



MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.
(CIN NO U40109MH20055GC153646)

From	To
Name of Office : Chief Engineer, Project Scheme Deptt.	The Chief Engineer
Office Address : 'Prakashganga', MSETCL, Plot no. C-19, E-Block, Bandra Kurla Complex, Bandra(E), Mumbai - 400051	EHV Construction cum O&M
Contact No: (O) 26595130 (P) 26595131	zone, MSETCL,
FAX : 022- 26598587	Nagpur
Email Id: cepd@mahatransco.in	

Ref. No MSETCL/CO/TR Project Scheme/Scheme I/TSS/

Date:

29 SEP 2016

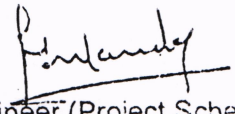
N 10530

Sub: Scheme for 132 kV of power supply to Mulmarora , Nagbhir and Hiradmali Traction Substation (TSS) for electrification of Gondia – Ballarsha section of M/s Railway Electrification Secunderabad (RES) under DDF

The scheme mentioned above has been approved by Competent authority vide no. CMD-1138 dated 29.09.2016, at an estimated cost of Rs. 2315.67 Lakhs only (Rs. Two Thousand three hundred fifteen Lakhs & Sixty Seven thousands only).

Three copies of the said report are enclosed herewith for your kind information & further necessary action.

Encl: As above


Chief Engineer (Project Scheme)

Copy s. w rs to


- 1) The Dy Secretary (Energy), Govt. of Maharashtra, Mantralaya, Mumbai – 32
- 2) The C.G.M.(F&A), MSETC Ltd., Mumbai.

Copy f w cs to:-

- 1) The C.E (C&M), MSETCL, Prakashganga, Mumbai

Copy to

- 1) The Supt. Engineer Tender Design / Tr O&M/ MSETC Ltd, Mumbai.
- 2) The Supt. Engineer, Transmission (O & M) Circle, MSETC Ltd, Chandrapur
- 3) The Supt. Engineer, EHV Construction Circle, MSETC Ltd., Nagpur
- 4) The Supt. Engineer, EHV Civil Construction Circle, MSETC Ltd., Nagpur
- 5) The Executive Engineer, EHV Constn Divn I, Nagpur
- 6) The Executive Engineer Trans O & M Division , MSETC Ltd, Ballarsha
- 7) The Executive Engineer, Tender Design (I/II/PTCC)
- 8) The E.E (FTU) MSETCL Prakashganga, Mumbai -- For issue of BCN number.


Executive Engineer
E.H.V. Project Dn.II
M.S.E.T.C.L. Nagpur

MAHARASHTRA STATE ELECTRICITY

TRANSMISSION COMPANY LIMITED

DOCKET-SHEET	
Subject:	Scheme for 132 kV of power supply to Mulmarora, Nagbhir, Hiradmali Traction Substation (TSS) for electrification of Gondia – Ballarsha section of M/s Railway Electrification Secunderabad (RES) under DDF
Section:-	PROJECT SCHEME DEPARTMENT
File No:-	MSETCL /CO/PS/S1/RES /
Date:	

DATE	TO WHOM SENT	REMARKS
	Director (Projects)	<div>MSETCL (From: M/s) 1552 Inward Dt: 28/9/16 Outward Dt: 14/9/16</div>
	Director (Finance)	<div>Dir.(F) 10-689 Date: 14/9/16</div>
	Chairman & Managing Director	<div>CMD / MSETCL / Inward No. 158 Date: 28/9/16</div>

Executive Engineer
E.H.V. Project Dn.II
M.S.E.T.C.L. Nagpur

C.E. (Proj. Schemes).....	1184
Date.....	12/9/16

ORIGINAL

OFFICE NOTE:

**No.MSETCL/CO/TR.PR/S &C I/RES /
Transmission Project Scheme Deptt.**

- 1.0 Name of the Sponsoring Section : Transmission Project Scheme Deptt.
- 2.0 Subject : Scheme for 132 kV of power supply to Mulmarora, Nagbhir, Hiradmal Traction Substation (TSS) for electrification of Gondia – Ballarsha section of M/s Railway Electrification Secundarabad (RES) under DDF
- 3.0 Estimated Cost : Rs. 2315.67 lakhs
(Rs.Two thousand three hundred fifteen lakhs and sixty seven thousand only)

