

Dated the 1st December, 2014

OFFICE MEMORANDUM

Subject: North Eastern Region Power system Improvement Project (NERPSIP) for six(6) States (Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland) for strengthening of the Intra State Transmission and Distribution System.

Sanction of the President of India is conveyed to the "North Eastern Region Power System Improvement Project (NERPSIP) for Six(6) States (Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland) for strengthening of the Intra-State Transmission and Distribution Systems (33kV and above)" at a total estimated cost of Rs.5111.33 Crore (at Feb, 2014 price level) with the completion schedule of 48 months from the date of release of first instalment of funds.

2. The total estimated cost of the scheme of Rs.5111.33 crore comprising Project Cost of Rs.5022.33 Crore including consultancy fee @ 12% of the executed cost and capacity building expenditure of Rs.89 crore. The detailed break up is given in **Annex-I**. The scheme will be implemented as a Central Sector Scheme through Power Grid Corporation of India Ltd (PGCIL). The scheme will be funded by the Government of India through the Budget of Ministry of Power and the World Bank on 50:50 basis. The Capacity Building expenditure of Rs.89 Crore will be funded entirely by Government of India through the Budget of Ministry of Power. The States will reimburse various State level taxes and duties as may be applicable to this project.

3. The beneficiary States, that is, Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland will be responsible for Operation & Maintenance of the Transmission and Distribution System, which would be transferred to them upon its commissioning as per the terms and conditions of the Agreement(s) to be signed in this regard between PGCIL and State Utility(s)/State Government(s). Copy of the signed Agreement(s) may be submitted to Ministry of Power within two months.

4. State Government(s) will ensure that there is no duplication of work between Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and that the scheme is also duly integrated with the downstream Distribution system.

5. The detailed/broad scope of works is attached at **Annex-II**.

6. The details of year-wise phasing of expenditure and State-wise cost estimates for the project are at **Annex-III**.

7. PGCIL will submit quarterly report to the Ministry of Power indicating financial and physical progress of implementation of activities covered by this sanction.

8. The expenditure to be incurred on the above scheme would be debitable to approved budget grant No.2552.00.799.02.01.28 of the Ministry of Power for the year 2014-15 and relevant Budget head of the subsequent years.

9. This issues with the concurrence of Integrated Finance Division of Ministry of Power vide their Dy.No. 192/Fin./2014 dated 1.12.2014.



(S. Venkateshwarlu)

Under Secretary to the Government of India

Tele-fax: 011-2332 5242

Email: transdosk-mop@nic.in

To

1. Commissioner & Secretary (Power), Assam
2. Secretary (Power), Mizoram
3. Principal Secretary (Power), Tripura
4. Commissioner (Power), Manipur
5. Commissioner & Secretary (Power), Meghalaya
6. Secretary (Power), Nagaland
7. CMD, PGCIL, Gurgaon, Haryana.

Copy, along with enclosures, forwarded to the following for information:

1. Cabinet Secretariat [Kind Attn: Shri S.G.P. Verghese, Director (Cabinet), Rashtrapati Bhavan, New Delhi] with reference to minutes of meeting of the Cabinet held on 20.11.2014 issued vide Cabinet Secretariat Memo No. 51/CM/2014(i) dated 24.11.2014.
2. Prime Minister's Office (Kind Attn: Shri Satosh D. Vaidya, Director) with reference to their PMO ID No. 210/31/C/29/2014-ES.I dated 21.8.2014.
3. Controller of Accounts, Ministry of Power, Sewa Bhavan, RK Puram, New Delhi.
4. Pay & Accounts Officer, Ministry of Power, New Delhi.
5. Principal Director of Audit, Economic & Service Ministry, AGCR Building, Near ITO, New Delhi-110002.
6. Chairperson, Central Electricity Authority, RK Puram, New Delhi.
7. Secretary, Planning Commission, Yojana Bhavan, New Delhi.
8. Secretary, Department of Expenditure, North Block, New Delhi.
9. Secretary, Department of Economic Affairs, North Block, New Delhi.
10. Secretary, M/o.DONER, Vigyan Bhavan Annexe, New Delhi.

Copy for information to: PPS to Secretary(Power)/ SS(DC)/ JS (Trans)/ JS&FA/ Director (Trans).

