

Copy s.w.rs to:-

The Dy. Secretary (Energy), Govt. of Maharashtra, Mantralaya, Mumbai – 32.

Copy s.w.rs to:-

- 1) The Chief Engineer (STU), MSETCL, Prakashganga, Mumbai
- 2) The Chief Engineer (Trans.O&M), MSETCL, Prakashganga, Mumbai
- 3) The Chief Engineer (PMT & Contracts), MSETCL, Prakashganga, Mumbai
- 4) The Chief Engineer (Distribution), MSEDCL, Prakashgad, Corporate Office, Bandra, Mumbai
- 5) The Chief Engineer (Infra), MSEDCL, Prakashgad, Corporate Office, Bandra, Mumbai
- 6) The Chief Engineer, O&M Zone, MSEDCL, AMTZ Akola.
--- For making necessary arrangement of 33kV network to connect the load.
- 7) The Chief General Manager (F&A), MSETCL, Prakashganga, Mumbai

Copy s.w.cs to:-

- ✓ 1) The Supdt. Engineer, (Contract/Design Engg SS/ Design Engg Lines), (Project Monitoring), MSETCL, Prakashganga, Mumbai
- 2) The Supdt. Engineer, EHV O&M Circle, MSETCL, Amravati.
- 3) The Supdt. Engineer, EHV Constn. Circle, MSETCL, Amravati.
- 4) A.G.M. (C.F.), MSETCL, Prakashganga, Mumbai.
- For issue of BCN, financial tie up and budget provision for the scheme sanctioned.

Copy with enclosure to:-

- 1) The Executive Engineer, EHV O&M Division, MSETCL, Amravati.
- 2) The Executive Engineer, EHV Const. Division, Amravati (Three copies)
- 3) The Executive Engineer, (Design /Engg SS-I,II, III, IV), Design /Engg Lines-I,II, III), (TKP-I,II,III, IV), (ADM/MERC) MSETCL, Prakashganga, Mumbai

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(Signature)

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M.S.E.T.C.L.

Activities to be monitored by Nodal Officer

- 1) To co-ordinate with Civil Division for land development such as plot fencing, leveling, approach road, water availability drainage, soil strata and soil resistivity data compilation & information to Head Office and monitoring weekly progress of work
- 2) To co-ordinate with MSEDCL Authorities for power connection.
- 3) To report the handing over of site to turnkey contractor.
- 4) To keep watch on the activities of turnkey contractor regarding timely receipt of sub-station layout, Earthmat design, Material specification and drawings finalization. Timely inspection of material both at pre-despatch and pre commissioning stage. To inform Circle Office/Zone as well as C.E. (Trans. Project) in case of bottlenecks in the proceedings.
- 5) To monitor the receipt of material at site of sub-station.
- 6) To monitor the activities of erection of sub-station for weekly report to Circle Office.
- 7) To monitor the receipt of material and progress of work for lines for weekly report to Circle Office.
- 8) To submit the claims to REC/PFC as per receipt of material & progress of work.
- 9) Timely recording of contractors' bills and submission to higher office.
- 10) To monitor the expenditure incurred and capitalization of assets of the scheme.
- 11) To inform the interruptions in work due to ROW problem and the decided course of action to Circle Office.
- 12) To co-ordinate with MSEDCL authorities regarding outages, shifting of HT/LT lines and reorientation of HT lines from new sub-station.
- 13) To arrange for testing & commissioning work at sub-station.
- 14) To finalize the work completion reports.


P.S. – The action applicable for the relevant project may please be considered for implementation.

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 <p>MAHATRANSCO Maharashtra State Electricity Transmission Co. Ltd.</p>	<p>MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO.LTD COMPANY SECRETARY DEPARTMENT</p> <p>Phone No. (022) 26595031 Fax:- (022)26592316</p> <p>Prakashganga, Plot No, C-19, "E" Block, 1st Floor, Bandra-Kurla Complex, Bandra (E), Mumbai-400 051.</p>
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Copy of Resolution passed at the meeting of Board of Directors held on 12.08.11

ITEM NO. 17 : Establishment of 2X25MVA, 132/33KV Sub-station at Dharni-Dist. Amravati

Resolution No. – 65/17

"RESOLVED THAT administrative approval of the Board of Director be and is hereby accorded for the Scheme of "Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. – Amravati" at an estimated cost of ₹ **3398.00** Lakhs (including IDC component of ₹ **165.00** Lakhs) covering the following works :

- 1) Establishment of 2x25 MVA, 132/33 KV Transformer with Bays.
- 2) Construction of 132 KV SCDC Line from 220 KV Nepanagar (M.P.) S/S to proposed 132 KV Dharni S/S (Interstate Line) – 55.0 Kms.
- 3) 132 KV Line Bays – 2 Nos.(1 No. at 132 KV Dharni S/S & 1 No. at 220 KV Nepanagar (M.P.) S/S)
- 4) 33 KV Outlets - 6 Nos. (Outlets to be constructed as per requirement)

The Board further directed that out of 2x25 MVA, 132/33 KV transformers, only one transformer be installed initially. Similarly out of 6x33 KV outlets only 2 outlets be installed initially. Another 25 MVA, 132/33 KV transformer and balance 33 KV outlets be installed as per load demand later on.

Acquisition of land is under process.

The above mentioned scope of work is not covered under any scheme or EPC contract.

The Scheme be processed for MERC approval, financial assistance from REC / PFC or any financial Institution and Turnkey/EPC contracting procedures after sanction of the

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scheme. SE (Contracts) be informed to advertise tender without T/Fs. Sufficient budget provision be made to complete the scheme within one and half years after financial tie up. Land development be processed immediately without waiting for financial tie-up, if necessary. The construction of staff quarters if required be decided as per need base only with separate approval.

RESOLVED FURTHER THAT the C.M.D. of MSETCL be and is hereby empowered to do all such acts, deeds and things necessary to give effect to the above resolution".


Company Secretary

MSETCL

Date : 30.08.11

CC : ED (Projects)

CERTIFIED TRUE COPY



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No. F&A	433
Inward Dt.	18.7.11
Outward Dt.	22.7.11

No. F&A	471
Inward Dt.	27.7.11
Outward Dt.	3.8.11

E.D. (PR.)	1195
Date	16/7/11

Dir. (F)	14957
Date	04/08/11

MSETCL/CO/CE/TR.PROJ./ S&C/Scheme/New S/S/Dharni
Transmission Project

Dir. (F)/332
Date: 6/8/11

C.C. (TR.Proj.) 1078
Date: 16.07.11

Note To The Board:

- | | |
|---|--|
| <p>1. Name of the Sponsoring Section</p> <p>2. Subject</p> <p>3. Estimated cost (As per Cost Data 2010-2011)</p> <p>4. MVA Added</p> <p>5. Ckt. Km Added</p> <p>6. Scope of Work</p> <p>7. Area to be served</p> <p>8. Land-Availability</p> <p>9. Technical Benefits of the scheme</p> | <p>Transmission Project</p> <p>Establishment of 2 x 25 MVA, 132/33 KV
Sub-station at Dharni, Dist. - Amravati</p> <p>Rs. 3398.00 Lakhs
(including IDC component Rs. 165.00 Lakhs)</p> <p>50 MVA</p> <p>55.0 Kms</p> <p>1) Establishment of 2x25 MVA, 132/33 KV Transformer with Bays.</p> <p>2) Construction of 132 KV SCDC Line from 220 KV Nepanagar (M.P.) S/S to proposed 132 KV Dharni S/S (Interstate Line) - 55.0 Kms.</p> <p>3) 132 KV Line Bays - 2 Nos. (1 No. at 132 KV Dharni S/S & 1 No. at 220 KV Nepanagar (M.P.) S/S)</p> <p>4) 33 KV Outlets - 6 Nos. (Outlets to be constructed as per requirement)</p> <p>Area of Melghat area.</p> <p>Acquisition of land is under process.</p> <p>1) Voltage will improve from 0.91 KV P.U. to 0.92 KV P.U. at 132 KV Hivarkhed S/S</p> <p>2) The saving in Line losses will be 1.41 MW with considerable improvement in Bus voltages.</p> |
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(1)



[Signature]
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10. Preamble:

Dharni city is situated in Melghat area which is tribal area in Amravati district which is the boundary of Maharashtra and from 20 Kms. thereafter, M.P. state starts.

This place is about 150 Kms. away from Amravati district head quarter. Approach to Dharni is from Paratwada (Achalpur Camp) and after travelling of 100 Kms through forest one can reach Dharni. The area up to Dharni is very thick forest and hilly area and thereafter, forest is very thin and plain area of MP starts. Also, Melghat area is well known for tiger reserve project and tourist place. From Dharni onwards some major cities of MP state are situated such as Khandwa, Burhanpur and Indore. Most of the transport traffic is on this state highway from southern India to MP.