4.0 Scope of Work:

I 132 kV Mulmarora TSS

A) The Scope of works to be executed by MSETCL:

Substation work

- 132 kV Feeder bays at existing 132 kV Mul S/S-Single Bus –Total 1 No
- Metering CT,PT, (Main & Check) , Isolator at Mulmarora TSS premises (1 Set)
- SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Mul substation
- PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger
- ABT meters along with associated software, Data Concentrator & other accessories and data connectivity for on line data transmission to State Load Dispatch Centre (SLDC) alongwith FOT equipments

B) The Scope of work to be executed by Railway Electrification Secundarabad (RES) under supervision of MSETCL

- 132 kV S/C line on D/C towers from existing 132 KV Mul Substation to Mulmarora TSS - 10 km
- Metering Room (AC) at TSS premises

II 132 kV Nagbhir TSS

A) The Scope of works to be executed by MSETCL:

Substation work

1. 132 kV Feeder bays at existing 132 KV Bramhapuri S/S - Single Bus - Total 1 No
2. Metering CT,PT, (Main & Check) , Isolator at Nagbhir SS premises (1 Sets)
3. SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Bramhapuri substation
4. PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger
5. ABT meters along with associated software, Data Concentrator & other accessories and Tulip connectivity for on line data transmission to State Load Dispatch Centre (SLDC) and FOT equipments

B) The Scope of work to be executed by Railway Electrification Secundarabad (RES) under supervision of MSETCL

1. 132 kV S/C line on D/C towers from existing 132 KV Bramhapuri Substation to Nagbhir TSS - 20 KM
2. Reorientation of existing 132 kV lines and ongoing 132 kV Bramhapuri - Sindewahi line at Bramhapuri Substation end in order to avoid the earlier proposed underground cable
3. Metering Room (AC)

III 132 kV Hiradamli TSS

A) The Scope of works to be executed by MSETCL:

Substation work

1. 132 kV Feeder bay at existing 132 KV Gondia S/S -Single Bus -Total 1 No
2. Metering CT,PT, (Main & Check) , Isolator at Hiradmali SS premises (1 Set)
3. SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Gondia substation
4. PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger

Not paid

5. ABT meters along with associated software, Data Concentrator & other accessories and Tulip connectivity for on line data transmission to State Load Dispatch Centre (SLDC) and FOT equipment
- B) The Scope of work to be executed by Railway Electrification Secunderabad (RES) under supervision of MSETCL
 1. 132 kV S/C line on D/C towers from existing 132 KV Gondia Substation to Hiradmal TSS – 17.18 km
 2. Metering Room (AC)

5.0 Preamble:

- 5.1 Railway Electrification Secunderabad (RES) have informed that for electrification of Gondia- Ballarshah section and they have applied for 132 kV power supply to the extent of 4 MVA each to proposed Traction Sub-Station (TSS) at Mulmarora, Nagbhir, Hiradamli, Wadegaon TSS.
- 5.2 The feasibility for the 132 kV power supply to above 4 nos. of TSS is received from C.E. MSETCL Nagpur. Out of 4 nos of traction substations 2 nos of TSS i.e. Arjuni and Hiradmal are under Gondia MSEDCL Circle and 2 nos of TSS i.e. Mulmarora and Nagbhir are under Chandrapur O&M Circle MSEDCL. Railway Electrification Secunderabad (RES) have requested for single circuit line instead of double circuit line for the above 4 nos of TSS for electrification of Gondia- Ballarshah section. Accordingly, C.E.(STU) have issued the revised intimation letter dt 13.06.2013 with single circuit line for power supply to above TSS. Based on the feasibility and grid connectivity letter from STU, out of 4 TSS the cost estimates for 132 kV power supply has been conveyed to concerned MSEDCL authorities.
- 5.3 The assurance letter for 132 kV power supply to above traction substations were issued by MSEDCL however the Railways has not paid the amount in the validity period and the validity of letter was expired.
- 5.4 Railway Electrification Secunderabad has requested for revised estimates for 2 nos. of traction substations at Nagbhir and Mulmarora. Subsequently, RE Secunderabad has requested to revise the scope as per the detailed survey carried out and accordingly

