

No. CE/Com/OA/SEM/Individual/

Date:

No 0 0 2 1 7 3 3 E-2 AUG 2019

To

The Superintending Engineer,

MSEDCL, All O&M Circles.

Sub: Cost Data for Installation of individual SEM metering at your Wind/Solar Generation End by MSEDCL.

Ref: 1) T.O.L. No. CE/Comm/OA/SEM/27786 dated 28.11.2018
2) Hon'ble MERC Order dated 05.04.2019 in Case No. 34 of 2019
3) Office Note No. CE/Com/OA/Group Meter/545 dated 11.06.2019
4) Prepage No. CE/Com/OA/Group Meter/599 dated 20.06.2019
5) Office Note No. CE/Comm/OA/SEM/657 dated 11.07.2019

There are many Solar and Wind Park developers in Maharashtra State who are approaching for common SEM metering installations at their respective Solar and Wind Parks. It is observed from SEM metering proposals in some solar/wind park there are individual metering and in some parks there is combined metering system. In combined metering system, the park developers are allotting capacity wise units generated to individual generators monthly. Also, it is observed that many such generators in the wind park were under EPA; selling their power generated to MSEDCL and now has opted for open access for self use or sale of their power to third party after expiry of EPA period.

Therefore, MSEDCL circulated guidelines vide letter under ref (1) for installation of SEM individual metering in respect of Solar and Wind generators opting for self use or third party sale under open access. Accordingly, many generators applied for installation of individual SEM metering at their respective generation end. However, being aggrieved by the same, Arvind Cotsyn (India) Ltd. has filed a petition for Discriminatory Treatment for Renewable Energy generator/ Consumer by MSEDCL for imposition of Individual Metering Policy (Case No. 34 of 2019). In this regard, Hon'ble MERC passed an order dated 05.04.2019 as under:

- 1) *Case No.34 of 2019 is partly allowed.*
- 2) *In Case, consumer/generator opts for installation of Special Energy Meter by the Maharashtra State Electricity Distribution Company Ltd. at former's cost, latter shall install the same as per provisions of the DOA Regulations, 2016 within a period of six months.*
- 3) *In the intervening period till installation of Special Energy Meter, Maharashtra State Electricity Distribution Company Ltd. shall not deny Open Access to such consumer/generator.*

In view of Hon'ble MERC order, many generators applied for installation of SEM individual metering by MSEDCL and were ready to bear the cost of SEM

installation. Hence, it was necessary to finalize the cost data for installation of SEM individual metering at generator end. In this regard, the Cost Data for installation of SEM individual metering has been prepared for installation at 11KV, 22 KV and 33KV (Copies enclosed). It is further to inform that the said cost data is only for installation of SEM individual metering, therefore, considering the site situation, if re-orientation existing 11KV/22KV/33KV feeder is required then the Demand note for the differential amount shall be issued to generator for immediate payment before starting of installation work.

This is for your reference and further necessary action please.

Encl: as above


Chief Engineer (Commercial)

Copy s. w. r. to:

- 1) The Director (Commercial), MSEDCL, Mumbai.
- 2) The Jt. Managing Director/ Regional Director, MSEDCL, Regional Office, Kalyan/Pune/Aurangabad/Nagpur.

Copy f. w. c. to:

The Chief Engineer, MSEDCL, All O&M zones.

Copy to:

The Superintending Engineer, MSEDCL, Testing and Quality Assurance Circle, Kalyan/Pune/Aurangabad/Nagpur.

