PROGRESS REPORT UP TO MARCH 2016

Rs. in Crore

Annexure_I(A)

Status of Powergrid Projects: Transmission Lines

PART - I : पारेषण लाईनस TRANSMISSION LINES

क्रमांक Sl. No.	पारेषण लाईन का नाम Name of the Trans line	लंबाई (सीकेएम) Length	भा.स./नि. मं अनुमोदन	लागत (अनुमोदित) /प्रत्याशित	संपूर्ति लक्ष्य Completi		Remarks / Constraints & assistance required.
					Sch. IA / BPTA* whichever later	*प्रत्या./ वास्त. Ant./ Act.*	
	EASTERN REGION						
1.	**Transmission System for Development of Pooling Station in Northern region Part of West Bengal and Transfer of Power from BHUTAN to NR/WR.**	**168**	**Apr'10**	**4404.57**	**Jan'15**	**Mar'17**	Gen. project delayed (ant. in 2017 -18). Works slowed down to the extent feasible to match Genaration.
1.1	LILO of Bishwanath Chariali - Agra HVDC line at New Pooling Station in Alipurduar for parallel operation of the HVDC stn.	24				Sep'16	Work under progress. Commissioning matching with associated HVDC terminal.
1.2	LILO of 400KV D/C Bongaigaon - Siliguri line (Pvt. Sector line) at New Pooling Station in Alipurduar	13				Sep'16	Completion matching with Alipurduar PS.
1.3	LILO of 400KV D/C Tala - Siliguri line at New Pooling Station in Alipurduar						SCOPE DELETED.
1.4	400KV D/C Punatsangchu-1 (Gen. Proj. in Bhutan) - Alipurduar line (HTLS Cond.) India Portion.	128				Mar'17	Wild life sanctuary involved. Case processed at NBWL & forwarded to State for further processes. Gen. expected beyond 2017-18.
1.5	LILO of 220KV D/C Birpara - Salakati line at New Pooling Station in Alipurduar	3				Sep'16	Completion matching with Alipurduar PS.

PROGRESS REPORT UP TO MARCH 2016

Rs. in Crore

क्रमांक Sl. No.	पारेषण लाईन का नाम Name of the Trans line	लंबाई (सीकेएम) Length	भा.स./निं. मं अनुमोदन	लागत (अनुमोदित) /प्रत्याशित	संपूर्ति लक्ष्य Completi		Remarks / Constraints & assistance required.
					Sch. IA / BPTA* whichever later	प्रत्या./ वास्त. Ant./ Act.	
2.	**Transmission System for Transfer of Power from Generation Project in SIKKIM to NR/WR Part - A.**	**52**	**May'10/ Mar'16**	**390.51**	**Jan'13/ Mar'16**	**May'16**	ICT-II expected by May'16
2.1	LILO of Siliguri (Existing) - Purnea 400KV D/C line (Q) at New Pooling station at Kishanganj	16				Mar'16	Line commissioned in Mar'16.
2.2	LILO of Siliguri - Dalkhola 220KV D/C line at New Pooling station Kishanganj	36				Mar'16	Line commissioned in Mar'16.
3.	**Eastern Region Strengthening Scheme - III**	**716**	**July'10/ Mar'16**	**1731.1**	**Nov'12/ Dec'16**	**Mar'17**	
3.1	400KV D/C Sasaram - Deltonganj line	392				Mar'17	Completion matching with Daltanganj S/s delayed due to non-availibility of sub station land (land acquired in May'15).
3.2	LILO of 400KV D/C Baripada - Mendhasal at Pandiabil (In place of 400KV D/C Mendhasal-Uttra line)	56				May'16	Completion matching with Pandiabil sub station.
3.3	LILO of 400KV D/C Kahalgaon - Biharshariff line (Ist line) at Lakhisarai	64				Mar'14	Line commissioned in Mar'14
3.4	LILO of 400KV D/C Kahalgaon - Biharshariff line (2nd line) at Banka	56				Nov'12	Line commissioned in Nov'12.
3.5	LILO of 400KV S/C Meramundali - Jeypore line at Bolangir	42				Aug'12	Line commissioned in Aug'12.
3.6	LILO of 400KV S/C Rengali - Baripada line at Keonjhar	18				Jan'13	Line commissioned in Jan'13.

PROGRESS REPORT UP TO MARCH 2016

Rs. in Crore

क्रमांक Sl. No.	पारेषण लाईन का नाम Name of the Trans line	लंबाई (सीकेएम) Length	भा.स./नि. मं अनुमोदन	लागत (अनुमोदित) /प्रत्याशित	संपूर्ति लक्ष्य Completi		Remarks / Constraints & assistance required.
					Sch. IA / BPTA* whichever later	प्रत्या./ वास्त. Ant./ Act.	
3.7	LILO of 400KV D/C (one ckt) Baripada - Mendhasal line at Dubri (OPTCL)	32				Jul'15	Line ready for commissioning in Jul'15 & commissioned alongwith extn. of Dubri (OPTCL) S/s in Aug'15
3.8	LILO of 400KV D/C (both ckt) Jamshedpur - Rourkela line at Chaibasa	56				Nov'14	Line charged & ready for commissioning in Nov'14.
4.	**Transmission System for Phase-I Generation Projects in ORISSA- Part- A.**	**689**	**Sep'10/ Feb'15**	**2348.37**	**Mar'13/ Jun'15**	**Jan'16**	
4.1	765KV S/C Angul Pooling station - Jharsuguda Pooling station line -I (Incl. Common D/C portion -212 locs. of total line)	274				Mar'15	Line commissioned in Mar'15.
4.2	765KV S/C Angul Pooling station - Jharsuguda Pooling station line -II	284				Jan'16	Line commissioned in Jan'16
4.3	LILO of 400KV D/C Rourkela - Raigarh at Jharsuguda Pooling stn.	88				May'13	Ckt-I of LILO line commissioned in Mar'13 (44 Ckm) & Ckt-II in May'13 (44 Ckm).
4.4	LILO of 400KV S/C Meramunali - Jeypore at Angul Pooling stn.	9				Mar'13	LILO line commissioned in Mar'13.
4.5	LILO of one ckt 400KV D/C Talchar - Meramundali at Angul Pooling station.	34				Mar'14	Line commissioned in Mar'14.
5.	**Transmission System for Transfer of Power from Generation Project in SIKKIM to NR/WR Part - B.**	**789**	**Mar'11**	**1585.12**	**Nov'13**	**Apr'16**	
5.1	400KV D/C Kishanganj - Patna line (Quad)	692				Mar'16	Line commissioned in Mar'16.

PROGRESS REPORT UP TO MARCH 2016

Rs. in Crore

क्रमांक Sl. No.	पारेषण लाईन का नाम Name of the Trans line	लंबाई (सीकेएम) Length	भा.स./नि. मं अनुमोदन	लागत (अनुमोदित) /प्रत्याशित	संपूर्ति लक्ष्य Completi		Remarks / Constraints & assistance required.
					Sch. IA / BPTA* whichever later	*प्रत्या./ वास्त. Ant./ Act.*	
5.2	LILO of 400KV D/C Teesta-V - Siliguri line at Rangpo (1 D/C & 1.5 M/C)	15				Oct'14	Ckt-I (7 Ckm) commissioned in Apr'14 & Ckt-II (8 ckm) commissioned in Oct'14.
5.3	LILO of Teesta-III - Kishanganj 400KV D/C (Q) at Rangpo (21 D/C+1.5 M/C) (being constructed under JV route)	21				Apr'16	LILO - IN portion completed & test charged in Mar'16. LILO - OUT now being proposed for deferement due to delayed clearance/Generation.
5.4	220KV D/C Rangpo - New Melli line (twin moose) (20.5 D/C & 1.5 M/C)	54				May'15	Line commissioned on 19.05.15
5.5	LILO of 132KV S/C Gangtok - Rangit line at Rangpo	7				Nov'14	Ckt-I commissioned in Apr'14 (terminated as Chuzachan)-1 Ckm. Balance commissioned in Nov'14.
6.	**Transmission System for Phase-I Generation Projects in Jharkhand and West Bengal - Part - A1.**	**372**	**Oct'11**	**558.26**	**Nov'13**	**Jun'16**	**Gen. Project delayed (ant. in 2016-17 & beyond)**
6.1	400KV D/C Ranchi - Jharkhand Pooling Stn. line (Quad)	138				Jun'16	Testing under progress. Completion matching with Jharkhand Pool & Jharkhand Pool bay at line.
6.2	400KV D/C Jharkhand Pool - Gaya line (Quad)	234				Jun'16	Permission to work received in May'15. Repeated stoppage of work by extremists affecting progress.
7.	**Split Bus Arrangement for avrious Sub Stations in Eastern Region**	**56**	**Mar'13 / Jan'16**	**146.73**	**Jun'14 / Mar'16**	**May'16**	