CE MSETCL Nagpur has forwarded the revised feasibility for 132 kV power supply to Nagbhir TSS with reduction in underground cable length ,vide letter no.2972 dt.1.12.2014. Accordingly, the revised cost estimates was intimated to Commercial section, MSEDCL for issue of assurance letter for 132 kV power supply to Nagbhir and Mulmarora TSS. RES have applied to STU for revised grid connectivity for Wadegaon TSS and the feasibility with estimates for Hiradmali TSS are already intimated to MSEDCL authorities.

- 5.5 C.E.(Commercial) MSEDCL, vide letter dt 11.03.2015, has issued the assurance letter for 132 kV power supply to Mulmarora and Nagbhir TSS out of 4 TSS under DDF and Railway Electrification has to pay the amount of Rs.36.50 lakhs (Rs. 12 .00 lakhs & Rs 24.50 lakhs) to MSETCL towards supervision charges for the work of 132 kV Mulmarora and 132 kV Nagbhir TSS.

Chief Project Manager, Railway Electrification, Secunderabad, has informed that as per Ministry of Finance, Department of Revenue Notification dt 20.06.2012 under Section 66 B of Finance Act 1994, service tax is exempted on service provided for "Transmission or Distribution of electricity by an electricity transmission or distribution utility" and requested to revise the estimate duly deleting the service tax.

As intimated by CGM (F&A) MSETCL, Railway is exempted from payment of service tax. Accordingly , RES can pay the amount of Rs. 21.45 lakhs towards supervision charges for providing the 132 kV power supply to Nagbhir TSS and Rs 10.20 lakhs towards supervision charges for providing the 132 kV power supply to Mulmarora TSS under DDF.

- 5.6 M/s RES, vide their letter dt 31.03.2015, has informed that they have paid the supervision charges of an amount of Rs. 31.65 lakhs (10.20 lakh +21.45 lakh) to MSETCL vide receipt no 40127 and 40128 dt 31.03.2015 for availing the power supply under DDF. The Scheme for 132 kV power supply to Mulmarora and Nagbhir TSS under DDF was approved by Competent Authority vide No. 903 dt.20.07.2015.

- 5.7 C.E.(Commercial), MSEDCL, vide letter dt 11.03.2015, has issued the assurance letter for 132 kV power supply to Hiradmali TSS under DDF and Railway Electrification has paid the amount of Rs.13.94 lakhs to MSETCL towards supervision charges for the work of 132 kV Hiradmali TSS under DDF.

5.8 R E Secundarabad has requested to revise the scope of work vide their letter dt. 02.09.2015 for the above TSS and informed that the bay in MSETCL substation will be executed by MSETCL. Accordingly, this office vide letter dt 16.09.2015, has informed Railways about their requirement and requested MSETCL field office to submit the estimates for the scope of work to be executed by MSETCL. Further, the joint meeting was held with MSETCL field office, Railway Authority on dt 01.02.2016. The minutes of meeting with revised scope of work is circulated vide this office letter dt 02.02.2016 and the field office was requested to submit the revised scope of work as discussed in the meeting.

5.9 C E., MSETCL, Nagpur vide his letter dated 09.03.2016 has intimated estimated cost for revised scope of work to this office. This office vide letter dated 17.03.2016, has intimated Commercial section, MSEDCL, the revised cost estimate for 132 kV power supply to Nagbhir, Mulmarora & Hiradamli TSS based on the scope of work finalized in the joint meeting between MSETCL & Railway as per the request of Railway authorities.

