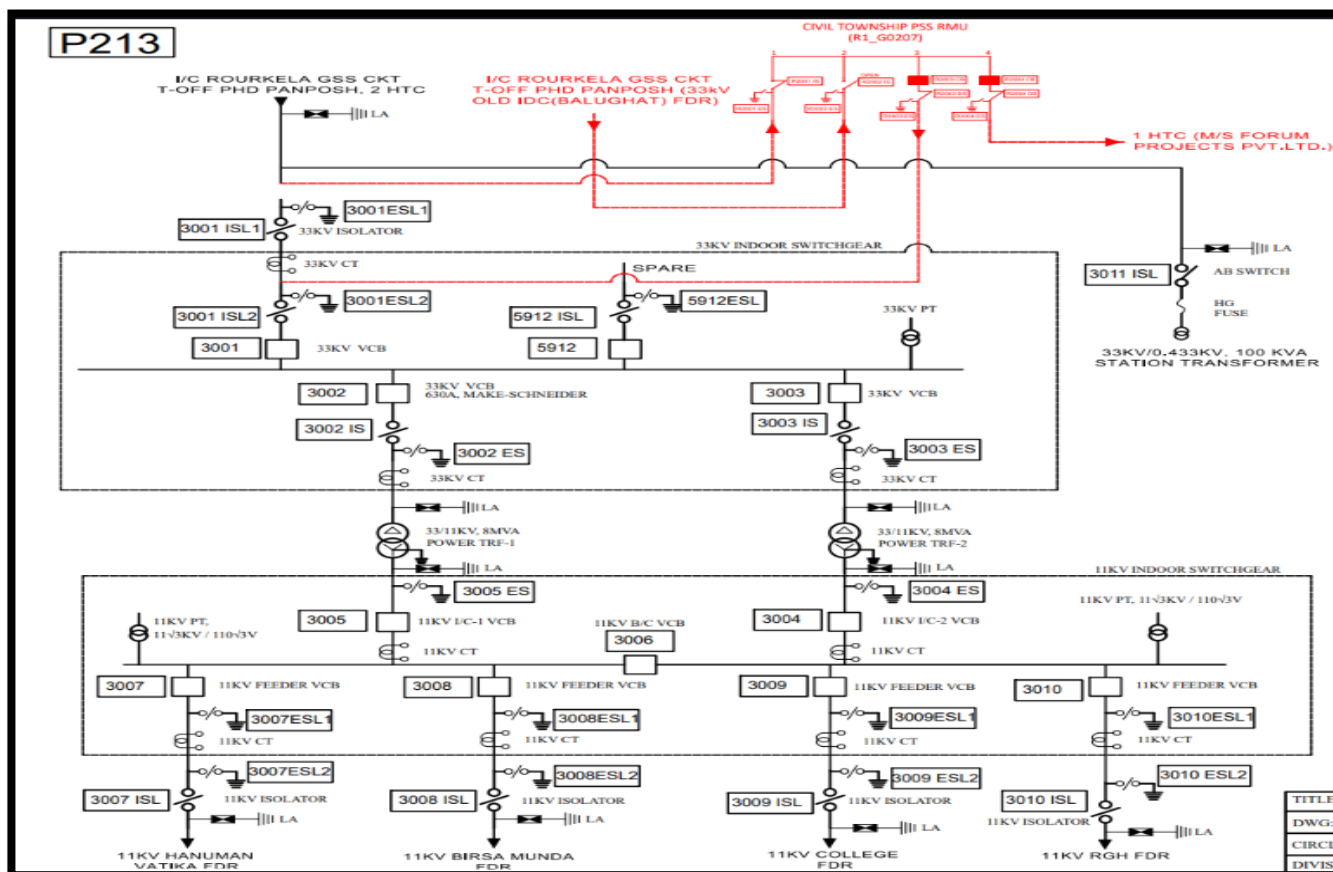
### Existing Scenario:

1. Loading of 33/11kV Civil Township PTR-1 & 2 are 6.1 MVA & 5.4 MVA respectively at peak load condition of FY-25. Considering load growth for 2years (10.07% load growth per year for 2years), the projected loading at FY-27 for PTR-1 & 2 would be 7.4MVA & 6.5MVA respectively.
2. PTR-1 & PTR-2 will be loaded up to 93% & 81% respectively, w.r.t, the existing transformer capacity of 8MVA & 8MVA respectively in FY-27.

**Existing FY-25 Loading and projected load at Civil Township PTRs:**

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @10.07%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Civil	PTR-1	8	6.1	76%	7.4	93%
2	Township	PTR-2	8	5.4	67%	6.5	81%

**EXISTING SLD OF CIVIL TOWNSHIP 33/11KV PSS:**

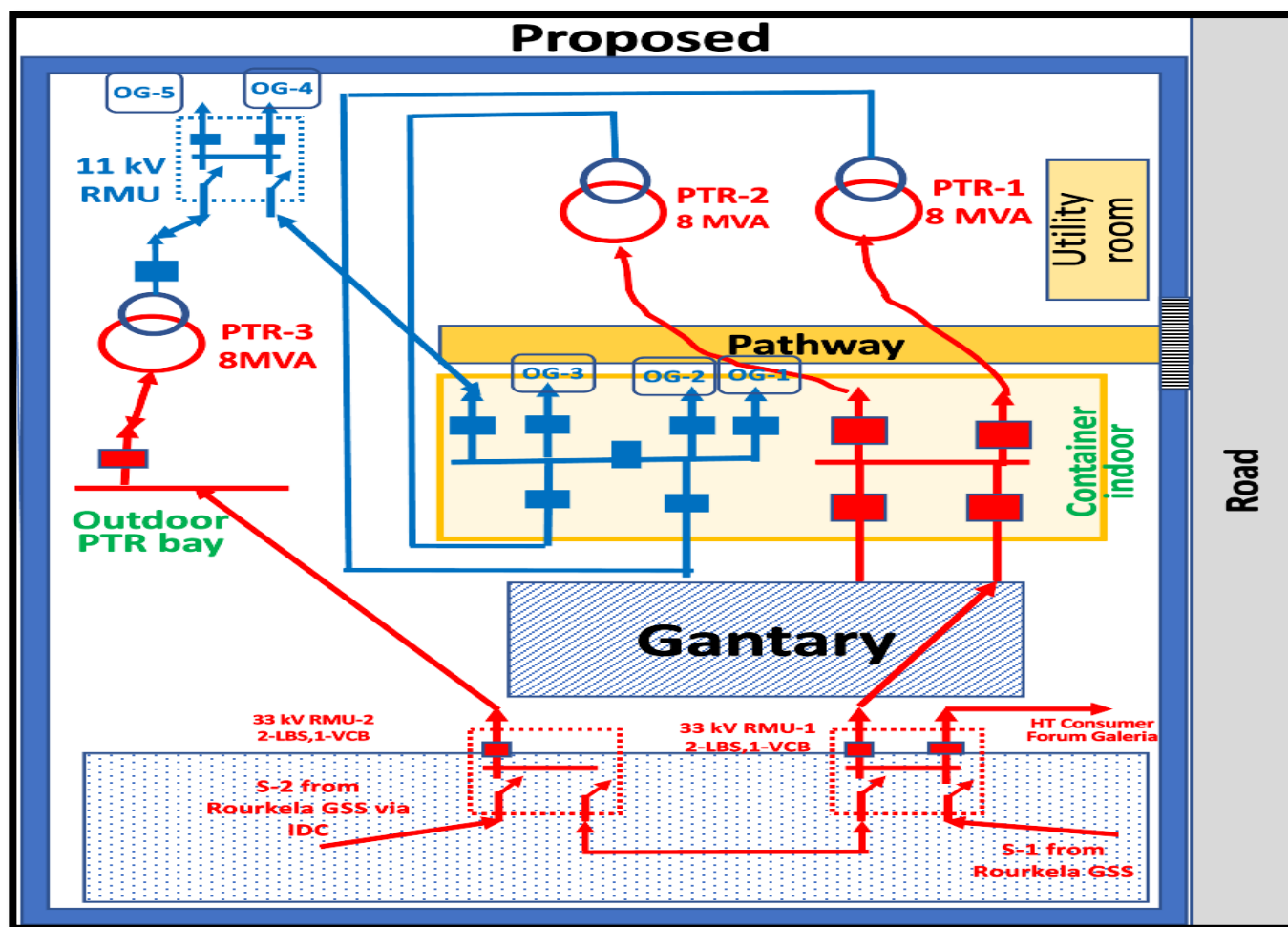


### Proposed Scenario:

- In order to Mitigate Over-Loading status of PTR-1 & PTR-2 it is required to Add one no. of 8MVA at Civil Township PSS is proposed to meet the full load of the PSS.

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @10.07%) FY-27	
				Peak Load	%Loading
1	Civil Township	PTR-1	8	5.4	68%
2		PTR-2	8	4.5	56%
3		PTR-3	8	4.0	50%

### PROPOSED SLD OF CIVIL TOWNSHIP 33/11KV PSS:



### SCOPE OF WORK:

- Addition of 1 No. of 33/11 KV 8MVA PTR.
- One no. of 33 KV O/D Bay, VCB, CT, PT & CR Panel(I/D) & 11 KV O/D Bay, VCB, CT, PT & CR Panel(I/D) for PTR Protection.

**PROPOSED COST WITH ESTIMATE BREAK-UP:**

Name of the Division: -		<b>RSED, ROURKELA</b>	
Name of the Sub-Division: -		Industrial Estate	
Name of the Section: -		Civil Township	
Name of the Work: -		Mitigation of 33/11kV PTR Overloading	
Scope: -		Addition of 01nos. Power Transformers of 8MVA at Civil Township 33/11kV PSS including New 33 KV & 11 KV O/D Bay & other civil works.	
Names of Schemes: -		TPWODL CAPEX (FY 2026-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>			
<b>Sl. No.</b>	<b>Part</b>	<b>Description</b>	<b>Amount</b>
1	A	Addition of 01nos. Power Transformers.	2,04,07,794.00
2	B	33 KV Bay, VCB, CT, PT & CRP (I/D) for PTR Protection	30,65,142.00
3	C	11 KV Bay, VCB, CT, PT & CRP (I/D) for PTR Protection	20,77,325.00
		<b>Total Amount</b>	2,55,50,261.00
		<b>Total Amount (In Cr)</b>	<b>₹ 2.56</b>
<b>Total estimated cost is Rs. 2.56 Crore. (On TPWODL CAPEX Scheme)</b>			

Cost Estimate: ₹ 2.56cr. (For detailed BoQ refer Annexure).

**PHYSICAL TARGET:**

March 2027

**COST BENEFIT ANALYSIS:**

Cost Benefit Analysis at CDB cost inclusive of taxes - Addition of 8 MVA Power Transformer at Civil Town ship PSS										
Year	Anticipate d loads in Amp at Load Growth of 10.07%	Anticipate d loads in MW at Load Growth of 10.07 %	cost benefit on account of new loads (Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads (Running Charges) = D*1000*days*hrs*LF* (selling price- Purchase price)	Total benefit (Rs)	Cumulative Benefit (Rs)	Revenue per day (Rs)	Calculations	Value	Unit
FY 27	4.00	3.50	8,40,000.00	43,69,050.00	52,09,050.00	52,09,050.00	14,271.37	Total Cost of Scheme (with Taxes)	2,05,50,261	Rs
FY 28	4.40	3.85	9,24,588.00	48,09,013.34	57,33,601.34	1,09,42,651.34	15,708.50	Revenue per day	17,449.93	Rs
FY 29	4.85	4.24	10,17,694.01	52,93,280.98	63,10,974.99	1,72,53,626.32	17,290.34	Pay Back Period of Scheme Years	3.41	Year
FY 30	5.33	4.67	11,20,175.80	58,26,314.37	69,46,490.17	2,42,00,116.50	19,031.48	% RR	29.34	%
FY 31	5.87	5.14	12,32,977.50	64,13,024.23	76,46,001.73	3,18,46,118.23	20,947.95			

**Benefits:**

- To mitigate overloading condition on power transformers.
- To cater future load growth of the consumer.
- To ensure reliable power supply to the consumers.

## **2. POWER TRANSFORMER OVERLOADING MITIGATION AT DEOGAON SUBSTATION**

**PROPOSAL:**

Augmentation of existing 1no. of 33/11kV, 5 MVA Power Transformer (PTR-1) to 8 MVA at Deogaon 33/11kV Substation in BED division of Balangir circle to mitigate overloading condition.

**REQUIREMENT/NEED OF PROPOSAL:**

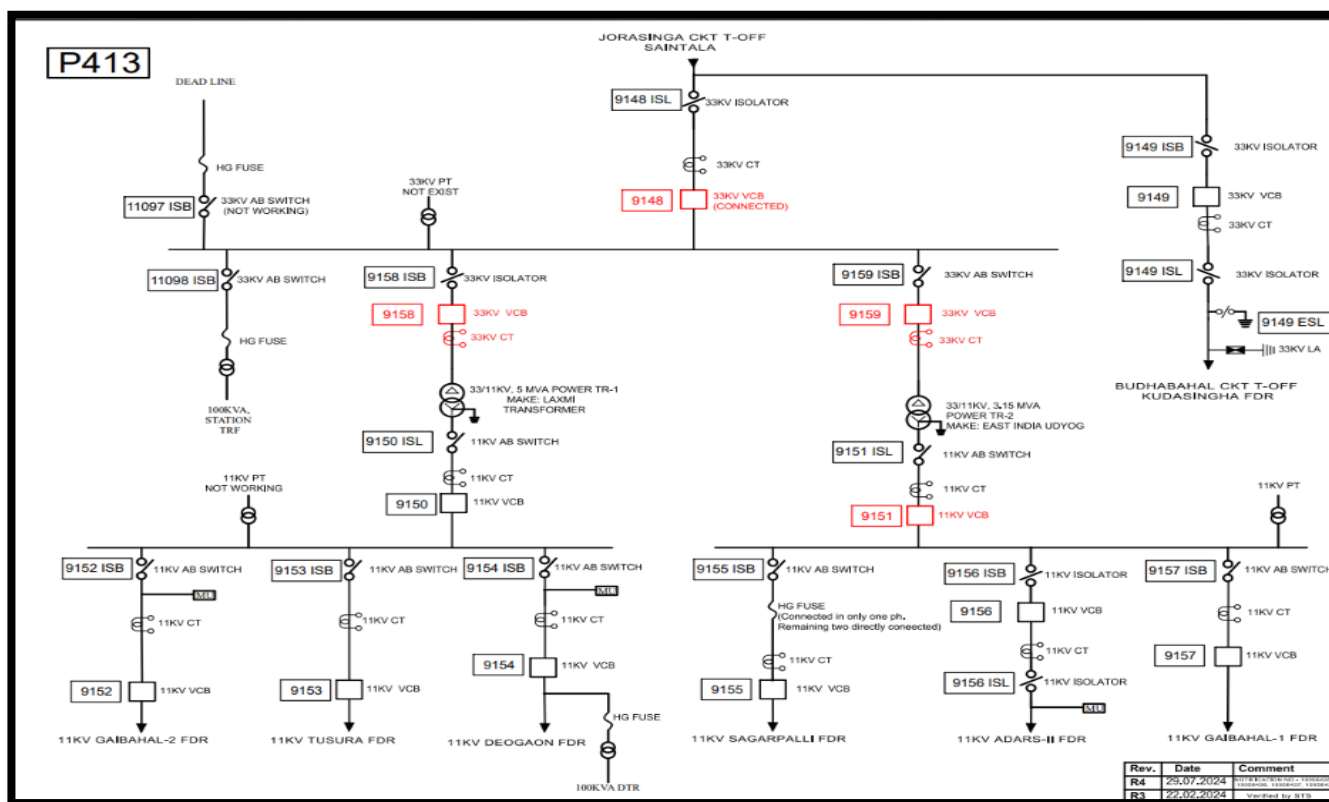
### Existing Scenario:

1. Loading of 33/11kV Deogaon PTR-1 & 2 are 4.1 MVA and 2.4 MVA respectively at peak load condition of FY-25. Considering load growth for 2years (6.81% load growth per year for 2years), the projected loading of FY-27 for PTR-1 & 2 would be 4.7MVA and 2.7MVA respectively.
2. PTR-1 and PTR-2 will be loaded up to 93% and 87% respectively, w.r.t, the existing transformer capacity of 5MVA and 3.15MVA respectively in FY-27.

**Existing FY-25 Loading and projected load at Deogaon PTRs:**

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @6.81%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Deogaon	PTR-1	5	4.1	82%	4.7	93%
2		PTR-2	3.15	2.4	76%	2.7	87%

**EXISTING SLD OF DEOGAON 33/11KV PSS:**

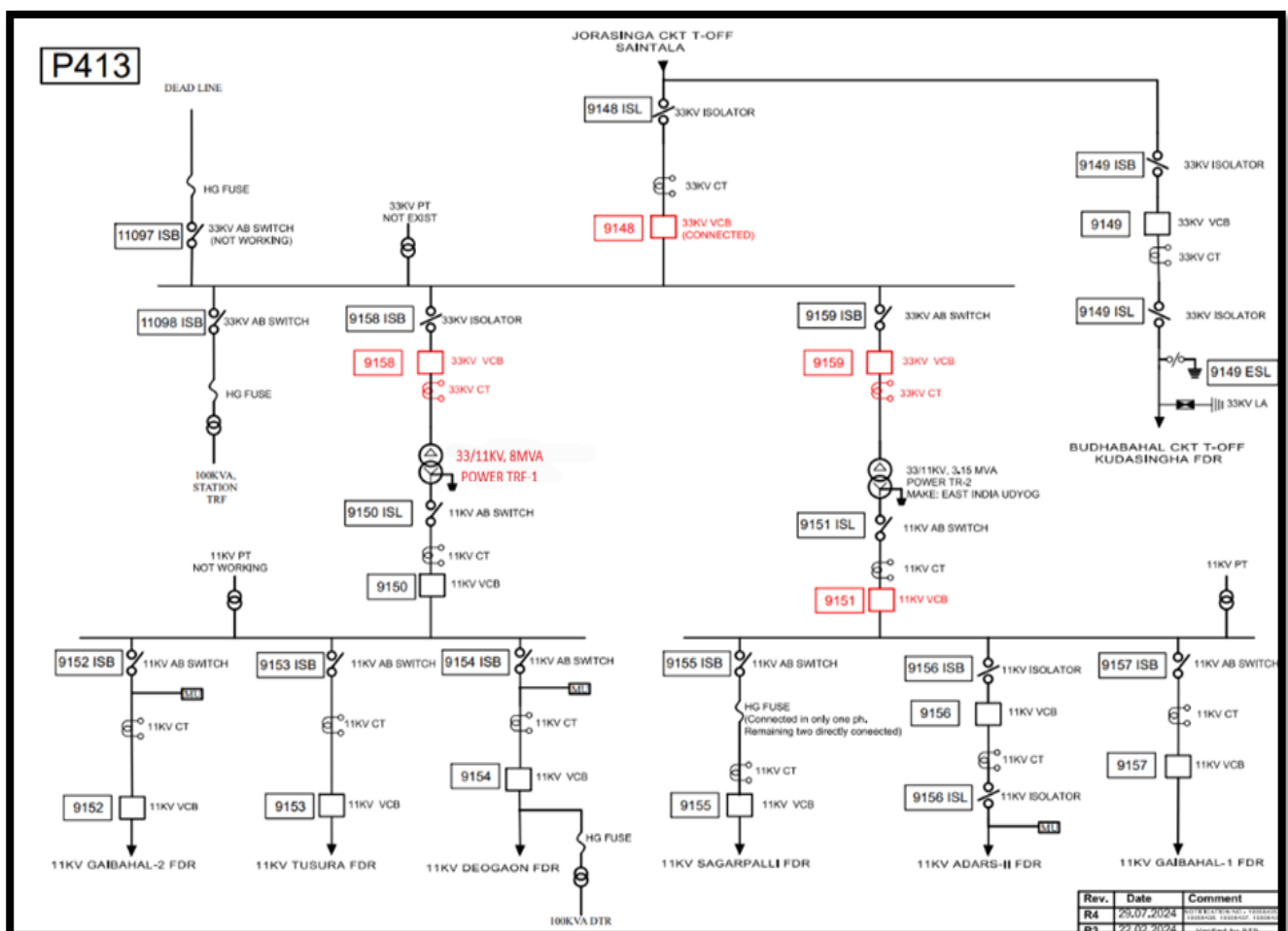


### Proposed Scenario:

- In order to Mitigate Over-Loading status of both PTR's. Augmentation of PTR-1 from 5 MVA to 8 MVA.
- Augmentation of PTR-2 from 3.15MVA to 5MVA (i.e., 5MVA to be installed in place of 3.15MVA as chain Augmentation) at Deogaon PSS is proposed to meet the full load of Deogaon PSS.