Presently, there are 02 Nos. of 33/11kV sub-stations in this area namely 33 KV Dabaka and Dharni S/S; both sub-stations are fed from 132 KV Hiwarkhed S/S on one 33 KV feeder. This 33 KV line length is about 90 Kms. and line passes through dense forest. Moreover, there is not any constructed road in forest along the line or in nearby area of line. In case of breakdown, the staff of Dharni Sub-Division (MSEDCL) has to travel more than 90 Kms. from Dharni to Hiwarkhed (Dist.: Akola) and from there to start patrolling of line through dense forest. In this situation, in rainy season, it takes more than 2-3 days to attend 33 KV line breakdowns.

In spite of keeping voltage level well above 34 KV at Hiwarkhed S/S 33 KV level voltage receiving at Dharni is 23 KV to 25 KV only. Efforts are being taken by MSEDCL to improve the voltage level at Dharni on 11 KV side by way of introducing voltage booster but cannot make expected improvement. Presently, in peak season the load of Dharni S/S is 7-8 MVA and Dabaka S/S is about 2 MVA. Also, one more 33 KV S/S at Kadhav is being commissioned 8 Kms. away from Dharni. Feeding these three 33 KV S/Ss will reach up to 12-14 MVA.

The land from Dharni onwards is very fertile and water potential is also very good but due to low voltage and interrupted power supply proper benefit cannot be taken. Moreover, due to power problem the projects

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(2)




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started by Govt. for tribal area and primary health centre equipments are also suffering.

Dharni city is situated on important road route and hence, there is much more scope for small scale industries in this area but due to problems related to power supply no small scale industries are installed till date. Hence, if proper power supply is maintained there can be further fast load growth owing to additional revenue.

Therefore, it is proposed to erect 132/33 kV S/S at Dharni the primary source of 132 kV supply will be from nearest 220/132 KV Nepanagar sub-station in M.P. which is 55 Km. away from proposed 132 KV Dharni sub-station. The secondary source of 132 KV supply will be from Hiverkhed sub-station but for that permission from forest department and tiger reserve project will have to be obtained for erection of 132 KV Line from Hiverkhed to Dharni s/s.

To discuss various issues involved in extending 132 KV supply from M.P. to the proposed 132 KV Dharni sub-station, a meeting of MSETCL's and MPPTCL's officers was held at MPPTCL's Corporate Office, Jabalpur on 10th May, 2011. During meeting following points are confirmed by both the authorities.

- 1) MPPTCL suggested that 220 KV Nepanagar (MP) will be the nearest (55 Km.) source to 132 KV Dharni s/s and also informed that space for one 132 Kv Bay is available at 220 KV Nepanagar s/s, which can be utilised for the proposed Line.
- 2) **Construction of Line:** MPPTCL informed that, MSETCL will have to construct the said Line. All the statutory approvals for Forest, PTCC and other clearances will have to be obtained by MSETCL from the concern authorities. MPPTCL also clarified that; the necessary license cover to MSETCL will be given during the construction activities of the said Line. MPPTCL also agreed to extend all kinds of help and coordination and seeking approvals for various clearances from M.P. and central Government.

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(3)




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- 3) ^{Commercial} **Comment Aspect:** The commercial aspect of purchasing approx. 10 MW power from MPPTCL was also discussed in length. MPPTCL proposed that Maharashtra Electricity Transmission Co. Ltd. (MSETCL) should approach to Hon'ble Regulatory Commission for Long Term Open Access from MPPTCL.
- 4) **O&M Charges:** MPPTCL suggested that O&M charges of the proposed 132 KV Bay and Line will be applicable and will be finalised by separate mutual agreement.

Feasibility has been confirmed by MSETCL and MPPTCL in the minutes of joint meeting held on 10th May, 2011 at Jabalpur, M.P.

Presently, it may seem that financially the returns are not up to mark from this 132 kV line and S/S but as soon as power supply condition improves rapid growth in revenue will occur.

Commission of this sub-station will deliver following benefits:

- 1) Load relief to existing 132 KV Hiwarkhed S/S.
- 2) 132 KV Dharni S/S can cater future load in nearby area.
- 3) Voltage profile will improve in Dharni-Hiwarkhed pocket due to reduction in length of 33 KV feeders.

This scheme is included in STU-Plan for the year 2011-12.

2x25 MVA, 132/33kV Transformers are available at Amravati Zone and proposed to be used for this scheme.

Total Scope of Work:

- 1) Establishment of 2x25 MVA, 132/33 KV Transformer with Bays.
- 2) Construction of 132 KV SCDC Line from 220 KV Nepanagar (M.P.) S/S to proposed 132 KV Dharni S/S (Interstate Line) – 55.0 Kms.
- 3) 132 KV Line Bays – 2 Nos. (1 No. at 132 KV Dharni S/S & 1 No. at 220 KV Nepanagar (M.P.) S/S)
- 4) 33 KV Outlets - 6 Nos. (Outlets to be constructed as per requirement)

The above mentioned scope of work is not covered under any scheme or EPC contract.

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- 11) (a) The total cost of scheme works out to be **Rs. 3398.00 Lakhs.**

(Including IDC component **Rs. 165.00 Lakhs**)

Cost data 2010-11 is considered while working out estimated cost of the scheme. Annexure A (I to VII)

(b) Cash Flow:

Sr. No.	Particulars	Budget Provision for the Year		Total Rs. in Lakhs
		2011-12	2012-13	
1	Base cost	2000.00	1233.00	3233.00
2	IDC	72.00	93.00	165.00
3	Total:	2072.00	1326.00	3398.00
4	Debt	1657.00	1061.00	2718.00
5	Equity	415.00	265.00	680.00
6	Budget provision	2072.00	1326.00	3398.00

Budget provision for the above scheme of Rs. 2072.00 Lakhs will be made in the budget provision of EHV Programme 2011-12. Balance amount of the estimated cost will be provided for in the ensuing year.

(c) The scheme will be posed to REC / PFC or any other financial institution for financial assistance (Loan).

12. Since the estimated cost of the scheme exceeds Rs 1000.00 Lakhs, the approval of MERC is necessary.
13. Impact on Tariff sheets are enclosed at 'Annexure-A'.
14. System study report is enclosed at 'Annexure-B'.
15. Single line diagram of the proposed works is shown at 'Annexure- C'.
16. Geographical map showing the locations of EHV S/S is enclosed in (Annexure- D).

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(5)




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17. The MSETCL shall exercise all the powers conferred by G.O.M. vide order No. 06/CR-312/NRG 14 to MSETCL under Indian Telegraph Act 1885 for the execution of works covered in the scheme.

18. APPROVAL OF COMPETENT AUTHORITY:

As the scheme cost is more than Rs. 10 Crores the scheme is put up to the Board of Directors, MSETCL for administrative approval/sanction as per GO 1 (F&A) Dt. 02.04.2007.

19. DRAFT RESOLUTION OF MSETCL BOARD OF DIRECTORS:

The Board of Directors, MSETCL considered the note submitted by Executive Director (Projects) and for the reasons mentioned therein RESOLVED THAT the consent of the Board of Director be and is hereby accorded administrative approval for the Scheme Report of "Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. - Amravati" at an estimated cost of Rs. **3398.00** Lakhs (including IDC component of Rs. **165.00** Lakhs) covering the following works.

- 1) Establishment of 2x25 MVA, 132/33 KV Transformer with Bays.
- 2) Construction of 132 KV SCDC Line from 220 KV Nepanagar (M.P.) S/S to proposed 132 KV Dharni S/S (Interstate Line) - 55.0 Kms.
- 3) 132 KV Line Bays - 2 Nos.(1 No. at 132 KV Dharni S/S & 1 No. at 220 KV Nepanagar (M.P.) S/S)
- 4) 33 KV Outlets - 6 Nos. (Outlets to be constructed as per requirement)

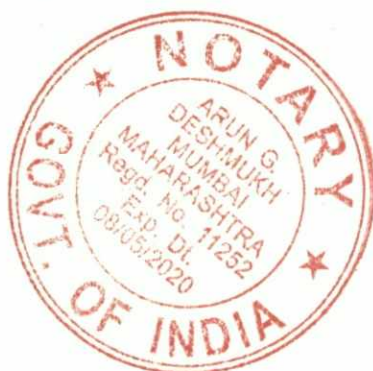
Acquisition of land is under process.

The above mentioned scope of work is not covered under any scheme or EPC contract.