Sl. No.	Description	Assam#			Manipur#			Meghalaya#			Mizoram			Nagaland			Tripura#			TOTAL		
		Trans.	Dist.	Total	Trans.	Dist.	Total	Trans.	Dist.	Total	Trans.	Dist.	Total	Trans.	Dist.	Total	Trans.	Dist.	Total	Trans.	Dist.	Total
A	Preliminary Survey & Soil Investigation	1.67	0.23	1.90	0.89	0.06	0.95	0.92	0.11	1.03	0.84	0.00	0.84	1.54	0.04	1.58	1.39	0.44	1.83	7.25	0.88	8.13
B	Land Acquisition for Substation and R&R Compensation	100.21	8.00	108.21	3.50	6.50	10.00	35.11	5.50	40.61	11.67	0.50	12.17	2.90	5.00	7.90	38.14	17.00	55.14	191.53	42.50	234.03
C	Cost of Compensation for Transmission Lines																					
i	Compensation towards Crop, Tree & PTCC	11.29	2.00	13.29	14.50	0.56	15.06	4.59	0.99	5.58	4.12	0.03	4.15	5.53	0.38	5.91	10.39	3.85	14.24	50.42	7.81	58.23
ii	Compensation towards forest	8.73	7.92	16.65	5.36	2.20	7.56	57.40	3.93	61.33	54.63	0.10	54.73	79.59	1.52	81.11	18.13	15.28	33.41	223.84	30.95	254.79
D	Civil works																					
i	Infrastructure for Substations	31.22	7.37	38.59	6.96	5.98	12.94	7.30	5.06	12.36	8.09	0.46	8.55	14.25	4.60	18.85	23.04	15.65	38.69	90.86	39.12	129.98
ii	Non Resident Buildings	20.65		20.65	3.10		3.10	7.08		7.08	4.65		4.65	8.14		8.14	13.57		13.57	57.19	0.00	57.19
iii	Colony for Transmission Lines & Substations	105.46		105.46	18.44		18.44	40.92		40.92	27.66		27.66	46.10		46.10	73.96		73.96	312.54	0.00	312.54
E	Equipment (Supply & Erection Cost)																					
i	Transmission Lines	170.16	167.51	337.67	60.86	24.58	85.44	155.06	58.31	213.37	72.70	1.49	74.19	200.37	18.50	218.87	133.85	234.22	368.07	793.00	504.61	1297.61
ii	Substations	410.80	102.32	513.12	53.46	118.56	172.02	158.22	57.49	215.71	41.46	7.01	48.47	94.66	76.95	171.61	243.14	224.53	467.67	1001.74	586.86	1588.60
iii	Voice & Data Connectivity	20.60	16.21	36.81	10.90	10.43	21.33	15.60	7.47	23.07	9.46	0.69	10.15	11.17	7.57	18.74	10.86	26.95	37.81	78.59	69.32	147.91
F	Sub Total A To D	880.79	311.56	1192.35	177.97	168.87	346.84	482.20	138.86	621.06	235.28	10.28	245.56	484.25	114.56	578.81	566.47	537.92	1104.39	2806.96	1282.05	4089.01
G	Contingency (@3% of F)	26.42	9.35	35.77	5.34	5.07	10.41	14.47	4.17	18.63	7.06	0.31	7.37	13.93	3.44	17.36	16.99	16.14	33.13	84.21	38.46	122.67
H	Sub Total (F+G)	907.21	320.91	1228.12	183.31	173.94	357.25	496.67	143.03	639.69	242.34	10.59	252.92	478.18	118.00	596.17	583.46	554.06	1137.52	2891.17	1320.51	4211.68
I	Cost for Consultancy fee(H-B)	807.00	312.91	1119.91	179.81	167.44	347.25	461.56	137.53	599.08	230.67	10.09	240.75	475.28	113.00	588.27	545.32	537.06	1082.38	2699.64	1278.01	3977.65
J	POWERGRID consultancy Fee @12% on I and service tax thereon	108.81	42.19	151.00	24.24	22.58	46.82	62.23	18.54	80.78	31.10	1.36	32.46	64.08	15.24	79.32	73.53	72.41	145.94	364.00	172.32	536.31
K	Total Project Cost Including consultancy Fees(H+J)	1016.02	363.10	1379.12	207.55	196.51	404.06	558.90	161.57	720.47	273.44	11.95	285.39	542.26	133.23	675.49	656.99	626.47	1283.46	3255.17	1492.82	4747.99
L	Interest During Construction (IDC) *	59.04	20.81	79.85	12.03	11.29	23.32	32.41	9.22	41.63	15.86	0.68	16.54	31.44	7.65	39.09	38.12	35.79	73.91	188.90	85.44	274.34
M	Grand Total	1075.06	383.91	1458.97	219.58	207.80	427.38	591.31	170.79	762.10	289.30	12.63	301.93	573.70	140.88	714.58	696.11	662.26	1357.37	3444.07	1578.26	5022.33
N	Capacity Building	7.42	7.42	14.83	7.42	7.42	14.83	7.42	7.42	14.83	7.42	7.42	14.83	7.42	7.42	14.83	7.42	7.42	14.83	44.50	44.50	89.00
O	TOTAL PROJECT COST	1082.48	391.32	1473.80	227.00	215.22	442.22	598.73	178.21	776.93	296.72	20.04	316.76	581.12	148.30	729.42	702.53	669.68	1372.20	3488.57	1622.76	5111.33

- Assam/ Manipur/ Meghalaya/ Tripura have unbundled utilities as separate Transmission and Distribution Companies. Thus there shall be 10 Utilities in six (6) States as of now.