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @6.81%) FY-27	
				Peak Load	%Loading
1	Deogaon	PTR-1	8	4.7	58%
2		PTR-2	5	2.7	55%

### PROPOSED SLD OF DEOGAON 33/11KV PSS:



### SCOPE OF WORK:

- Augmentation of 1 no. of 33/11 KV PTR from 5MVA to 8MVA along with Plinth & other civil works.

**PROPOSED COST WITH ESTIMATE BREAK-UP:**

Name of the Division: -		BED, BALANGIR	
Name of the Sub-Division: -		Tusura	
Name of the Section: -		Deogaon	
Name of the Work: -		Mitigation of 33/11kV PTR Overloading	
Scope: -		Augmentation of 01nos. Power Transformers of PTR-1 from 5MVA to 8MVA at Deogaon 33/11kV PSS with other civil works.	
Names of Schemes: -		TPWODL CAPEX (FY 2026-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>			
Sl. No.	Part	Description	Amount
1	A	Augmentation of 01nos. Power Transformers.	1,44,40,009.00
		Total Amount	1,44,40,009.00
		Total Amount (In Cr)	₹ 1.44
Total estimated cost is Rs. 1.44 Crore. (On TPWODL CAPEX Scheme)			

Cost Estimate: ₹ 1.44cr. (For detailed BoQ refer Annexure).

**PHYSICAL TARGET:**

March 2027

**COST BENEFIT ANALYSIS:**

Cost Benefit Analysis at CDB cost inclusive of taxes - Augmentation of 5 MVA Power Transformer to 8MVA at Deogaon PSS										
Year	Anticipated loads in Amp at Load Growth of 6.81%	Anticipated loads in MW at Load Growth of 6.81 %	cost benefit on account of new loads(Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads(Running Charges) = D*1000*Days*Hrs* LF*(Selling price-Purchase price)	Total benefit (Rs)	Cumulative Benefit(Rs)	Revenue per day (Rs)	Calculations	Value	Unit
FY 27	0.29	0.25	60,900.00	3,16,756.13	3,77,656.13	3,77,656.13	1,034.67	Total Cost of Scheme(with Taxes)	1,44,40,009	Rs
FY 28	0.31	0.27	65,047.29	3,38,327.22	4,03,374.51	7,81,030.63	1,105.14	Revenue per day	1,185.53	Rs
FY 29	0.33	0.29	69,477.01	3,61,367.30	4,30,844.31	12,11,874.94	1,180.40	Pay Back Period of Scheme Years	33.50	Year
FY 30	0.35	0.31	74,208.39	3,85,976.41	4,60,184.81	16,72,059.75	1,260.78	% RR	2.99	%
FY 31	0.38	0.33	79,261.99	4,12,261.41	4,91,523.39	21,63,583.15	1,346.64			

**Benefits:**

- To mitigate overloading condition on power transformers.
- To cater future load growth of the consumer.
- To ensure reliable power supply to the consumers.



### 3. POWER TRANSFORMER OVERLOADING MITIGATION AT KUSADUNGRI SUBSTATION

#### PROPOSAL:

Augmentation of existing 1no. of 33/11kV, 5 MVA Power Transformer (PTR-1) to 8 MVA at Kusadungri 33/11kV Substation in KEED division of Kalahandi circle to mitigate overloading condition.

#### REQUIREMENT/NEED OF PROPOSAL:

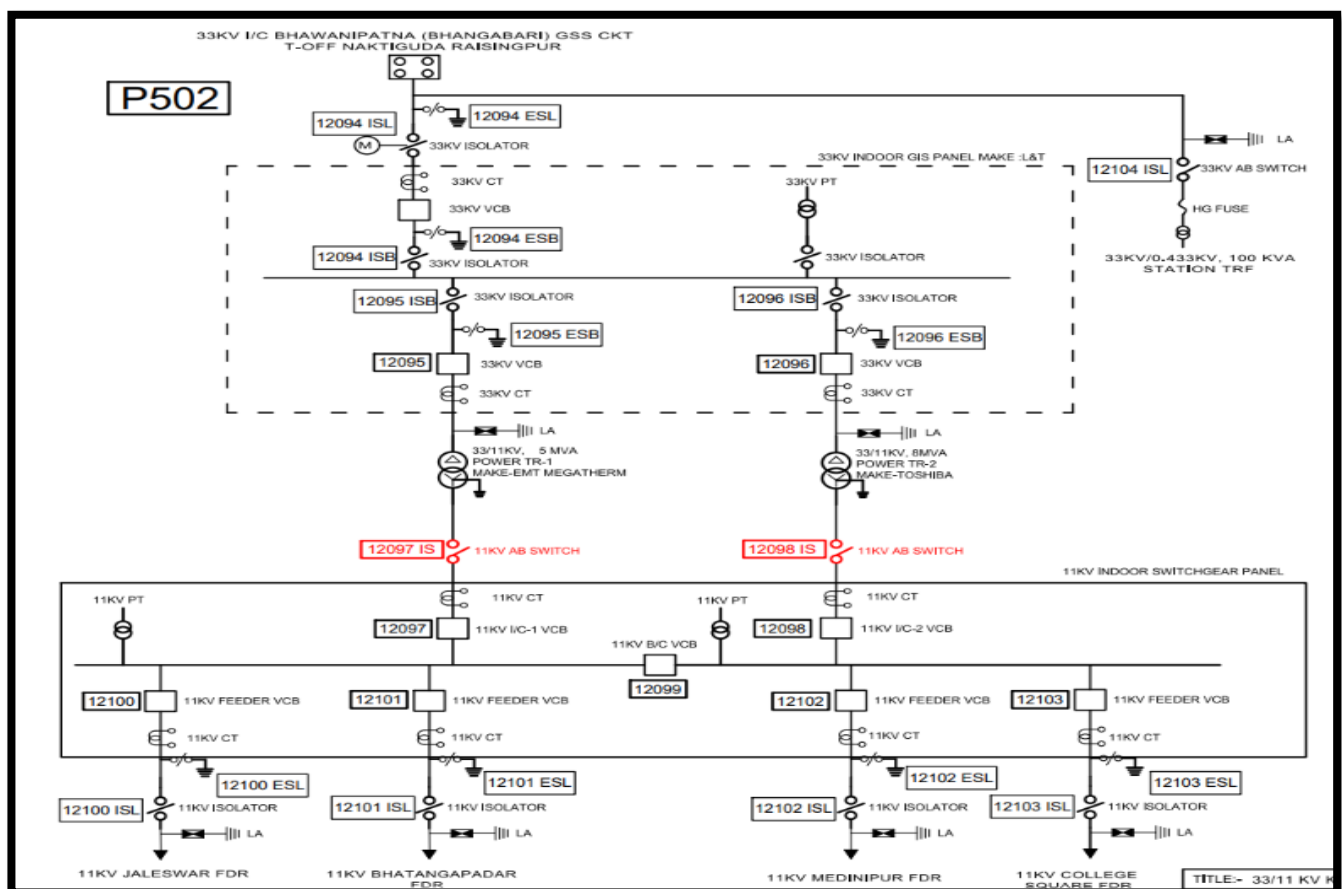
##### Existing Scenario:

1. Loading of 33/11kV Kusadungri PTR-1 & 2 are 4.1 MVA and 5.1 MVA respectively at peak load condition of FY-25. Considering load growth for 2years (5.74% load growth per year for 2years), the projected loading of FY-27 for PTR-1 & 2 would be 4.5MVA and 5.7MVA respectively.
2. PTR-1 and PTR-2 will be loaded up to 91% and 71% respectively, w.r.t, the existing transformer capacity of 5MVA and 8MVA respectively in FY-27.

##### Existing FY-25 Loading and projected load at Kusadungri PTRs:

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @5.74%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Kusadungri	PTR-1	5	4.1	81%	4.5	91%
2		PTR-2	8	5.1	64%	5.7	71%

#### EXISTING SLD OF KUSADUNGRI 33/11KV PSS:

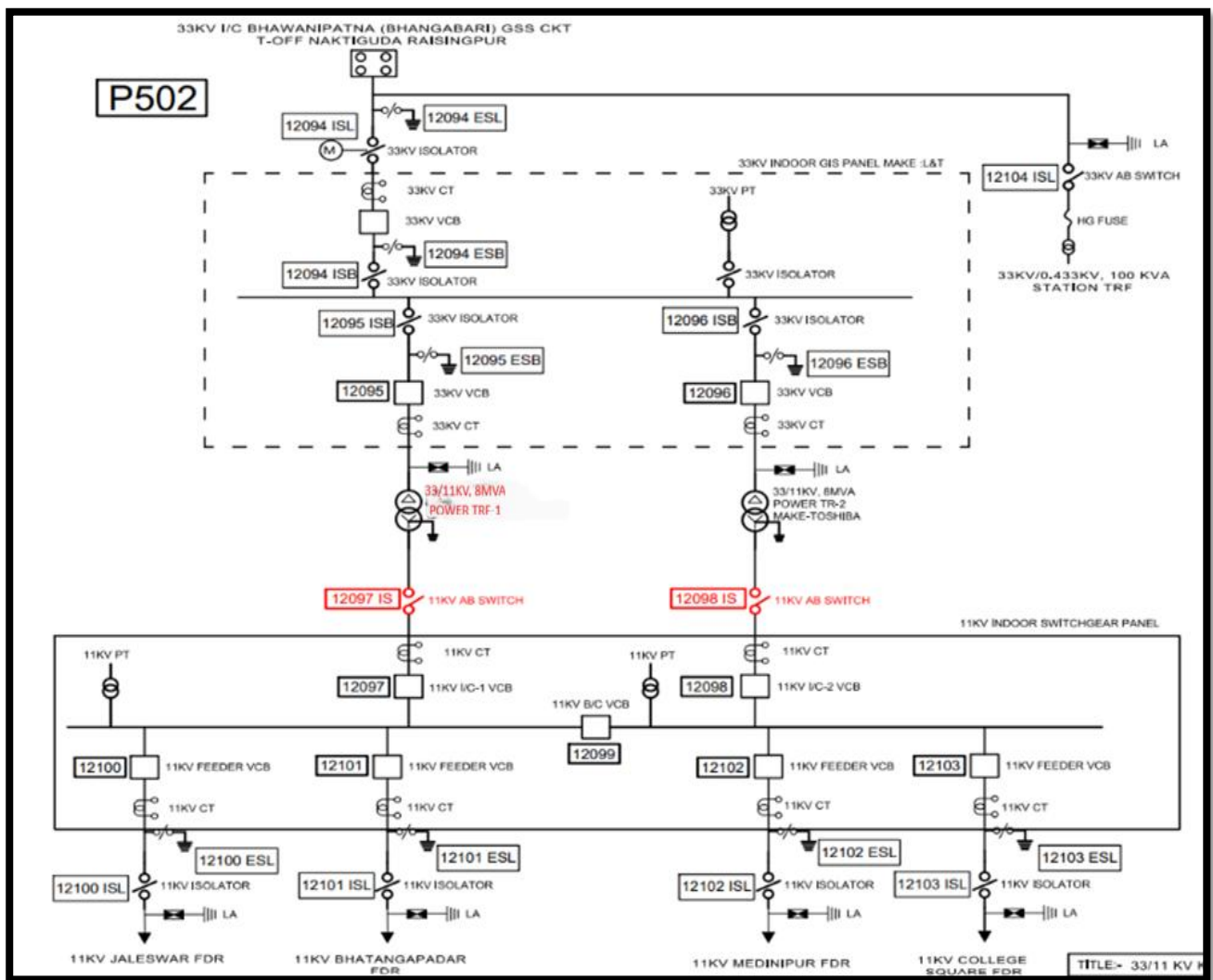


### Proposed Scenario:

- In order to Mitigate Over-Loading status of PTR-1 it is required to Augment PTR-1 from 5 MVA to 8 MVA at Kusadungri PSS is proposed to meet the full load of the PSS.

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @5.74%) FY-27	
				Peak Load	%Loading
1	Kusadungri	PTR-1	8	4.5	57%
2		PTR-2	8	5.7	71%

### PROPOSED SLD OF KUSADUNGRI 33/11KV PSS:



### SCOPE OF WORK:

- Augmentation of 1 no. of 33/11 KV PTR from 5MVA to 8MVA along with Civil works.

**PROPOSED COST WITH ESTIMATE BREAK-UP:**

Name of the Division: -		KEED, KALAHANDI	
Name of the Sub-Division: -		Power House	
Name of the Section: -		Section-4	
Name of the Work: -		Mitigation of 33/11kV PTR Overloading	
Scope: -		Augmentation of 01nos. Power Transformers of PTR-1 from 5MVA to 8MVA at Kusadungri 33/11kV PSS with other civil works.	
Names of Schemes: -		TPWODL CAPEX (FY 2026-27)	
ABSTRACT OF ESTIMATE			
Sl. No.	Part	Description	Amount
1	A	Augmentation of 01nos. Power Transformers.	1,44,40,009.00
		Total Amount	1,44,40,009.00
		Total Amount (In Cr)	₹ 1.44
Total estimated cost is Rs. 1.44 Crore. (On TPWODL CAPEX Scheme)			

Cost Estimate: ₹ 1.44cr. (For detailed BoQ refer Annexure).

**PHYSICAL TARGET:**

March 2027

**COST BENEFIT ANALYSIS:**

Cost Benefit Analysis at CDB cost inclusive of taxes - Augmentation of 5 MVA Power Transformer to 8MVA at Kusadungri PSS										
Year	Anticipated loads in Amp at Load Growth of 5.74%	Anticipated loads in MW at Load Growth of 5.74 %	cost benefit on account of new loads (Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads (Running Charges) = D*1000*Days*Hrs* LF*( Selling price-Purchase price)	Total benefit (Rs)	Cumulative Benefit (Rs)	Revenue per day (Rs)	Calculations	Value	Unit
FY 27	0.24	0.21	50,400.00	2,62,143.00	3,12,543.00	3,12,543.00	856.28	Total Cost of Scheme (with Taxes)	1,44,40,009.00	Rs
FY 28	0.25	0.22	53,292.96	2,77,190.01	3,30,482.97	6,43,025.97	905.43	Revenue per day	960.39	Rs
FY 29	0.27	0.23	56,351.98	2,93,100.71	3,49,452.69	9,92,478.66	957.40	Pay Back Period of Scheme Years	41.30	Year
FY 30	0.28	0.25	59,586.58	3,09,924.70	3,69,511.28	13,61,989.93	1,012.36	% RR	2.42	%
FY 31	0.30	0.26	63,006.85	3,27,714.37	3,90,721.22	17,52,711.16	1,070.47			

**Benefits:**

- To mitigate overloading condition on power transformers.
- To cater future load growth of the consumer.
- To ensure reliable power supply to the consumers.

4. POWER TRANSFORMER OVERLOADING MITIGATION AT DASMILE SUBSTATION

PROPOSAL:

Augmentation of existing 1no. of 33/11kV, 8 MVA Power Transformer (PTR-1) to 12.5 MVA at Dasmile 33/11kV Substation in BWED division of Bargarh circle to mitigate overloading condition.