PROGRESS REPORT UP TO MARCH 2016

Rs. in Crore

क्रमांक Sl. No.	पारेषण लाईन का नाम Name of the Trans line	लंबाई (सीकेएम) Length	भा.स./नि. मं अनुमोदन	लागत (अनुमोदित) /प्रत्याशित	संपूर्ति लक्ष्य Completi		Remarks / Constraints & assistance required.
					Sch. IA / BPTA* whichever later	प्रत्या./ वास्त. Ant./ Act.	
7.1	400KV D/C trans. Line for swapping of Purnea baya (1&2) with Sasaram bays (#3&4) at Biharshariff S/Stn.	10				May'16	ROW problem being encountered. Critical.
7.2	400KV D/C trans. Line for swapping of Kahalgaon #1 bay with Sasaram # 1 bay at Biharshariff S/Stn.	20				Apr'15	Commissioned in Apr'15.
7.3	400KV D/C trans. Line for reconfiguration of Biharshariff Ckt III&IV from its present position to St.-II side of Kahalgaon Sw. yd. of NTPC	26				May'16	Bay at NTPC yet to be awarded. Critical
8.	**Eastern Region Strengthening Scheme-V**	**961**	**Oct'13**	**1364.52**	**Apr'16**	**Sep'16**	
8.1	400KV D/C Rajarhat - Purnea line (Tripal) (with LILO of one ckt at Gokarana (WBSETCL) & other ckt at Farraka (NTPC).	953				Sep'16	Severe ROW problem in Jharkhand area.
8.2	LILO of Subhashgram -Jeerat 400KV S/C line at Rajarhat	8				Jun'16	
9.	**Eastern Region Strengthening Scheme - XIII**	**86**	**May'14**	**121.38**	**Nov'16**	**Mar'16**	
9.1	Re- conductoring of 400KV D/C Farakka-Malda line (HTLS Cond.) with associated bays.	86				Mar'16	Line charged in Mar'16
10.	**Transmission System Associated with Darlipalli TPS**	**148**	**Jan'16**	**187.04**	**Jun'18**	**Jun'18**	Compln Sch. 29 months from IA.
10.1	765KV D/C Darlipalli TPS - Jharsuguda (Sundergarh) Pooling Stn. line	148				Jun'18	Award placed in Jan'16.

Annexure_I(B)

Status of Powergrid Projects: Sub Station

PART - II : सब स्टेशन SUBSTATION

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविकAnt./ Act	
	EASTERN REGION						
1	**Transmission System for Development of Pooling Station in Northern region Part of West Bengal and Transfer of Power from BHUTAN to NR/WR.**		**April'10**		**Jan'15**	**Mar'17**	Compln. Sch. - * 57 months tentatively from the date of investment approval subject to CERC concurrence, such that additional Return on equit @05% is admissible.
1.1	400/220KV HVAC & 3000MW +/-800KV HVDC New Pooling Station in Alipurduar	2x315		ABB		Sep'16	Award placed in Mar'11. Supply, civil works & erection under progress. Land under acqurisation. Partly land acquired.
1.2	Extn. of +/- 800KV HVDC at Agra with 3000MW.			ABB		Sep'16	work under progress.
2	**Transmission System for Transfer of Power from Generation Project in SIKKIM to NR/WR Part - A.**		May'10		**Jan'13**	**May'16**	
2.1	400/220/33 KV Kishanganj Sub station (GIS)	2x315		Pinggao		May'16	Sub station commissioned alongwith ICT-I in Mar'16. ICT-II expected by May'16.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविक Ant./ Act	
3	**Eastern Region Strengthening Scheme - III**		**July'10**		**Nov'12**	**Mar'17**	**Compln. Sch. - 28 months from date of investment approval**
3.1	400/220 KV Daltonganj	2x315		Alstom		Mar'17	Award was placed on Alstom. Due to delay in handing over land, M/s Alstom not agree to take up the work. Re-tendering under progress. **Down stream network also not envisaged by JSEB.**
3.2	400/220 KV Bolangir	2x315		KEC		Oct'12	Sub station with ICT-I commissioned in Aug'12 & ICT-II in Oct'12.
3.3	400/220 KV Keonjhar	2x315		KEC		Feb'13	Sub station commissioned alongwith ICT-I in Jan'13 & ICT-II in Feb'13.
3.4	400/220 KV Chaibasa	2x315		EMC		Jan'15	Sub station commissioned alongwith ICT-I in Nov'14 & ICT-II commissioned in Jan'15.
3.5	400/220 KV Uttara (Pandiabil)	2x500		Hysoung		May'16	Alternate land acquired at Pandiyabil. Land handed over in Mar'13. Supply, civil works & erection under progres. Progress severly affected due to repeted ROW ereated by local.
3.6	400/132 KV Lakhisarai	2x200		GET		May'14	ICT-I commissioned in Mar'14. ICT-II commissioned in May'14.
3.7	400/132 KV Banka	2x200		GET		Dec'12	Sub station commissioned with ICT-I in Nov'12 & ICT-II in Dec'12.
3.8	Extn. at 400KV Sasaram S/stn.			GET		Dec'16	Award placed in Feb'11. Supply, civil works & erection under progress.
3.9	Extn. at 400KV Dubri & Mendhasal S/Stn. (OPTCL)			KEC		Aug'15	Reactor at Dubri commissioned in Mar'14. Mendhhasal scope deleted. Bay at Dubri commissioning in Aug'15.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविक Ant./ Act	
4	**Transmission System for Phase-I Gen. Projects in ORISSA - Part - A.**		**Sep'10 / Feb'15**		**Mar'13/ Jun'15**	**Jan'16**	**BPTA Schedule Mar'13.**
4.1	765/400KV Pooling Station at Jharsuguda	2x1500		Siemens		Jan'16	400KV (02 nos) bays charged in Mar'13. ICT-I Commissioned in Jul'14 & ICT-II commissioned in Oct'14. Balance work in Jan'16..
4.2	765/400KV Pooling Station at Angul	4x1500		Siemens		Jan'16	400KV (02 nos) bays charged in Mar'13. ICT-I commissioned in Mar'15, ICT-II in Apr'15 & ICT-III in May'15 & ICT-IV commissioned in Jan'16.
5	**Transmission System for Transfer of Power from Generation Project in SIKKIM to NR/WR Part - B.**		Mar'11		**Nov'13**	**Apr'16**	
5.1	400/220/132KV Rangpo Sub station (GIS)	16x105 3x100		Hysoung		Apr'16	Sub station alongwith ICT-I (3x105. 1 Ph, & 1x100, MVA) commissioned in Apr'14. ICT-II (3x105. 1 Ph. & 1x100,) commissioned in May'14. 400kv ICT-III & IV, 220kv ICT-III commissioned in Jun'14. 400kv ICT-V commissioned in Jul'14. Bay completion matching with line.
5.2	220KV Switching station New Melli (GIS)			Alstom		May'15	Sub station commissioned in May'15
5.3	Extn. at 400/220KV Kishanganj S/Stn.			Ping. / KEC		Mar'16	Commissioned in Mar'16.
5.4	Extn. at 400/220KV Patna S/Stn.			GET		Feb'15	Extn. commissioned in Feb'15
6	**Transmission System for Phase-I Generation Projects in Jharkhand and West Bengal - Part - A.**	-	**Oct'11**		**Nov'13**	**Jun'16**	
6.1	400KV GIS Pooling Station (Jharkhand Pool) near Essar			Hysoung & L&T		Jun'16	Land acquired in Apr'13. Engg., supply, civil works & erection under progress.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविक Ant./ Act	
7	**Split Bus Arrangement for avrious Sub Stations in Eastern Region**	-	**Mar'13/ Jan'16**		**Jun'14 / Mar'16**	**May'16**	
7.1	Spliting arrangement with tie line breaker for 400KV Maithon & Durgapur S/stn.			BHEL		Jan'16	Extn. at Durgapur completed in Oct'15. Balance work completed in Jan'16.
7.2	Spliting arrangement with tie line breaker for 400KV Biharshariff Sub station			BHEL		May'16	Award placed in Aug'13. Supply, civil works & erection under progress.
8	**Eastern Region Strengthening Scheme - VIII**		**Aug'13/ Jan'16**		**April'15/ Feb'16**	**Feb'16**	**RCE approved in Jan'16**
8.1	Installation of 2x125MVAR BR at Muzaffarpur (one replace by 63MVAR)			Siemens		Mar'15	Commissioned in Mar'15.
8.2	Installation of 1x125MVAR BR at Rourkela & Indrawati Sub station			Siemens		Aug'15	Reactor at Rourkela commissioned in Feb'15 & Reactor at Indrawati in Aug'15.
8.3	Installation of 2x125MVAR BR at Jaypore (replaceing by 63MVAR)			Siemens		Nov'15	Commissioned in Nov'15.
8.4	Additionl ICT at 400/220KV Subhashgram S/stn.	1x500		Siemens		Jan'15	ICT commissioned in Jan'15.
8.5	Shifting of 2x50MVAR LR from Patna end of 400KV Kahalgaon/Barh-Patna line to Balia end of 400KV Patna-Balia			Siemens		Feb'16	Commissioned in Feb'16.
9	**Eastern Region Strengthening Scheme-V**		**Oct'13**		**Apr'16**	**Oct'16**	Compln. Sch. - 30 months from date of investment approval
9.1	400/220KV Rajarhat S/Stn. (GIS)	2x500		Siemens		Oct'16	Supply, Civil works & erection under progress. Land acquired in Feb'14.
9.2	Extn at 400KV Farakka S/stn.			Sterling & Willsion		Jun'16	Award placed in Mar'15. Supply, Civil works & erection under progress.
9.3	Extn at 400KV Gokarna S/stn.					Jun'16	Award placed in Mar'15. Supply, & Civil works under progress.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविक Ant./ Act	
10	**Eastern Region Strengthening Scheme-IX**		**Feb'14**		**Feb'16**	**Jun'16**	Compln. Sch. - 24 months from date of investment approval
10.1	Installation of 125 MVAR Bus Reactor at Gazwaka (1 no.), Rengali (2 nos.), Maithon (1 no.), Biharshariff (1 no.), Jamshedpue (2 nos.), Rourkela (1 no.) and Durgapur (2 nos.) Converting 2x80 MVAR LR at Gorakhpur end of Barh-II - Gorakhpur 400KV D/C line to 2x80MVAR Switchable LR.			BHEL		Jun'16	Awarded in Jun'14. Engg., supply, Civil work & erection under progress. Completion delayed due to delay in manufacturing of Reactors by M/s BHEL. Yet to be taken up.
10.2	ICT at 400/220KV at Muzaffarpur S/S.	500		Toshiba		Dec'15	Commissioned in Dec'15.
10.3	ICT at 220/132KV at Ara S/stn.	160		Toshiba		Dec'15	Commissioned in Dec'15.
10.4	Repl. 2 nos. ICT's, 500MVA to 315 MVA at 400/220KV Maithon S/stn.	370		Toshiba		Jun'16	Award placed in Oct'14. Engg., supply, civil work & erection under progress.
10.5	Procur. 500MVA ICT at 765/400KV Gaya S/stn.			Alstom		Jun'16	Award placed in Jun'15.
11	**Eastern Region Strengthening Scheme-XII**	**2100**	**May'14**		**Nov'16**	**Nov'16**	Compln. Sch. - 30 months from date of investment approval
11.1	Installation of 125 MVAR Bus Reactor at Baripada (1 no.) & Maithon (1 no.) with GIS bays. Conversion of 50 MVAR LR, presently installed at Jeerat end of Baharampur - Jeerat 400KV line as BR in parallel with existing BR at Jeerat.			Hysoung & L&T		Nov'16	Award placed in Oct'14. Engg., supply, civil works & erection under progress.
11.2	Addition of 500MVA ICT at 400/220KV Baripada S/stn.	500		Alstom		Nov'16	Awarded in Jun'14. Engg., supply, civil work & erection under progress.
11.3	Repl. 2 nos. ICT's, 315MVA to 500MVA at 400/220KV Purnea S/stn.	370		Alstom		Nov'16	ICT- I commissioned in Jul'15. Balance work under progress.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविकAnt./ Act	
11.4	Repl. 2 nos. ICT's, 315MVA to 500MVA at 400/220KV Pusali S/stn.	370		Alstom		Nov'16	ICT- I commissioned in Mar'16. Balance woprk under progress.
11.5	Repl. 2 nos. ICT's, 315MVA to 500MVA at 400/220KV Patna S/stn.	370		Alstom		Nov'16	Awarded in Jun'14. Engg. civil works, supply & erection under progress.
11.6	Shifting 1 no. ICT, 315MVA to 500 MVA at 400/220KV Jamshedpur S/S.	185		Alstom		Nov'16	Awarded in Jun'14. Engg., supply & civil work under progress.
11.7	Shifting 1 no. ICT, 315MVA to 500 MVA at 400/220KV Farakka S/S.	185		Alstom		Nov'16	Awarded in Jun'14. Engg., supply, civil work & erection under progress.
11.8	Repl. 1 no. ICT's, 100MVA to160MVA at 220/132KV Siliguri S/stn.	60		Alstom		Jan'16	Commissioned in Jan'16.
11.9	Repl. 1 no. ICT's, 100MVA to160MVA at 220/132KV Purnea S/stn.	60		Alstom		Feb'16	Commissioned in Feb'16.
11.10	Repl. 1 no. ICT's, 100MVA to160MVA at 220/132KV Birpara S/stn.	60		Alstom		Dec'15	Commissioned in Dec'15.
11.11	Modification of 132KV Bus arrangement at 220/132 KV Siliguri & Purnea S/stn. with GIS bays.	-		Hysoung & L&T		Nov'16	Awarded in Oct'14.Supply, civil works & erection under progress.
11.12	Const. of 4 nos 220KV GIS line bays at Kishanganj S/stn.	-		Hysoung & L&T		Nov'16	Awarded in Oct'14.Supply, civil works & erection under progress.