* Interest During Construction(IDC) is considered on World Bank Loan portion only.

Scope of works to be implementedScope of Work – State-wise positionAssam-(A) Scope of works under DPR of "Intra State : Assam – Transmission / Sub-transmission(132kV & above)"

Summary of the transmission / Sub transmission system planned for Assam is as under :

- 260 km of new 220 & 132 kV transmission lines
- 116 Km of stringing of additional circuit
Total line : 376 km
- 679 Km of Optical Fibre Ground Wire (OPGW) installation
- **11 new sub-stations** : 220 kV- 2 Nos. & 132 kV – 09 Nos.
- Augmentation works of 9 existing sub-stations
Total transformation capacity addition 1644 MVA.

(B) Scope of works under DPR of "Intra State : Assam – Distribution (Upto 33 kV)"

Summary of the distribution system planned for Assam is as under :

- **16 nos. New 33/11 kV substations** – 240 MVA
- Augmentation S/s-Nil
Total Capacity Addition-240MVA
- Addition of 33 kV single line bays in existing 33 /11 kV s/s -29 nos.
- Addition of 33 kV single line bays in existing 132/33 kV s/s- 3 nos.
- 33 kV Single circuit Overhead line-399 km,
- Single circuit underground 33 kV cable-64KM,
- Double circuit underground 33 kV cable-16km
- **Total 33kV Line length-479km**
- 470 km of OPGW installation

Manipur-(A) Scope of works under DPR of "Intra State : Manipur – Transmission / Sub-transmission(132kV & above)"

Summary of the transmission / Sub transmission system planned for Manipur is as under :

- 226 Km of new 220 & 132 kV transmission lines,
- 91 Km of renovation of existing line
Total line length-317km
- 390 Km of OPGW installation
- **2 new sub-stations,**
- Augmentation works of 4 existing sub-stations and
- **Transformation capacity addition of about 160 MVA**

(B) Scope of works under DPR of "Intra State : Manipur – Distribution (Upto 33 kV)"

Summary of the distribution system planned for Manipur is as under :

- **13 nos. New 33/11 kV substations** – 117.8 MVA
- Augmentation S/s-22 Nos. Capacity Addition-111.6MVA
Total Capacity Addition-229.4 MVA
- Addition of 33 kV Single line bays in existing 33 /11 kV s/s -7 nos.
- 33 kV Single circuit Overhead line-106 km,
- 33 kV Single circuit underground cable-5KM,
- **Total 33kV Line length-111km**
- 365 km of OPGW installation

Meghalaya-

- (A) Scope of works under DPR of "Intra State : Meghalaya – Transmission / Sub-transmission(132kV & above)"

Summary of the transmission / Sub transmission system planned for Meghalaya is as under :

- **416 Km of new 220 & 132 kV transmission lines,**
- 570 Km of OPGW installation
- **4 nos. of new sub-stations**
- **Total transformation capacity addition 940 MVA,**
- Augmentation work of 1 no. of existing sub-stations

- (B) Scope of works under DPR of "Intra State : Meghalaya - Distribution (Upto 33 kV)"

Summary of the distribution system planned for Meghalaya is as under :

- **11 nos. New 33/11 kV substations –120 MVA**
- Augmentation S/s-2 Nos. Capacity Addition-15 MVA
Total Capacity Addition-135 MVA
- Addition of 33 kV Single line bays in existing 33 /11 kV s/s -4 nos.
- 33 kV Single circuit Overhead line-198 km,
- 33kV line Reconductoring-65kM
Total line length – 263km
- 570 km of OPGW installation

Mizoram-

- (A) Scope of works under DPR of "Intra State : Mizoram – Transmission / Sub-transmission (132kV & above)"

Summary of the transmission / Sub transmission system planned for Mizoram is as under :

- **214 Km of new 220 & 132 kV transmission lines**
- 310 Km of OPGW installation
- **3 new sub-stations,**
- Augmentation works of 1 existing sub-station
- **Transformation capacity addition of about 125 MVA**