The Scheme shall be processed for MERC approval, financial assistance from REC / PFC or any financial Institution and Turnkey/EPC contracting procedures after sanction of the scheme. SE (Contracts) will be inform to advertise tender without T/Fs. Sufficient budget provision shall be made to complete the scheme within one and half years after financial tie up. Land development shall be processed immediately without waiting for

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financial tie-up, if necessary. The construction of staff quarters if required shall be decided as per need base only with separate approval.

FURTHER RESOLVED THAT the C.M.D. of MSETCL be and is hereby empowered to do all such acts, deeds and things necessary to give effect to the above RESOLUTION.

No. F&A	633
Inward Dt.	18.7.11
Outward Dt.	22.7.11


Chief Engineer
(Tr. Project)

Executive Director (Projects)



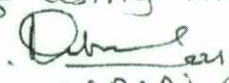
C.G.M. (Finance & Accounts)

1) Proposal for same work was routed through F&A section for ₹ 4031/- lakhs for 75km line. This proposal is for Rs. 3398/- lakhs for 55 km line. The reasons for resubmission of same proposal may be elaborated alongwith the change in item-wise scope of work financial implication thereof.

Director (Projects)

Director (Finance)

2) The feasibility report from field office may be enclosed and the availability of other material required for the project may be confirmed alongwith possibility of using the same.

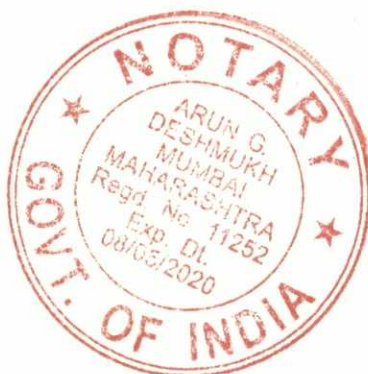

C.G.M. (F&A)

C.E. (Tr. Proj) 
22.7.11

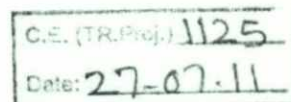
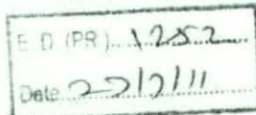
C.M.D., MSETCL

SE (S & C)
pl. put up compliance
22.7.11

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STU (Regulatory)
M.S.E.T.C.L.



FROM PREPAGE:

S&C/Schemes/132 KV Dharni/
Transmission Project Section

Sub.:- Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. - Amravati.

The point wise compliance of CGM (F&A) observations Dtd. 22.07.2011 on the proposal for "Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. - Amravati" is as given below.

Point No. 1:- Proposal for same work was routed through F&A section for Rs. 4031 Lakhs for 75 Km. line. This proposal is for Rs. 3398 Lakhs for 55 Km. line. The reasons for resubmission of same proposal may be elaborated along with the change in item-wise scope of work financial implication thereof.

To discuss various issues involved in extending 132 KV supply from M.P. to the proposed 132 KV Dharni sub-station, a meeting of MSETCL's and MPPTCL's officers was held at MPPTCL's Corporate Office, Jabalpur on 10th May, 2011. During meeting MPPTCL's officers suggested that 220 KV Nepanagar s/s (M.P.) would be better source instead of 132 KV Badgaon s/s (M.P.) for proposed 132 KV Dharni s/s. Therefore scheme proposed for 132 KV Dharni with source line from 132 KV Badgaon s/s (M.P.) has been modified and resubmitted for approval.

Point No. 2:- The feasibility report from field office may be enclosed and the availability of other material required for the project may be confirmed along with the possibility of using the same.

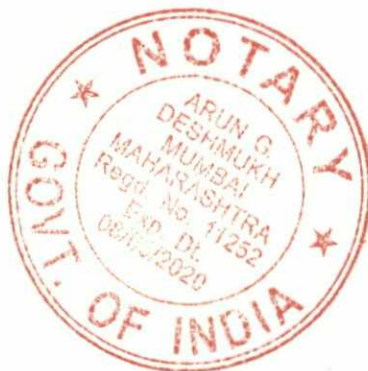
Field officers of MPPTCL and MSETCL have confirmed technical feasibility of line during joint meeting held on 10th May 2011 at Jabalpur. Copy of minutes of meeting is enclosed. Two available transformers have already been considered while preparing estimate.

Submitted for approval of competent authority.


Chief Engineer
(Transmission Project)

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(18)




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STU (Regulatory)
M.S.E.T.C.L.

No. F&A	471
Inward Dt.	27.7.11
Outward Dt.	3.8.11

FROM PREPAGE:

Sub.:- Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. - Amravati.

Executive Director (Projects) *[Signature]*

C.G.M. (F&A) The availability of material in stock other than Tlf is not clarified in proposal. The technical feasibility report from field office except the mom is not enclosed. ^{However?} CA may decide.

Director (Projects) *[Signature]* 6/8

[Signature] 3/8
CGM (F&A)

Director (Finance) proposal may be put up before BOD for approval. *[Signature]* 6/8/11

Chairman & Managing Director, MSETCL *[Signature]*

CE (Tr. Proj)
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(9)

[Signature]
Executive Engineer
STU (Regulatory)
M.S.E.T.C.L.



MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED.



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Web : <http://www.mahatransco.in>

Office of the
Chief Engineer (STU),
"Prakashganga", 8th Floor,
Plot No. C-19, E- Block,
Bandra Kurla Complex,
Bandra (East), MUMBAI 400 051.

Ref: MSETCL/CO/STU/ 8233

Date: 27/6/11

To,
Executive Director, (Power System),
Madhya Pradesh Power Transmission Co. Ltd
Shakti Bhavan, Vidyut Nagar, Rampur,
Jabalpur (MP) - 48200
Fax No.-0761-2665593

Sub: - Minutes of Meeting held between MPPTCL & MSETCL on dt- 10/05/2011 at Jabalpur.

Ref: - 1) Your Office Letter No: - 04-02/PSP/N-47/134, Date:-21-01-11.

2) This Office Letter No: -MSETCL/CO/STU/6554, Date: - 30/04/2011.

A meeting of MSETCL's & MPPTCL's officers was held at MPPTCL's Cooperate office, Jabalpur on Dt- 10/05/2011 to discuss the various issues involved in extending 132 KV supply from MP to the proposed MSETCL's 132 KV Dharni S/S.

The minutes of the said meeting along with the list of the participants is annexed herewith as Annexure A & B respectively for your kind information please.

Enclosure A & B

SE (SEC)
Pl. modify the
the proposal & put up
ul
SE
Chief Engineer (STU)

Copy s.w.r.to:-

1)The CMD, MSETCL/MSEDCL, Mumbai.

2)Shri P.K Pahwa, Director, CEA, System Planning and Project Appraisal Division, 3rd floor, Sewa Bhawan, R.K.Puram, New Delhi-110066.

3)The Director (Operations/Project), MSETCL/MSEDCL, Mumbai.

4)The Executive Director (Operations/Project), MSETCL, Mumbai.

Copy f.w.c. to:-

1) The Chief Engineer (Trans.Project), MSETCL, Mumbai. With request to make the necessary changes in the scope of work of 132 KV Dharni S/S i.e. instead of 132 KV Badgaon (MP) – Dharni SCDC Interstate line, 132 KV Nevanagar (MP) – Dharni SCDC Interstate line should be considered.

2) The Chief Engineer (Distribution/Comm/Power Purchase), MSEDCL, Mumbai.

3) The Chief Engineer (EHV CC O&M Zone), Amravati/O & M Zone Akola.

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SV
Executive Engineer
STU (Regulatory)
M.S.E.T.C.L.

Annexure-A

Sub: Minutes of meeting held between Maharashtra Transmission Co. Ltd (MSETCL) & Madhya Pradesh Power Transmission Co. Ltd. (MPPTCL) at Jabalpur on 10th May 2011 for giving 132kV supply to proposed MSETCL's 132kV Dharni (MS) S/s.

Ref: 1. The CMD, MSETCL's letter No. 19729 dated 23.12.2010.
2. The ED (Plg. & Power System), MPPTCL's letter No. 34 dated 04.02.2011.

With reference to above, A meeting between MSETCL & MPPTCL was arranged at MPPTCL's office at Jabalpur on dated 10th May, 2011 at 11:00 AM to discuss the proposal of MSETCL for giving 132kV supply from MPPTCL to MSETCL's proposed 132kV Dharni (MS) S/s.

The list of participants is enclosed herewith as Annexure-B.