PROGRESS REPORT UP TO MARCH 2016

क्रमांक Sl. No.	सब स्टेशन का नाम Name of the Sub -Station	एम.वी.ए अनुपात MVA Ratio	भा.स./नि.मं अनुमोदन GoI / BoD Approval	इरेकशन ठेकेदार Erection Contractor	संपूर्ति लक्ष्य Completion Tgt.		Remarks
					Schedule	प्रत्याशित/ वास्तविक Ant./ Act	
12	**Eastern Region Strengthening Scheme - XIII**		**Nov'14**		**Nov'16**	**Mar'16**	
12.1	Upgradation of Bays at Ferakka & Malda S/stn.			Alstom		Mar'16	Charged in Mar'16.
13	**Sub station extn. works associated with Eastern Region Strengthening Scheme - VII**		**Mar'15**		**Mar'17**	**Mar'17**	Compln. Sch. - 24 months from date of investment approval
13.1	Extn at 400KV bays at 400/220KV Purulia PSPP Sw.Yd., Kharagpur, Chaibasa and 765/400KV Ranchi S/stn. (02 nos. each)					Mar'17	Purulia & Kharagpur bays to be executed by West Bengal on deposit work basis. Bay at Purulia to be constructed in New S/S at Purulia (WBSETCL) due to space constraint. Interim arrangement to be made accordingly by WBSETCL. Work under progress.
13.2	Extn at 765/400KV Ranchi S/stn. end (2x50 MVAR LR) and 400/220KV Chaibasa S/stn. end (2x63 MVAR LR)			Empower		Mar'17	Award placed in Jun'15. Engg., supply & civil work under progress.
14	**Transmission System Associated with Darlipalli TPS**		**Jan'16**		**Jun'18**	**Jun'18**	Compln. Sch. - 29 months from date of IA
14.1	Extn. at 765KV at Jharsaguda (Sundergarh) Pooling Station.					Jun'18	Award under progress.

Annexure-II

Status of TBCB Transmission Projects

S. N.	SPV Name And Executing agency	Name of associated Project	BPC	Estd. Cost (Rs Cr)	Scope of works	Current Status
1		2	3	4	5	6
1	DMTCL (Essel Infraprojects Ltd.)	**Eastern Region System Strengthening Scheme-VI**	PFC	540		(i) LOI placed on 17.10.2013 (ii) Special Purpose Vehicle acquired on 10.12.2013 (iii) Tariff adoption approval issued by CERC on 20.5.2014 (iv) Transmission license received on 30.5.2014 (v) Clearance u/s 164 : received on 4/9/2014 (vi) Scheduled COD: Darbhanga Element : June 2016 Motihari Element : August 2016
					(i). 2x500 MVA, 400/220 kV GIS Substation at Darbhanga with space for future extension (500 MVA)	Land 100% Civil work 60% Equip Supply 40% (Structure material received at site. 400 kV and 220 kV GIS reached at port. Transformers under transit.) Equip. Erection 2%
					(ii). 2x200 MVA, 400/132 kV GIS Substation at Mothihari with space for future extension (200 MVA	• Land 100% • Civil work 35% • Equip Supply 10% (Transformers & 3 Reactors under transit.) • Equip. Erection 0% **Issues:** 1) Geological surprise at S/S land and ground improvement took approx. 5 months before commencing any foundation work. 2) Flooding of S/S land in Aug/Sep 2015. • Prohibition of sand mining in Bihar from 9th Feb 2016 to 3rd Mar 2016.