- (B) Scope of works under DPR of "Intra State : Mizoram - Distribution (Upto 33 kV)"

Summary of the distribution system planned for Mizoram is as under :

- **1 nos. New 33/11 kV substations –6.3 MVA**
- Replacement of 2nos. 33kV transformer bays in one existing 33 /11 kV s/s.
- 33 kV Single circuit overhead line-5.1 km,
- 33kV double circuit underground cable- 0.1kM
Total line length – 5.2km
- 5 km of OPGW installation

Nagaland-

- (A) Scope of works under DPR of "Intra State : Nagaland – Transmission / Sub-transmission(132kV & above)"

Summary of the transmission / Sub transmission system planned for Nagaland is as under:

- **376 Km of new 220 & 132 kV transmission lines**
- 467 Km of OPGW installation
- **5 new sub-stations,**
- Augmentation works of 1 existing sub-stations and
- **Transformation capacity addition of about 245 MVA**

- (B) Scope of works under DPR of "Intra State : Nagaland - Distribution (Upto 33 kV)"

Summary of the distribution system planned for Nagaland is as under :

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- 10 nos. new 33/11 kV substations –115 MVA
- Augmentation S/s-12 Nos. Capacity Addition-75 MVA
Total Capacity Addition-190 MVA
- Addition of 33 kV Single line bays in existing 33 /11 kV s/s -8 nos.
- **33 kV Single circuit overhead line-76.5 km**
- 253 Km of OPGW installation.

Tripura-(A) Scope of works under DPR of "Intra State : Tripura – Transmission / Sub-transmission(132kV & above)"

Summary of the transmission / Sub transmission system planned for Tripura is as under :

- **415 Km of new 220 & 132 kV transmission lines,**
- 525 Km of OPGW installation
- **8 nos. new sub-stations**
- **Total transformation capacity addition 1306.5 MVA,**
- Augmentation works of 5 nos. existing sub-stations

(B) Scope of works under DPR of "Intra State : Tripura - Distribution (Upto 33 kV)"

Summary of the distribution system planned for Tripura is as under :

- **34 nos. new 33/11 kV substations –360 MVA**
- Augmentation S/s-13 Nos. Capacity Addition-90.5 MVA
Total Capacity Addition-450.5 MVA
- R&M of exiting 33/11kV S/s -13 Nos.
- Addition of 33 kV Single line bays in existing 33 /11 kV s/s -14 nos.
- Addition of 33 kV two line bays in existing 33 /11 kV s/s -4 nos.
- Addition of 33 kV three line bays in existing 33 /11 kV s/s -1 nos.
- 33 kV Single circuit overhead line-770 km,
- Reconductoring of 33 kV Existing line -326km
- **Total line length-1096km**

I. Tabulated summary of the works described in I above.

	Transmission (132kV & above)			Distribution(upto 33kV)		
	Line (CKm)	New S/s (No)	Total MVA (New & Augmentation)	Line (CKm)	New S/s (No)	Total MVA (New & Augmentation)
Assam	376	11	1644	479	16	240
Manipur	317	2	160	111	13	229.4
Meghalaya	416	4	940	263	11	135
Mizoram	214	3	125	5.2	1	6.3
Nagaland	376	5	245	76.5	10	190
Tripura	415	8	1306.5	1096	34	450.5
Total	2114	33	4420.5	2030.7	85	1251.2

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The year-wise phasing of expenditure for the project:

(Figures in Rs. Crore)

SI No	Funding		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
A	World Bank	Project Cost	100.00	366.00	620.67	763.59	494.72	166.185	2511.165
		Project Cost	100.00	366.00	620.67	763.59	494.72	166.185	2511.165
B	Gol	Cap. Building	0.00	17.80	26.70	35.60	8.90	0	89.00
		Total = B	100.00	383.80	647.37	799.19	503.62	166.185	2600.165
C	Total = (A+B)		200.00	749.80	1268.04	1562.78	998.34	332.37	5111.33

I. State-wise cost estimates of the project

(Figures in Rs. Crore)

	World Bank	Government of India		Total
	Project Cost	Project Cost	Capacity Building	
Assam	729.485	729.485	14.83	1473.803
Manipur	213.690	213.690	14.83	442.213
Meghalaya	381.050	381.050	14.83	776.933
Mizoram	150.965	150.965	14.83	316.763
Nagaland	357.290	357.290	14.83	729.413
Tripura	678.685	678.685	14.83	1372.203
Sub Total	2511.165	2511.165	89	5111.33
Total	2511.165	2600.165		

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