REQUIREMENT/NEED OF PROPOSAL:

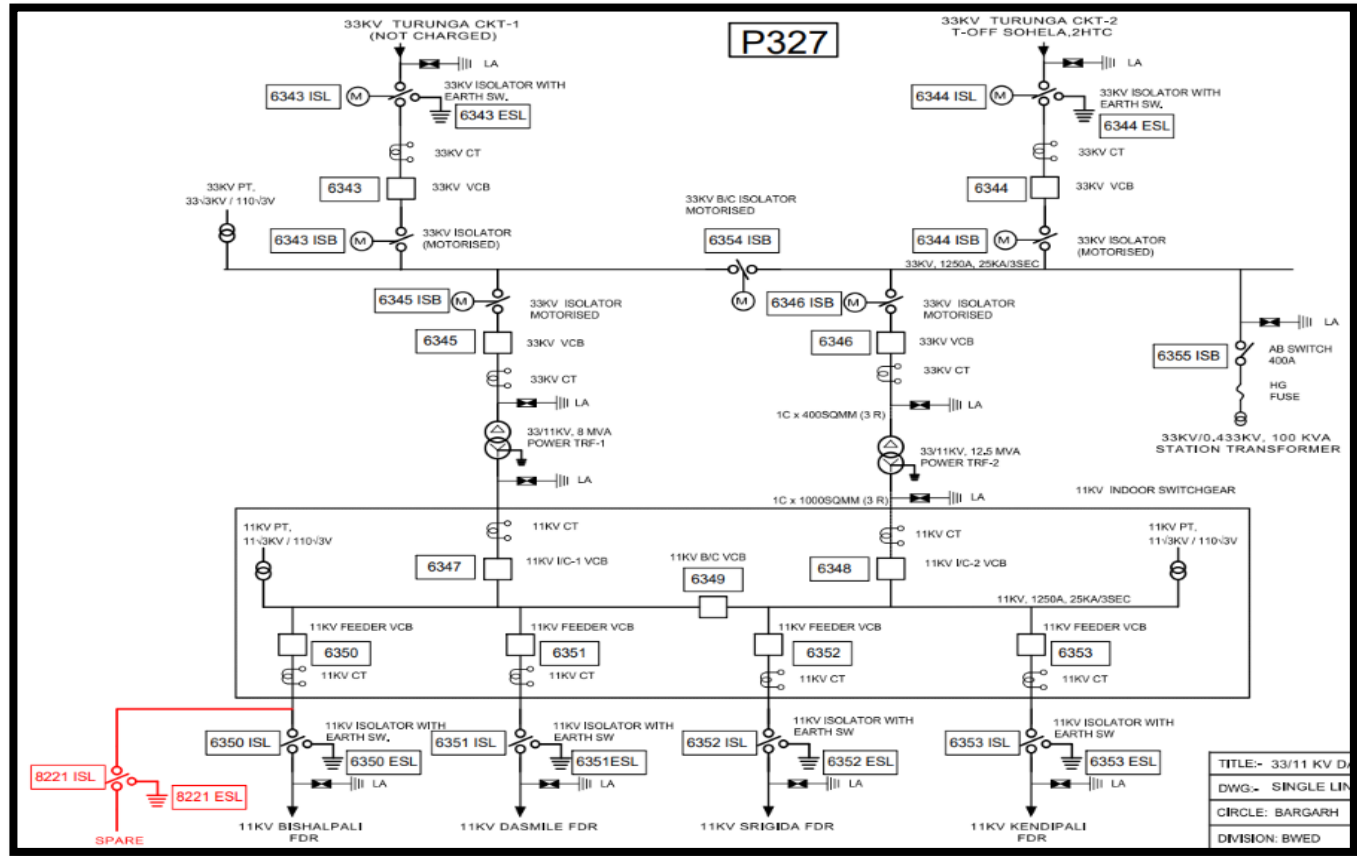
Existing Scenario:

- 1. Loading of 33/11kV Dasmile PTR-1 & 2 are 7.2 MVA and 7.1 MVA respectively at peak load condition of FY-25. Considering load growth for 2years (8.86% load growth per year for 2years), the projected loading of FY-27 for PTR-1 & 2 would be 8.6MVA and 8.4MVA respectively.
- 2. PTR-1 and PTR-2 will be loaded up to 107% and 68% respectively, w.r.t, the existing transformer capacity of 8MVA and 12.5MVA respectively in FY-27.

Existing FY-25 Loading and projected load at Dasmile PTRs:

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @8.86%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Dasmile	PTR-1	8	7.2	90%	8.6	107%
2		PTR-2	12.5	7.1	57%	8.4	68%

EXISTING SLD OF DASMILE 33/11KV PSS:

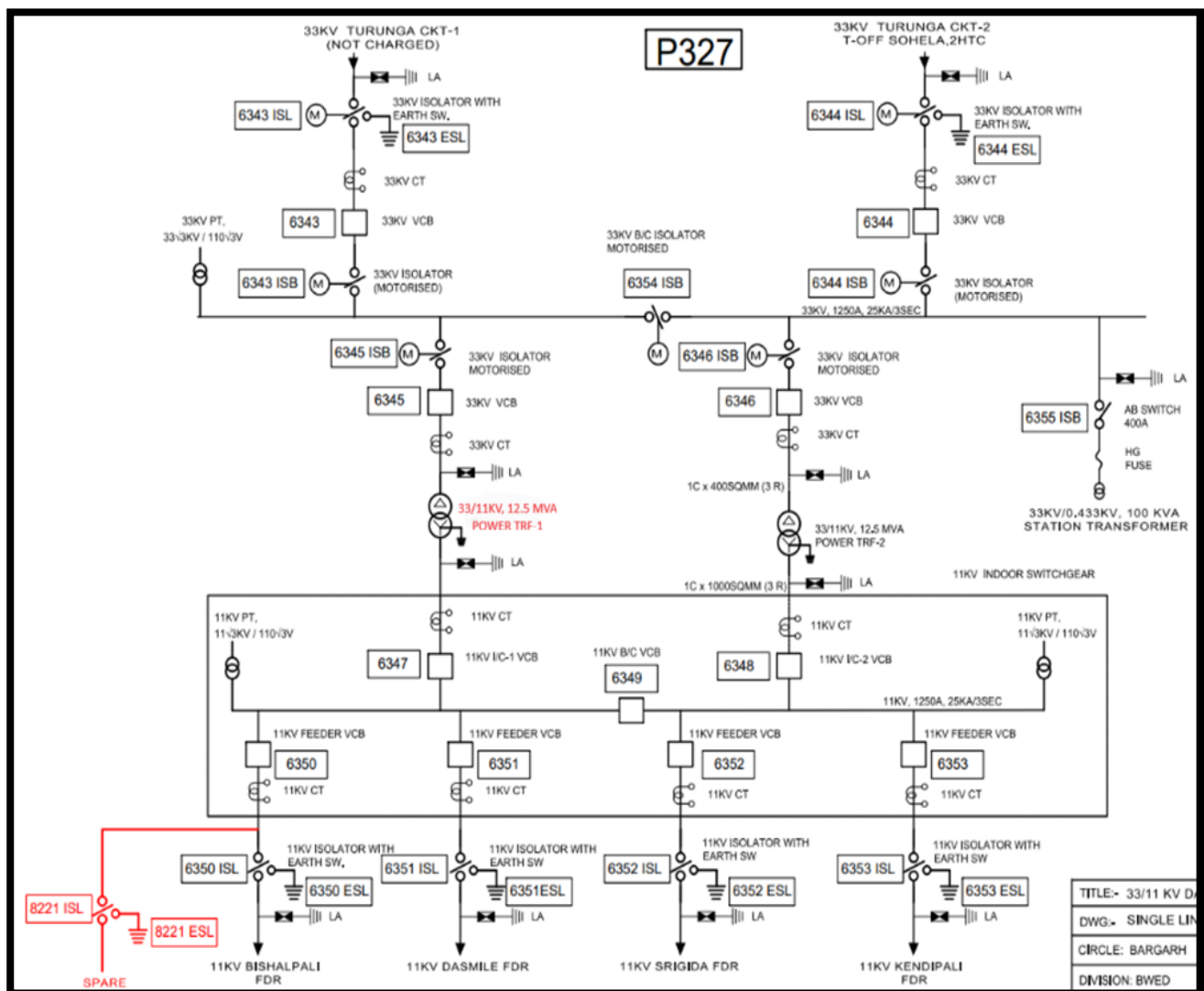


### Proposed Scenario:

- In order to Mitigate Over-Loading status of PTR-1 it is required to Augment PTR-1 from 8 MVA to 12.5 MVA at Dasmile PSS is proposed to meet the full load of the PSS.

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @ 8.86%) FY-27	
				Peak Load	%Loading
1	Dasmile	PTR-1	12.5	8.6	69%
2		PTR-2	12.5	8.4	68%

**PROPOSED SLD OF DASMILE 33/11KV PSS:**



**SCOPE OF WORK:**

- Augmentation of 1no. of 33/11 KV 8MVA PTR to 12.5MVA PTR along with Plinth, NIFPS & other civil works.

**PROPOSED COST WITH ESTIMATE BREAK-UP:**

Name of the Division: -		BWED, BARGARH	
Name of the Sub-Division: -		Sohela	
Name of the Section: -		Eso No-2	
Name of the Work: -		Mitigation of 33/11kV PTR Overloading	
Scope: -		Augmentation of 01nos. Power Transformers of PTR-1 from 8MVA to 12.5MVA at Dasmile 33/11kV PSS with NIFPS & other civil works.	
Names of Schemes: -		TPWODL CAPEX (FY 2026-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>			
<b>Sl. No.</b>	<b>Part</b>	<b>Description</b>	<b>Amount</b>
1	A	Augmentation of 01nos. Power Transformers.	2,35,76,680.00
		<b>Total Amount</b>	<b>2,35,76,680.00</b>
		<b>Total Amount (In Cr)</b>	<b>₹ 2.36</b>
<b>Total estimated cost is Rs. 2.36 Crore. (On TPWODL CAPEX Scheme)</b>			

Cost Estimate: ₹ 2.36cr. (For detailed BoQ refer Annexure).

**PHYSICAL TARGET:**

March 2027

**COST BENEFIT ANALYSIS:**

Cost Benefit Analysis at CDB cost inclusive of taxes -Augmentation of 8 MVA Power Transformer to 12.5MVA at Dasmile PSS										
Year	Anticipate d loads in Amp at Load Growth of 8.86%	Anticipated loads in MW at Load Growth of 8.86 %	cost benefit on account of new loads (Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads (Running Charges) = D*1000*Days*Hrs* LF*(Selling Price-Purchase price)	Total benefit (Rs)	Cumulative Benefit (Rs)	Revenue per day (Rs)	Calculations	Value	Unit
<b>FY 27</b>	0.67	0.59	1,40,700.00	7,31,815.88	8,72,515.88	8,72,515.88	2,390.45	Total Cost of Scheme (with Taxes)	<b>2,35,76,680</b>	Rs
<b>FY 28</b>	0.73	0.64	1,53,166.02	7,96,654.76	9,49,820.78	18,22,336.66	2,602.25	Revenue per day	<b>2,853.26</b>	Rs
<b>FY 29</b>	0.79	0.69	1,66,736.53	8,67,238.37	10,33,974.90	28,56,311.56	2,832.81	Pay Back Period of Scheme Years	<b>22.80</b>	Year
<b>FY 30</b>	0.86	0.76	1,81,509.39	9,44,075.69	11,25,585.08	39,81,896.64	3,083.79	% RR	<b>4.39</b>	%
<b>FY 31</b>	0.94	0.82	1,97,591.12	10,27,720.80	12,25,311.92	52,07,208.56	3,357.02			

**Benefits:**

- To mitigate overloading condition on power transformers.
- To cater future load growth of the consumer.
- To ensure reliable power supply to the consumers.

## 5. POWER TRANSFORMER OVERLOADING MITIGATION AT DOVA SUBSTATION

### PROPOSAL:

Augmentation of existing 1 no. of 33/11kV, 8 MVA Power Transformer (PTR-2) to 12.5 MVA at Dova 33/11kV Substation in BWED division of Bargarh circle to mitigate overloading condition.

### REQUIREMENT/NEED OF PROPOSAL:

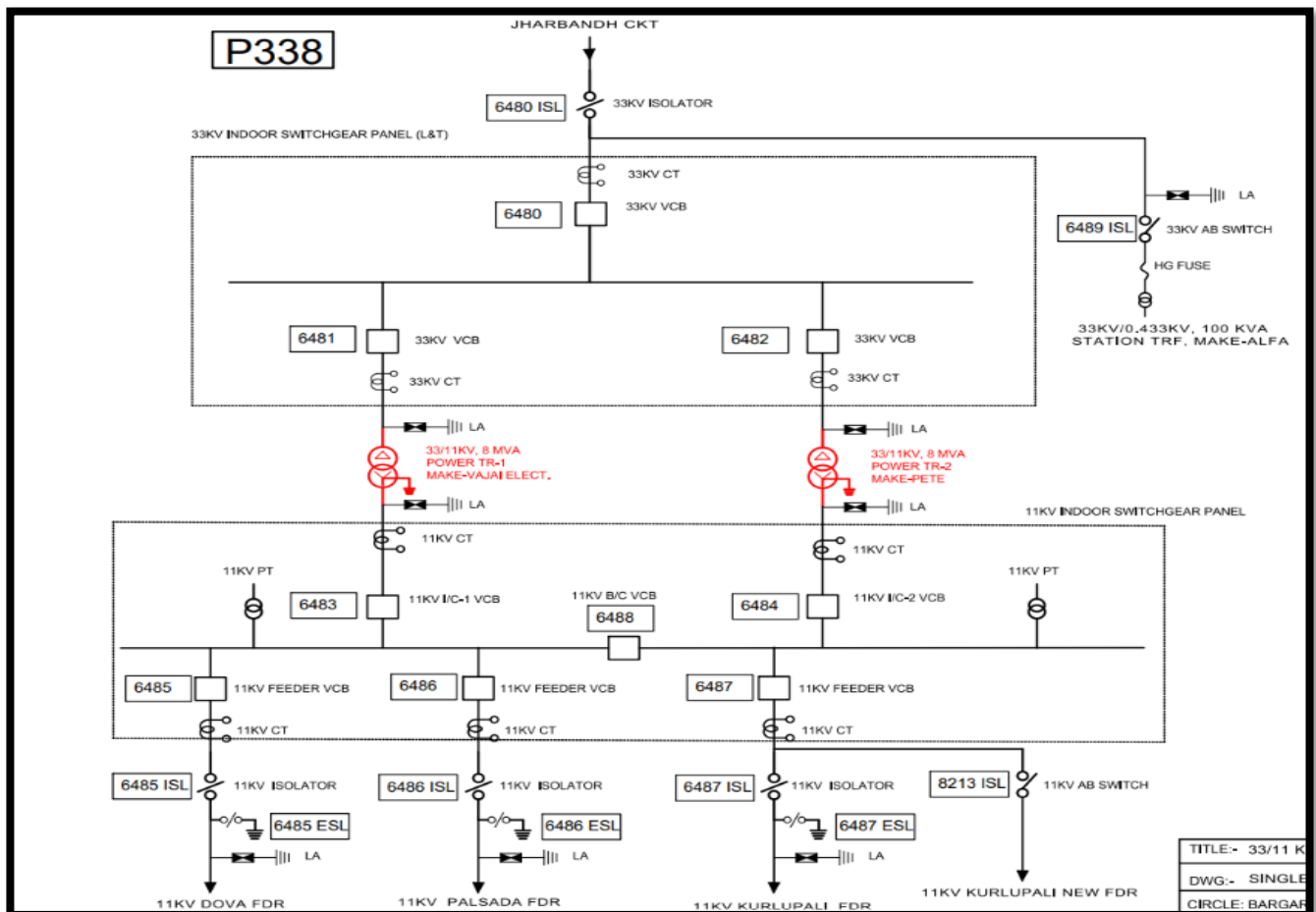
#### Existing Scenario:

1. Loading of 33/11kV Dova PTR-1 & 2 are 6.4 MVA and 6.6 MVA respectively at peak load condition of FY-25. Considering load growth for 2years (8.86% load growth per year for 2years), the projected loading of FY-27 for PTR-1 & 2 would be 7.6MVA and 7.8MVA respectively.
2. PTR-1 and PTR-2 will be loaded up to 95% and 97% respectively, w.r.t, the existing transformer capacity of 8MVA and 8MVA respectively in FY-27.

#### Existing FY-25 Loading and projected load at Dova PTRs:

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	AS IS (FY-25)		Projected Load (2yrs. Load Growth @8.86%) FY-27	
				Peak Load	%Loading	Peak Load	%Loading
1	Dova	PTR-1	8	6.4	80%	7.6	95%
2		PTR-2	8	6.6	82%	7.8	97%

### EXISTING SLD OF DOVA 33/11KV PSS:

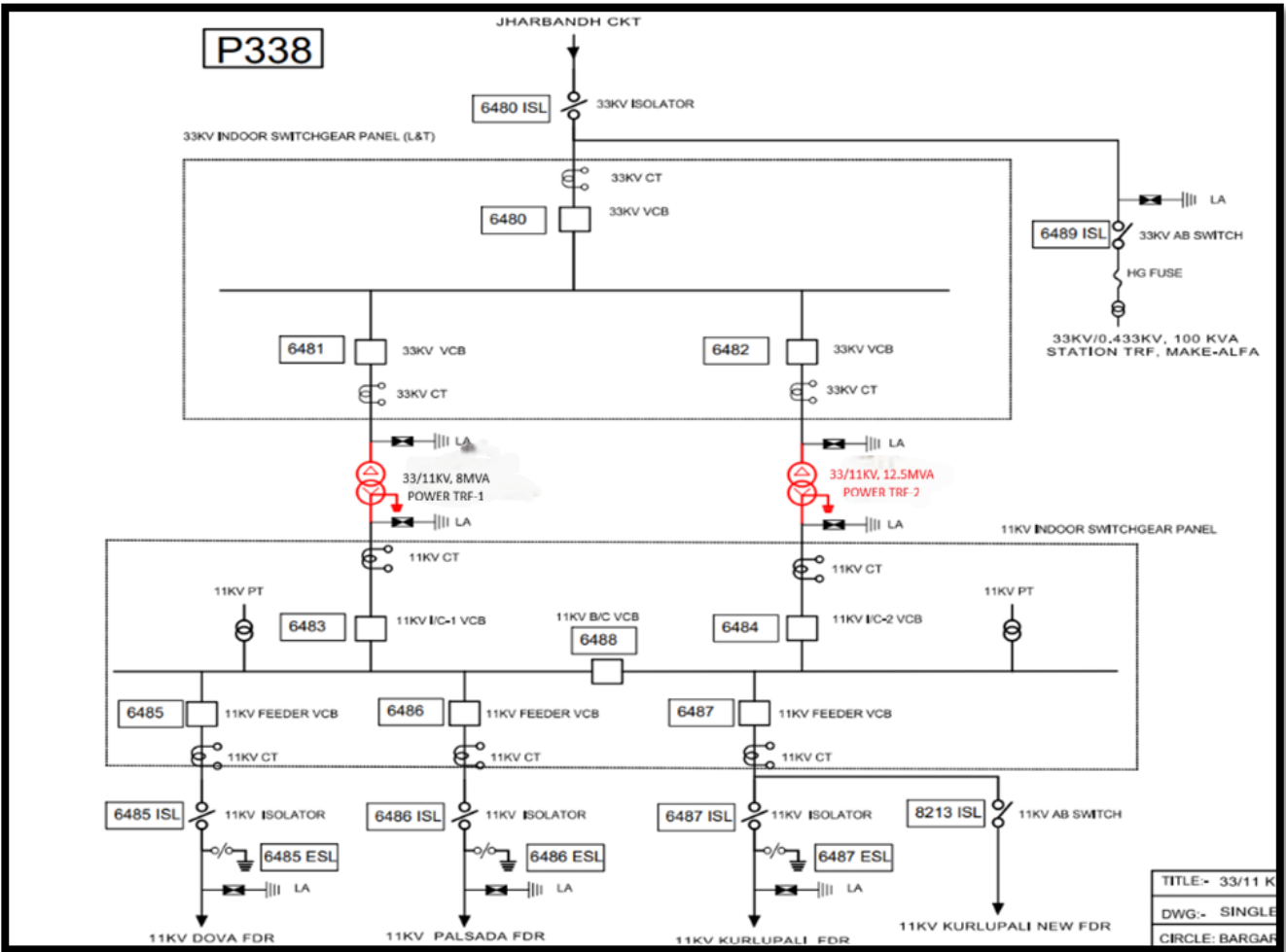


**Proposed Scenario:**

- In order to Mitigate Over-Loading status of PTR-2 it is required to Augment PTR-2 from 8 MVA to 12.5 MVA at Dova PSS is proposed to meet the full load of the PSS.
- Moreover, Load shifting of 1.5MVA from PTR-1 (8MVA) to Augmented 12.5 MVA PTR-2.