S. N.	SPV Name And Executing agency	Name of associated Project	BPC	Estd. Cost (Rs Cr)	Scope of works	Current Status
					(iii). Muzaffarpur(PG)- Darbhanga 400 kV D/c line with triple snowbird conductor	• Loc 178 • Fdn 155 • TE 131 • STG 87.2/126 (Ckm) **Forest** : Stage I approval received. **Power Line Crossings** : All approved. **RailwayLine Crossings** : Demand submitted. **National Highway Crossings** : Under approval. **PTCC** : Submitted in Nov 2015. **Issues:** 1) Involvement of forest (deviation from RFP). 2) Severe RoW issues in Darbhanga & Muzaffarpur Distts. 3) Very high no. of trees in the route due to which local resistance is very high. 4) Demand charges raised by PGCIL for under crossing of their 400 kV line. PGCIL yet to provide the guidelines under which demand is raised. • Prohibition of sand mining in Bihar from 9th Feb 2016 to 3rd Mar 2016.

S. N.	SPV Name And Executing agency	Name of associated Project	BPC	Estd. Cost (Rs Cr)	Scope of works	Current Status
					(iv). LILO of Barh –Gorakhpur 400 kV D/c line at Mothihari, 400kV 2xD/C quad	• Loc 210 • Fdn 197 • TE 158 • STG 62/152 (ckm) **Forest** : Under approval for stage I. FRA pending from Motihari Distt. **Power Line Crossings** : All approved. **RailwayLine Crossings** : Under approval **National Highway Crossings** : Under approval. **PTCC** : Submitted in Feb 2016. **Issues:** 1) Involvement of forest (deviation from RFP). 2) Flooding of Gandak river affecting construction of line. Prohibition of sand mining in Bihar from 9th Feb 2016 to 3rd Mar 2016.
2	PKTCL (Sterlite Grid Ltd.)	**Eastern Region System Strengthening Scheme-VII**	PFC	370	General Details	(i) LOI placed on 17.09.2013 (ii) Special Purpose Vehicle acquired on 09.12.2013 (iii) Transmission license granted by CERC (iv) Tarrif adoption done by CERC Scheduled COD: 09.03.2016.
					(i) Purulia PSP(WB) – Ranchi (PG) 400 kV D/C line	**Loc: 302** **Fnd:248** **Erec:168** **Stg: 30/370** Expected COD: **Aug'16**
					Chaibasa – Kharagpur 400 kV D/C line	**Loc: 426** **Fnd:422** **Erec:413** **Stg:290/332 ckm** Expected COD: **May'16**

S. N.	SPV Name And Executing agency	Name of associated Project	BPC	Estd. Cost (Rs Cr)	Scope of works	Current Status
3	**Sterlite**	Common Transmission system for phase-II generation projects in Orissa and immediate evacuation system for OPGC project (Orissa)		1587		➢ LOI placed on Jan-2016 ➢ Special Purpose Vehicle acquired on ➢ Transmission License granted on ➢ Tariff adoption approval on ➢ Clearance under Section 164 : Submitted on
					Jharsuguda – Raipur 765 kV D/C (hexa)	• Loc • Fdn • TE • STG 0/644 (Ckm) • Scheduled Completion:
					OPGC – Jharsuguda 400 kV D/C (triple)	• Loc • Fdn • TE • STG 0/110 (Ckm) • Scheduled Completion:
4.	TTCL(Reliance Power Transmission Company Ltd.)	Talcher-II Augmentation System	REC	1400	(i)Talcher II- Rourkela 400 kV D/C Quad line (ii)Talcher II – Behrampur 400 kV D/C line (iii)Behrampur-Gazuwaka 400 kV D/C line (iv)400/220 kV, 2x315 MVA Behrampur substation	LOI issued on 18-12-2009 SPV acquired by Reliance on 27-04-2010 (Effective date) Matter was in CERC for revision of tariff and extension of date of commissioning. TTCL filed an appeal in appellate tribunal challenging CERC order of 9.5.2013. Appellate Tribunal has given final judgment on 2.12.13 setting aside CERC order and allowing the appeal. TTCL is initiating steps for implementing of order. The judgment of Appellate Tribunal accepts delay in clearance under section-164 as force majeure. According TTCL have requested MoP to extend the validity of section 68 clearance vide their letter dtd 14.1.2014. Beneficiaries have appealed SC. **Work yet to start.**

S. N.	SPV Name And Executing agency	Name of associated Project	BPC	Estd. Cost (Rs Cr)	Scope of works	Current Status
5	Alipurduar Transmission Ltd. (Kalpataru Power Transmission Ltd.)	Transmission system strengthening in Indian system for transfer of power frem new HEP's in Butan	REC		(i) Alipurduar - Siliguri 400kV D/C line (2nd) with Quad moose conductor (ii) Kishanganj - Darbhanga 400kV D/C line	• LOI placed on : 29/10/2015 • TSA signed on: • Special Purpose Vehicle acquired on: 06/01/2016 • Tariff adoption approval issued by CERC: 22/03/2016 • Transmission license: 21/03/2016 • Clearance u/s 164 : Scheduled COD: 05/03/2019
					Alipurduar (PG) – Siliguri (PG)	• Loc • Fdn • TE • STG / (Ckm) • Scheduled Completion:
					Kishanganj (PG) – Darbhanga (DMTCL)	• Loc • Fdn • TE • STG / (Ckm) • Scheduled Completion:

Status of approved TBCB Tr. Projects

Annexure - III

S. No.	Name of the Project	BPC / Implementing Agency / Milestones	Scope of works	Current Status
1	Common Transmission System for Phase-II Generation Projects in Odisha and Immediate Evacuation System for OPGC (1320 MW) Project in Odisha Estimated Cost as provided by Empowered Committee: Rs. 2748 crore	PFCCL **Milestones:** (i) MoP vide Gazette Notification dated 06.02.15 appointed PFCCL as BPC. (ii) SPV incorporated on 17.04.2015 (iii) RFQ notice published on 23.04.2015.	(i) OPGC (IB TPS) – Jharsuguda (Sundargarh) 400kV D/C line with Triple Snowbird Conductor 400 kV D/C Length- 50 KM (ii) Jharsuguda (Sundargarh)– Raipur Pool 765 kV D/C line 765 KV D/C Length- 350 KM	Under Bidding process
2	Immediate evacuation for North Karanpura (3x660MW) generation project of NTPC	REC TPCL **Milestones:** (i) MoP vide Gazette Notification dated 17.11.2015 appointed RECTPCL as BPC.	(i) North Karanpura – Gaya 400 kV D/C with quad moose conductor. (ii) North Karanpura – Chandwa (Jharkhand) Pooling Station 400 kV D/C with quad moose conductor.	Under Bidding process
3	Creation of 400/220 kV sub-station at Dhanbad - Proposal of JUSNL (ERSS-XIX)	REC TPCL **Milestones:** (i) MoP vide Gazette Notification dated 17.11.2015 appointed RECTPCL as BPC.	(i) Establishment of 400/220 kV, 2x500 MVA sub-station at Dhanbad (ii) LILO of both circuits of Ranchi-Maithon RB 400 kV D/C line at Dhanbad	Under Bidding process
4	765 kV System Strengthening Scheme in Eastern Region (ERSS-XVIII)	PFCCL **Milestones:** (i) MoP vide Gazette Notification dated 17.11.2015 appointed PFCCL as BPC.	(i)Establishment of 765/400kV, x1500MVA substation at Medinipur (ii)Establishment of 765/400kV, 2x1500MVA substations at Jeerat (New) (iii)Ranchi (New) – Medinipur 765kV D/C line with 2x330 MVAR switchable line rector at both ends (iv)Medinipur – Jeerat (New) 765kV D/C line (v)Medinipur – Haldia New (NIZ) (WBSETCL) 400kV D/C line (quad / HTLS) (vi)LILO of both circuits of Chandithala – Kharagpur	Under Bidding process

S. No.	Name of the Project	BPC / Implementing Agency / Milestones	Scope of works	Current Status
			400kV D/C line at Medinipur (vii) Jeerat (New) – Subhasgram 400 kV D/C line (quad/HTLS) viii) Jeerat (New) – Jeerat (WB) 400 kV D/C line (quad/HTLS) (ix) LILO of Jeerat (WB) – Subhasgram (PG) 400 kV S/C section at Rajarhat (PG) (x) 2 no. 400 kV line bays at Haldia New (NIZ) (WBSETCL) (xi) 2 no. 400 kV line bays at Jeerat (WBSETCL)	

Annexure-IVA

Minutes of the Meeting on "Change of scope of the scheme under ERSS-XVIII" held on 29.03.2016 in the office of Member(PS), CEA.