5.10 Now again, Dy Chief Electrical Engineer (R.E.Secundarabad), vide letter dt. 25.04.2016 has informed the following.

- Railway have already awarded contract for transmission line and material of earthwire and related hardware/accessories.
- The above material are supplied and also Railway has made payment to contractor for supply of earthwire & related hardware accessories.
- At this stage it is not possible to provide OPGW in lace of earthwire due to contractual obligation of Railway.
- Therefore Railway has requested to provide the PLCC instead of OPGW by MSETCL and necessary charges for provision of PLCC will be made by Railway. Space required for installation of PLCC panel, Battery and Battery charger will be provided in control room

Due to above change in scope of work of PLCC in lieu of OPGW and work to be executed by MSETCL under DDF, the estimated cost intimated vide this office letter dt 17.03.2016 is to be again revised as per the request of Railway. In view of above, the earlier approved Scheme for 132 kV power supply to Mulmarora and Nagbhir TSS under DDF is treated as cancelled. The demand note for revised

		Rs. Lakhs
i)	Works to be executed by MSETCL	278.43
ii)	15 % Supervision charges of labour charges for works to be executed by consumer (15 % of Rs. 51.59 lakhs)	7.74
SUB- TOTAL Rs. lakhs		286.17
	Earlier, RE Secundarabad has already paid amount of Rs.13.94 lakhs (including supervision charges) to MSETCL vide receipt no. 40156 Dt 07.07.2015 , therefore, the balance amount to be paid by Railways of Rs.(286.17-13.94) Lakhs =	272.23

The execution of MSETCL scope of works will be taken up in hand only after receipt of full payment from RES to MSETCL which include the total amount of Rs. 829.40 lakhs (Rs.267.63 lakhs , Rs. 289.54 lakhs & Rs. 272.23 lakhs) for the above TSS. RES has already paid the amount of Rs. . 829.40 lakhs (Rs.267.63 lakhs , Rs. 289.54 lakhs & Rs. 272.23 lakhs) for the above TSS vide receipt no.0071236 dt. 03.08.2016 to MSETCL.

As per the vide letter dt. 03.08.2016 from RES for waiver of bank guarantee as the Central Railway is being the Govt. organization. Further, in lieu of Bank Guarantee, Railway has to submit the undertaking in order to pay the enhanced cost due to overrun or by any reason.

5.7 The power supply arrangement will be executed on following terms and conditions.

A. The cost estimate has been prepared considering the load requirement of M/s Chief

Project Manager Railway Electrification, Secundarabad for 3 nos of TSS at Mulmarora, Nagbhir, Hiramamli TSS with back to back arrangement under dedicated distribution facility.

B. The consumer has to provide free of cost a technically suitable and developed plot of desired size duly fenced for termination arrangement of MSETCL's transmission lines, line bay and bus with separate and independent approach roads to MSETCL and consumer

switchyard. The ownership of equipments up to point of supply isolator will remain with MSETCL.

The power supply arrangement is subject to following conditions.

1. The execution of MSETCL scope of work will be taken up in hand by MSETCL only after receipt of full payment from railways.
 2. The detailed terms and conditions are enclosed herewith as Annexure I
 3. The cost estimates are based on tentative survey. The Revised scheme for the same is yet to be approved from the competent authority of MSETCL. In case of any change in estimated cost, the consumer has to pay the difference in cost and shall be binding on them.
 4. The right of way problem for laying of transmission line are to be sorted out by railways at their cost. The route may involve railway crossings, forest NOC. The required line crossing permission as well as the charges for availing the railway block should be arranged by RES. The railways has to pay the charges towards load management to MSETCL during re-orientation work of 132 kV Sindewahi- Bramhapuri and 132 kV Asagaon – Bramhapuri line for Nagbhir TSS. In case of any increase in outage period Railway has to pay the increase in cost and shall be binding on them.
 5. The other miscellaneous work involves shifting of 11 kV, 33 kV line and store shed Drain fencing road etc. Railway Authority has to carry out the above work at their cost and same will be intimated to Railways by MSEDCL authority. RES has to follow up with MSEDCL for the above issue.
 6. The railway has to provide the space for installation of LA, WT, CC along with metering equipment at TSS premises measuring about 25m (width) x 34m (length). Also, in control room the room for PLCC and Battery, Battery charger is to be provided by Railway.
- C. Demarcation of MSETCL switchyard and consumer switchyard at consumer premises shall be distinctly made through fencing. The ownership of EHV line and termination arrangement at consumer's switchyard up to point of supply isolator will remain with MSETCL.
- D. The consumer has to construct air conditioned metering cabin of size 3.5 m x 3.5 m for housing energy / tariff meter.
- E. The protection scheme & s/s layout shall be finalized by the consumer in consultation with CE (Project & Design) MSETCL.