Sl. No.	Name of 33/11kV PSS	PTR No.	PTR Rating (MVA)	Projected Load (2yrs. Load Growth @8.86%) FY-27	
				Peak Load	%Loading
1	Dova	PTR-1	8	6.09	76%
2		PTR-2	12.5	9.29	74%

**PROPOSED SLD OF DOVA 33/11KV PSS:**



**SCOPE OF WORK:**

- One no. of augmentation of existing 8MVA to 12.5MVA along with new plinth, NIFPS & other civil works.



**PROPOSED COST WITH ESTIMATE BREAK-UP:**

Name of the Division: -		<b>BWED, BARGARH</b>	
Name of the Sub-Division: -		Paikmal	
Name of the Section: -		Jharbandh No-2	
Name of the Work: -		Mitigation of 33/11kV PTR Overloading	
Scope: -		Augmentation of 01no. Power Transformers of PTR-2 from 8MVA to 12.5MVA at Dova 33/11kV PSS with NIFPS & other civil works.	
Names of Schemes: -		TPWODL CAPEX (FY 2026-27)	
<b><u>ABSTRACT OF ESTIMATE</u></b>			
<b>Sl. No.</b>	<b>Part</b>	<b>Description</b>	<b>Amount</b>
1	A	Augmentation of 01nos. Power Transformers.	2,35,76,680.00
		<b>Total Amount</b>	<b>2,35,76,680.00</b>
		<b>Total Amount (In Cr)</b>	<b>₹ 2.36</b>
<b>Total estimated cost is Rs. 2.36 Crore. (On TPWODL CAPEX Scheme)</b>			

Cost Estimate: ₹ 2.36cr. (For detailed BoQ refer Annexure).

**PHYSICAL TARGET:**

March 2027

**COST BENEFIT ANALYSIS:**

Cost Benefit Analysis at CDB cost inclusive of taxes - Augmentation of 8 MVA Power Transformer to 12.5MVA at Dova PSS										
Year	Anticipated loads in Amp at Load Growth of 8.86%	Anticipated loads in MW at Load Growth of 8.86 %	cost benefit on account of new loads (Fixed Charges) = 1000 X 12 X 20	cost benefit on account of new loads (Running Charges) = D*1000*Days*Hrs* LF*( Selling price-Purchase price)	Total benefit (Rs)	Cumulative Benefit (Rs)	Revenue per day (Rs)	Calculations	Value	Unit
FY 27	0.61	0.53	1,28,100.00	6,66,280.13	7,94,380.13	7,94,380.13	2,176.38	Total Cost of Scheme (with Taxes)	2,35,76,680	Rs
FY 28	0.66	0.58	1,39,449.66	7,25,312.54	8,64,762.20	16,59,142.33	2,369.21	Revenue per day	2,597.75	Rs
FY 29	0.72	0.63	1,51,804.90	7,89,575.24	9,41,380.14	26,00,522.46	2,579.12	Pay Back Period of Scheme Years	25.03	Year
FY 30	0.79	0.69	1,65,254.81	8,59,531.60	10,24,786.42	36,25,308.88	2,807.63	% RR	4.00	%
FY 31	0.86	0.75	1,79,896.39	9,35,686.10	11,15,582.49	47,40,891.37	3,056.39			

**Benefits:**

- To mitigate overloading condition on power transformers.
- To cater future load growth of the consumer.
- To ensure reliable power supply to the consumers.

***LOCATION SUMMARY:***

Sl no.	Circle	Division	Sub-Division	PSS Name	PTR No.	Proposal
1	Rourkela	RSED	Industrial Estate	Civil Township		Addition of 8MVA
2	Bolangir	BED	Tusura	Deogaon	PTR-1	Augmentation from 5MVA to 8MVA
3	Kalahandi	KEED	Powerhouse	Kusadungri	PTR-1	Augmentation from 5MVA to 8MVA
4	Bargarh	BWED	Sohela	Dasmile	PTR-1	Augmentation from 8MVA to 12.5MVA
5	Bargarh	BWED	Paikmal	Dova	PTR-2	Augmentation from 8MVA to 12.5MVA

***Overview of Total Scope Vs. Achieved till date and Planning for Balance***

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement	Covered under FY'27 DPR	Planned for Balance Years DPR	Remarks	Priority Criteria
			A	B	C=A-B	D	E=C-D		
1.	Requirement of New PTR	Nos.	70	37	33	5	28		PTRs are considered which are having loading more than 90 % in FY 2026-27 and load diversion is not possible due to site constraint.

## ANNEXURE 42

### Scheme Name: Augmentation of DTR

- **Background**

- Distribution transformers (DTs) are critical components in the power distribution network, ensuring last-mile connectivity to end consumers. Currently, DT meter data indicates that many transformers located in high-revenue areas are operating under overloaded conditions during peak demand periods.
- Incidents of transformer burnings are occurring due to overloading, which creates challenges for reliability in power supply to the domestic as well as commercial consumers. This also affects the revenue of the TPWODL, and the O&M costs also increases.
- To mitigate the overloading problem and to cater load growth, transformer augmentation is necessary.

- **Proposal**

- Augmentation of DT is proposed for overloading mitigation & increasing 24\*7 reliable power supply of the network.
- Herewith proposed 44 nos. of Augmentation of 100kVA, 250kVA, 500kVA, Distribution Transformer installation under various circles.

- **Requirement/ Need of the Proposal**

- Incident of transformer burning due to overloading of transformer leading to reliability issues and dissatisfaction among consumers.
- Currently, out of a total of 413 distribution transformers experiencing load growth exceeding 100% within one year, 50 have been prioritized for augmentation to mitigate overloading issues and ensure reliable power supply.
- With growing loads and voltage instability, upgrading and augmenting distribution transformers (DTs) is crucial for maintaining optimal voltage levels and preventing power disruptions. Strengthening the power distribution network will enhance efficiency, reduce outages, and support long-term energy sustainability.

- **Scope of Work**

DESCRIPTION OF WORK	UOM	QUANTITY
Augmentation of DTR to 250 KVA	Nos	40
Augmentation of DTR to 500 KVA	Nos	9
Augmentation of DTR to 1000 KVA	Nos	1

- **Proposed Cost with Estimate Break-up**

SL NO.	DESCRIPTION OF WORK	AMOUNT
ESTIMATE-1	Augmentation of DTR to 250 KVA	6,95,78,000.00
ESTIMATE-2	Augmentation of DTR to 500 KVA	2,83,26,699.00
ESTIMATE-3	Augmentation of DTR to 1000 KVA	51,80,654.00
	<b>TOTAL</b>	<b>10,30,85,353.00</b>
		<b>(10.31Cr.)</b>

**Refer Annexure 173 for location Details**

- **Benefit to the System and Consumers**

- Overloading of Distribution Transformers during peak demand can lead to overheating and eventual failure, including incidents of transformer burning. Such failures disrupt power supply, adversely impacting consumers and reducing the reliability of the distribution network.
- To accommodate future load growth and ensure a reliable and uninterrupted power supply to consumers, it is essential to augment the capacity of existing distribution transformers.

**Scheme Name: Addition of DTR**

- **Background**

- Distribution transformers (DTs) are critical components in the power distribution network, ensuring last-mile connectivity to end consumers. Currently, DT meter data indicates that many transformers located in high-revenue areas are operating under overloaded conditions during peak demand periods.

- Overloading of Distribution Transformers poses a significant risk of equipment failure, which directly impacts the reliability of power supply. This can result in substantial revenue loss and increased Operations & Maintenance (O&M) costs for TPWODL. Additionally, the presence of long Low Tension (LT) feeders contributes to voltage drops at the consumer end, leading to poor power quality and higher technical losses within the system. To address these issues, the installation of additional Distribution Transformers at strategically identified locations is proposed, with the objective of improving voltage regulation, reducing losses, and enhancing overall network reliability.

- In several villages and urban areas, extended Low Tension (LT) service lines are leading to significant voltage drops at the consumer end. Furthermore, certain existing distribution transformers are unable to cater to the increasing peripheral load demand. To address these low voltage issues and enhance the quality of power supply, the deployment of additional distribution transformers is proposed.

- **Proposal**

- New DT are here by proposed to meet the load growth & increase reliability of the network.
- Herewith proposed 24 nos. of New Distribution Transformer of 100kVA, 250kVA, 500kVA capacity to be installed under various circles.

- **Requirement/ Need of the Proposal**

- A significant number of distribution transformers are experiencing load growth exceeding 100% within one year, leading to severe overloading issues. Currently, to mitigate the overloading and maintain reliable power supply, out of a total of 413 overloaded transformers, 24nos DTR have been prioritized by installing new distribution transformers and 50nos DTR have been prioritized for Augmentation.

- Moreover, load growth is very high due to rising temperature, increasing commercial activities rapid infrastructure growth.

- Addition of DT is considered due to lack of space for augmentation of the DT.

- **Scope of Work**

DESCRIPTION OF WORK	UOM	QUANTITY
Addition of 100 KVA, 11/0.4 KV DTR	Nos	13
Addition of 250 KVA, 11/0.4 KV DTR	Nos	7
Addition of 500 KVA, 11/0.4 KV DTR	Nos	4

**Refer Annexure 174 for location details**

- **Proposed Cost with Estimate Break-up**

SL NO.	DESCRIPTION OF WORK	AMOUNT
ESTIMATE-1	Addition of 100 KVA, 11/0.4 KV DTR	2,33,21,522
ESTIMATE-2	Addition of 250 KVA, 11/0.4 KV DTR	1,78,36,618
ESTIMATE-3	Addition of 500 KVA, 11/0.4 KV DTR	1,46,76,121
	TOTAL	5,58,34,262
		(5.58 Cr.)

- **Benefit to the System and Consumers**

- Overloading of DT as well as burnt of DT is avoided.
- Consumer will get uninterrupted power supply.
- Voltage issue of remote consumer will resolve by addition of DT at load centre.

- **Overview of Total Scope Vs. Achieved till date and Planning for Balance**

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement	Covered under FY'27 DPR	Planned for Balance Years DPR	Remarks	Priority Criteria
			A	B	C=A-B	D	E=C-D		
1.	Requirement of New DTR	Nos.	1379	379	1000	74	926		Over-Loading (>80%) in FY-27

## ANNEXURE 43

### Scheme Name: LT Protection (ACB/MCCB)

#### Background

At the time of inception of TPWODL, most Distribution Transformers (DTs) in the licensed area were commissioned without adequate LT side protection. The arrangement typically consisted of only HT side protection through fuses/AB switches, leaving the LT side vulnerable to faults such as short-circuits, overloading, and unbalanced loading.

Since vesting, significant progress has been made in strengthening the DT network by installing new DTs, upgrading capacity, and ensuring LT protection through ACBs, MCCBs, LTDB, Feeder Pillar. However, the coverage of LT side protection remains limited. A substantial portion of DTs are still operating without dedicated LT protection devices. The balance requirement will be completed in a phased manner under subsequent year's CAPEX plan.

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement
			A	B	C=A-B
1.	LT Protection	Nos.	24387	5377	19010

#### Proposal

It is proposed to provide LT protection arrangements on Distribution Transformers across the network. This will include installation of LT ACB/MCCBs with appropriate rating and features (short circuit, overload, and earth fault protection) on the LT side of each DT.

#### Requirement/ Need of the Proposal

- **Existing Deficiency:** Presently, absence of LT side protection leads to direct exposure of DT windings and LT feeders to faults, resulting in frequent DT burnouts, prolonged outages, and safety hazards.
- **Scope for Improvement:** Installation of LT protection will isolate LT faults quickly, preventing damage to DT windings and minimizing outage durations.
- **Statutory / Regulatory Compliance:** Current standards and safety guidelines mandate provision of adequate protection on both HT and LT sides of DTs. The proposed arrangement ensures compliance with these statutory requirements, thereby mitigating audit observations and regulatory risks.

**Scope of Work***Installation of LT Protection (ACB/MCCB):-*

Sl. No.	Activity	UOM	Proposed Qty
1.	LT MCCB Installation at 100 KVA	Nos.	100
2.	LT MCCB for Installation at 25 KVA	Nos.	87
3.	LT MCCB for Installation at 63 KVA	Nos.	105
4.	ACB Installation at 250 KVA	Nos.	95
5.	ACB Installation at 500 KVA	Nos.	144
6.	ACB Installation at 1000 KVA	Nos.	18
	<b>Total</b>		<b>549</b>

**Refer Annexure 157 for ACB and 158 for MCCB installation locations.****Proposed Cost with Estimate Break-up**

Sl. No.	Activity	UOM	Proposed Qty	Unit Rate (in Cr.)	Total cost (in Cr.)	Remarks
1.	LT MCCB Installation at 100 KVA	Nos.	100	0.0094	0.94	Refer Annexure – 125 for detailed costing sheet
2.	LT MCCB for Installation at 25 KVA	Nos.	87	0.006	0.55	Refer Annexure – 129 for detailed costing sheet
3.	LT MCCB for Installation at 63 KVA	Nos.	105	0.007	0.74	Refer Annexure – 130 for detailed costing sheet
4.	ACB Installation at 250 KVA	Nos.	95	0.014	1.33	Refer Annexure – 126 for detailed costing sheet
5.	ACB Installation at 500 KVA	Nos.	144	0.0286	4.11	Refer Annexure – 127 for detailed costing sheet
6.	ACB Installation at 1000 KVA	Nos.	18	0.06	1.08	Refer Annexure – 128 for detailed costing sheet
	<b>Total</b>				<b>8.75</b>	

**Physical Target:**

The proposed work will be completed by March 27.

**Cost Benefit Analysis**

Not applicable

**Benefit to the System and Consumers****System Benefits:**

- Reduction in DT failure rate, thereby lowering replacement/repair costs.
- Improvement in overall network reliability and improvement in billing efficiency.
- Enhanced compliance with safety and regulatory standards.

**Consumer Benefits:**

- Improved supply reliability with fewer interruptions.
- Reduction in voltage fluctuations and improved power quality.
- Enhanced safety against electrical hazards in consumer premises.

**Overview of Total Scope Vs. Achieved till date and Planning for Balance**

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement	Covered under FY'27 DPR	Planned for Balance Years DPR	Remarks	Priority Criteria
			A	B	C=A-B	D	E=C-D		
1.	LT Protection (ACB/MCCB)	Nos.	24387	5377	19010	549	18461		1.Sambalpur and Rourkela Main Town 2. Other Town of Rourkela & Sambalpur Circle.



## ANNEXURE 44

### Scheme Name: Addition of New LT ABC network

#### **Background**

LT networks are the backbone to provide last mile connectivity to the consumers. Due to significant development in the TPWODL operational area the LT feeders are facing problems related to overloading and undervoltage. In addition to it, for providing steady and reliable power supply to the Commercials and Domestic consumers, “N-1” connectivity at LT network level is also very essential. Further to accommodate the future load growth at LT level, The LT network shall be adequately developed at the high load growth area. To mitigate the problems mentioned in above paragraph as well as to make system ready to take up future load, new LT ABC networks are proposed to be added in our operational area.

#### **Proposal**

Addition of New LT ABC network to mitigate overloading, under voltage, for “N-1” connectivity as well as to meet the future load growth.

#### **Requirement/ Need of the Proposal**

- i) To mitigate overloading & under voltage problem.
- ii) For establishing “N-1” connectivity.
- iii) To meet the future load growth.

#### **Scope of Work**

Sl. No.	Work Description	Scope (in CKm)
1	Addition of New LT ABC network by using 3x95+ 1x70+ 1 x16 mm2 LT AB cable	100
2	Addition of New LT ABC network by using 3x120+ 1x70+ 1 x16 mm2 LT AB cable	50
<b>Note- For Location details, please refer Annexure 161.</b>		

#### **Proposed Cost with Estimate Break-up**

TP WESTERN ODISHA DISTRIBUTION LIMITED			
Name of the Scheme	Addition of New LT ABC network		
Budget Head	TPWODL CAPEX (FY 26-27)		
<b><u>ABSTRACT OF ESTIMATE</u></b>			
Sl. No.	Description	Unit Price	Amount
1	Addition of New LT ABC network by using 3x95+ 1x70+ 1 x16 mm2 LT AB cable- <b>100CKm</b>	1093486	1,09,34,860
2	Addition of New LT ABC network by using 3x120+ 1x70+ 1 x16 mm2 LT AB cable- <b>50CKm</b>	119243	5,99,62,150
	Total Amount		16,93,10,750
	Total Amount (In Cr.)		16.93
Total estimated cost is Rs.16.93 Crore. (On TPWODL Capex Scheme)			

Note-

- i) For Estimate Break-up of Addition of LT ABC by using 95sqmm LT AB cable please refer to Annexure- 140

ii) For Estimate Break-up of Addition of LT ABC by using 120sqmm LT AB cable please refer to Annexure- 141

**Physical Target:**

The proposed work will be completed by March 27.

**Cost Benefit Analysis**

Not Applicable

**Benefit to the System and Consumers**

- i) Mitigation of LT feeder overloading problem.
- ii) Mitigation of Undervoltage problem.
- iii) Enable “N-1” connectivity at LT feeder level.
- iv) Addition in network capacity to meet future commercial & domestic load growth.

**Overview of Total Scope Vs. Achieved till date and Planning for Balance**

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement	Covered under FY'27 DPR	Planned for Balance Years DPR	Remarks	Priority Criteria
			A	B	C=A-B	D	E=C-D		
1	Addition of New LT ABC network	CkM	1518.59	442.75	1075.84	150	925.84	95sqmm & 120sqmm LT cables are used for addition of LT new line	<b>Cities &amp; Towns are given higher priority</b>

## ANNEXURE 45

### **Scheme Name: Build & Strengthen DC–DR Infrastructure & End-User IT Hardware**

#### **Background**

Over the last four fiscal years (FY2021–22 to FY2024–25), TPWODL has strategically modernized its digital foundation to support evolving business needs and operational scale. This transformation focused on four key pillars: building a robust core IT infrastructure through the establishment of an enterprise network and scalable Data Center; expanding the end-user ecosystem by integrating more employees and partners into digital platforms for improved collaboration; reinforcing cybersecurity with advanced threat detection and prevention systems; and deploying critical business applications like ERP and CRM to automate and streamline core processes.

