Annexure-I

List of Participants of 2nd meeting of NRPC(TP) held on 1.09.2020

S.No.	Name (S/Shri)	Designation	Contact No.	Email ID
I	**CEA**			
1.	P.S.Mhaske	Chairperson		
2.	Goutam Roy	Chief Engineer	8376817933	Goutamroy.715@gmail.com
3.	Manjari Chaturvedi	Director	9810502209	Manjari.cea@gmail.com
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II	**NRPC**			
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III	**POWERGRID**			
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10.	Yatin Sharma	Asst. Manager(CTU-Plg)	9205287433	yatinsharma@powergridindia.com
11.	Roushan Kumar	Engineer(CTU-Plg)	7546075385	roushan.k@powergridindia.com
IV	**RVPNL**			
12.	S.K.Baswal	C.E(PPD)	9413387178	Ce.ppm@rvpn.co.in
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14.	SonaShishodia	Xen(P& P)	9414030303	xen2.pp@rvpn.co.in
15.	V.A. Kale	Xen (Auto)	9414061050	kale.vishwas@rvpn.co.in
V	**HVPN**			
16.	B S Dahiya	SE/Planning	9315016202	seplg@hvpn.org.in
17.	Baljeet Singh Malik	XEN/System Study	9315353618	xenplgss@hvpn.org.in
18.	Rajiv Tayal	SE/NCR Planning	9312599029	sencrplg@gmail.com
VI	**UPPTCL**			
19.	Anil Jain	Director Planning & Commercial	9811317975	director_comm@upptcl.org

S.No.	Name (S/Shri)	Designation	Contact No.	Email ID
VII	**PSTCL**			
20.	Sanjeev Gupta	CE/TS	9646100864	Ce-tl@pstcl.org
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VIII	**DTL**			
22.	Anuj Kumar Gahlaut	DGM, Planning	9999533954	kg.anuj@gmail.com
23.	Pramod Kumar	Asstt. Manager (Tech)	9711003106	pramod@dtl.gov.in
IX	**THDC**			
24.	U. C. Kannaujia	GM (NCR)	9411103637	uckannaujia@thdc.co.in
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X	**SECI**			
29.	S.K Mishra	Director	9717890222	Sk.mishra@seci.com.in
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XI	**JKPTCL, Jammu**			
31.	Sudhir Gupta	CE(Trans)	9419181570	sojpdd@gmail.com
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XII	**JKPTCL, Kashmir**			
33.	HashmatQazi	CE(Trans)	0194-2491340	dosokashmir@rediffmail.com
XIII	**CVPPPL**			
34.	Amrik Singh	GM	9560455326	amrik1474_28@yahoo.co.in
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XIV	**PTCUL**			
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XV	**POSOCO**			
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39.	Riza Naqvi	Manager	9650480505	riza.naqvi@posoco.in

S.No.	Name (S/Shri)	Designation	Contact No.	Email ID
40.	NallarasanNagarathinam	Chief General Manger	8527077022	nallarasan@posoco.in
XVI	**NHPC**			
41.	J. R. Chaudhary	Executive Director(T&RE)	9810875116	jrchaudhary@nhpc.nic.in
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XVII	**HPPTCL**			
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44.	Sandeep Sharma	GM (C & D)	98166-28734	gmcd@hpptcl.in
45.	Harmanjeet Singh	AE (Planning)	98057-72660	dmplg1@hpptcl.in
XVIII	**SJVN**			
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48.	Romesh Kumar Kapoor	Chief General Manager	9418088008	Romesh.kapoor@sjvn.nic.in
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XIX	**STERLITE**			
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55.	Amit Tripathi	Lead-Policy Advisory	9930808689	amit.tripathi1@sterlite.com