- N.
-
- F. SCADA for remote monitoring of switchyard is to be provided by MSETCL substation as per specification of MSETCL.
- G. The consumer has to provide space in their control room or construct control room of required size to accommodate MSETCL's equipments like SCADA panels, PLCC panels, 48 V Battery and charger etc.
- H. The consumer shall have to provide supervisory panel in line with MSETCL specification and standards and arrange for potable water tap for MSETCL substation free of cost.
- i. The consumer shall have to provide at his cost auxiliary D.C. and 3 phase A.C supply for MSETCL's equipments etc.
- J. The consumer shall have to spare two cores of transformer CTs, one of P.S. class for Bus bar protection and one of 0.2S class for supervisory metering as per MSETCL's standards. The metering CT shall be of accuracy class 0.2S , burden 15VA and metering PT shall be of 0.2 with burden 50 VA single core single ratio commensurate with contract demand.
- K. The work of MSETCL's portion to be executed by consumer will be as per specification and standards of MSETCL. The equipment drawing and test reports may be got approved from MSETCL before procurement and the material will be inspected by MSETCL's representative before dispatch. The consumer shall arrange at his cost the inspection of proto assembly, witnessing type tests and pre-dispatch inspection of material by MSETCL. Works under consumer switchyard shall be done by the consumer at his risks and costs.
- In respect of the agency for erecting the EHV line & switchyard work (Civil as well as electrical), the details of past experience of works executed by agency during last three years in physical & financial terms are to be submitted so as to ascertain the capability of agency for execution of line and approval thereof.
- L. a) The line & switchyard materials shall be procured from approved vendors of MSETCL and as per technical specification of MSETCL. The line survey, profile, tower spotting, schedule shall be done by consumer and got approved from Planning section.
- b) Statutory PTCC route approval from the Divisional Engineer Telegraph (PTCC), Mumbai and charging permission from the concerned Telecom and Railway authorities will be obtained by the consumer at his own cost
- c) If the D.E.T. (PTCC), Mumbai recommends any protection measures on Telecom and Railway ckts. in the PTCC route Approval the whole cost of said work will be borne by the consumer.

-
- d) Statutory Forest NOC / Clearance certificate from the Govt. of India will be obtained by the consumer.
 - e) In this process any estimate submitted by the Forest Deptt. for the cost of land, deforestation charges, compensatory afforestation charges, maintenance charges etc. will be borne by the consumer.
 - f) The consumer has to initiate & obtain all statutory clearance/ approval from various authorities including Chief Engineer (Electrical), GOM before taking up the erection works of transmission lines and substation switchyard at their cost.
- M. All payments towards way leave problems, obstruction by local persons are to be sorted out by consumer for the scope of work to be executed by consumer. Any compensation for injuries including death shall be borne by consumer as per the relevant act
- N. Supervision of work by MSETCL will be taken up in hand only after receipt of supervision charges towards scope of work involved.
- O. The works are to be executed by consumer under supervision of S.E. EHV Construction circle, Nagpur
- 6.0 **Brief Scope of Work** :
Scope of work is as per clause 4.0 given above
- 7.0 **Single Line diagram of the proposed works is shown as Annexure-II**
- 8.0 **Cost Estimate and Phasing of Expenditure** :
The total cost of scheme works include Nagbhir, Mulmarora & Hiradmalī TSS out to Rs. 2315.67 lakhs. The details are given in Annexure-I. The latest Cost data during 2014 is considered while preparing the cost estimates (as the consumer has paid the supervision charges in the validity period) which are prepared in the standard formats.
- 9.0 **Power of Telegraph Authority** :
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 the work covered in the scheme.
-

10.0 Approval of Competent Authority :

As per clause 1 (c) of Section II (works) of REVISED G.O. 1 (F & A) dt 03.09.2012 & for DDF scheme the estimated cost of scheme above Rs. 1000.00 Lakhs, Chairman & Managing Director in consultation with Director (Projects) and Director (Finance) is empowered for administrative approval.