Following issues were discussed related to the subject:-

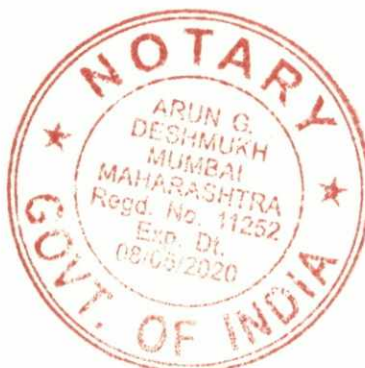
- (1) **Source S/S of MPPTCL:** Originally MSETCL requested for extending 132kV Supply from MPPTCL's 132kV Badgaon S/s, which is about 70-80 Km from Dharni. However, MPPTCL informed that the 132kV Badgaon S/s is already loaded and at present is being fed from 220kV Neapanagar S/s via 132kV DCSS (Double Circuit Single Strung) line. As such, extending 132kV supply from 132kV Badgaon to 132kV Dharni S/s will not be feasible due to line loading constraints. MPPTCL suggested MSETCL that, if 132kV line is to be constructed from 132kV Badgaon S/s, then MSETCL will have to carry out 2nd circuit stringing of existing 132kV DCSS Neapanagar-Badgaon (MP) line in addition to 132kV Badgaon (MP)-Dharni (MS) DCSS line for achieving voltage regulation. MPPTCL, however, suggested an alternate proposal to MSETCL to construct 132kV line from 220kV Neapanagar S/s, which will reduce line length as well as, it will not effect MPPTCL's existing system at Badgaon.

MPPTCL suggested that 220kV Neapanagar (MP) will be the nearest (55 Km) source to 132kV Dharni S/s and also informed that space for one 132kV bay is available at 220kV Neapanagar S/s, which can be utilized for the proposed line.

- (2) **Construction of Line:** MPPTCL informed that, MSETCL will have to construct the said line. All the statutory approvals for Forest, PTCC and other clearances will have to be obtained by MSETCL from the concern authorities. MPPTCL also clarified that, the necessary license cover to MSETCL will be given during the construction activities of the said line. MPPTCL also agreed to extend all kinds of help and co-operation for seeking approvals for various clearances from MP & Central Government.
- (3) **Commercial Aspect:** The commercial aspect of purchasing approx. 10MW power from MPPTCL was also discussed in length. MPPTCL proposed that Maharashtra Electricity Distribution Co. Ltd. (MSETCL) should approach to Hon'ble Regulatory Commission for Long Term Open Access from MPPTCL.
- (4) **O&M Charges:** MPPTCL suggested that O&M charges of the proposed 132kV bay and line will be applicable and will be finalized by separate mutual agreement.

Finally MSETCL expressed vote of thanks to MPPTCL's authorities and informed that the proposal of erection of 132kV Neapanagar (MP) - Dharni (MS) DCSS Inter-state line will be examined in view of above points and will be intimated to MPPTCL accordingly.

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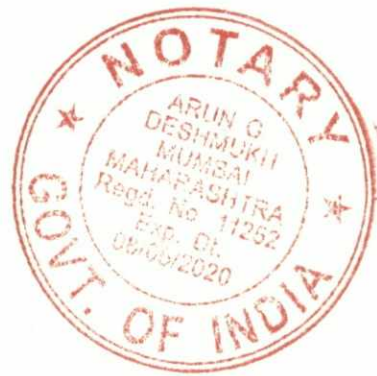
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NAME OF PARTICIPANTS WHO ATTENDED THE MEETING

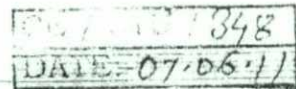
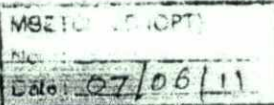
MPPTCL		MSETCL	
Sl. No.	Name & Design.	Sl. No.	Name & Design.
1	Shri O.P. Jaiswal, ED (Plg.&PS), Jabalpur	1	Shri N.R. Sonkavday, CE (STU), Mumbai
2	Smt. N.M.Bajpai, ED(T&P), Jabalpur	2	Shri D.K.Rokade, SE (EHV Const), Amravati
3	Shri Umesh Rautji, CE(EHT-C&M), Jabalpur	3	Shri S.W.Sherekar, EE(STU), Mumbai
4	Shri S.L. Mukati, CE (T&C), Jabalpur		
5	Shri A.B. Bajpai, CE (Commercial), Jabalpur.		
6	Shri K.K.Prabhakar, SE (SLDC), Jabalpur		
7	Shri S.S. Nigam, SE (PS), O/o ED (Plg.& PS), Jabalpur.		

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OFFICE NOTE: -

CE/STU/CO

DATE: -

Sub: - Establishment of 132 KV Dharni S/S, Dist. - Amravati and change of scope thereof

Ref: - 1) Substation approval Note No. MD-1476, dated 04/11/2010.

2) M.O.M regarding meeting between MSETCL & MPPTCL at Jabalpur on
Dated 10/05/2011.

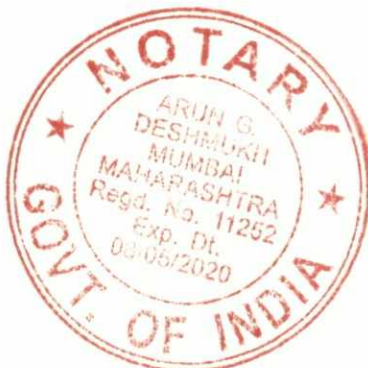
As per requirement from MSEDCL authorities, 132 KV S/S at Dharni, Tal. Dharni, Dist. - Amravati was approved vide reference no. (1) with following scope of work for the year 2011-12.

- 1) 132 KV Badgaon (M.P) - Dharni SC DC Interstate line - 75 km, with line bays at both the ends.
- 2) 132/33 KV, 25 MVA T/F 2 nos.
- 3) 33 KV Bays - 6 nos. (Initially 4 Nos bays will be provided and subsequently construction of remaining two Nos of bays will be done as per load requirement)

Accordingly, to avail supply of 132 KV from MPPTCL i.e. from their 132 KV S/S at Badgaon, a meeting was held between officials of MSETCL & MPPTCL on 10th May 2011 at Jabalpur in the office of MPPTCL. In the meeting it was informed by MPPTCL that at present 132KV Badgaon S/S is fed from 220 KV Nepanagar S/S via 132 KV SC DC line. As such, extending 132 KV supply from 132 KV Badgaon to 132 KV Dharni S/S will not be feasible due to line loading constraints. Hence in order to extent 132 KV supply to Dharni S/S from 132 KV S/S Badgaon, the 2nd circuit stringing of existing 132 KV SC DC Nepanagar - Badgaon line is necessary. Thus MPPTCL suggested that instead of 132 KV Badgaon S/S, Nepanagar 220/132 KV S/S will be the nearest (55km) source for 132 KV Dharni S/S and also informed that space for one 132 KV bay is available at 220 KV Nepanagar S/S, which can be utilised for proposed 132 KV Nepanagar - Dharni line. MPPTCL also clarified that, necessary license cover to MSETCL will be given during the construction activities of the said line. MPPTCL also agreed to extend all kinds of help & co-operation for seeking approvals for various clearances from Government. The copies of above mentioned references are enclosed herewith for ready reference.

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Thus in view of above it is proposed to revise the scope of 132 KV Dharni S/S as below:-

- 1) 132 KV Nepanagar – Dharni SC DC interstate line – 55 kms with line bays at both ends.
- 2) 132/33 KV, 25 MVA T/F 2 nos.
- 3) 33 KV Bays – 6 nos. (Initially 4 Nos of bays will be provided and subsequently remaining 2 Nos of bays will be erected as per requirement).