These initiatives have collectively enabled seamless business operations, enhanced data security, and accelerated TPWODL's digital transformation. The improvements have not only increased internal efficiency but also elevated service reliability and responsiveness for stakeholders. With a future-ready IT landscape now in place, TPWODL is well-positioned to scale further and embrace emerging technologies in its next phase of growth.

#### **Proposal**

In recent years, TPWODL has witnessed a significant transformation in its operational landscape, driven by the increasing adoption of digital technologies and data-centric approaches. As the organization continues to expand its services and enhance customer engagement, the demand for robust, scalable, and future-ready IT infrastructure has grown exponentially.

To support this digital evolution, several key IT initiatives are underway, including the mapping of utility infrastructure, integration of customer data with business applications, and the rollout of smart metering systems. These initiatives are not only critical for operational efficiency but also for meeting regulatory requirements and improving service delivery.

#### **Requirement/ Need of the Proposal**

To support TPWODL's expanding digital operations and ensure future readiness, strategic augmentation of IT infrastructure and hardware is essential.

Key drivers include:

- **GIS Infrastructure:** Increased data volume and integration needs demand enhanced capacity for asset mapping and spatial analytics.
- **IPDS Data Centre:** Scaling is required to support 3 lakh additional consumers and maintain service reliability.
- **AMI Systems (HES & MDM):** Deployment of 3 lakh smart meters necessitates upgraded processing and storage capabilities.
- **Network Modernization:** Upgrades to routers, switches, and Wi-Fi access points are vital for improved connectivity and enterprise integration.
- **End-User Equipment:** Laptops, desktops, and MFDs are needed for new users allotments and asset replacements under different scenarios.
- **LAN Infrastructure Setup:** Wired connectivity must be provisioned for new and relocated workstations at New and renovated Office Locations.
- **Power Backup:** UPS systems are critical to protect network equipment and ensure business continuity during outages.

#### **Scope of Work**

The Geographic Information System (GIS) platform, which plays a pivotal role in asset mapping and spatial analysis, is experiencing a surge in data volume and complexity. To maintain performance and ensure seamless integration with other business systems, augmentation of GIS infrastructure has become essential.

Simultaneously, the IPDS Data Centre, which supports core consumer services, must be scaled to accommodate an additional 3 lakh consumers, ensuring uninterrupted service and data integrity. The AMI (Advanced Metering

Infrastructure) ecosystem, comprising the Head-End System (HES) and Meter Data Management (MDM), is also set to expand with the deployment of 3 lakh smart meters. This expansion demands enhanced processing power and storage capabilities to manage the influx of real-time data.

In addition to backend systems, the organization's network infrastructure across office locations requires modernization. Upgrades to routers, switches, and Wi-Fi access points are necessary to improve connectivity, support flexible work environments, and bring all offices under a unified enterprise IT network.

To support day-to-day operations, Multi-Function Printers (MFDs) are needed at office locations and laptops & desktops must be procured for new employees and to replace aging assets. Furthermore, LAN point setups are required to ensure wired connectivity in newly created workstations and relocated offices.

Lastly, to safeguard critical network equipment from power disruptions, UPS systems with battery backup are proposed, ensuring business continuity and protecting infrastructure investments.

### Proposed Cost with Estimate Break-up

#### Budgetary Details for Build & Strengthen DC–DR Infrastructure & End-User IT Hardware

Hardware IT Infra (FY26-27)					
S. No.	Description	UoM	Qty	Unit cost (INR inclusive of Tax)	Total Cost (INR Cr)
1	Augmentation of AMI DC & DR infrastructure for 3 lakh meters (i.e. Server, Storage, Network Switches etc.)	AU	1	70,00,000.00	0.70
2	Augmentation/upgradation of GIS & Smart Meter Solution (i.e. Server, Storage, Network Switches etc.)	AU	1	50,00,000.00	0.50
3	Augmentation of IPDS IT infrastructure (CIS solution) for Consumers (i.e. Server, Storage, Network Switches etc.)	AU	1	1,20,00,000.00	1.20
4	Routers & Switches for Town offices IPDS Infra	AU	1	80,00,000.00	0.80
5	Laptop for End Users	EA	75	93,578.92	0.70
6	Desktop for End Users	EA	40	66,847.00	0.27
7	MFD Large Printer for Office Locations	EA	5	2,30,000.00	0.12
8	MFD Midsize Printer for Office Locations	EA	10	67,760.00	0.07
9	UPS with Battery (2 kVA online)	EA	30	55,000.00	0.17
10	Wi-Fi Access Point and Other IT Equipment	AU	1	22,00,000.00	0.22
11	Office LAN Setup	Node	600	5,000.00	0.30
12	Network Equipment (LLB/Firewall/RTR/SW) for Offices	EA	50	1,83,348.40	0.92
13	One Time Implementation Charges for Above Items	AU	1	4762985.52	0.48
<b>Total Estimated Cost</b>					<b>6.43</b>

### Physical Target:

TPWODL targets to complete all the afore mentioned activities under the scheme within March 2026.

### Cost Benefit Analysis

The activities under this scheme will enable seamless business operations, enhanced data security, and accelerated TPWODL's digital transformation journey. These improvements will increase internal efficiency and elevated service reliability and responsiveness for stakeholders.

## **Benefit to the System and Consumers**

The planned upgrades to TPWODL's IT infrastructure are designed not only to improve internal efficiency but also to significantly enhance the experience and service quality for external customers.

- **Faster and More Accurate Service Delivery**

With the augmentation of the GIS platform, customers will benefit from quicker resolution of service requests, accurate outage mapping, and better visibility into infrastructure-related issues. This leads to faster fault detection, improved maintenance response, and more reliable power supply.

- **Improved Reliability and Continuity of Services**

Scaling the IPDS Data Centre ensures that the growing customer base—especially the additional 3 lakh consumers—receives uninterrupted services, even during peak loads. This translates to fewer service disruptions and better handling of billing, complaints, and service requests.

- **Smarter Energy Management**

The expansion of the AMI ecosystem (HES & MDM) enables real-time monitoring of smart meters, empowering customers with accurate billing, consumption insights, and faster issue resolution. It also supports demand-side management and energy efficiency programs.

- **Enhanced Customer Support and Engagement**

With improved network infrastructure and upgraded business systems (like CRM), customer interactions—whether through call centers, mobile apps, or service portals—will be faster, more responsive, and better integrated.

- **Business Continuity and Trust**

The deployment of UPS systems ensures that critical services remain operational during power outages, reinforcing customer trust in TPWODL's reliability and preparedness.

## ANNEXURE 46

### **Scheme Name: Augmentation of IT Applications & Software**

#### **Background**

TPWODL has strategically modernized its digital foundation to support evolving business needs and operational scale. This transformation focused on building a robust core IT infrastructure and it's amply supplemented by Application & Software environment. through the establishment of an robust scalable ecosystem by integrating into digital platforms for improved collaboration and deploying critical business applications like ERP and CRM to automate and streamline core processes.

These initiatives have collectively enabled seamless business operations and accelerated digital transformation. The improvements have increased internal efficiency, elevated service reliability. With a future-ready IT landscape now in place, TPWODL is well-positioned to scale further and embrace emerging technologies in its next phase of growth.

#### **Proposal**

As TPWODL scales its IT hardware infrastructure to meet growing operational demands, a parallel upgrade in software solutions is essential to ensure seamless performance and system integration. To support the deployment of 3 lakh additional smart meters, the **AMI ecosystem**—including HES, MDM, and SPM—requires augmentation with expanded databases, operating systems, virtual machines, and licenses to handle increased data processing and maintain system efficiency.

Similarly, the **GIS platform** must be enhanced to support detailed mapping of utility nodes and customer data, backed by the necessary software stack and virtual infrastructure. To streamline customer operations, a **Customer Information System (CIS)** is proposed for automated billing, collections, and account management. Additionally, essential **Office Automation Tools** like MS Office, Canva, AutoCAD, and Adobe Photoshop etc. are needed to equip teams with essential productivity and design capabilities across departments.

#### **Requirement/ Need of the Proposal**

As TPWODL continues to scale its IT hardware infrastructure to support growing digital operations, it is critical to ensure that the corresponding software ecosystem evolves in tandem. Without the right software capabilities, the full potential of the upgraded infrastructure cannot be realized, leading to performance bottlenecks and operational inefficiencies.

Below mentioned software investments are vital to sustain TPWODL's digital momentum and ensure future readiness. Thus listed below are the key drivers of Software & Application scale up requirements:

- AMI (HES, MDM & SPM) Augmentation for 3 Lakh Meters is required to support expanded Advanced Metering Infrastructure, including Database, Operating System, VMs and other corresponding licenses for additional meter data processing and system performance.
- GIS Infrastructure augmentation is required to accommodate mapping of utility nodes as well as customer info. Infrastructure augmentation should be adequately substantiated with corresponding Software like DB, OS & Virtual infrastructure provisioning like VMs.
- CIS Solutions is proposed to automate and streamline the billing, collection, and customer account management processes.
- Office Automation Tools (e.g., MS Office, Canva, AutoCAD, Adobe Photoshop etc.) needed to equip teams with essential productivity, documentation, and design tools for day-to-day operations across TPWODL departments.

#### **Scope of Work**

To support TPWODL's expanding digital operations and ensure future readiness, strategic augmentation of IT infrastructure and its corresponding Application & Software ecosystem is essential. To ensure seamless operations and future readiness, TPWODL must scale its software ecosystem in alignment with its expanding IT hardware infrastructure.

Key drivers of Software & Application scale up requirements: include:

- **AMI System Expansion (HES, MDM & SPM)**

Augmentation is required to support 3 lakh additional smart meters, including provisioning of databases, operating systems, virtual machines, and licenses for efficient data processing and system performance.

- **GIS Infrastructure Enhancement**

Increased mapping of utility nodes and customer data demands corresponding software upgrades—such as database, OS, and virtual infrastructure—to maintain accuracy and integration.

- **Customer Information System (CIS)**

Proposed to automate billing, collections, and account management, improving customer service and operational transparency.

- **Office Automation Tools**

Essential productivity and design software (e.g., MS Office, Canva, AutoCAD, Adobe Photoshop) are needed to support day-to-day operations across departments.

## Proposed Cost with Estimate Break-up

### Budgetary Details for IT Applications & Software:

IT Applications and Software (FY26-27)					
SL No.	Description	UoM	Qty	Unit cost (INR inclusive of Tax)	Total Cost (INR Cr)
1	Augmentation of AMI DC & DR infrastructure for 2 lakh meters (i.e. Server, Storage, Network Switches etc.)	AU	1	65,00,000.00	0.65
2	Augmentation/upgradation of GIS & Smart Meter Solution (i.e. Server, Storage, Network Switches etc.)	AU	1	50,00,000.00	0.50
3	Augmentation/upgradation of IPDS IT infrastructure (CIS solution) for Consumers (i.e. Server, Storage, Network Switches etc.)	AU	1	1,25,00,000.00	1.25
4	Office Automation tools (MS Office/Adobe/AutoCAD, etc.)	AU	1	35,00,000	0.35
5	One time Implementation Charges for above items	AU	1	2,80,000	0.03
<b>Total Estimated Cost</b>					<b>2.78</b>

## Physical Target

TPWODL targets to complete all the afore mentioned activities under the scheme within March 2026.

## **Cost Benefit Analysis**

The activities under this scheme will enable seamless business operations, enhanced data security, and accelerated TPWODL's digital transformation journey. These improvements will increase internal efficiency and elevated service reliability and responsiveness for stakeholders.

### **Benefit to the System and Consumers**

- Licensing for AMI (DB, OS, VM, HES) to support 3 lakh additional meters, ensuring smooth integration and reliable system performance.
- Augmentation/Upgrade of CIS (MBC) solutions to streamline billing and collection workflows, reduce revenue leakage, and improve customer lifecycle management.
- GIS Infrastructure augmentation will enhance mapping of remaining utility nodes as well as customer data.
- Deployment of MS Office, AutoCAD, Canva, and other automation tools to improve documentation, design, and reporting capabilities on end user systems.



## ANNEXURE 47

### **Scheme Name: Enhancement of Cybersecurity Solutions**

#### **Background**

To strengthen TPWODL's cybersecurity posture and ensure compliance with ISO/IEC 27001, CERT-In guidelines, and mandates from the Ministry of Power, Ministry of Electronics and Information Technology (MeitY), and other relevant government agencies, we propose the implementation of a comprehensive suite of advanced cybersecurity solutions and data protection controls.

#### **Proposal**

The following measures are recommended to enhance cyber resilience, ensure regulatory compliance, and mitigate operational risks across both IT and OT environments:

- Deployment of Network Intrusion Prevention System (NIPS) and Network Detection and Response (NDR) for real-time threat monitoring and mitigation.
- Expansion of Patch Management and Antivirus Coverage to ensure all endpoints and servers are protected against known vulnerabilities and malware.
- Establishment of a Unified Security Operations Center (SOC) to integrate existing SIEM systems and provide centralized visibility, threat intelligence, and coordinated incident response.

#### **Requirement/ Need of the Proposal**

To effectively implement the proposed cybersecurity enhancements and ensure alignment with regulatory mandates, TPWODL requires the following:

- Advanced Threat Detection and Prevention Tools
  - Procurement and deployment of Network Intrusion Prevention System (NIPS) and Network Detection and Response (NDR) solutions.
  - Integration with existing network infrastructure for seamless monitoring and automated threat mitigation.
- Endpoint Security and Vulnerability Management
  - Comprehensive patch management solution covering all IT and OT assets.
  - Enterprise-grade antivirus and anti-malware tools with centralized management and reporting capabilities.
- Unified Security Operations Center (SOC)
  - Design and establishment of a centralized SOC with 24x7 monitoring capabilities.
  - Integration of existing Security Information and Event Management (SIEM) systems.
  - Skilled cybersecurity personnel for threat analysis, incident response, and continuous improvement.
- Compliance and Governance Framework
  - Implementation of controls and processes to ensure compliance with ISO/IEC 27001, CERT-In guidelines, and directives from MeitY and the Ministry of Power.
  - Regular audits, reporting mechanisms, and documentation to demonstrate adherence to regulatory standards.
- Training and Awareness
  - Cybersecurity awareness programs for employees across departments.
  - Specialized training for SOC analysts and IT/OT administrators on new tools and threat response protocols.

#### **Scope of Work**

##### **Implementation of Secure Access Technologies:**

- Zero Trust Network Access (ZTNA) for granular, application-level access control.
- Virtual Private Network (VPN) for encrypted remote access.

**Data Protection, Access Controls & Monitoring:**

- Data Loss Prevention (DLP) to prevent unauthorized data exfiltration.
- URL Filtering to block access to malicious or non-compliant web content.
- Role-Based Access Controls (RBAC) to enforce least-privilege access.
- Centralized SOC through Log monitoring, Identification & response solutions (SIEM).

These initiatives are designed to align with the Digital Personal Data Protection (DPDP) Act, 2023, which mandates lawful, transparent, and secure processing of personal data

**Risk Assessment and Mitigation Priorities**

We have identified the following high-priority cybersecurity risks and corresponding mitigation strategies:

Risk Priority	Risk Description	Mitigation Strategy
1	Non-compliance with the DPDP Act may lead to legal penalties and reputational damage.	Implement DLP, access controls, and consent-based data processing mechanisms.
2	Lack of integration between existing SIEM and the upcoming Unified SOC for TP Odisha Discoms.	Integrate SIEM with SOC for centralized threat detection and response.
3	Traditional VPNs lack granular access control.	Deploy ZTNA for secure, application-specific access.
4	Absence of patch management exposes systems to known vulnerabilities.	Enforce automated patch management across all assets.
5	Unprotected endpoints and servers are vulnerable to malware and ransomware.	Deploy enterprise-grade antivirus and endpoint protection.
6	Lack of NDR/NIPS increases risk of undetected lateral movement and advanced threats.	Deploy NDR/NIPS for proactive

**Proposed Cost with Estimate Break-up****Budgetary Details for Enhancement of Cybersecurity Solutions:**

Enhancement of Cybersecurity Solutions (FY26-27)					
S. No.	Description	UoM	Qty	Unit cost (INR inclusive of Tax)	Total Cost (INR Cr)
1	Data Leakage Prevention Tool (Implementation of Digital Personal Data Protection (DPDP) Act, 2023)	AU	1	40000000	3.00
2	Unified Security operation centre	AU	1	10000000	1.00
3	ZTNA (Zero Trust Network Access)	AU	1	15000000	1.50
4	NIPS/NDR (Network Intrusion Prevention/Detection & Response)	AU	1	5000000	0.50
5	Web URL Filtering	AU	1	12500000	1.25
6	SIEM SOAR Solution	AU	1	12500000	1.25
7	Implementation of above items	AU	1	5700000	0.57
<b>Total Estimated Cost</b>					<b>9.07</b>

**Physical Target**

TPWODL targets to complete all the afore mentioned activities under the scheme within March 2026.

## **Cost Benefit Analysis**

The activities under this scheme will enable seamless business operations, enhanced data security, and accelerated TPWODL's digital transformation journey. These improvements will increase internal efficiency and elevated service reliability and responsiveness for stakeholders.

## **Benefit to the System and Consumers**

- **Strengthened Cyber Resilience:** Advanced security solutions (NIPS/NDR, Unified SOC) to proactively detect, respond, and mitigate threats across IT and OT networks.
- **DPDP Act 2023 Readiness:** Deployment of VPN, ZTNA, DLP, URL Filtering, and Access Controls ensures secure data handling, remote access, and alignment with national data protection regulations.
- **Centralized Threat Visibility:** Unified SOC facilitates real-time security monitoring and faster incident response, reducing business risk and downtime.
- **Regulatory & Standards Compliance:** Ensures adherence to ISO 27001:2022, MeitY, CERT-In, and IT Act guidelines, minimizing legal and reputational risks

## Annexure - 48

### Scheme: Construction of Office Buildings

#### Background

In continuation of our efforts towards upgrading existing infrastructure and creating new facilities, including shifting from rented offices to our own premises, TPWODL has achieved considerable milestones in providing decent, clean, and hygienic workplaces for employees and supporting operational needs. Some of offices are deteriorated to an extent that water leaks from roof during periods of rainfall. As of now lots of cracks are observed on old office wall and there is a lack of cleanliness and comfortable workspace for employees. Going forward, the proposed infrastructure is planned for execution in FY 2026–27 in a phased manner. This initiative is aimed at ensuring that employees feel comfortable and motivated in their workplaces, thereby enhancing their efficiency and contributing to the success of the organization as well as the welfare of the customers we serve.

#### Proposal

We have already completed Construction of all 5 nos Circle Office and construction of all 17 Nos Division offices will be completed in FY 25-26. With available fund, 43 nos SDO office out of 57 Nos & 151 Nos Section Office out of 201 nos will be completed. In FY 26-27, it is proposed to construct 14 Nos SDO Offices & 31 Nos Section Offices. Moreover, 02 nos. M&T Lab & 13 Nos M&T Store with seating arrangement will be done.