As such the following proposal is proposed & put up for approval in respect of "Scheme for 132 kV power supply to Nagbhir , Mulmarora & Hiradmal Traction Substation (TSS) of M/s Railway Electrification Secunderabad (RES) under DDF "at an estimated cost of Rs. 2315.67 lakhs covering following scope of work.

All Works to be executed by RES under Supervision of MSETCL:

I. 132 kV Mulmarora TSS:

C) The Scope of works to be executed by MSETCL:

Substation work

6. 132 kV Feeder bays at existing 132 kV Mul S/S-Single Bus -Total 1 No
7. Metering CT,PT, (Main & Check) , Isolator at Mulmarora TSS premises (1 Set)
8. SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Mul substation
9. PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger
10. ABT meters along with associated software, Data Concentrator & other accessories and data connectivity for on line data transmission to State Load Dispatch Centre (SLDC) alongwith FOT equipments

D) The Scope of work to be executed by Railway Electrification Secunderabad (RES) under supervision of MSETCL

3. 132 kV S/C line on D/C towers from existing 132 KV Mul Substation to Mulmarora TSS - 10 km
4. Metering Room (AC) at TSS premises

II. 132 kV Nagbhir TSS

C) The Scope of works to be executed by MSETCL:

Substation work

-
6. 132 kV Feeder bays at existing 132 KV Bramhapuri S/S - Single Bus - Total 1 No
 7. Metering CT,PT, (Main & Check) , Isolator at Nagbhir SS premises (1 Sets)
 8. SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Bramhapuri substation
 9. PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger
 10. ABT meters along with associated software, Data Concentrator & other accessories and Tulip connectivity for on line data transmission to State Load Dispatch Centre (SLDC) and FOT equipments

D) The Scope of work to be executed by Railway Electrification Secunderabad (RES) under supervision of MSETCL

4. 132 kV S/C line on D/C towers from existing 132 KV Bramhapuri Substation to Nagbhir TSS - 20 km
5. Reorientation of existing 132 kV lines and ongoing 132 kV Bramhapuri - Sindewahi line at Bramhapuri Substation end in order to avoid the earlier proposed underground cable
6. Metering Room (AC)

III 132 kV Hiradamli TSS

C) The Scope of works to be executed by MSETCL:

Substation work

6. 132 kV Feeder bay at existing 132 KV Gondia S/S -Single Bus -Total 1.No
7. Metering CT,PT, (Main & Check) , Isolator at Hiradmali SS premises (1 Set)
8. SCADA System for remote monitoring of switchyard to be installed at existing 132 KV Gondia substation
9. PLCC equipment: (Line equipment: 2 No and Station equipment: 1 no) alongwith Battery , Battery charger
10. ABT meters along with associated software, Data Concentrator & other accessories and Tulip connectivity for on line data transmission to State Load Dispatch Centre (SLDC) and FOT equipment

D) The Scope of work to be executed by Railway Electrification Secunderabad (RES) under supervision of MSETCL

Sub: Scheme for 132 kV of power supply to Mulmarora, Nagbhir, Hiradmali Traction Substation (TSS) for electrification of Gondia – Ballarsha section of M/s Railway Electrification Secunderabad (RES) under DDF

Director (Projects)

P. Kumar
14-9-16

as proposed

Director (Finance)

P. Kumar

Chairman & Managing Director

P. Kumar
29/9

C2 CPS?

CMD / MSETCL / Inward No. _____

Date: _____

CMD / MSETCL / Outward No. 113

Date: 29/9/16