Submitted for your approval please

SE (STU)

SE (STU)

80
6/6/11

ED (Operations)

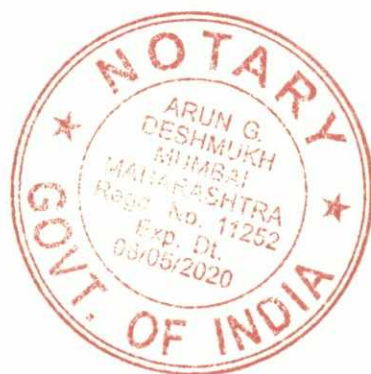
Director (Operations)

Director (Projects)

CMD

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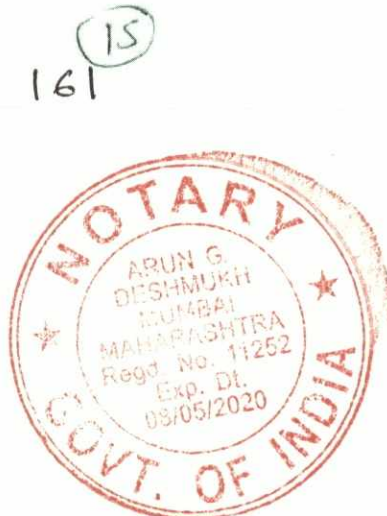


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**Feasibility Report for Transmission Project Scheme
IN PRINCIPLE CLEARANCE STAGE**

Particulars in the Scheme Report

- 1) Title (Name of Scheme) : Establishment of 2 x 25 MVA, 132/33 KV Sub-station at Dharni, Dist. – Amravati
- 2) Estimated Cost : Rs. 3398.00 Lakhs
(including IDC component Rs. 165.00 Lakhs)
- 3) Brief Scope of Work : 1) Establishment of 2x25 MVA, 132/33 KV Transformer with Bays.
2) Construction of 132 KV SCDC Line from 220 KV Nepanagar (M.P.) S/S to proposed 132 KV Dharni S/S (Interstate Line) – 55.0 Kms.
3) 132 KV Line Bays – 2 Nos. (1 No. at 132 KV Dharni S/S & 1 No. at 220 KV Nepanagar (M.P.) S/S)
4) 33 KV Outlets - 6 Nos. (Outlets to be constructed as per requirement)
- 4) Load flow Study : Enclosed separately.
- 5) Objective / Justification : i) To improve voltage level at 33kV level.
ii) To reduce 33 KV feeder length.
iii) To reduce line losses due to lengthy 33 KV feeder, i.e. 90 Kms.
iv) To cater additional load near Dharni area.
- Voltage will improve from KV P.U.
to KV P.U. at 132 KV Hiverkhed S/S.
Also, the saving in Line losses will be MW
with considerable improvement in Bus
voltages.
- 6) Land Availability : Acquisition of land is under process.
- 7) Impact on tariff for next 5 : Enclosed separately.
years




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8) Proposed funding arrangement : REC / PFC or any other financial Institutions.

9) Time frame / Phasing of : 2011 - 2012 : 2072.00 Lakhs
2012 - 2013 : 1326.00 Lakhs


Chief Engineer
(Transmission Project)

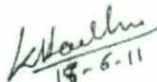
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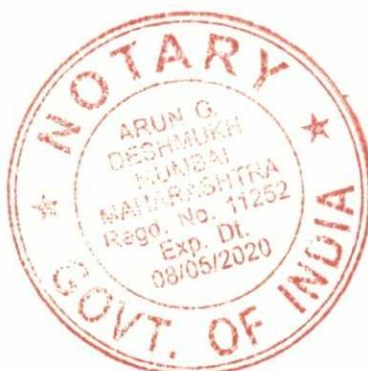

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A B S T R A C T

COST ESTIMATE OF ESTABLISHMENT OF 132/33 KV DHARNI SUB-STATION, DIST.- AMARAVATI			
SR. NO.	PARTICULARS	AMOUNT IN RS. LAKHS	REMARKS
1	CIVIL WORKS	324.88	ANNEXURE-I
2	TRANSMISSION LINE	1474.81	ANNEXURE-II
3	2 x 25 MVA ,132/33 KV POWER TRANSFORMER ALONGWITH BAYS	589.36	ANNEXURE-III
4	132 KV BAYS- 2 NOS.@ RS. 90.42 LAKHS/ BAY	180.84	ANNEXURE-IV
5	PLCC EQUIPMENTS	45.44	ANNEXURE-V
6	SCADA SYSTEM	70.00	ANNEXURE-VI
7	33 KV OUTLETS @ RS. 22.40 LAKHS/OUTLET (6 NOS.)	134.40	ANNEXURE-VII
8	132 KV BUS BAR PROTECTION	14.00	
	SUB TOTAL - I	2833.73	
9	ADD.CONTINGENCIES 3% ON SUB TOTAL - I	85.01	
	SUB TOTAL - II	2918.74	
10	ADD.CENTAGES 10.75% ON SUB TOTAL-II	313.76	
	SUB TOTAL - III	3232.51	
	IDC COMPONENT	165.00	ANNEXURE-A
	GRAND TOTAL	3397.51	
	SAY RS. 3398.00 LAKHS		
THE ESTIMATES ARE PREPARED BY APPLYING RATES OF LATEST COST DATA AND THE CALCULATION ARE CORRECT.			
<div><div> 18-6-11</div><div>SUPERINTENDING ENGINEER (S&C)</div></div>			

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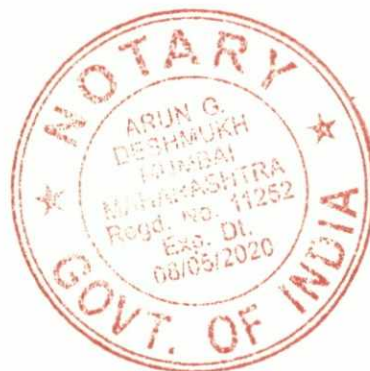

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ANNEXURE-I

CIVIL ESTIMATE OF ESTABLISHMENT OF 132/33 KV DHARNI SUB-STATION, DIST.- AMARAVATI		
SR.NO.	PARTICULARS	AMOUNT RS. IN LAKHS
1	LAND ACQUISITION	75.00
2	LAND DEVELOPMENT WITH RCC RETAINING WALL & STEP WALL ETC.	70.00
3	CONTROL ROOM/STORE SHED / AC PLANT / SUBSTATION.	65.00
4	ELECTRIFICATION @ 7.5% ON ITEM 3	4.88
5	WATER SUPPLY & DRAINAGE	25.00
6	ROADS ETC.	20.00
7	METAL SPREADING GI PIPE LINE & OTHER MISC. CIVIL WORKS.	20.00
8	CABLE TRENCH	25.00
9	T/F OIL COLLECTION TANK	7.00
10	FURNITURE IN CONTROL ROOM, OFFICE & REST ROOM	10.00
11	MATERIAL REQUIRED FOR PANTRY SUCH AS LPG CONNECTION, UTENSILS, CROCKERY ETC.	2.50
12	TV, SET TOP BOX / DISH ANTENA	0.50
	TOTAL RS.	324.88

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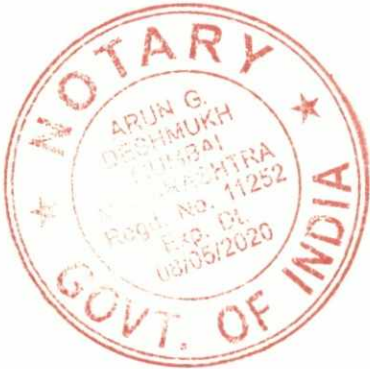


TRANSMISSION LINE

SR. NO.	PARTICULARS OF MATERIALS	UNIT	QTY.	RATE / UNIT IN RS.LAKHS	AMOUNT IN RS.LAKHS
1	132 KV SCDC LINE FROM 220 KV NEPANAGAR S/S TO 132 KV PROPOSED DHARNI S/S INTERSTATE LINE WITH 0.2 SQ. INCH. ACSR (PANTHER)	KM.	55	26.81	1474.81
	TOTAL				1474.81

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**COST ESTIMATE OF 2 X 25 MVA, 132 / 33 KV T/F AT PROPOSED
132 KV SUB-STATION.
(TWO BUS AT HV & SINGLE BUS AT L.V)**

SR. NO.	PARTICULARS OF MATERIALS	UNIT	QTY.	RATE / UNIT IN RS.LAKHS	AMOUNT IN RS.LAKHS
1	CIRCUIT BREAKER				
	A) 132 KV T/F HV	SET	2	11.05	22.10
	B) 132 KV B/C	SET	1	11.05	11.05
	C) 132 KV BS	SET	1	11.05	11.05
	D) 33 KV T/F LV	SET	2	2.87	5.74
	E) 33 KV BS	SET	1	2.87	2.87
2	ISOLATOR WITHOUT EB				
	A) 132 KV T/F HV	SET	6	2.70	16.20
	B) 132 KV B/C	SET	2	2.70	5.40
	C) 132 KV BS	SET	2	2.70	5.40
	D) 132 KV PT	SET	2	2.70	5.40
	E) 33 KV T/F LV	SET	2	0.75	1.50
	F) 33 KV BS	SET	2	0.75	1.50
	G) 33KV P.T.	SET	2	0.75	1.50
	H) 33 KV STN. T/F	SET	2	0.75	1.50
	I) 33 KV BY PASS ISOLATOR	SET	3	0.75	2.25
3	CURRENT TRANSFORMER				
	A) 132 KV T/F HV	NO	6	1.53	9.18
	B) 132 KV B/C	NO	3	1.53	4.59
	C) 132 KV BS	NO	3	1.53	4.59
	D) 33 KV T/F LV	NO	6	0.39	2.34
	E) 33 KV BS	NO	3	0.39	1.17
4	POTENTIAL TRANSFORMER				
	A) 132 KV	NO	6	0.97	5.82
	B) 33 KV	NO	6	0.21	1.26