Description	Item	Unit	Proposed in FY 26-27
New Building	SDO Office	Nos.	14
	Section Office	Nos.	31
	M&T Lab	Nos.	02
	M&T Store with Seating Arrangement	Nos.	13
Please refer appendix -I for details			

#### Requirement / Need of the Proposal

The allocation of the proposed budget will not only address our immediate need for additional office space but also yield significant returns in terms of enhanced productivity, employee satisfaction, and organizational success. Furthermore, it underscores our unwavering commitment to fostering a culture of excellence and providing our team with the requisite tools and infrastructure to thrive

#### Scope of Work:

The scope of work for the proposed construction will broadly include:

- Development of a dedicated office room with adequate storage facilities
- Provision for essential utilities such as electrical fittings, lighting, ventilation, and office furniture
- Necessary civil and finishing works to ensure readiness for immediate operational use

- Office Boundary Wall & Peripheral Civil Work

LIST OF TPWODL SECTION OFFICES CONSIDERED IN DPR FY 26-27						
Sl No	Circle	Division	Sub Division	Section	New /Renovation	Remarks
1	Sambalpur	SED,Samabalpur	Ainthapali	Bareipali	New	Construction of Thirty-One Nos (31 Nos) Section Offices considered in Civil Infrastructure DPR FY 26-27
2	Sambalpur	SED,Samabalpur	Ainthapali	Hospital Road	New	
3	Sambalpur	SEED,Sambalpur	Dhanupali	Dhanupali	New	
4	Sambalpur	SEED,Sambalpur	Dhanupali	Dhama	New	
5	Sambalpur	SEED,Sambalpur	Rairakhol	Hatibari	New	
6	Sambalpur	SEED,Sambalpur	Bhutapada	Sakhipara	New	
7	Sambalpur	SEED,Sambalpur	Bhutapada	CS colony	New	
8	Sambalpur	SEED,Sambalpur	Bhutapada	Brroks Hill	New	
9	Sambalpur	JED,Jharsuguda	Jharsuguda-I	Pahadi	New	
10	Sambalpur	JED,Jharsuguda	Jharsuguda-I	Beheramal	New	
11	Sambalpur	JED,Jharsuguda	Jharsuguda-II	Sarbahal	New	
12	Sambalpur	JED,Jharsuguda	Jharsuguda-II	Jhanda Chowk	New	
13	Sambalpur	JED,Jharsuguda	Kuchinda	Bamra	New	
14	Sambalpur	JED,Jharsuguda	Kuchinda	Kusumi	New	
15	Rourkela	SED Sundargarh	Ujjalpur	Ujjalpur	New	
16	Rourkela	SED Sundargarh	Ujjalpur	Lafripada	New	
17	Rourkela	SED Sundargarh	Sundargarh	ESO, Bedabahal	New	
18	Rourkela	RED Rourkela	Koelnagar	ESO, No.III, Jhirpani, Rourkela	New	
19	Rourkela	RED,Rajgangpur	Kuarmunda	ESO, Hatibari, Rajgangpur	New	
20	Kalahandi	KWED,Kalahandi	Charbahal	ESO, Jaipatna	New	
21	Kalahandi	KWED,Kalahandi	Charbahal	ESO, Charbahal	New	
22	Bargarh	BED,Bargarh	Bargarh-I	ESO NO.- III,BARGARH	New	
23	Bargarh	BED,Bargarh	Bargarh-I	ESO NO.- IV,BARGARH	New	
24	Bargarh	BED,Bargarh	Bargarh-II	ESO,AMBAPALLI	New	
25	Bargarh	BED,Bargarh	Attabira	ESO,RENGALI CAMP	New	
26	Bargarh	BED,Bargarh	Bheden	ESO,BHEDEN	New	
27	Bargarh	BWED, Bargarh	Barapali	ESO, No.II, Barpali	New	
28	Bargarh	BWED, Bargarh	Paikmal	ESO, Paikmal	New	
29	Bargarh	BWED, Bargarh	Sohela	ESO, No.I, Sohela	New	
30	Bargarh	BWED, Bargarh	Sohela	ESO, No.II, Sohela	New	
31	Balangir	BED,Balangir	Tusura	Section, Tusura	New	

**LIST OF TPWODL M&T LAB and STORE WITH SEATING CONSIDERED IN DPR FY 26-27**

Sr No.	Name of Circle	Location
<b>A.</b>	<b>M&amp;T Lab</b>	
1	Sambalpur	SED, Sambalpur
2	Bargarh	BED, Bargarh
<b>B</b>	<b>M&amp;T Store with Seating</b>	
1	Rourkela	RED, Rourkela
2	Rourkela	IDC, Kalunga
3	Rourkela	SED, Sundargarh
4	Sambalpur	SED, Sambalpur
5	Sambalpur	SEED, Sambalpur
6	Sambalpur	JED, Jharsuguda
7	Sambalpur	DED, Deogarh
8	Bargarh	BED, Bargarh
9	Bargarh	Padampur, Bargarh
10	Balangir	SED, Sonepur
11	Balangir	Katabanji, Titlagarh
12	Kalahandi	KEED, Bhawanipatna
13	Kalahandi	NED, Nuapada

**Proposed Cost with estimate Break-up:**

CIVIL INFRA						
SL No	Description	Item	Unit	QTY	Budgeted Amount (CR)	Remarks
1	New Building	SDO Office	EA	14	5.29	Per Nos Cost 37.75lacs
		Section Office	EA	31	11.70	Per Nos Cost 37.75lacs
		M&T Lab	EA	02	0.11	Per Nos Cost 5.5 lacs
		M&T Store with Seating Arrangement	EA	13	1.04	Per Nos Cost 8.0 lacs
Total					18.14	

**Physical Target:**

Following work will be completed by end of March'27

- SDO Office – 14 Nos
- Section Office – 31 Nos
- M&T Lab – 02 Nos
- M&T Store with Seating Arrangement – 13 Nos

**Cost Benefits Analysis**

Not applicable

## Benefits of the system and consumers

The proposed investment will result in substantial benefits for both employees and customers. Establishing modern, well-maintained office buildings will provide employees with a better workplace environment, enhancing their motivation, job satisfaction, and overall productivity. Customers will benefit from clean, aesthetically designed offices that improve their service experience and provide professional touchpoints. Furthermore, the development of safe and sound workplaces with essential amenities will address gaps currently seen in rented offices and temporary facilities. Operational efficiency will also be significantly improved through infrastructure such as various office buildings and upgraded Store facilities, which will streamline operations. Collectively, these investments will support organizational growth while ensuring long-term sustainability and customer satisfaction.

- Overview of Total Scope Vs. Achieved till date and Planning for Balance

Sl. No.	Activity	UOM	Total Scope across System	Work Covered so far (up to FY'26 DPR)	Balance Requirement	Covered under FY'27 DPR	Planned for Balance Years DPR	Priority Criteria
			A	B	C=A-B	D	E=C-D	
1.	SDO Office	EA	57	43	14	14	0	Balance all SDO Considered
2.	Section Office	EA	201	151	50	31	19	Section Office considered where there is no land issue
3.	M&T Lab	EA	2	0	2	2	0	All M&T Lab considered
4.	M&T Store with Seating Arrangement	EA	13	0	13	13	0	All M&T store with seating arrangement considered

## Appendix - I

### SUB DIVISION OFFICE

#### HIRAKUD SDO OFFICE (01/14)

This has been observed Hirakud Subdivision Office Building is running from a **Rented building** as there is no own building available and it controlling 4 section offices.

Existing Employees – Around 16 Nos.

Outline Damaged Areas of Building:

1. As it is running in a Residential Building so the proper arrangement of seating of employee not possible.
2. Due Confined Space.

It is imperative that we prioritize the well-being and safety of our employees, and addressing this issue promptly is essential in ensuring their welfare.

#### **DHANUPALI SDO OFFICE (02/14)**

Dhanupali SDO Office which is part of the Sambalpur Circle under SEED Division. Its distribution area is 800 square km, It encompasses 5 Sections and one of the most Important subdivision of SEED.

During visit it was observed our SDO Office operates from a **Rented office** from last 30year.The building in deteriorated condition and lacks proper housekeeping facilities, hindering efficiency and morale.

Constructing a new SDO office will address these issues and provide our team with a fresh and productive workspace along with better facilities and infrastructure, we anticipate improved efficiency and effectiveness in our operations.

As a well-maintained office reflects positively on our organization and creates a favourable impression on consumers, it is proposed to construct a new sdo office in our own premises. Hence propose for New Subdivision Office.





### BELPAHAR SDO OFFICE (03/14)

It has been observed Belpahar Subdivision office, which is a part of Sambalpur Circle under BNED Division. Its Has 4 electrical sections encompasses 40 Gram Panchayats and 350 villages. We don't currently have a typical subdivision office for our seating proposals. The office which is running from a rented building. There is a lack of a clean and comfortable workspace for employees in the Belpahar subdivision office. It is essential maintain a good hygienic environment for employee health and safety .

As this subdivision office has around 12 nos. employees, it is necessary to provide them a proper hygienic work area along with standard sitting arrangements for Increase the productivity and personality of employees.

### JHARSUGUDA 2 SDO OFFICE (04/14)

Currently, we are operating SDO Office Jharsuguda 2 of JED division in a single **Rented building**, accommodating a total of 15 employees. However, this arrangement has led to significant space constraints and hygiene issues, impacting the productivity and well-being of our team.

Outlined below are the key reasons why the construction of a new section office is necessary:

1. **Space Constraints:** The existing rented building does not provide adequate space to accommodate our growing team and conduct operations efficiently. This congestion has resulted in decreased productivity and compromised employee comfort.
2. **Hygiene Concerns:** The limited space and shared facilities in the rented building have led to hygiene issues, posing health risks to our employees. A new office space would enable us to maintain better cleanliness standards and ensure a healthier work environment.
3. **Improved Morale and Productivity:** Providing our employees with a spacious and well-designed office environment will boost morale and enhance productivity. A dedicated office space will also foster collaboration and teamwork among team members.



### JHARSUGUDA 1 SDO OFFICE (05/14)

Jharsuguda 1 Section Office which is part of the Sambalpur Circle's under JED Division. Its distribution area is 160square km and It encompasses with 4section offices.

We want to inform you that after careful consideration and evaluation of the current situation regarding our SDO office, we have raised the proposal for the construction of a new SDO office on our own land. As the

existing SDO office, which is situated in a **Rented building**, has been facing numerous challenges primarily due to space constraints and the deteriorating condition of the building. This has adversely impacted our operational efficiency and the working environment for our staff.

Recognizing the criticality need for a suitable and sustainable solution, we need to construct a new SDO office on our own land. This will not only address the space constraints but also ensure a safer and more favourable working environment for our employees. Again, it is also important to provide adequate resources and infrastructure to support our operations, and this decision aligns with our commitment to fostering a conducive work environment that enables our team to perform at their best.



#### UJALAPUR SDO OFFICE (06/14)

Ujalpur SDO office which is part of the Rourkela Circle's under SED Sundargarh Division. Its distribution area is 150 square km and it encompasses 4 sections 80 Village and 9 GP.

Currently our sdo office operates from a **Rented building**, which poses significant challenges in terms of space constraints and hygiene issues. The existing premises have become inadequate to support our operational needs effectively. The limited space not only hampers our day-to-day activities but also compromises the hygiene standards necessary for a conducive work environment. These issues directly impact the productivity and well-being of our staff.

Constructing a new SDO office on our owned land presents a viable solution to address these pressing concerns. It would provide us with the necessary space to accommodate our operations comfortably and ensure better hygiene standards, thereby fostering a more efficient and healthier work environment.



#### KOELNAGAR SDO OFFICE (07/14)

Koel Nagar SDO Office which is part of the Rourkela Circle's under RED Rourkela. Its distribution area is 100square km and it encompasses 92villages and 19Gramme Panchayats. During site visit it has become apparent that our existing SDO office in a **Rented premises**, facing several challenges like space constant i.e running from a single room that impede our efficiency and effectiveness. The space available in the rented premises is inadequate to accommodate our growing needs. This limitation restricts the functionality of our operations and creates congestion issues, hindering the productivity of our team. Furthermore, the single room office fails to meet modern standards, posing potential risks and inconveniences to our staff.

Consider to aforementioned situation it has been proposed to approve for construct a new SDO office of Koelnagar at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members and in Over time, this will result in significant cost savings and improved financial sustainability for our organization.



#### KUARMUNDA SDO OFFICE (8/14)

Kuarmunda SDO Office which is part of the Rourkela Circle's under Rajgangpur RED Division. Its distribution area is 250 square km and it encompasses 180 villages and 48 Gramme Panchayats.

During visit it was observed the inefficiencies and limitations posed by the current setup, wherein the section office operates from a **Rented building**, it has become evident that establishing our own SDO office within our premises is a strategic move towards enhancing operational efficiency and reducing long-term costs. The decision to construct a new section office aligns with our organizational goals of fostering sustainability, optimizing resources, and ensuring seamless workflow. By having our SDO office located within our own premises, we will not only mitigate the risks associated with renting external spaces but also provide a more conducive environment for our employees to carry out their duties effectively.



#### **TUSURA SUBDIVISION OFFICE (09/14)**

It has been observed of Tusura Subdivision office, which is a part of Balangir Circle's BED Division. Its distribution area is entire Tusura NAC area and Gudvela & Degaon Block area covering 2 electrical sections. It encompasses 40 Gram Panchayats and 350 villages. We don't currently have a typical subdivision office for our seating proposals. The office which is running from 1st floor of SBI Bank which is in a **rental building**. There is a lack of a clean and comfortable workspace for employees in the Tusura subdivision office. As maintaining good hygiene is essential, Employee health and safety are seriously to put at a risk in unhygienic environments.

As this subdivision office has around 10 nos. employees, it is necessary to provide them a proper hygienic work area along with standard sitting arrangements for Increase the productivity and personality of my employees.

#### **PATNAGARH SDO OFFICE (10/14)**

According to inspection of Patnagarh SDO office, which comes under Titilagarh division under Balangir circle. We don't currently have a typical subdivision office of our seating proposals. This subdivision office which is **rented building** is too small and has only for 2 nos. of rooms have been occupied on rent, there is no proper store, no proper drinking water facility and washroom, etc. owner is also denied for the same.

Existing Employees – Around 15Nos.

Outline Areas of Building:

1. **Rented building**
2. Washroom not working properly
3. Seating Area very congested in single room.
4. Exposed wiring.



It is imperative that we prioritize the well-being and safety of our employees, and addressing this issue promptly is essential in ensuring their welfare. Therefore, we initiated discussions and proposed to construct a new office building that meets modern safety standards, appropriate seating arrangement for our workforce, which will not only improve productivity but also provides a secure environment. Hence propose for New Subdivision Office.

#### **KHARIAR SDO OFFICE (11/14)**

It has been observed that Khariar subdivision Office Building, we identified that the environmental conditions of the premises pose substantial safety hazards to our personnel and operational functionalities. It has 4 section offices.

Existing Employees – Around 20 Nos.

Outline unsafe Areas of Building:

1. Confide Space for Seating of employee.
2. As the section office inside the Control room public gathering is there which needs to be avoided.

It is imperative that we prioritize the well-being and safety of our employees, as well as public and addressing this issue promptly is essential in ensuring their welfare.

Therefore, we initiated discussions and proposed to construct a new office building that meets modern safety standards, appropriate seating arrangement for our workforce, which will not only improve productivity but also provides a secure environment. Hence propose for New Subdivision Office.



### CHARBAHAL SDO OFFICE (12/14)

Charbahal SDO Office, which is the part of the Kalahandi Circle's KWED Division. Its distribution area is 2000 square km and it encompasses 400 villages and 50 Gram Panchayats. We don't currently have a typical SDO office of our seating proposals. The old SDO office which is around 40 years old is the property of Indravati Canal, has deteriorated to an extent that water leakage from old roof slab during period of the rainfall, lots of cracks on old office wall and floors are in damage stage. There is a lack of a clean and comfortable workspace for employees in the Charbahal section office. Considering that many employees spend ten to fourteen hours a day at work, there must be maintain good hygiene is essential. Employee health and safety are seriously put at risk in unhygienic environments.

As Charbahal SDO Office has around 20 employees it is necessary to provide them a proper hygienic work area along with standard sitting arrangements for Increase the productivity and personality of my employees.



### BHEDEN SDO OFFICE (13/14)

Bheden SDO Office which is part of the Bargarh Circle's under BED Division. Its distribution area is 120 square km and It encompasses 86 villages and 9 Gramme Panchayats.

During visit it was observed our SDO office operates from a **Rented office** from last 30 year and space is outdated. The building in deteriorated condition with lack of proper housekeeping facilities which hindering our efficiency and morale. Constructing a new SDO office will address these issues and provide our team with a fresh and productive workspace along with better facilities and infrastructure, we anticipate improved efficiency and effectiveness in our operations.

As a well-maintained office reflects positively on our organization and creates a favourable impression on consumers, it is proposed to construct a new sdo office in our own premises. Hence propose for New Subdivision Office.



#### SOHELA SDO OFFICE (14/14)

Sohela SDO Office which is part of the Bargarh Circle's under BWED Division. It encompasses 250 villages and 70 Gramme Panchayats.

We require a new sdo office, as our current facility is in a state of severe deterioration. The building, which is over 30 years old, no longer provides a safe or suitable environment for our operations. the condition of the existing building has reached a point where it poses significant risks to the well-being of our staff and compromises the efficiency of our work. Structural issues, Water leakage, and deteriorating infrastructure have become prevalent concerns, leading to disruptions in our daily operations and compromising our ability to serve effectively.

In light of these circumstances, it is imperative that we take proactive steps to address the situation by constructing a new section office. Doing so will not only ensure the safety and comfort of our employees but also enable us to maintain productivity and meet the needs of our stakeholders more effectively.





LIST OF TPWODL SDO OFFICES CONSIDERED IN DPR FY 26-27				
Sl No	Circle	Division	Sub Division	Remarks
1	Sambalpur	SED, Sambalpur	Hirakud	Construction of Fourteen Nos (14 Nos) SDO Offices considered in Civil Infrastructure DPR FY 26-27
2	Sambalpur	SEED, Sambalpur	Dhanupali	
3	Sambalpur	BNED, Brajrajnagar	Belpahar	
4	Sambalpur	JED, Jharsuguda	Jharsuguda-II	
5	Sambalpur	JED, Jharsuguda	Jharsuguda-I	
6	Rourkela	SED, Sundargarh	Ujjalpur	
7	Rourkela	RED, Rourkela	Koelnagar	
8	Rourkela	RED, Rajgangpur	Kuarmunda	
9	Balangir	BED, Balangir	Tusura	
10	Balangir	TED, Titlagarh	Patnagarh	
11	Kalahandi	NED, Nuapada	Khariar	
12	Kalahandi	KWED, Kalahandi	Charbahal	
13	Bargarh	BED, Bargarh	Bheden	
14	Bargarh	BWED, Bargarh	Sohela	



### **BAREIPALI SECTION OFFICE (1/31)**

The Bareipali Section Office falls under the Sambalpur Circle's SED division. It serves about 3015 consumers and has a square 10km distribution area. It includes 10 villages.