1. List of participants is enclosed at Annexure-I.

2. Member(PS), CEA welcomed all the participants to the meeting. He said that Midnapore-Haldia NIZ 400kV D/C line as a part of ERSS-XVIII scheme has been agreed in the 17th meeting of the Standing Committee of Power System Planning in Eastern Region (SCPSPER) held on 25th May, 2015 at New Delhi. The Haldia NIZ 400 kV sub-station for the termination of the above line was to be implemented by WBSETCL. The Empowered committee on Transmission in its 35th meeting held on 14th September, 2015 has decided that the ERSS-XVIII scheme would be implemented through tariff based competitive bidding (TBCB). Accordingly, PFC Consulting Ltd., the bid process coordinator (BPC) for the scheme has initiated bidding process for the scheme.

3. Now, WBSETCL vide their letter no. CE/CPD/CEA dated 12th Feb., 2016 has informed that they are not implementing the Haldia NIZ 400 kV S/S. He requested WBSETCL to explain the reasons for non-implementation of the 400 kV S/S.

4. WBSETCL explained that the proposed Haldia NIZ 400 kV S/S was contemplated in anticipation of Haldia Energy Ltd.(HEL) (2x300 MW) generation project and the upcoming India Power Corporation Ltd.(IPCL) (3x150 MW) project will approach WBSETCL for connectivity for evacuation of power. He informed that power from the HEL generation project is being evacuated through Haldia-Subhashgram (PG) 400 D/C line and M/s IPCL has approached WBSETCL for connectivity at 220kV level. As such, WBSETCL is not implementing the 400 kV Haldia NIZ sub-station as of now.

5. Chief Engineer, CEA said that in the previous standing committee meeting, the 765 kV Ranchi-Midnapore-Jeerat 765 kV D/C line along with Midnapore-Haldia NIZ 400kV D/C line was agreed to strengthen the transmission network in Eastern part of the West Bengal especially Kolkata area. He requested WBSETCL to reconsider the establishment of Haldia NIZ 400 kV sub-station for improving the reliability of power supply to Kolkata area.

6. WBSETCL stated that 400 kV Haldia sub-station of M/s HEL is existing and requested that Midnapore 765/400 kV sub-station may be connected with Haldia generation switchyard through 400kV D/C line. Director, CEA informed that WBSETCL proposal of interconnecting Midnapore with Haldia generation switchyard needs to be studied and discussed in the standing committee meeting. As the bidding process for the scheme has already been initiated by the BPC, any addition / modification at this stage would delay the implementation of the scheme. Therefore, it would be appropriate to delete Midnapore-Haldia NIZ 400kV D/C line as of now and go ahead with the bidding process of the remaining scheme. The deletion of the line along with associated bays at Midnapore from the scope of ERSS-XVIII was agreed. The revised

scope of ERSS-XVIII scheme would be formalized in next meeting of SCPSPER and also got noted in the Empowered Committee meeting on Transmission. The revised scope would be notified in the Gazette after taking up in the Empowered Committee

7. GM, PGCIL stated that in ERSS-XVIII scheme the two lines namely Jeerat (New)-Subhasgram 400 kV D/C line and Jeerat (New)-Jeerat 400 kV D/C line with the conductor configuration of (Quad/HTLS) has been agreed. He suggested that at this point of time these lines may be constructed with Quad Moose conductor configuration. This was agreed in the meeting.

8. PFCCL informed that RfQ for the scheme has already been issued based on the qualification requirement including Midnapore-Haldia NIZ 400kV D/C line (130 km). Further, PFCCL informed that 5 nos. RfQ responses were received and evaluation of the same is under progress. Further, BPC has also informed that as per MoP directives, henceforth, the bid process for both the RfQ and RfP stages shall be done through e-bidding for which the development of e-portal is being initiated and it will take at least 2-3 months for implementation.

9. The deletion of the line from the scope of works would reduce the qualification requirement for the scheme. Therefore, in order to avoid any legal complication at later date, BPC was advised that the RfQ for the scheme be re-issued. The re-issue of the RfQ for the scheme was also agreed.

10. PFCCL also informed that as per the Gazette notification dated 17th November, 2015 for the scheme, WBSETCL has to provide space for construction of 2 nos. 400 kV bays at Jeerat (WBSETCL) substation for termination of Jeerat (New)-Jeerat (WBSETCL) 400 kV D/C line. As per the site condition, there is space constraints for termination of 2 nos. of bays at existing Jeerat (WBSETCL) 400 kV substation. The issue of space constraint at Jeerat (WBSETCL) S/S was discussed and WBSETCL suggested construction of GIS line bays at Jeerat (WBSETCL) for termination of Jeerat (New)-Jeerat (WBSETCL) 400 kV D/C line. The necessary space for the 2 no. 400 kV GIS line bays shall be provided by WBSETCL. The same was agreed.

11. After further discussion, following was decided:

    a) Revised scope of ERSS-XVIII scheme as agreed above is given at Annexure-II.
    b) The revised scope of ERSS-XVIII scheme would be formalized in next meeting of SCPSPER and also got noted in the Empowered Committee meeting on Transmission.
    c) The revised scope would be notified in the Gazette after taking up in the Empowered Committee.
    d) Pending above, PFCCL is advised to go ahead with the bidding process with revised scope of ERSS-XVIII scheme and re-issue the RfQ.

The meeting ended with a vote of thanks to the chair.

Annexure-I

List of participants of the meeting on 'Change of Scope of scheme under ERSS-XVII':

S. No.	Name	Designation	Mobile
CENTRAL ELECTRICITY AUTHORITY			
1.	Shri S. D. Dubey	Member (PS)	
2.	Shri Pardeep Jindal	Chief Engineer (PSPA-2)	
3.	Shri Ravinder Gupta	Director (PSPA-2)	
4.	Shri Nitin Deswal	Assistant Director (PSPA-2)	**9717818349**
POWEGRID/CTU			
1.	Shri Ashok Pal	GM(CTU-Plg.)	**9910378105**
WBSETCL			
1.	Smt A. Ghosh	CE(CPD)	**9434910019**
2.	Shri B. Bandyopadhyay	CE(Project)	**9434910025**
3.	Shri A. Karmakar	Addl. CE (CPD)	**9434910090**
PFCCL			
1.	Shri Sanjay Nayak	AVP	**9871611467**
2.	Shri ShwetabhVerma	Manager	**9582433597**

Scope as per Gazette Notification		Modified Scope	
1.	Establishment of 765/400kV, 2×1500MVA substation at Medinipur **765 kV** • ICTs: 7×500 MVA, 765/400 kV (1 spare unit) • ICT bays: 2 no. • Line bays: 4 no. • Bus reactor: 7×110 MVAR single phase units including 1 spare unit • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no. • Space for 765/400 kV ICT **400 kV** • ICT bays: 2 no. • Line bays: 6 no. • Bus reactor: 2×125 MVAR • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no.	1.	Establishment of 765/400kV, 2×1500MVA substation at Medinipur 765 kV • ICTs: 7×500 MVA, 765/400 kV (1 spare unit) • ICT bays: 2 no. • Line bays: 4 no. • Bus reactor: 7×110 MVAR single phase units including 1 spare unit • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no. • Space for 765/400 kV ICT **400 kV** • ICT bays: 2 no. • Line bays: **4** no. • Bus reactor: 2×125 MVAR • Bus reactor bay: 2 no. • Space for line bays: **6** no. • Space for ICT bays: 2 no.
2.	Establishment of 765/400kV, 2x1500MVA substations at Jeerat (New) **765 kV** • ICTs: 7×500MVA, 765/400 kV (1 spare unit) • ICT bays: 2 no. • Line bays: 2 no. • Bus reactor: 7×110 MVAR single phase unit including 1 spare unit • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no. • Space for 765/400 kV ICT **400 kV** • ICT bays: 2 no. • Line bays: 4 no. • Bus reactor: 2×125 MVAR • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no.	2.	Establishment of 765/400kV, 2x1500MVA substations at Jeerat (New) **765 kV** • ICTs: 7×500MVA, 765/400 kV (1 spare unit) • ICT bays: 2 no. • Line bays: 2 no. • Bus reactor: 7×110 MVAR single phase unit including 1 spare unit • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no. • Space for 765/400 kV ICT **400 kV** • ICT bays: 2 no. • Line bays: 4 no. • Bus reactor: 2×125 MVAR • Bus reactor bay: 2 no. • Space for line bays: 4 no. • Space for ICT bays: 2 no.
3.	Ranchi (New) – Medinipur 765kV D/c line with Hexa ACSR Zebra conductor along with 240 MVAR 765 kV (765 kV, 3x80 MVAR single phase units) switchable line rector in each circuit at Medinipur end.	3.	Ranchi (New) – Medinipur 765kV D/c line with Hexa ACSR Zebra conductor along with 240 MVAR 765 kV (765 kV, 3x80 MVAR single phase units) switchable line rector in each circuit at Medinipur end.