11 KV SEM Metering Estimate - For Main & Check Meter

Sr. No.	Particulars	Unit	Qty	Rate	Amount
1	11 KV metering cubical with CTs & PTs but without meter	Nos	2	90000	180000.00
2	Lightening Arrestor (11 KV)	Set	2	9900	19800.00
3	Chain Link Fencing	LS	1	208965.04	208965.04
4	Metal Spreading	LS	1	130945	130945.00
5	Meter room 3 X 2.5 Meter	LS	1	100000	100000.00
6	Energy Meter with ABT features 0.2S Class	Nos	2	140000	280000.00
7	Meter Enclosure	Nos	2	10000	20000.00
8	RSJ 152 X 152, 11m long	Nos	4	17887	71548.00
9	GI Channel 100X50X6 mm	Kg	300	50.78	15234.00
10	GI Angle 50X50X6 mm	Kg	100	50.78	5078.00
11	GI Flat 50X50X6 mm	Kg	120	50.78	6093.60
12	GI Nust Bolts	Kg	40	82.88	3315.20
13	ACSR conductore	Rmt	30	50.8	1524.00
14	Palm type clamp (compression type)	Nos	12	928.43	11141.16
15	Clamps for 11 KV CT	Nos	6	1425.46	8552.76
16	11 KV Pin Insulator	Nos	6	135.11	810.66
17	11 KV Disc Insulator	Nos	18	344.48	6200.64
18	11 KV Tensionhardware set	Nos	6	463	2778.00
19	Armoured copper control cable 2CX2.5 sqmm	Rmt	80	55.73	4458.40
20	Cable glands, Ferulesand tape etc	LS	1	1100	1100.00
21	Earthing Set HT	Nos	4	335.51	1342.04
22	Concreting Ratio1:3:6	Cmt	8	2892	23136.00
23	Aluminium Pain for 1 Coat	Ltr	2	93.93	187.86
24	Red Oxide Paint for 2 Coats	Ltr	2	60	120.00
25	Sundries Such as Nuts Washer etc	LS	1	1500	1500.00
A	TOTAL MATERIAL COST				1103830.36
1	Transportation on Material			12.00%	132459.64
2	T&P on Material Cost			3.00%	33114.91
3	Contigencies on material			1.50%	16557.46
4	Erection Cost			45.00%	496723.66
5	Contractor Supervision Charges on Material			5.00%	55191.52
6	Insurance, Labour & Finance Cost			5.00%	55191.52
B	TOTAL SERVICES (1+2+3+4+5+6)			71.50%	789238.71
C	SUB-TOTAL (A + B)				1893069.07
7	Profit on (C)			4.00%	75722.76
D	Centages (B + 7)				864961.47
E	Tender Cost (A+D)				1968791.83
8	GST @ 18% on 1.3 Supervision Charges			18%	2882.88
9	Price Escalation on net material cost			0	0.00
F	SUB-TOTAL (E + 8)				1971674.71
G	Estimate Cost for calculation of sup charges (A+4)				1600554.02
10	HO Supervision Charges @ 1.3% of Material and Supervision Charges (1.3% of G)				20807.20
11	Interest During Construction of F			0.00%	0.00
12	Total GST on (10) @ 18%			18.00%	3745.30
13	Total Supervision Chares (10+12)				24552.50
TOTAL ESTIMATE COST (F +11 + 13)					1996227.21

22 KV SEM Metering Estimate - For Main & Check Meter

Sr. No.	Particulars	Unit	Qty	Rate	Amount
1	22 KV metering cubical with CTs & PTs but without meter	Nos	2	125000	250000.00
2	Lightening Arrestor (22 KV)	Set	2	9900	19800.00
3	Chain Link Fencing	LS	1	208965.04	208965.04
4	Metal Spreading	LS	1	130945	130945.00
5	Meter room 3 X 2.5 Meter	LS	1	100000	100000.00
6	Energy Meter with ABT features 0.2S Class	Nos	2	140000	280000.00
7	Meter Enclosure	Nos	2	10000	20000.00
8	RSJ 152 X 152, 11m long	Nos	4	17887	71548.00
9	GI Channel 100X50X6 mm	Kg	300	50.78	15234.00
10	GI Angle 50X50X6 mm	Kg	100	50.78	5078.00
11	GI Flat 50X50X6 mm	Kg	120	50.78	6093.60
12	GI Nust Bolts	Kg	40	82.88	3315.20
13	ACSR conductore	Rmt	30	50.8	1524.00
14	Palm type clamp (compression type)	Nos	12	928.43	11141.16
15	Clamps for 22 KV CT	Nos	6	1425.46	8552.76
16	22 KV Pin Insulator	Nos	6	335.98	2015.88
17	11 KV Disc Insulator	Nos	18	344.48	6200.64
18	22 KV Tensionhardware set	Nos	6	463	2778.00
19	Armoured copper control cable 2CX2.5 sqmm	Rmt	80	55.73	4458.40
20	Cable glands, Ferulesand tape etc	LS	1	1100	1100.00
21	Earthing Set HT	Nos	4	335.51	1342.04
22	Concreting Ratio1:3:6	Cmt	8	2892	23136.00
23	Aluminium Pain for 1 Coat	Ltr	2	93.93	187.86
24	Red Oxide Paint for 2 Coats	Ltr	2	60	120.00
25	Sundries Such as Nuts Washer etc	LS	1	1500	1500.00
A	TOTAL MATERIAL COST				1175035.58
1	Transportation on Material			12.00%	141004.27
2	T&P on Material Cost			3.00%	35251.07
3	Contigencies on material			1.50%	17625.53
4	Erection Cost			45.00%	528766.01
5	Contractor Supervision Charges on Material			5.00%	58751.78
6	Insurance, Labour & Finance Cost			5.00%	58751.78
B	TOTAL SERVICES (1+2+3+4+5+6)			71.50%	840150.44
C	SUB-TOTAL (A + B)				2015186.02
7	Profit on (C)			4.00%	80607.44
D	Centages (B + 7)				920757.88
E	Tender Cost (A+D)				2095793.46
8	GST @ 18% on 1.3 Supervision Charges			18%	2882.88
9	Price Escalation on net material cost			0	0.00
F	SUB-TOTAL (E + 8)				2098676.34
G	Estimate Cost for calculation of sup charges (A+4)				1703801.59
10	HO Supervision Charges @ 1.3% of Material and Supervision Charges (1.3% of G)				22149.42
11	Interest During Construction of F			0.00%	0.00
12	Total GST on (10) @ 18%			18.00%	3986.90
13	Total Supervision Chares (10+12)				26136.32
TOTAL ESTIMATE COST (F +11 + 13)					2124812.66