However, in line with our efforts establishing a dedicated office space reflects our commitment to cultivating a corporate culture that emphasizes professionalism, and Standardizing seating arrangements across section offices promotes consistency and facilitates better communication and teamwork among employees.

construct a new section office aligns with our organizational goals of enhancing efficiency, fostering a conducive work environment, and optimizing resources. By transitioning from rented premises to our own premises, we not only gain greater control over the workspace but also invest in a long-term asset for the company.

In conclusion, I urge your favourable consideration of this proposal, recognizing the strategic importance and benefits of constructing a new section office on our own land.

Hence propose for New Section Office .



### **HOSPITAL ROAD SECTION OFFICE (2/31)**

Hospital Road Section Office which is part of the Sambalpur Circle's under SED Division. It's distribution area is 10square km and it serves around 2145 customers. It encompasses Municipality. During site visit it has become apparent that our existing section office, housed in a rented premises, presents several challenges like space constant and old building that impede our efficiency and effectiveness. The space available in the rented premises is inadequate to accommodate our growing needs. This limitation restricts the functionality

of our operations and creates congestion issues, hindering the productivity of our team. the building housing our section office is notably old, which raises concerns regarding its structural integrity and safety. Furthermore, the outdated infrastructure fails to meet modern standards, posing potential risks and inconveniences to our staff.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Hospital road at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members and in Over time, this will result in significant cost savings and improved financial sustainability for our organization.

Hence propose for New Section Office .



### DHANUPALI SECTION OFFICE (03/31)

Dhanupali Section Office which is part of the Sambalpur Circle's under SEED Division. It's distribution area is 50 square km and it encompasses 15 villages and Municipality area.

During visit it was observed our section operates from a **rented office** from last 30 year space that is not only outdated, building in deteriorated condition but also lacks proper housekeeping facilities, hindering our efficiency and morale.

Constructing a new section office will address these issues and provide our team with a fresh and productive workspace along with better facilities and infrastructure, we anticipate improved efficiency and effectiveness in our operations. as a well-maintained office reflects positively on our organization and creates a favourable impression on consumers, it is proposed to construct a new section office in our own premises.

Hence propose for New Section Office.



#### **DHAMA SECTION OFFICE (04/31)**

Dhama Section Office which is part of the Sambalpur Circle's under SEED Division. Its distribution area is 60 square km, and it encompasses 45 villages and 3 Gram Panchayats. Presently existing section office operational within the PSS Control Room building. As the section offices are consumer visit area, poses significant safety concerns for both our employees and consumers.

The section office serves as a crucial hub for our operations, facilitating interactions with consumers and providing essential services. However, its current location within the consumer visit area presents challenges regarding safety and security. Given the nature of our work and the potential risks involved, it is imperative that we take proactive measures to ensure the well-being of all individuals involved.

To address the issues, it has been proposed to construct a new section office in our own land provides a secure and comfortable working environment. Additionally, it will enhance the overall efficiency and functionality of our operations, enabling us to better serve our consumers while maintaining a safe workplace for our employees. Hence propose for New Section Office.

#### **HATIBARI SECTION OFFICE (05/31)**

Hatibari Section Office which is part of the Sambalpur Circle's under SEED Division. It's distribution area is 320 square km and it serves around 12,700 customers. It encompasses 30 villages and 17 Gram Panchayats.



During site visit we observed that our existing section office operates from the PSS Control Room building, which poses significant safety concerns for our employees as well as consumers. Additionally, there is a severe lack of space for proper seating arrangements, hindering productivity and comfort.

Constructing a new section office is crucial to ensure the safety and well-being of our employees and to provide adequate facilities for serving our consumers efficiently. The new office will not only address the current safety concerns but also enhance operational effectiveness and brand value. We have identified a suitable location for the new section office. The proposed construction plan includes provisions for sufficient space for seating and other amenities necessary for the smooth functioning of our operations.

Hence propose for New Section Office.



on our company-owned land. This decision comes in light of the current operational challenges posed by running the section office from an old rented building. A purpose-built section office will provide a conducive and tailored environment for our operations, fostering productivity and efficiency among our team members. establishing our section office on company-owned land aligns with our strategic objectives, demonstrating stability and commitment to our stakeholders.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Sakhipara at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members.

Hence propose for New Section Office .



#### CS CLONY SECTION OFFICE (07/31)

CS Colony Section Office which is part of the Sambalpur Circle's under SEED Division. It's distribution area is 10square km and it serves around 3409 customers. It encompasses municipality area .

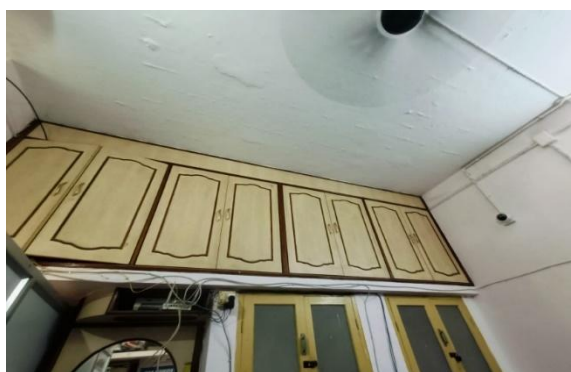
We need a new section office at our own premises as our current office space, being rented, poses several limitations, including escalating costs and space constraints. As our operations expand and our team grows, it has become increasingly evident that we need a dedicated space that aligns with our organizational needs and future growth plans. the proposal for construction of a new section office aims to provide a sustainable solution to these challenges. By having our own space, we can optimize operational efficiency, enhance collaboration among team members, and create a conducive work environment that fosters productivity and innovation.

Hence propose for New Section Office .



#### BRROKS HILL SECTION OFFICE (08/31)

Brroks Hill Section Office which is part of the Sambalpur Circle's under SEED Division. It's distribution area is 08 square km and it serves around 3222 customers. It encompasses municipality area.





There is no proper section office for our employees as the current office premises have been deemed inadequate due to their deteriorated condition. Recognizing the importance of providing a suitable working environment for our staff, it is necessary to construct a new section office at BrroksHill .

The existing office infrastructure has been subject to wear and tear over the years, as it has been already 20 year and it is leading to numerous functional and structural deficiencies. This has not only impacted the efficiency of our operations but has also compromised the well-being and safety of our employees. By investing in the construction of a new section office, it will create a conducive and modern workspace that meets the evolving needs of our team. The new facility will provide ample space, improved amenities, and enhanced functionality, fostering a more productive and comfortable work environment for our all Employees

Hence propose for New Section Office .



#### PAHADI SECTION OFFICE (9/31)

Pahadi Section Office which is part of the Sambalpur Circle's under JED Division. It's distribution area is 50 square km and it serves around 6352 customers. It encompasses municipality area .

Currently, our section office operates from a rented building, which poses significant challenges in terms of space constraints and hygiene issues. The existing premises have become inadequate to support our operational needs effectively. The limited space not only hampers our day-to-day activities but also

compromises the hygiene standards necessary for a conducive work environment. These issues directly impact the productivity and well-being of our staff.

Constructing a new section office on our owned land presents a viable solution to address these pressing concerns. It would provide us with the necessary space to accommodate our operations comfortably and ensure better hygiene standards, thereby fostering a more efficient and healthier work environment.

Hence propose for New Section Office .



#### **BEHERAMAAL SECTION OFFICE (10/31)**

Beheramaal Section Office which is part of the Sambalpur Circle's under JED Division. It's distribution area is 20 square km and it serves around 5672 customers. It encompasses Municipality area.

We want to inform you that after careful consideration and evaluation of the current situation regarding our section office, we have raised the proposal for the construction of a new section office on our own land. As the existing section office, which is situated in a rented building, has been facing numerous challenges primarily due to space constraints and the deteriorating condition of the building. This has adversely impacted our operational efficiency and the working environment for our staff.

Recognizing the criticality need for a suitable and sustainable solution, we need to construct a new section office on our own land. This will not only address the space constraints but also ensure a safer and more conducive working environment for our employees. Again it is also important to provide adequate resources and infrastructure to support our operations, and this decision aligns with our commitment to fostering a conducive work environment that enables our team to perform at their best.

Hence propose for New Section Office.



### **SARBAHAL & JHANDA CHOWK SECTION OFFICE (11 & 12/31)**

Currently, we are operating two section offices i.e. Sarbahal & Jhanda chowk of JED division in a single rented building, accommodating a total of 20 employees. However, this arrangement has led to significant space constraints and hygiene issues, impacting the productivity and well-being of our team.

Outlined below are the key reasons why the New section office is necessary:

1. **Space Constraints:** The existing rented building does not provide adequate space to accommodate our growing team and conduct operations efficiently. This congestion has resulted in decreased productivity and compromised employee comfort.
2. **Hygiene Concerns:** The limited space and shared facilities in the rented building have led to hygiene issues, posing health risks to our employees. A new office space would enable us to maintain better cleanliness standards and ensure a healthier work environment.
3. **Improved Morale and Productivity:** Providing our employees with a spacious and well-designed office environment will boost morale and enhance productivity. A dedicated office space will also foster collaboration and teamwork among team members.

It is proposed to renovate section office, as it aligns with our goal of providing a conducive work environment for our employees while also optimizing operational efficiency. Hence propose for New Section Office.



### **BAMRA SECTION OFFICE (13/31)**



Bamra Section Office which is part of the Sambalpur Circle's under JED Division. It's distribution area is 50 square km and it serves around 15000 customers. It encompasses municipality area .

Currently, our section office operates from a rented building, which poses significant challenges in terms of space constraints and hygiene issues. The existing premises have become inadequate to support our operational needs effectively. The limited space not only hampers our day-to-day activities but also compromises the hygiene standards necessary for a conducive work environment. These issues directly impact the productivity and well-being of our staff. Constructing a new section office on our owned land presents a viable solution to address these pressing concerns. It would provide us with the necessary space to accommodate our operations comfortably and ensure better hygiene standards, thereby fostering a more efficient and healthier work environment.

Hence propose for New Section Office .

#### **KUSUMI SECTION OFFICE (14/31)**

Kusumi Section Office which is part of the Sambalpur Circle's under JED Division. Its distribution area is 40 square km, and it encompasses 15 villages and 06 Gramme Panchayats. Presently existing section office operational within the PSS Control Room building. As the section offices are consumer visit area, poses significant safety concerns for both our employees and consumers.

The section office serves as a crucial hub for our operations, facilitating interactions with consumers and providing essential services. However, its current location within the consumer visit area presents challenges regarding safety and security. Given the nature of our work and the potential risks involved, it is imperative that we take proactive measures to ensure the well-being of all individuals involved.

To address the issues, it has been proposed to approve for construct a new section office in our own land provides a secure and comfortable working environment. Additionally, it will enhance the overall efficiency and functionality of our operations, enabling us to better serve our consumers while maintaining a safe workplace for our employees. Hence propose for New Section Office.

#### **UJALAPUR SECTION OFFICE (15/31)**

Ujalpur Section office which is part of the Rourkela Circle's under SED Sundargarh Division. It's distribution area is 60 square km and it serves around 10000 customers. It encompasses 20 Village and 93 GP.

Currently, our office operates from a rented building, which poses significant challenges in terms of space constraints and hygiene issues. The existing premises have become inadequate to support our operational needs effectively. The limited space not only hampers our day-to-day activities but also compromises the hygiene standards necessary for a conducive work environment. These issues directly impact the productivity and well-being of our staff.

Constructing a new section office on our owned land presents a viable solution to address these pressing concerns. It would provide us with the necessary space to accommodate our operations comfortably and ensure better hygiene standards, thereby fostering a more efficient and healthier work environment.

Hence propose for New Section Office .



#### **LEFRIPADA SECTION OFFICE (16/31)**

Lefripada Section Office which is part of the Rourkela Circle's under SED Sundargarh Division. Its distribution area is 145 square km, and it encompasses 55 villages and 11 Gramme Panchayats. During site visit it has become apparent that our existing section office, housed in a rented premises, presents several challenges like space constraint and old building that impede our efficiency and effectiveness. The space available in the rented premises is inadequate to accommodate our growing needs. This limitation restricts the functionality of our operations and creates congestion issues, hindering the productivity of our team. The building housing our section office is notably old, which raises concerns regarding its structural integrity and safety. Furthermore, the outdated infrastructure fails to meet modern standards, posing potential risks and inconveniences to our staff.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Lafripada at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members and in Over time, this will result in significant cost savings and improved financial sustainability for our organization. Hence propose for Construction of New Section Office.



### **BEDABAHAL SECTION OFFICE (17/31)**

Bedabahal Section Office which is part of the Rourkela Circle's under SED Sundargarh Division. Its distribution area is 110 square km, and it encompasses 35 villages and 07 Gramme Panchayats.

Our current office space is rented and has been experiencing significant deterioration, particularly in terms of safety concerns. The condition of the building poses a risk to the well-being of our staff, jeopardizing both their safety and productivity.

Given the urgency of the situation, it is imperative that we take action to ensure a safe and conducive work environment for our employees. Constructing a new section office will not only address the safety issues but also provide a more sustainable solution in the long term.

The new office space will enable us to enhance efficiency, improve morale, and better serve our constituents. Additionally, having our own facility will offer greater flexibility and control over our operations.

Hence propose for New Section Office.



### **JHIRPANI SECTION OFFICE (18/31)**

Jhirpani Section Office which is part of the Rourkela Circle's under RED Division. Its distribution area is 80 square km, and it encompasses 15 villages and 01 Gramme Panchayats.

After careful consideration and evaluation, we have found that construction of a new section office for Jhirpani required on our company-owned land. This decision comes considering the current operational challenges posed by running the section office from an old, rented building along with space constraints. The purpose of built the section office will provide a conducive and tailored environment for our operations, fostering productivity and efficiency among our team members. establishing our section office on company-owned land aligns with our strategic objectives, demonstrating stability and commitment to our stakeholders.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Kanshbahal at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members. Hence propose for new Office.





### **HATIBARI SECTION OFFICE (19/31)**

Hatibari Section Office which is part of the Rourkela Circle's under RED Division. Its distribution area is 220 square km, and it serves around 20621 customers. It encompasses 120 villages and 18 Gramme Panchayats.

We required a new section office by replace our current office space, which has deteriorated significantly and lacks proper work environment and safety standards. After thorough assessment and consideration of the current state of our office premises, it has become evident that continuing operations in the existing space poses significant risks to the well-being of our employees and the efficiency of our operations. The deteriorated condition of the office not only hampers productivity but also compromises the safety and morale of our team. The new office will provide a conducive work environment that fosters productivity, collaboration, and employee well-being along with the new office will provide modern standards of safety, comfort, and functionality to ensure the continued success and growth of our organization. Hence propose for New Section Office.



### **JAIPATNA SECTION OFFICE (20/31)**

As per recent inspection of Jaipatna Section Office, which is the part of the Kalahandi Circle's KWED Division. Its distribution area is 350 square km, and it serves to around 12,000 customers. It encompasses 60 villages and 22 Gram Panchayats. We don't currently have a typical section office of our seating proposals. The section office which is rented building is too small and has only 2 numbers rooms have been occupied on rent, No proper store, Toilets are available in addition to that no proper property is identified for FCC Jaipatna. There

is confined space, No proper drinking facility is available, and owner is also denied for the same. To fulfill our all requirements, another building is not available on rent in that area for section office and FCC Jaipatna. There is a lack of a clean and comfortable workspace for employees in the Jaipatna section office with sufficient space and storage. Considering that many employees spend ten to fourteen hours a day at work, there must be maintain good hygiene is essential. Employee health and safety are seriously put at risk in unhygienic environments.

As Jaipatna section office has around 45 employees it is necessary to provide them a proper hygienic work area along with standard seating arrangements for Increase the productivity and personality of my employees.

Therefore, we initiated discussions and proposed to construct a new office building that meets modern safety standards, appropriate seating arrangement for our workforce, which will not only improve productivity but also provides a secure environment.

Hence propose for New Section Office .



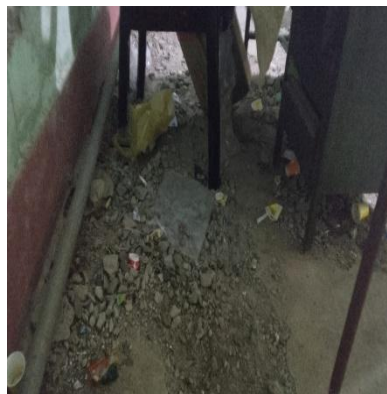
**CHARBAHAL SECTION OFFICE (21/31)**



As per recent inspection of Charbahal Section, which is the part of the Kalahandi Circle's KWED Division. Its distribution area is 400 square km, and it encompasses 52 villages and 13 Gram Panchayats. We don't currently have a typical section office of our seating proposals. The old section office which is around 40 years old is the property of Indravati Canal, has deteriorated to an extent that water leakage from old roof slab during period of the rainfall, lots of cracks on old office wall and floors are in damage stage. There is a lack of a clean and comfortable workspace for employees in the Charbahal section office.

As Charbahal section has around 15 employees it is necessary to provide them a proper hygienic work area along with standard sitting arrangements for Increase the productivity and personality of my employees.

Therefore, we initiated discussions and proposed to renovation of office building that meets modern safety standards, appropriate seating arrangement for our workforce, which will not only improve productivity but also provides a secure environment. Hence propose for NEW Section Office.



### **BARGARH 3 SECTION OFFICE (22/31)**

Bargarh 3 Section Office which is part of the Bargarh Circle's BED Division. Its distribution area is 30 square km, and it encompasses 2 villages and Municipality area. We don't currently have a typical section office for our seating proposals. The older section office, which was around twenty-five years old, has deteriorated to an extent that water leaks from old asbestos during periods of rainfall and lots of cracks on old office wall. There is a lack of a clean and comfortable workspace for employees in the Bargarh 1 section office. As maintaining good hygiene in office is essential. Employee health and safety are seriously put at risk in unhygienic environments.

As Bargarh 3 Section has around 12 employees it necessary to provide them a proper hygienic work area along with standard Sitting arrangements for Increase the Productivity and Personality of my employees.

In light of the aforementioned details, proposed to build a new section office with appropriate seating arrangements for the wellbeing of our employees, which will not only improve productivity but also create a hygienic work environment. Hence propose for New Section Office.