Scope as per Gazette Notification		Modified Scope	
4	Medinipur - Jeerat (New) 765kV D/c line with Hexa ACSR Zebra conductor along with 240 MVAR (765 kV, 3x80 MVAR single phase units) switchable line rector in each circuit at Jeerat (New) end	4	Medinipur - Jeerat (New) 765kV D/c line with Hexa ACSR Zebra conductor along with 240 MVAR (765 kV, 3x80 MVAR single phase units) switchable line rector in each circuit at Jeerat (New) end
5	Medinipur – Haldia New (NIZ) (WBSETCL) 400kV D/c line [ACSR Quad Moose/ HTLS (equivalent to ACSR Quad Moose current rating at 85° C)]	5	**[Deleted]**
6	LILO of both circuits of Chandithala – Kharagpur 400 kV D/c line at Medinipur	6	LILO of both circuits of Chandithala – Kharagpur 400 kV D/c line at Medinipur
7	Jeerat (New) – Subhasgram 400 kV D/c line [ACSR Quad Moose/ HTLS (equivalent to ACSR Quad Moose current rating at 85° C)]	7	Jeerat (New) – Subhasgram 400 kV D/c line (ACSR Quad Moose current rating at 85° C)
8	Jeerat (New) – Jeerat (WB) 400 kV D/c line [ACSR Quad Moose/ HTLS (equivalent to ACSR Quad Moose current rating at 85° C)]	8	Jeerat (New) – Jeerat (WB) 400 kV D/c line (ACSR Quad Moose current rating at 85° C)
9	LILO of Jeerat (WB) – Subhasgram (PG) 400 kV S/c section at Rajarhat (PG)	9	LILO of Jeerat (WB) – Subhasgram (PG) 400 kV S/c section at Rajarhat (PG)
10	2 no. 400 kV line bays at Haldia New (NIZ) (WBSETCL)	10	**[Deleted]**
11	2 no. 400 kV line bays at Jeerat (WBSETCL)	11	2 no. 400 kV **GIS** line bays at Jeerat (WBSETCL)
12	Note: 1. CTU (POWERGRID) would provide 2 no. 400 kV line bays at Subhasgram (PG) for termination of Jeerat (New) - Subhasgram 400 kV D/c line [ACSR Quad Moose/ HTLS] line 2. CTU (POWERGRID) would provide 2 no. 400 kV line bays at Rajarhat (PG) for termination of LILO of Jeerat (WB) – Subhasgram (PG) 400 kV S/c section at Rajarhat (PG) 3. CTU (POWERGRID) would provide 2 no. 765 kV line bays at Ranchi (New) (PG) along with 2X240 MVAr switchable line reactor with 750 Ω NGR on each circuit for Ranchi (New)- Medinipur 765 kV D/c line. 4. WBSETCL would provide space for 2 no. 400 kV line bays at Haldia New (NIZ) (WBSETCL) for termination of Medinipur-Haldia (New) (NIZ) (WBSETCL) 400 kV D/c line 5. WBSETCL would provide space for 2 no. 400 kV line bays at Jeerat (WBSETCL) for termination of Jeerat (New)- Jeerat (WBSETCL) 400 kV D/c line	12	Note: 1. CTU (POWERGRID) would provide 2 no. 400 kV line bays at Subhasgram (PG) for termination of Jeerat (New) - Subhasgram 400 kV D/c line [ACSR Quad Moose/ HTLS] line 2. CTU (POWERGRID) would provide 2 no. 400 kV line bays at Rajarhat (PG) for termination of LILO of Jeerat (WB) – Subhasgram (PG) 400 kV S/c section at Rajarhat (PG) 3. CTU (POWERGRID) would provide 2 no. 765 kV line bays at Ranchi (New) (PG) along with 2X240 MVAr switchable line reactor with 750 Ω NGR on each circuit for Ranchi (New)- Medinipur 765 kV D/c line. 4. **[Deleted].** 5. WBSETCL would provide space for 2 no. **400 kV GIS bays** at Jeerat (WBSETCL) for termination of Jeerat (New)- Jeerat (WBSETCL) 400 kV D/c.

Annexure-IVB

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केंद्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग-2 **[ISO: 9001:2008]**
Power System Planning & Appraisal Division-2
सेवा भवन, रा. कृ.पुरम , नयी दिल्ली -110066
Sewa Bhawan, R. K. Puram, New Delhi-110066

No. 83/16/2016/PSPA-2/ Dated 16.05.2016

To

1. COO(CTU-Planning),
Power Grid Corporation of India Ltd.,
"Saudamini" Plot no-2, Sector-29,
Gurgoan- 122001, Haryana
Fax-11-265600039

2.Shri Bhupender Gupta, Addl. CEO,
REC Transmission Projects Company Limited,
12-21, Upper Ground Floor,
Antriksh Bhawan, 22 KG Marg,
New Delhi-110001
Fax-11-24360644

3. Shri Ashok Pal
Addl. GM (CTU-Planning),
Power Grid Corporation of India Ltd.,
"Saudamini" Plot no-2, Sector-29,
Gurgoan- 122001, Haryana
Fax-11-265600039

4. Shri Sanjay Nayak,
AVP, Power Finance Corporation Ltd.
'Urjanidhi', 1, Barakhamba Lane,
Connaught Place
New Delhi-110 001
Fax-11-23456170

Subject: Minutes of Meeting to resolve issues related to Tariff Based Competitive Bidding (TBCB) scheme in Eastern and North Eastern region -Regarding

Sir/Madam,

Please find enclosed herewith the Minutes of the Meeting to resolve issues related to Tariff Based Competitive Bidding (TBCB) scheme in Eastern and North Eastern region held on 12.05.2016 at 11:00 hrs at office of Member (Power system), 3rd floor, CEA, Sewa Bhawan, R K Puram, New Delhi-66

Encl: As above

Yours faithfully,

(Satyendra Kr. Dotan)
Dy. Director (SP&PA)

Copy to:
1.Chief Engineer (PSPA-1)

Minutes of Meeting to resolve issues related to Tariff Based Competitive Bidding (TBCB) scheme in Eastern and North Eastern region held on 12.05.2016 at 11:00 hrs at office of Member (Power system), 3rd floor, CEA, Sewa Bhawan, R K Puram, New Delhi-110066

The list of participants is enclosed at **Annexure-1.**

1.0 Chairperson & Member (PS), CEA chaired the meeting. He welcomed the participants. He requested Director (PSPA-2), CEA to take up the agenda items.

2.0 Requirement of future space for HVDC substation at Rangia /Rowta in Assam

2.1 Director, CEA stated that the scheme "Transmission system for Ph-I Generation Projects in Arunachal Pradesh", interalia, covers establishment of 400/220 kV sub-stations at Dinchang and Rangia / Rowta and 400 KV D/C quad line from Dinchang to Rangia / Rowta. Keeping in view the anticipated generation in Twang and Kameng basins to be pooled at Rangia / Rowta provision for space for ± 800 kV 6000/7000 MW HVDC station at Rangia / Rowta in Assam was also made in the scheme. At present only one Hydro projects named Gongri (144 MW) had signed the LTA agreement and is showing physical progress at site. RECPTCL has informed that additional land requirement for the HVDC station at Rangia / Rowta would be about 120-150 Acre. In view of uncertainty of commission schedule of other hydro projects in Twang and Kameng basins, it is suggested that provision of land for future HVDC station may be deleted from the scheme. HVDC station at Rangia / Rowta or any other location nearby would be taken after firming up of commissioning schedule of hydro projects in Kameng and Twang basins in Arunachal Pradesh.