ANNEXURE-III

**COST ESTIMATE OF 2 X 25 MVA, 132 / 33 KV T/F AT PROPOSED
132 KV SUB-STATION.
(TWO BUS AT HV & SINGLE BUS AT LV)**

SR. NO.	PARTICULARS OF MATERIALS	UNIT	QTY.	RATE / UNIT IN RS.LAKHS	AMOUNT IN RS.LAKHS
5	LIGHTENING ARRESTORS				
	A) 132 KV	NO	6	0.32	1.92
	B) 33 KV	NO	6	0.04	0.24
6	A) POWER TRANSFORMER 1x25 MVA, 132/33KV T/F (OLD T/F)	NO	1	23.67	23.67
	B) POWER TRANSFORMER 1x25 MVA, 132/33KV T/F (OLD T/F)	NO	1	28.06	28.06
7	CONTROL & RELAY PANEL				
	A) 132 KV T/F	SET	2	12.62	25.24
	B) 132 KV B/C	SET	1	8.32	8.32
	C) 132 KV BS	SET	1	7.76	7.76
	D) 33 KV BS	SET	1	0.84	0.84
8	CONTROL CABLE				
	A) TRANSFORMER	BAY	2	1.64	3.28
	B) 132 KV T/F HV	BAY	2	2.37	4.74
	C) 132KV B/C	BAY	1	1.67	1.67
	D) 132 KV BS	BAY	1	1.67	1.67
	E) 132 KV PT	BAY	2	0.46	0.92
	F) 33KV T/F LV	BAY	2	0.82	1.64
	G) 33KV BS	BAY	1	0.82	0.82
	H) 33KV PT	BAY	2	0.21	0.42
9	STRUCTURES				
	A) 132 KV T/F HV	BAY	2	9.72	19.44
	B) 132 KV B/C	BAY	1	9.72	9.72
	C) 132 KV BS	BAY	1	9.72	9.72
	D) 33 KV T/F LV	BAY	2	3.60	7.20
	E) 33 KV BS	BAY	1	3.60	3.60

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ANNEXURE-III

**COST ESTIMATE OF 2 X 25 MVA, 132 / 33 KV T/F AT PROPOSED
132 KV SUB-STATION.
(TWO BUS AT HV & SINGLE BUS AT LV)**

SR. NO.	PARTICULARS OF MATERIALS	UNIT	QTY.	RATE / UNIT IN RS.LAKHS	AMOUNT IN RS.LAKHS
10	EARTHING & LIGHTING				
	A) 132 KV T/F HV	BAY	2	3.25	6.50
	B) 132 KV B/C	BAY	1	3.25	3.25
	B) 132 KV BS	BAY	1	3.25	3.25
	C) 33 KV T/F LV	BAY	2	0.70	1.40
	D) 33 KV BS	BAY	1	0.70	0.70
11	FENCING				
	I) PERIFERY FENCING	L.S.	1	10.00	10.00
	II) CHAIN LINK FENCING (SUB-STATION)	L.S.	1	15.00	15.00
12	FIRE FIGHTING EQUIPMENTS	SET	2	7.50	15.00
13	T/F RAIL TRACK	L.S.	2	3.70	7.40
14	STATION TRANSFORMER	NO	2	4.01	8.02
15	AC DISTRIBUTION BOARD	NO	2	1.86	3.72
16	BATTERY, BATTERY CHARGER DC	SET	1	2.95	2.95
17	BUS BAR & INSULATORS				
	A) 132 KV T/F HV	BAY	4	6.00	24.00
	B) 132 KV BC	BAY	2	6.00	12.00
	C) 132 KV BS	BAY	2	6.00	12.00
	D) 33 KV T/F LV	BAY	4	0.80	3.20
	e) 33 KV BS	Bay	2	0.80	1.60
	SUB TOTAL - I				413.29
18	SPARES FOR CB, ISOLATOR, CT, PT, LA ETC.				12.40
	SUB TOTAL - II				425.69
19	TRANSPORTATION TO SITE @ 5%, INSURANCE @ 1% (TOTAL 6% ON SUB TOTAL II)				25.54

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ANNEXURE-III

COST ESTIMATE OF 2 X 25 MVA, 132 / 33 KV T/F AT PROPOSED
132 KV SUB-STATION.
(TWO BUS AT HV & SINGLE BUS AT LV)

SR. NO.	PARTICULARS OF MATERIALS	UNIT	QTY.	RATE / UNIT IN RS.LAKHS	AMOUNT IN RS.LAKHS
	CONCRETE FOR FOUNDATION				
	A) 132 KV T/F HV	Bay	2	17.00	34.00
	B) 132 KV B/C	Bay	1	17.00	17.00
20	C) 132 KV BS	Bay	1	17.00	17.00
	D) 33 KV T/F LV	Bay	2	5.00	10.00
	E) 33 KV BS	Bay	1	5.00	5.00
	F) 132 KV T/F PLINTH	Bay	2	6.50	13.00
	SUB TOTAL - III				547.23
21	ERECTION CHARGES @ 7.5% ON SUB TOTAL I AND ITEM 20.				38.20
22	SERVICE TAX 10.30% ON ERECTION CHARGES (SR NO.21)				3.93
	GRAND TOTAL				589.36

NOTE : TWIN CONDUCTOR SYSTEM IS USED FOR 220 KV & 33KV BUS. THEREFORE, 2 SETS OF BUSBAR & INSULATORS ARE USED.
BUS BAR PROTECTION COST IS TO BE ADDED IN THE ABSTRACT DEPENDING ON NUMBER OF BAYS

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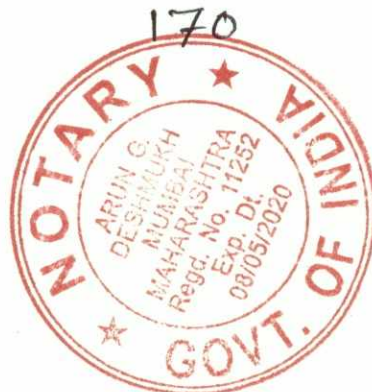
ANNEXURE-IV

COST ESTIMATE FOR 132 KV LINE BAYS (132 KV TWO BUS)

SR. NO.	PARTICULARS	UNIT	QTY.	RATE/ UNIT	AMOUNT IN RS. LAKHS
1	CIRCUIT BREAKER	NO	1	11.05	11.05
2	ISOLATOR WITHOUT EB	NO	2	2.70	5.40
3	ISOLATOR WITH EB	NO	1	2.76	2.76
4	CURRENT TRANSFORMER	NO	3	1.53	4.59
5	LIGHTENING ARRESTOR	NO	3	0.32	0.96
6	C & R PANEL FOR LINE	SET	1	7.26	7.26
7	CONTROL CABLE	BAY	1	2.33	2.33
8	STRUCTURE	BAY	1	9.72	9.72
9	EARTHING & LIGHTING	BAY	1	3.25	3.25
10	FIRE FIGHTING EQUIPMENT	SET	1	2.00	2.00
11	BUS BAR AND INSULATOR	BAY	2	6.00	12.00
	SUB TOTAL - I				61.32
12	SPARES FOR LA, CT, PT ETC.				1.84
	SUB TOTAL - II				63.16
13	CONCRETE FOR FOUNDATION	BAY	1	17.00	17.00
14	TRANSPORTATION TO SITE 5%, INSURANCE 1% (TOTAL 6% ON SUB TOTAL-II)				3.79
15	ERECTION CHARGES (@ 7.5% ON SUB TOTAL-I & ITEM NO.13)				5.87
16	SERVICE TAX @10.30% ON ERECTION CHARGES				0.60
	GRAND TOTAL				90.42

TOTAL COST OF 132 KV LINE BAYS RS. 90.42 LAKHS

NOTE : TWIN CONDUCTOR SYSTEM IS USED FOR 132 KV BUS. THEREFORE, 2 SETS OF BUSBAR & INSULATORS ARE USED.