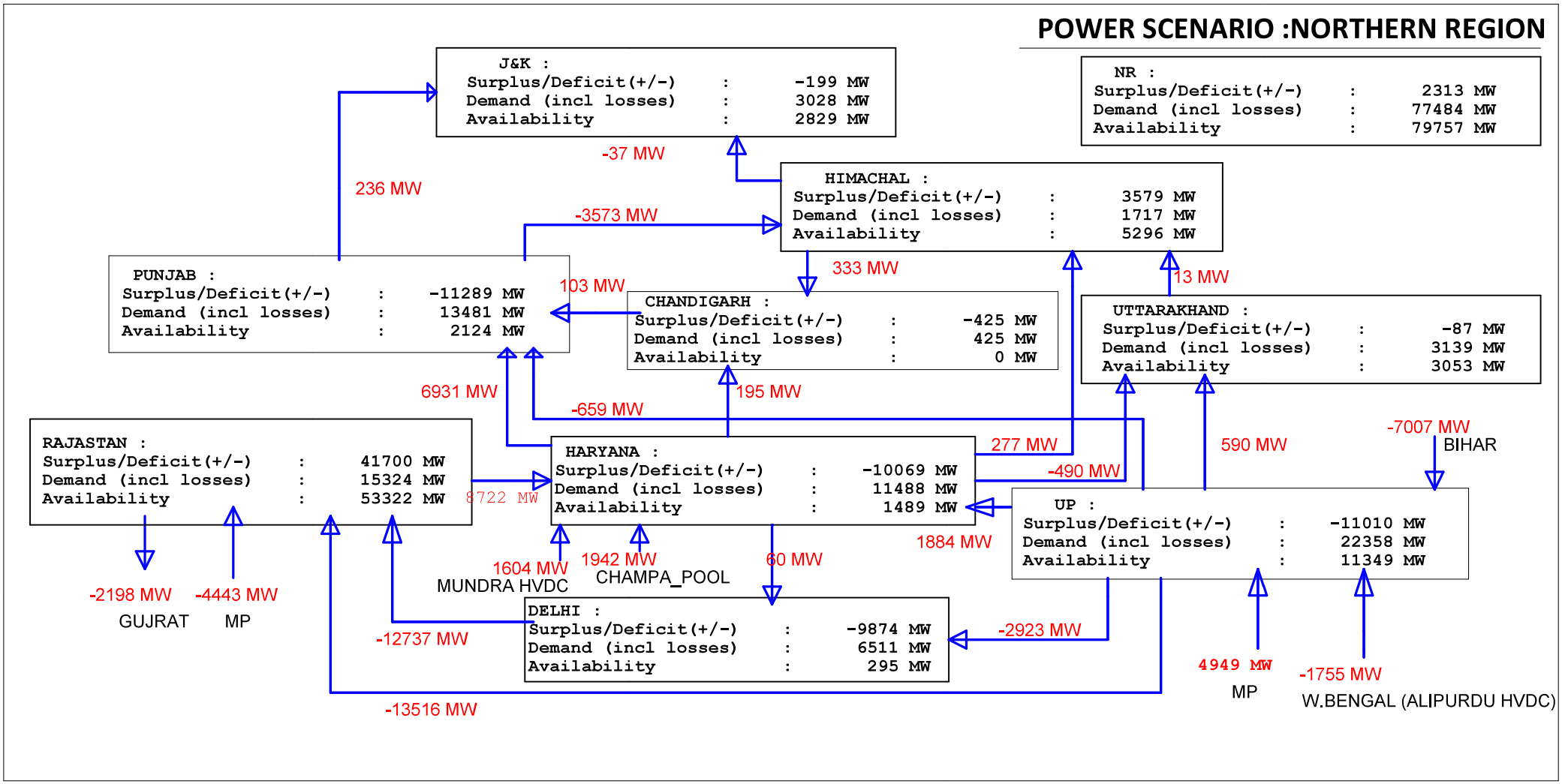
ANNEXURE-II

Additional Transmission works proposed by JKPDD for Jammu Region

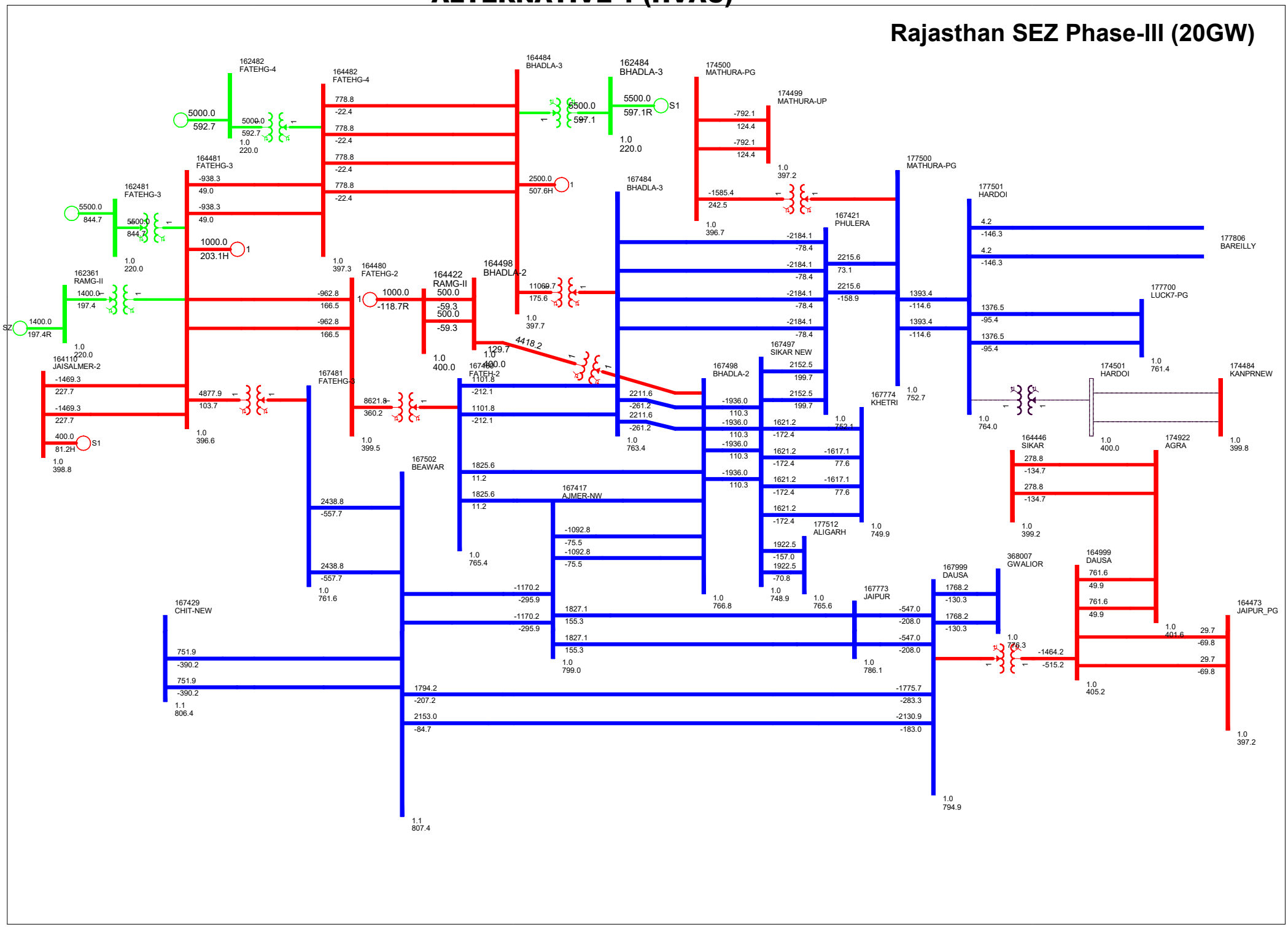
S.No.	Transmission Element
1.	Erection of new 220 KV Chowadi-Nagrota-Katra Line (55 Kms)
2.	LILO of 220KV Gladni -Udhampur S/c line 5km at 220/33KV Grid station Nagrota
3.	Creation of New 50 MVA 220/33 KV Grid Station Ramanagar including 24km LILO line from 220 KV Sarna- Udhampur Transmision line
4.	Creation of new 1x50 MVA , 132/33KV Grid Station Basohli including LILO of one circuit of 132KV D/C Sewa Mahanpur line (for improved voltage regulations feeding to far flung rural areas such as Bani, Bhoond etc presently fed on very lengthy 33KV lines from Mahanpur Grid)
5.	Creation of new 20 MVA 132/33 KV Grid Station Paddar including 28km,132 KV line from 132 KV 132/33KV Grid Station Khellani Doda
6.	220 KV Line Bay 4 no (at Nagrota for 220 KV Chowadhi Nagrota katra line)
7.	Creation of new 132 KV line bay at Grid station Draba for 132KV Draba-Mendhar line
8.	Creation of 2 no new 132 KV line bays at Grid station Gladni for evacuation of power to Nagrota link from Gladni.