2.2 After discussions, it was decided that acquisition of land for space for HVDC substation at Rangia / Rowta may be considered at later stage when more hydro generation would commission in Arunachal Pradesh.

3.0 Construction of Dinchang-Rangia/Rowta 400 kV D/C with Quad Moose / twin HTLS conductor

3.1 Director, CEA stated that Dinchang-Rangia/Rowta Pooling Point 400 kV D/C line under "Transmission System for Phase –I Generation project in Arunachal Pradesh" has been agreed in the 35th meeting of Empowered Committee on Transmission on 14-09-2015 with ACSR Quad Moose / Twin HTLS conductor. COO (CTU-Planning) in letter dated 31-12-2015 has stated that about 40 Km of this line falls in hilly terrain, so the line may be constructed with Twin HTLS conductor.

3.2 GM (CTU-planning) stated that the issue of Quad Moose versus Twin HTLS conductor for the Dinchang-Rangia/Rowta 400 kV D/C line was deliberated in the meeting held on 03.02.2016 in CEA and it had been already decided that Dinchang Pooling Station-Rangia/Rowta 400 kV D/C line will be implemented with Quad Moose conductor instead of Twin HTLS conductor.

3.3 After discussion, it was decided that Dinchang Pooling Station-Rangia/Rowta 400 kV D/C line will be implemented with Quad Moose conductor.

4.0 Finalization of inputs for preparation of RfP documents for ERSS-XIX scheme

4.1 Director, CEA stated COO (CTU-Planning) in letter dated 31-12-2015 has informed that element wise cost for ERSS-XIX has not been indicated in the minutes of the 35th meeting of empowered committee on Transmission. This input is required for calculation of percentage of quoted transmission charges recoverable on scheduled CoD of the particular element(s) of the scheme and finalization of RfP document for the scheme.

4.2 Representative of RECPTCL informed the element wise cost had already been submitted.

5.0 Provision of spare single phase 80 MVAr Line reactor at Medinipur and Jeerat New under ERSS-XVIII scheme

5.1 Director, CEA stated that DGM (CTU-planning) vide e-mail dated 2nd May, 2016 has requested for provision of single phase spare Line reactors of 80 MVAr at Medinipur and Jeerat (New) S/s under ERSS-XVIII scheme.

5.2 GM (CTU-planning) informed that it is normal practice to use spare line reactor in single phase scheme. In case the rating of bus and line reactors are same, then only one spare is required. In case of different ratings of bus and line reactor, two spare reactors of different ratings are to provided. In the ERSS-XVIII scheme provision for spare110 MVAR, 765 kV bus reactor has been kept at Medinipur and Jeerat (New) S/S. Line reactors (80 MVAR) has not been kept at Medinipur and Jeerat (New) S/s.

5.3 Director, CEA said that CEA Regulation "Technical Standard for Construction of Electrical Plants & Lines" Regulation 2010 under Reactive Compensation states that "*Ïn case single phase shunt rectors are provided, then minimum one single phase unit shall be provided as spare for entire substation or switchyard".*

5.4 PFCCL representative requested CTU to expedite the revised input for re-initiation of RfQ for ERSS-XVIII and inputs for RfP documents for (NERSS-VI). He also informed that PFCCL vide letter dated 25-4-2016 has requested Joint Secretary (Transmission), MOP for allowing PFCCL to continue the bid process of re-issuing the RfQ with modified scope as per normal procedure instead of e-bidding for the transmission scheme ERSS-XVII, as the development of e-bidding portal are under process. He added that the RfP for this scheme shall be carried out through e-portal. He

requested CEA to expedite MoP approval for re-issuing the RfQ with modified scope as per normal procedure, instead of e-bidding for ERSS-XVIII scheme.

5.5 After deliberation, Member (PS) advised that one spare unit of line reactor of 80 MVAR should be provided at Medinipur and Jeerat New end. The same was agreed and accordingly scope of ERSS-XVIII may be modified.

The meeting ended with the thanks to Chair.

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Annexure-1

Sr. No.	Name	Designation	Organization
1.	S.D.Dubey	Member (PS)	CEA
2.	K.K.Arya	Chief Engineer (PSPA-1)	CEA
3.	Pardeep Jindal	Chief Engineer (PSPA-2)	CEA
4.	Ravinder Gupta	Director (PSPA-2)	CEA
5.	Rishika Sharan	Director (PSPA-2)	CEA
6.	Chandra Prakash	Director (PSPA-1)	CEA
7.	Santosh Kumar	Dy. Director (PSPA-2)	CEA
8.	Satyendra Kr.Dotan	Dy.Director (PSPA-2)	CEA
9.	Ashok Pal	GM (CTU-Planning)	POWERGRID
10.	Bhupender Gupta	ACEO	RECTPCL
11.	Sanjay Nayak	AVP	PFCCL
12.	Kumar Ritu Raj	Coordinator	PFCCL

Annexure-V

Minutes of the Meeting on "Termination of 400 kV D/C Purulia-Ranchi transmission line by M/s PKTCL at Purulia PPS (New) switching station" held on 29.03.2016 in the office of Member(PS), CEA.

1. List of participants is enclosed at Annexure-I.

2. Member (PS) welcomed all the participants to the meeting. He requested M/s Sterlite Grid to give the updated status of Purulia PSP-Ranchi 400 kV D/C line and also requested WBSETCL to give the status of line bays that are required for termination of the Purulia PSP-Ranchi 400 kV line at New Purulia sub-station.

3. M/s Sterlite Grid informed that the construction work for the Purulia PSP-Ranchi 400 kV D/C line is going on in full swing. About 50 foundations are pending out of total tower location of 302 and stringing of about 80km is remaining out of 185km. Because of shifting in terminal point from Purulia PSP to New Purulia, the line was resurveyed for route and forest identification. The forest clearance for revised route is expected within a week. He assured that the line will be ready by 31st May 2016.

4. WBSETCL informed that the GIS line bays required for termination of the line at New Purulia sub-station is likely to be completed by November 2016.

5. Chief Engineer, (PSPA-2), CEA enquired, whether shifting in terminal point from Purulia PSP to New Purulia has been agreed earlier. Director (PSPA-2), CEA informed that in this regard, four meetings initiated by PSPM Division, CEA were held on 23.04.2014, 25.06.2015, 22.09.2015 and 09.02.2016, which were attended by officials from WBSEDCL, WBSETCL, POWERGRID/CTU, PFC and Sterlite Grid Ltd. (PKTCL). He added that a team of CTU and WBSETCL has also visited the site at Purulia PSP on 20-21 May 2015 to explore the possibility of construction of 400 kV GIS bays at Purulia PSP switchyard. Due to space constraint at Purulia PSP, the termination of Purulia PSP-Ranchi 400 kV D/C line at New Purulia of WBSETCL was agreed in the meeting on 25-06-2015. The relevant extracts of minutes of the meeting held on 25.06.2015 are reproduced below:

   " *7. Managing Director (WBSETCL) informed that there is space constraint at GIS switchyard of Purulia PSP for construction of 2 Nos. bays (400kV) needed for termination of Purulia PSP (WB)-Ranchi 400 kV D/C line. He further informed that proposal for setting up of a new 400 kV sub-station close to Purulia PSP has been approved by WBSETCL Board and location of substation has been fixed. This sub-station will be connected through LILO of one ckt. Of Purulia PSP-Arambagh 400 kV D/C line and the substation is likely to be completed by March, 2017. He further stated that they had already intimated PKTCL vide their letter dated 18.06.2014 about space constraint at existing PPSP 400 kV GIS for termination of Purulia PSP (WB)-Ranchi (PG) 400 kV D/C line and had also proposed to terminate the 400 kV D/C line at their proposed new 4000 kV S/S. MD (WBSETCL) informed that they have already kept provision of two (2) 400 kV bays for termination of Purulia PSP – Ranchi 400 kV D/C line at the new 400 kV sub-station and PGCIL is yet to pay the cost of 400 kV Bays as deposit work.*

8. *Director (SP&PA) informed that this transmission project has been awarded to PKTCL through Tariff Based Competitive Bidding route and any change in scope of works at later date shall require approval of Standing Committee on Power System Planning of ER.*