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ANNEXURE-V

BREAK UP OF PLCC EQUIPMENTS

SR.NO.	PARTICULARS	UNIT	UNIT RATE	QTY.	AMOUNT IN RS.LAKHS
1	132 KV STATION EQUIPMENT	NO	12.16	1	12.16
2	132 KV LINE EQUIPMENT	NO	16.64	2	33.28
	TOTAL RS.				45.44

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BREAK UP SCADA SYSTEM

SR.NO.	PARTICULARS	UNIT	RATE PER UNIT	QTY.	AMOUNT IN RS. LAKHS
1	SCADA SCADA SYSTEM COMPRISING OF				
A)	BASE SERVER CUM WORK STATION COMPRISING PENTIUM PC 2.8 GHZ 1.44 MB FDD 1 GB RAM, 80 GB HARD DISC, COMBO DRIVE(CD RAM & DVD R/W), 21" TFT MONITOR, KEY BOARD, MOUSE AND LICENCED OPERATING SYSTEM.	SET	4	1	4
B)	SCADA SOFTWARE	SET	21	1	21
C)	BAY CONTROLLER/RTU, GPS CLOCK, PARALLEL REDUDANT UPS SYSTEM (MIN 5 HOURS BACKUP)	SET	30	1	30
D)	LAN SWITCH, OPTICAL FIBRE CABLES, CONTROL CABLES, A3 SIZE PRINTER(LASERJET, COLOUR), A4 SIZE DOT MATRIX PRINTER, FURNITURE FOR SCADA SYSTEM	SET	8	1	8
E)	LAPTOP WITH MAINTAINANCE SOFTWARE OF LATEST HARDWARE CONFIGURATION	SET	2	1	2
F)	ETC OF SCADA SYST EM	SET	5	1	5
	TOTAL RS.				70

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ANNEXURE VII

BREAK-UP OF ESTIMATE FOR 33 KV OUTLET					
SR. NO.	PARTICULARS	UNIT	RATE PER UNIT RS.LAKHS	QTY.	AMOUNT IN RS.LAKHS
1	CIRCUIT BREAKER	SET	2.87	1	2.87
2	ISOLATOR WITHOUT EARTHING BLADE	SET	0.75	1	0.75
3	ISOLATOR WITH EARTHING BLADE	SET	0.86	1	0.86
4	CURRENT TRANSFORMER	NOS.	0.39	3	1.17
5	LIGHTENING ARRESTOR	NOS.	0.04	3	0.12
6	CONTROL & RELAY PANELS	SET	1.95	1	1.95
7	STRUCTURES	SET	3.60	1	3.60
8	POWER & CONTROL CABLES	SET	0.85	1	0.85
9	EARTHING & LIGHTING	L.S.	0.7	L.S.	0.70
10	BUSBAR & INSULATORS	SET	0.80	2	1.60
	SUB TOTAL-I :				14.47
11	SPARES FOR CT, PT, LA ETC.				0.43
	SUB TOTAL-II :				14.90
12	CONCRETE FOR FOUNDATION	L.S.	5.00	1	5.00
	SUB TOTAL-III :				19.90
13	TRANSPORTATION TO SITE 5%, INSURANCE 1% (TOTAL 6% ON SUB TOTAL-II)				0.89
14	ERECTION 7.5% ON SUB TOTAL-I & ITEM 12				1.46
15	SERVICE CHARGES ON ERECTION CHARGES SR.NO.14				0.15
					22.40
SAY RS. 22.40 LAKHS PER OUTLET					

NOTE : TWIN CONDUCTOR SYSTEM IS USED FOR 33 KV BUS. THEREFORE, 2 SETS OF
BUSBAR & INSULATORS ARE USED.

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ANNEXURE VIII

CREDIT COST FOR 2 x 25 MVA, 132/33 KV POWER TRANSFORMERS AT 132/33 KV DHARNI SUB-STATION, DIST.- AMRAVATI

S.NO.	PARTICULARS	AVAILABLE AT	YEARS OF MANUFACTURING	NO. OF YEARS IN SERVICE	ESTIMATED COST (Rs. IN LAKHS)	DEPRICIATED COST (Rs. IN LAKHS)	CREDIT COST (Rs. IN LAKHS)
						(3.6*E*F/100)	(F-G)
A	B	C	D	E	F	G	H
1	1 x 25 MVA, 132/33 KV T/F	RAHURI	1992	17	61	37.33	23.67
2	1 x 25 MVA, 132/33 KV T/F	SHEVGAON	1994	15	61	32.94	28.06
	TOTAL Rs.						51.73



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Cost Estimate of PLCC Station Equipments for 132 KV or 100 KV System				
Sr. NO.	Items	Qty.	Unit Rate in Rs.	Amount in Rs.
1	UpSs Comprising of i) 48 V, 200 AH Battery and ii) 48 V, 50 A, Battery charger with D.C. Board	1 Set		164011.38
			69003.24	
			95008.15	
2	Microprocessor based 12/8 lines EPAX with Telephone Cable and wiring etc.	1 Set	318894.17	318894.17
3	Push button Telephones(nos)	5	460.43	2302.15
4	PLCC Testing equipment digital signal level meter, Digital signal level oscillator, Oscilloscope with allied assortment etc.	L.S.	L.S.	550000.00
Sub Total-I :				1035207.71
5.00	Spares @ 3% on Sub Total- I			31056.23
Sub Total-II :				1066263.94
6.00	Transportation, Insurance @ 6 % on Sub Total-II			63975.84
7.00	Cost of installation, Testing & Communication @ 7.5% on Sub Total-I			77640.58
8.00	Service charges 10.30 % on item 7			7996.98
Grand Total in Rs.				1215877.34
Grand Total in Rs. Lakhs				12.16
Say Rs. 12.16 Lakhs				

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Standard Cost Estimate of PLCC Line Equipments on One End of 132 KV or 100 KV Trans.Lines

Sr. No.	Equipment	Qty	Unit Rate in Rs.	Amount in Rs.
1	Wave trap 630 A/0.5 mH with three connecting clamps	2	241553.97	483107.94
2	Coupling Capacitors for 132 KV	2	116746.43	233492.86
3	Co-axial cable 75 ohms unbalanced	0.5 Km	98520.19	49260.09
4	Twin channel carrier set	1	604573.41	604573.41
5	Protection Coupler Double Circuit			
6	Coupling Device for phase to phase coupling (200W)	1 Set	31617.12	31617.12
7	Cost of civil works	L.S.	L.S.	15000.00
Sub Total- I :				1417051.42
8	Cost of spares (@ 3%)			42511.54
Sub Total-II :				1459562.97
9	Transportation, Insurance @ 6 % on Sub Total-II			87573.78
10	Cost of installation testing and commissioning @ 7.5% on Sub Total-I			106278.86
11	Service Tax (10.30 % on item no 10)			10946.72
Grand Total in Rs.				1664362.32
Grand Total in Rs. Lakhs				16.64
Say Rs.		16.64	Lakhs	

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(Amt.in Rs.Lakhs)

**Break-up Estimate for 10 kms. Of 132/110/100 kV
S/c line on D/c Tower.**

(i) Conductor Size :	0.2 Sq.inch ACSR (Panther)
(ii) Earthwire Size :	7/3.15 mm
(iii) Normal Span :	320 Mtrs

Sr. No	Item	Unit	Unit Rate in Rs. Lakhs	Quantity	Amount
1	Survey, Tree Cutting & Compensation			L.S.	2.80
2	(i) Tower	M.T.	0.64	154.00	93.56
	(ii) Tower Accessories		L.S.	L.S.	2.04
	(iii) Nut Bolts	M.T.	0.96	5.70	5.47
3	Conductor (including 2.5% sag and wastage)	Km	1.23	30.75	37.82
4	Groundwire (including 2.5% sag and wastage)	Km	0.33	10.25	3.38
5	Insulators, Hardware, Conductor & Groundwire accessories	-	L.S.	L.S.	18.68
	Sub Total-I :				168.75
6	Spares (@ 3% on item 2 to 5)				4.98
7	Transportation to site 5%, Insurance 1% (Total 6 % on item 2 to 6)				10.26
8	Concrete for foundations & excavation and stubsettings	-	L.S.	L.S.	65.05
9	Erection & stringing charges (7.5% on item 2 to 5 & 8)				17.33
10	Service Tax 10.30 % on Erection & stringing charges.				1.78
	TOTAL				268.15
Cost of 132/110/100 kV S/c line on D/c Tower for ONE km.					26.81

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ms-sh
At (5/10/20)
23/5/20

LOAD FLOW STUDY REPORT				
Establishment of 132 / 33 KV Dharni Sub-station, Dist : Amaravati				
Name of the Sub-stion	Before Schemes		After Schemes	
	Voltage p.u.	System Losses in MW	Voltage p.u.	System Losses in MW
1 132 KV Dharni	1038.94	0.99	1037.53
2 33 KV Dharni	0.69		0.98	
3 33 KV Dhabka	0.75		0.97	
4 33 KV Kadav	0.68		0.98	
5 132 KV Hivaerkhed	0.91		0.92	
6 33 KV Hivaerkhed	0.86		0.90	
SAVING IN LOSSES (MW)				1.41
D/STU/2010/ReportDharni				