#### **BARGARH 4 SECTION OFFICE (23/31)**

Bargarh 4 Section Office which is part of the Bargarh Circle's under BED Division. Its distribution area is 40 square km, and it encompasses 4 villages and Municipality area.

After careful consideration and evaluation, we have found that construction of a new section office for Bargarh-4 required on our company-owned land. This decision comes in light of the current operational challenges posed by running the section office from an old, **rented building**. A purpose-built section office will provide a conducive and tailored environment for our operations, fostering productivity and efficiency among our team members. establishing our section office on company-owned land aligns with our strategic objectives, demonstrating stability and commitment to our stakeholders.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Bargarh 4 at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members. Hence propose for New Section Office.



### AMBAPALI SECTION OFFICE (24/31)

Ambapali Section Office which is part of the Bargarh Circle's under BED Division. Its distribution area is 60 square km, and it encompasses 33 villages and 03 Gramme Panchayats.

We require a new office as the current office space within the PSS Control Room building has become inadequate to support the growing needs of our section. The limited space not only hampers our efficiency but also poses significant safety and hygiene concerns.

**Space Constraint:** The existing office space is insufficient to accommodate the personnel and equipment required for smooth operations. This limitation has led to overcrowding and hindered productivity.

**Safety Concerns:** Overcrowding and operated from PSS Control room exacerbates safety hazards, increasing the risk of accidents and injuries. A dedicated space will allow for better organization and compliance with safety protocols, ensuring the well-being of our staff.

**Hygiene Issues:** The cramped conditions make it challenging to maintain proper hygiene standards. A new office space will facilitate better sanitation practices, promoting a healthier work environment for all employees.

Given these pressing concerns, we propose for the construction of a new section office. Hence propose for New Section Office.



### RENGALI CAMP SECTION OFFICE (25/31)

Rengali camp Section Office which is part of the Bargarh Circle's under BED Division. Its distribution area is 40 square km, and it encompasses 4 villages and Municipality area.

After careful consideration and evaluation, we have found that construction of a new section office for Rengalicamp required on our company-owned land. This decision comes in light of the current operational challenges posed by running the section office from an old, **rented building**. A purpose-built section office will provide a conducive and tailored environment for our operations, fostering productivity and efficiency among our team members. establishing our section office on company-owned land aligns with our strategic objectives, demonstrating stability and commitment to our stakeholders.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Rengali camp at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members. Hence propose for New Section Office.

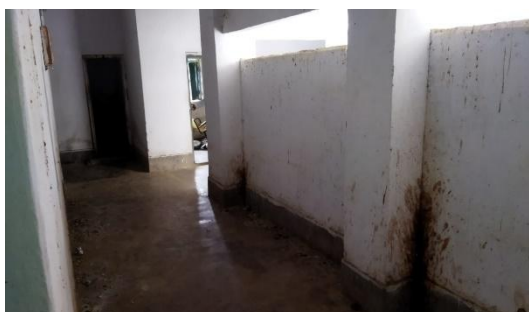


### **BHEDEN SECTION OFFICE (26/31)**

Bheden Section Office which is part of the Bargarh Circle's under BED Division. Its distribution area is 30 square km, and it encompasses 18 villages and 6 Gram Panchayats.

During visit it was observed our section operates from a rented office from last 30 year space that is not only outdated, building in deteriorated condition but also lacks proper housekeeping facilities, hindering our efficiency and morale. Constructing a new section office will address these issues and provide our team with a fresh and productive workspace along with better facilities and infrastructure, we anticipate improved efficiency and effectiveness in our operations.

As a well-maintained office reflects positively on our organization and creates a favourable impression on consumers, it is proposed to construct a new section office in our own premises. Hence propose for New Section Office.



### **BARPALI SECTION OFFICE (27/31)**

Barpali Section Office which is part of the Bargarh Circle's under BWED Division. It's distribution area is 100 square km and it serves around 10503 customers. It encompasses 18 villages and 03 Gram Panchayats.

We require a new section office building on the premises due to the deteriorating condition of the existing structure. Our current building has reached a state of disrepair, presenting various safety hazards, including an asbestos ceiling which gives potential danger it poses. Additionally, the layout and design of the current building no longer meet the operational needs of our organization. With limited space available, it has become increasingly challenging to accommodate our staff and resources effectively.

Constructing a new section office will provide us with the opportunity to design a modern, efficient workspace that aligns with our requirements and supports our objectives along with a hygienic work place.

Hence propose for New Section Office.



### PAIKMAAL SECTION OFFICE (28/31)

Paikmal Section Office which is part of the Bargarh Circle under BWED Bargarh. Its distribution area is 110 square km, and it encompasses 80 villages and 12 Gramme Panchayats. During site visit it has become apparent that our existing section office, housed in a **rented premises**, presents several challenges like space constant i.e. running from a single room that impede our efficiency and effectiveness. The space available in the rented premises is inadequate to accommodate our growing needs. This limitation restricts the functionality of our operations and creates congestion issues, hindering the productivity of our team. Furthermore, the single room office fails to meet modern standards, posing potential risks and inconveniences to our staff.

Consider to aforementioned situation it has been proposed to approve for construct a new section office of Paikmaal at our own premises by which we can integrate modern infrastructure and amenities, ensuring functionality, comfort, and safety for our team members and in Over time, this will result in significant cost savings and improved financial sustainability for our organization.

Hence propose for New Section Office.

### SOHELA -1 SECTION OFFICE (29/31)

Sohele-1 Section Office which is part of the Bargarh Circle's under BWED Division. Its distribution area is square km, and it encompasses 55 villages and 05 Gramme Panchayats.

We require a new section office, as our current facility is in a state of severe deterioration. The building, which is over 30 years old, no longer provides a safe or suitable environment for our operations. the condition of the existing building has reached a point where it poses significant risks to the well-being of our staff and compromises the efficiency of our work. Structural issues, Water leakage, and deteriorating infrastructure have become prevalent concerns, leading to disruptions in our daily operations and compromising our ability to serve effectively.

In light of these circumstances, it is imperative that we take proactive steps to address the situation by constructing a new section office. Doing so will not only ensure the safety and comfort of our employees but also enable us to maintain productivity and meet the needs of our stakeholders more effectively.

Hence propose for New Section Office.



#### **SOHELA -2 SECTION OFFICE (30/31)**

Sohela -2 Section Office which is part of the Bargarh Circle's under BwED Division. Its distribution area is 120square km and it encompasses 50 villages and 4 Gramme Panchayats.

We require a office as the current office space within the PSS Control Room building has become inadequate to support the growing needs of our section. The limited space not only hampers our efficiency but also poses significant safety and hygiene concerns.

Space Constraint: The existing office space is insufficient to accommodate the personnel and equipment required for smooth operations. This limitation has led to overcrowding and hindered productivity.

Safety Concerns: Overcrowding and operated from PSS Control room exacerbates safety hazards, increasing the risk of accidents and injuries. A dedicated space will allow for better organization and compliance with safety protocols, ensuring the well-being of our staff.

Hygiene Issues: The cramped conditions make it challenging to maintain proper hygiene standards. A new office space will facilitate better sanitation practices, promoting a healthier work environment for all employees. Given these pressing concerns, we propose for the new section office. Hence propose for Construction of new Section Office .

#### **TUSURA SECTION OFFICE (31/31)**

TUSURA Section Office which is a part of the Balangir Circle's, Balangir Division. Its distribution area is 80 square km and it serves around 17,600 customers. It encompasses 130 villages and 21 Gramm Panchayats. We don't currently have a typical section office for our seating proposals. The older section office which is running from Subdivision and section office, 1st floor of SBI Bank which is in rental condition. There is a lack of a clean and comfortable workspace for employees in the Tusura subdivision and section office. Considering that many employees spend ten to fourteen hours a day at work, maintaining good hygiene is essential. Employee health and safety are seriously put at risk in unhygienic environments.

As Tusura Section office has around 09 employees it necessary to provide them a proper hygienic work area along with standard Sitting arrangements for Increase the Productivity and Personality of my employees.

Considering the aforementioned details, proposed to build a new section office with appropriate seating arrangements for the wellbeing of our employees, which will not only improve productivity but also create a hygienic work environment.



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## ANNEXURE 49

**Scheme Name:** Establishment of Technical and Safety training centre and mobile training facility.

### Background

Safety is core values of TPWODL, Where the well-being of our employees, Business associates and public utmost priority. The organization consistently strives to improve safety practices across operation, in aligned with industry best practices and statutory requirements. Ensuring the safety of personal involved in fieldwork, particularly in remote and high-risk area, is critical to maintaining operational excellence and prevention of public accidents. we have established 05 no's of HOTT centre in 05 Circle.

To enhance further safety practices, particularly in Hands on technical training, on-site training and operational safety improvement. The following new initiative has been proposed to improve safety standard across the company. This initiative included the establishment of Hands-on Technical Training centre at two remote locations of Nuapada and Sundargarh and Mobile training facilities.

### Proposal

To ensure safety Improvement and regulatory compliance, the following proposal is proposed

#### 1. Establishment of Technical and Safety Training Centres (02 Nos.)

It is proposed to establish **Technical and Safety Training Centres** at Nuapada and Sundargarh.

Each centre will be equipped with:

- Building Infrastructure and Periphery Civil work
- Model structures replicating LT & HT networks.
- Distribution transformer (DT) model installations, breakers, and related equipment.
- Pole climbing and rescue practice yards.
- Metering, billing, and service connection demonstration setups.
- Safety equipment demonstration zones.
- Classrooms with modern digital learning aids, including smart boards and VR-based safety simulations.

These centres will provide employees and Business Associates (Contractor) with practical/simulated training environments that will significantly enhance technical competency and reduce workplace incidents.

## **2. Introduction of “Learning on Wheels” Vehicles (03 Nos.)**

The proposal includes procuring and deploying specially designed “**Learning on Wheels**” vehicles, equipped with essential training and awareness tools. These mobile units will travel to various work locations based on operational needs. Each mobile training unit will be equipped with

- Bolero Pickup Van with modify structure setup
- Training Aids (digital screen, generator, Sound system, writeup board, PVC chair etc.)

Benefits include:

- Mass safety and technical awareness across all divisions.
- Reduced workforce travel for training and awareness sessions.
- Lower road risk exposure by minimizing long-distance travel.
- Direct engagement with field staff and the local community, ensuring awareness at the grassroots level.
- Enhancement of community awareness also

### **Requirements /Need of the proposal**

This proposal ensures a balanced approach capacity building through training centres, easy accessibility to the consumer and workplace workforce through mobile training vehicles, and risk mitigation through provision of safety equipment

**1.Skill Gap Identification:** Current staff lacks practical exposure to certain operational tasks due to limited Hands-on technical training centre.

**2.Safety Compliance:** High incidence of electrical accidents indicates urgent need for hands-on safety training.

**3.Regulatory Requirement:** To fulfil the CEA & DISCOM safety guidelines

**4.Employee Development:** To enhance productivity through practical hands-on training efficiency, and morale.

**5.Consumer Expectation:** Faster response, reliable service, and quality supply depend on skilled manpower.

### **Scope of the Work:**

Each **Technical and Safety Training centre** unit will be equipped with

1. Building Infrastructure and Periphery Civil work
2. Model structures replicating LT & HT networks.
3. Distribution transformer (DT) model installations, breakers, and related equipment.

4. Pole climbing and rescue practice yards.
5. Metering, billing, and service connection demonstration setups.
6. Safety equipment demonstration zones.
7. Classrooms with modern digital learning aids, including smart boards and VR-based safety simulations.

Each **Learning on Wheels Vehicles (03 Nos.)** unit will be equipped with

Each mobile training unit will be equipped with

- Bolero Pickup Van with modify structure setup
- Training Aids (digital screen, generator, Sound system, writeup board, PVC chair etc.)

**Proposed Cost with Estimated Break-up:**

1. Technical and Safety Training Centre 02 Nos, Each HOTT Cost 1.12CR, Total Cost is ₹-2.24CR
2. Learning on Wheels-04 Nos, Each Vehicle with all equipment is 34Lac, Total cost is ₹-0.68CR

Sl. No	Circle / Corporate	Total	Base Cost (in Rs.)	Escl (%)	Unit cost (in Rs.)	Total Cost
1	Technical and Safety Training Centre	2	10547953.81	6.00%	11180831.04	22361662.07
2	Digital Van -"Training on wheel"	2	3217327.00	6.00%	3410366.62	6820733.24
	<b>Total</b>					<b>29182395.31</b>
					<b>(In Cr.)</b>	<b>2.92</b>

**Physical Target:**

The work will be completed by March 2027

**Cost benefit Analysis:**

Not Applicable

**Benefit to the System and Consumer:**

- Enhanced Training Accessibility
- Improved Technical Competency
- Workforce Safety & Risk Reduction
- Consumer & Community Awareness

## **ANNEXURE 50**

### **Scheme Name: Store Infrastructure**

#### ***Background***

Over the years, the Stores Department has played a critical role in ensuring smooth material availability and support for various operational needs. However, with growing inventory volumes, evolving safety standards, and the need for better space utilization, there is a pressing requirement for infrastructure upgradation. Under proposed scheme, key areas such as storage optimization, material handling, safety, documentation, and power backup are being prioritised for FY26-27. These initiatives aim to modernize store operations, enhance efficiency, and support future scalability across all store locations.

#### ***Proposal***

Primary purpose of this proposal is to strengthen store infrastructure to support safe, efficient, and organized material management. By implementing key improvements such as sheds, racking systems, surveillance, and handling equipment, the plan aims to minimize material loss, optimize space, and ensure operational continuity. These upgrades will also support statutory compliance, improve working conditions, and enable scalability for future business needs.

#### ***Requirement/ Need of the Proposal***

Provides organized, space-saving storage for physical documents and records. Ensures uninterrupted power for critical store operations like SAP terminals, weighing scales, and security systems. Organizes small and medium components for easy retrieval. Facilitates safe and compliant storage of transformer oil. Provides high-intensity lighting for wide-area coverage during night operations. Ensures security and real-time surveillance of store premises. Maximizes vertical space utilization for systematic storage. Provides protection from environmental elements like rain, heat, and dust. Enables efficient and safe movement of goods within the store premises.

#### ***Scope of Work***

- Material Handling Equipment (Storage bins, storage stands, trolley, pallets, outdoor storage racks, Material handling tools etc) - 50 Lakh (all Store)
- Installation of Open Shed for indoor materials -50 lakh (Bolangir store)
- Racking system & mezzanine floor at bargarh store - 75 Lakh (Bargarh Store)
- CCTV installation at new bargarh store -30 Lakh (Bargarh Store)
- CCTV installation at new bolangir scrap store – 30 Lakh (Bolangir store)
- High Mast installation scrap store bolangir & new bargarh store -20 Lakh (Bolangir store)
- Tank MS 20 KL for trf oil storage Bolangir Store – 15 lakhs (Bolangir store)
- HDPE PVC heavy duty Storage bins – 15 Lakh (All store)



### Proposed Cost with Estimate Break-up

Sl. No.	Major work under proposals	UOM	Quantity	Unit cost	Total Cost	Justification
				(Rs. Lakhs)	(Rs. Lakhs)	
1	Material Handling Equipment - Storage bins, storage stands, trolley, pallets, outdoor storage racks, Material handling tools etc	LS	1	50.00	50.00	Reduces manual effort, improves turnaround time, and prevents material damage during internal transfers
2	Installation of Open Shed for indoor materials	EA	1	50.00	50.00	Prevents deterioration and corrosion of critical materials stored outdoors due to weather exposure.
3	Racking system & mezzanine floor at bargarh store	EA	1	75.00	75.00	Enhances storage capacity and improves accessibility of inventory, resulting in better stock control and space management.
4	CCTV installation at new bargarh store	EA	1	30.00	30.00	Helps in preventing theft, unauthorized access, and supports incident tracking for audit and compliance purposes.
5	CCTV installation at new bolangir scrap store	EA	1	30.00	30.00	Helps in preventing theft, unauthorized access, and supports incident tracking for audit and compliance purposes.
6	High Mast installation scrap store bolangir & new bargarh store	EA	2	10.00	20.00	Increases safety and visibility in open yards and scrap areas, enabling extended working hours and enhancing surveillance
7	Tank MS 20 KL for trf oil storage Bolangir Store	EA	1	15.00	15.00	Prevents contamination, leakage, and environmental hazards while supporting oil reusability and audit requirements.
8	HDPE PVC heavy duty Storage bins	LS	1	15.00	15.00	Enhances cleanliness, reduces mix-ups, and ensures better space utilization in closed/open stores and shelves.
					<b>285.00</b>	
				<b>In Cr</b>	<b>2.85</b>	

### Physical Target:

The proposed infrastructure initiatives will be completed by Mar'27.

### Cost Benefit Analysis

Not applicable

### Benefit to the System and Consumers

- Provides organized, space-saving storage for physical documents and records.
- Ensures uninterrupted power for critical store operations like SAP terminals, weighing scales, and security systems.
- Organizes small and medium components for easy retrieval.
- Facilitates safe and compliant storage of transformer oil.
- Provides high-intensity lighting for wide-area coverage during night operations.
- Ensures security and real-time surveillance of store premises.
- Maximizes vertical space utilization for systematic storage.
- Provides protection from environmental elements like rain, heat, and dust.
- Enables efficient and safe movement of goods within the store premises.

## **ANNEXURE 51**

### **Scheme Name: Ready to Use Assets for Offices**

#### ***Background***

In TPWODL, the office space is currently crowded and haphazardly planned for seating arrangements, moreover, most of the circulation area has been occupied with files, documents etc.

#### ***Proposal***

To provide best in class services to consumers, earn consumer delight and improve satisfaction among other stakeholders and maintaining a clean & safe working environment, it is proposed to procure ready to use assets.

#### ***Requirement/ Need of the Proposal***

- **TV, Projector, Sound System, Cordless Mic** are necessities to conduct smooth conduct of meetings/virtual meetings with various third parties, team in field located at various circles.
- **Inverter & Battery** are essential for office space for uninterrupted power supply, environmental considerations and emergency preparedness.
- **Office air conditioning systems and Desert Coolers** are required to provide a comfortable working environment to bring and control Energy Efficiency, Humidity, Air Quality, and Reduction in Noise & Keeping Business Critical Equipment at the Right Temperature.
- **Water cooler & Purifiers** are required for proper hydration employees and to ensure good health and improve overall efficiency. An employee should drink at least eight glasses of water a day to be properly hydrated as Water increases the amount of blood flow and oxygen to the brain and other body parts which in turn increases brain activity and attentiveness.
- **Ergonomic office chairs** for sitting long periods with ease. This naturally helps employees work more efficiently and productively. Another benefit is reduction in healthcare expenses related to poor posture from unsuitable office chairs.
- **Vehicles** to provide transportation for employees.