9. *CTU representative informed that the scheme under TBCB was approved for the benefit of WBSETCL, to take power when Purulia PSP working in pumping mode. He further stated that in case of delay in completion of 400 kV bays at new 400 kV Substation, the Purulia – Ranchi 400 kV Line may be directly connected with the proposed LILO of Purulia PSP – Arambagh 400 kV D/C line at 400 kV new S/s near PPSP. Regarding payment of deposit works (2 nos. 400 kV bays), he requested Managing Director (WBSETCL) to take up matter with the PGCIL with the copy to COO(CTU).*

10. ***It was agreed to shift termination of** Purulia **(WB) – Ranchi 400 kV D/C line of PKTCL from PPSP switchyard to new 400 kV substation of WBSETCL near PPSP due to space constraints at PPSP switchyard. Member (PS), CEA advised WBSETCL to take up the matter of proposed new sub-station near Purulia PSP in the next standing committee meeting for its approval and also inform the co-ordinates to CEA through a formal letter."***

6. Director (PSPA-2), CEA further added that, as informed by M/s Sterlite (PKTCL) and WBSETCL, the Ranchi - Purulia PSP 400 kV D/C line will be ready by May 2016 whereas the bays at New Purulia would be ready by Nov. 2016, therefore, during the interim period i.e. from May 2016 to Nov., 2016 or till the commissioning of New Purulia S/S & bays, the line would remain unutilized. In this regard, he informed that in the earlier meeting of PSPM held on 22.09.2015, following was recorded - "It *was decided that WBSETCL would complete the priority bays required for termination of Purulia – Ranchi 400 kV line of PKTCL and LILO of Purulia – Aarambagh D/C line by March, 2016. In case of any delay in priority bays required for termination of both the lines, WBSETCL may consider an interim arrangement for interconnection of Purulia – Ranchi 400 kV line of PKTCL to LILO of Purulia – Aarambagh D/C line by March, 2016."*

7. CE(PSPA-2), CEA observed that if the change in transmission plan i.e. (i) creation of new Purulia 400 kV S/S by WBSETCL (ii) LILO of one circuit of Purulia PSP-Arambag at New Purulia S/S and (iii) change of termination of Ranchi-Purulia PSP line of PKTCL as Ranchi-New Purulia was discussed in PSPM meeting held on 23.04.2015, why the same was not taken up in the 17th meeting of SCPSP ER held on 25.05.2015.

8. General Manager, POWERGRID also suggested that during the interim period, M/s Sterlite may connect their Purulia PSP-Ranchi 400 kV line at a suitable location through LILO of one circuit of Purulia PSP-Arambagh D/C line of WBSETCL as an interim arrangement till the 400 kV bays at New Purulia are commissioned so as to form Ranchi-Arambag (about 327 km), Ranchi-Purulia PSP (about 115 km),) and Purulia PSP-Arambagh (212km) 400 kV lines. The interim arrangement as well as change in location of terminal point from Purulia PSP to New Purulia would be formalized in the next meeting of SCPSPER and got noted in next empowered committee meeting on transmission.

9. On a query from Chief Engineer (PSPA-2), CEA regarding charging of Ranchi- Arambag 400 kV line during interim arrangement, GM, POWERGRID informed that the line length is about 327 km and charging of this line from Arambag end may be possible. He informed that there is a line reactor of 50 MVAr on each circuit of the line at Ranchi end. Chief Engineer (PSPA-2), CEA requested POWERGRID to submit the line charging studies for the interim arrangement and also forward DOV studies ensuring that the voltages during line charging and DOV during load throw-off remain within permissible limits.

10. M/s PKTCL (Sterlite Grid) stated that change in location of terminal point of the line from Purulia PSP to New Purulia and termination of the line during interim arrangement as above, would involve modification / addition in the scope of work and accordingly the tariff would need to be revised to recover additional cost. In this regard, it was observed that M/s PKTCL may take up the matter with CERC as per prevailing regulations and terms of TSA.

11. M/s PKTCL also informed that their Kharagpur (WB)-Chiabasa (PG) 400 kV D/C line is ready and the bays at Kharagpur (WB) under the scope of POWERGRID are not ready. GM, POWERGRID informed that bays at Kharagpur (WB) are being implemented by WBSETCL as a deposit work. He suggested that M/s PKTCL may interconnect the Kharagpur (WB)-Chiabasa (PG) 400 kV D/C line by LILO one circuit of Kharagpur (WB)-Kolaghat 400 kV D/C line near Kharagpur end as an interim arrangement till the bays at Kharagpur (WB) are ready, so that the line does not remain unutilized. The interim arrangement suggested would be implemented by M/s Sterlite with no additional cost to be recovered as tariff. This was agreed in the meeting and would be formalized in the next meeting of SCPSPER.

12. After further deliberations, following was agreed:

    a) PGCIL shall submit following studies:

        i. Line charging studies indicating that the Ranchi – Arambagh circuit (317 km) can be charged without any constraints. However, if there are any constraints / conditions for charging, the same may be specified upfront in the studies.
        ii. DOV studies indicating that the dynamic over voltage remains within specified limit (i.e. 1.4 pu) during load throw-off. The studies may also indicate the loading assumed on the line prior to load throw-off and the maximum load throw-off admissible for the DOVs. (The lines in these studies is a combination of Ranchi-Purulia and Ranchi-Purulia-Arambag and accordingly all the three nodes i.e Ranchi, Purulia and Arambag would need to be represented while carrying out DOV studies)
        iii. It is understood that the line reactors (i.e. 50MVAr) at Ranchi end of this line do not have NGR. So, POWERGRID may also indicate that there would not be any problem during auto reclosing under single line to ground fault without the NGR.

    b) M/s PKTCL would terminate their Ranchi-Purulia PSP 400 kV D/C line at New Purulia GIS of WBSETCL. This change in transmission scope would be finalised in the next meeting of SCPSPER and would got noted in the next Empowered committee meeting on Transmission.

c) In view of anticipated delay in commissioning of New Purulia 400 kV GIS by WBSETCL, M/s Sterlite Grid (PKTCL) may connect Ranchi-New Purulia 400 kV D/C line at a suitable location by LILO of one circuit of Purulia-Arambagh D/C line of WBSETCL as an interim arrangement till the commissioning of 2 no. 400 kV GIS bays at New Purulia. Based on the studies furnished by PGCIL (as mentioned above), the interim arrangement would also be formalized in the next meeting of SCPSPER and would got noted in the next meeting of the Empowered Committee on Transmission.

   Regarding recovery of additional cost, if any, due to these changes, PKTCL may take up with CERC.

d) WBSEDCL and WBSETCL would submit SLD and general arrangement (GA) layout of the Purulia PSP and Arambag S/S respectively to CEA through E-mail.

e) PKTCL would interconnect their Kharagpur (WB)-Chiabasa (PG) 400 kV D/C line by LILO one circuit of Kharagpur (WB)-Kolaghat 400 kV D/C line near Kharagpur end as an interim arrangement till the 400 kV bays at Kharagpur (WB) are commissioned with no additional cost to be recovered as tariff. The interim arrangement would be formalized in next meeting of SCPSPER.

f) WBSETCL would furnish the load flow/system studies results in respect of New Purulia 400 kV s/s and associated transmission line to CEA, urgently, so that same could be taken in the forthcoming meeting of the SCPSP ER.

g) PKTCL will provide tower location and route alignments near the Purulia PSP and New Purulia for the (i) original Ranchi-Purulia PSP line (ii) re-alignment to New Purulia and (iii) alignment for terminating LILO in the Purulia PSP-Arambag line.

The meeting ended with a vote of thanks to the chair.

Annexure-I

List of participants of the meeting on 'Termination of 400kV D/c Purlia – Ranchi transmission line by M/s PRTCL at Purlia (new) switching station':

S.No.	Name	Designation	Mobile
CENTRAL ELECTRICITY AUTHORITY			
1.	Shri S. D. Dubey	Member (PS)	
2.	Shri Pardeep Jindal	Chief Engineer (PSPA-2)	
3.	Shri Ravinder Gupta	Director (PSPA-2)	
4.	Shri Nitin Deswal	Assistant Director (PSPA-2)	**9717818349**
POWEGRID/CTU			
1.	Shri Ashok Pal	GM(CTU-Plg.)	**9910378105**
2.	Shri S. Chattopadhyay	DGM	**9434742008**
3.	Shri S. J. Lahiri	DGM	**9434742001**
WBSETCL			
1.	Smt A. Ghosh	CE(CPD)	**9434910019**
2.	Shri B. Bandyopadhyay	CE(Project)	**9434910025**
3.	Shri A. Karmakar	Addl. CE (CPD)	**9434910090**
Sterlite Grid			
1.	Shri T.A Reddy	VP	**9310490976**
2.	Shri S.C. Ghosal	VP	**9650100032**