REVISED ON 15JUL11

01.XI.10

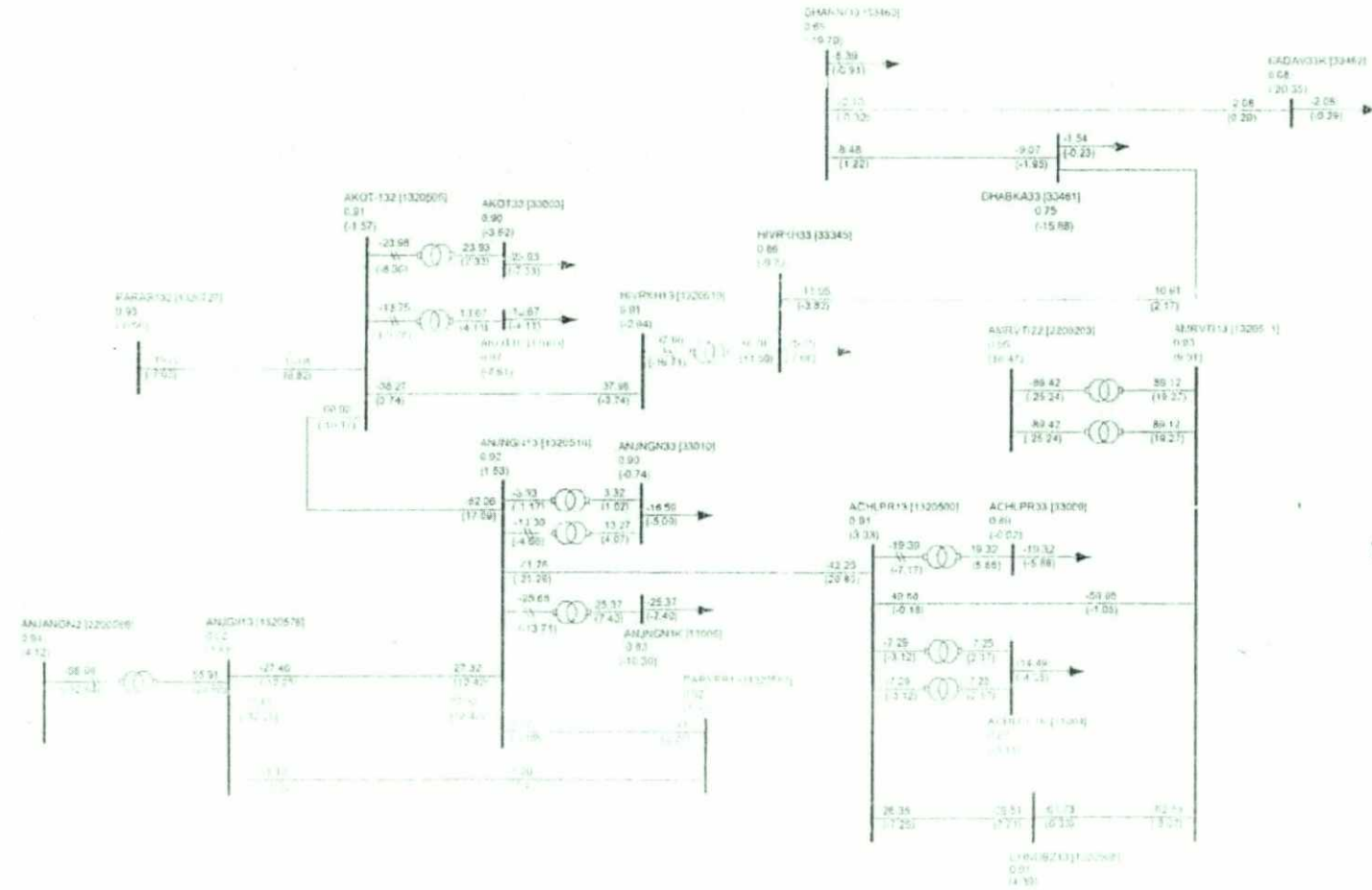
ANNEXURE-



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LOAD FLOW STUDY FOR 132 KV DHARNI S/STN. DIST : AMARAVATI.
FOR THE YEAR 2011-12.....CASE : WITHOUT 132 KV DHARNI S/STN.

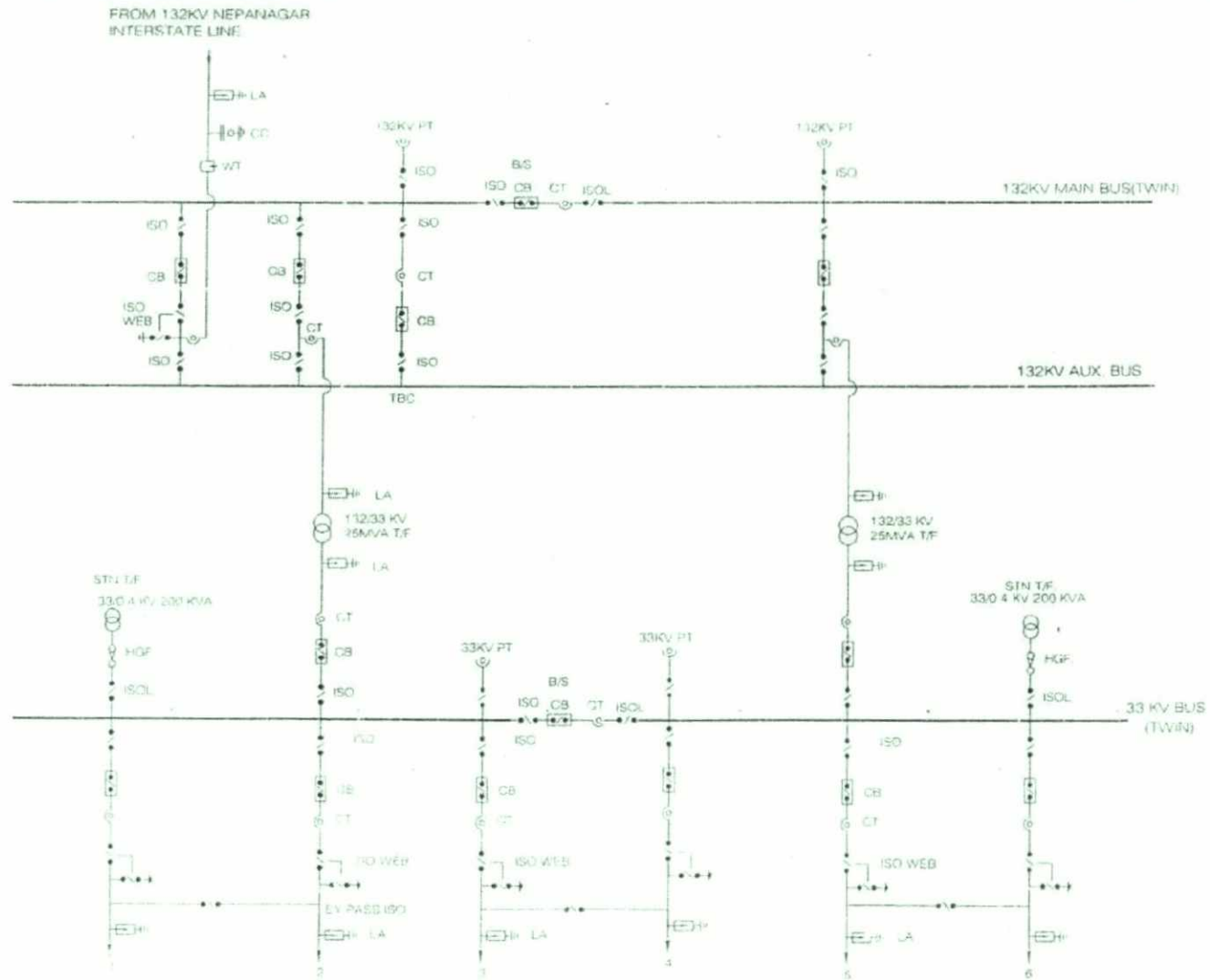


TOTAL LOSSES WITHOUT S/STN. = 1035.94 MW



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ESTT. OF 2x25MVA, 132-33KV DHARNI S-S DISTRICT-AMRAVATI, AMRAVATI ZONE							MSETCL
DRN	CHEKD	SUB	APPD	SCALE	DATE	DRG NO. SCHEME	TRANS. PROJECT

ANNEXURE - C