33 KV SEM Metering Estimate - For Main & Check Meter

Sr. No.	Particulars	Unit	Qty	Rate	Amount
1	33 KV CT for Metering (Class 0.2S) 15VA	Nos	6	25250	151500.00
2	33 KV PT (33KV/110V, Core-1, Class 0.2, 50 VA) for metering	Nos	6	18898	113388.00
3	Lightening Arrestor (33 KV)	Set	2	9900	19800.00
4	Chain Link Fencing	LS	1	208965.04	208965.04
5	Metal Spreading	LS	1	130945	130945.00
6	Meter room 3 X 2.5 Meter	LS	1	100000	100000.00
7	Energy Meter with ABT features 0.2S Class	Nos	2	140000	280000.00
8	Meter Enclosure	Nos	2	10000	20000.00
9	RSJ 152 X 152, 11m long	Nos	4	17887	71548.00
10	GI Channel 100X50X6 mm	Kg	300	50.78	15234.00
11	GI Angle 50X50X6 mm	Kg	100	50.78	5078.00
12	GI Flat 50X50X6 mm	Kg	120	50.78	6093.60
13	GI Nust Bolts	Kg	40	82.88	3315.20
14	ACSR conductore	Rmt	30	50.8	1524.00
15	Palm type clamp (compression type)	Nos	12	928.43	11141.16
16	Clamps for 33 KV CT	Nos	6	1450	8700.00
17	33 KV Pin Insulator	Nos	6	541.38	3248.28
18	11 KV Disc Insulator	Nos	18	344.48	6200.64
19	33 KV Tensionhardware set	Nos	6	463	2778.00
20	Armoured copper control cable 2CX2.5 sqmm	Rmt	80	55.73	4458.40
21	Cable glands, Ferulesand tape etc	LS	1	1100	1100.00
22	Earthing Set HT	Nos	4	335.51	1342.04
23	Concreting Ratio1:3:6	Cmt	8	2892	23136.00
24	Aluminium Pain for 1 Coat	Ltr	2	93.93	187.86
25	Red Oxide Paint for 2 Coats	Ltr	2	60	120.00
26	Sundries Such as Nuts Washer etc	LS	1	1500	1500.00
A	TOTAL MATERIAL COST				1191303.22
1	Transportation on Material			12.00%	142956.39
2	T&P on Material Cost			3.00%	35739.10
3	Contigencies on material			1.50%	17869.55
4	Erection Cost			45.00%	536086.45
5	Contractor Supervision Charges on Material			5.00%	59565.16
6	Insurance, Labour & Finance Cost			5.00%	59565.16
B	TOTAL SERVICES (1+2+3+4+5+6)			71.50%	851781.80
C	SUB-TOTAL (A + B)				2043085.02
7	Profit on (C)			4.00%	81723.40
D	Centages (B + 7)				933505.20
E	Tender Cost (A+D)				2124808.42
8	GST @ 18% on 1.3 Supervision Charges			18%	2882.88
9	Price Escalation on net material cost			0	0.00
F	SUB-TOTAL (E + 8)				2127691.30
G	Estimate Cost for calculation of sup charges (A+4)				1727389.67
10	HO Supervision Charges @ 1.3% of Material and Supervision Charges (1.3% of G)				22456.07
11	Interest During Construction of F			0.00%	0.00
12	Total GST on (10) @ 18%			18.00%	4042.09
13	Total Supervision Chares (10+12)				26498.16
TOTAL ESTIMATE COST (F +11 + 13)					2154189.46