9.	Creation of new 1 No 132 KV line bay Jhajjar-Kotli
10.	Creation of new 10 66 KV line bay (4 No at 220/66KV Samba and 4 no at 220/66KV Ghatti)
11.	Creation of new 21 no 33 KV line bay (04 no for Nagrota Sub station, 4 no at Chowadhi 4 no at Gladni and Barn each)
12.	Creation of new 66 KV line bay at recently augmented 150 MVA Grid station Kathua for evacuation of power
13.	Creation of new 33 KV line bay at recently augmented 150 MVA Grid station Miransahib for evacuation of power
14.	Installation of capacitor Banks at various Grid Stations of System and Operation Wing Jammu
15.	LILO bays of 132 KV D/C RRKTL from the proposed evacuation 440/132 KV Sub Station of CVPPL along with associated 25 km 132 KV D/c transmission line
16.	Replacement of old/deteriorated control cables of 33KV & 132 KV bays at Grid station Miransahib and BB-I
17.	Replacement of old/deteriorated control cables of 33KV & 132 KV bays at Grid station BB-II
18.	Renovation of control Room building at Grid station at Miran sahib & BB-I
19.	Provision for civil works at Grid station Batote as the area is sinking/slide prone and has caused damaged to protection walls and other civil works.

ANNEXURE-III

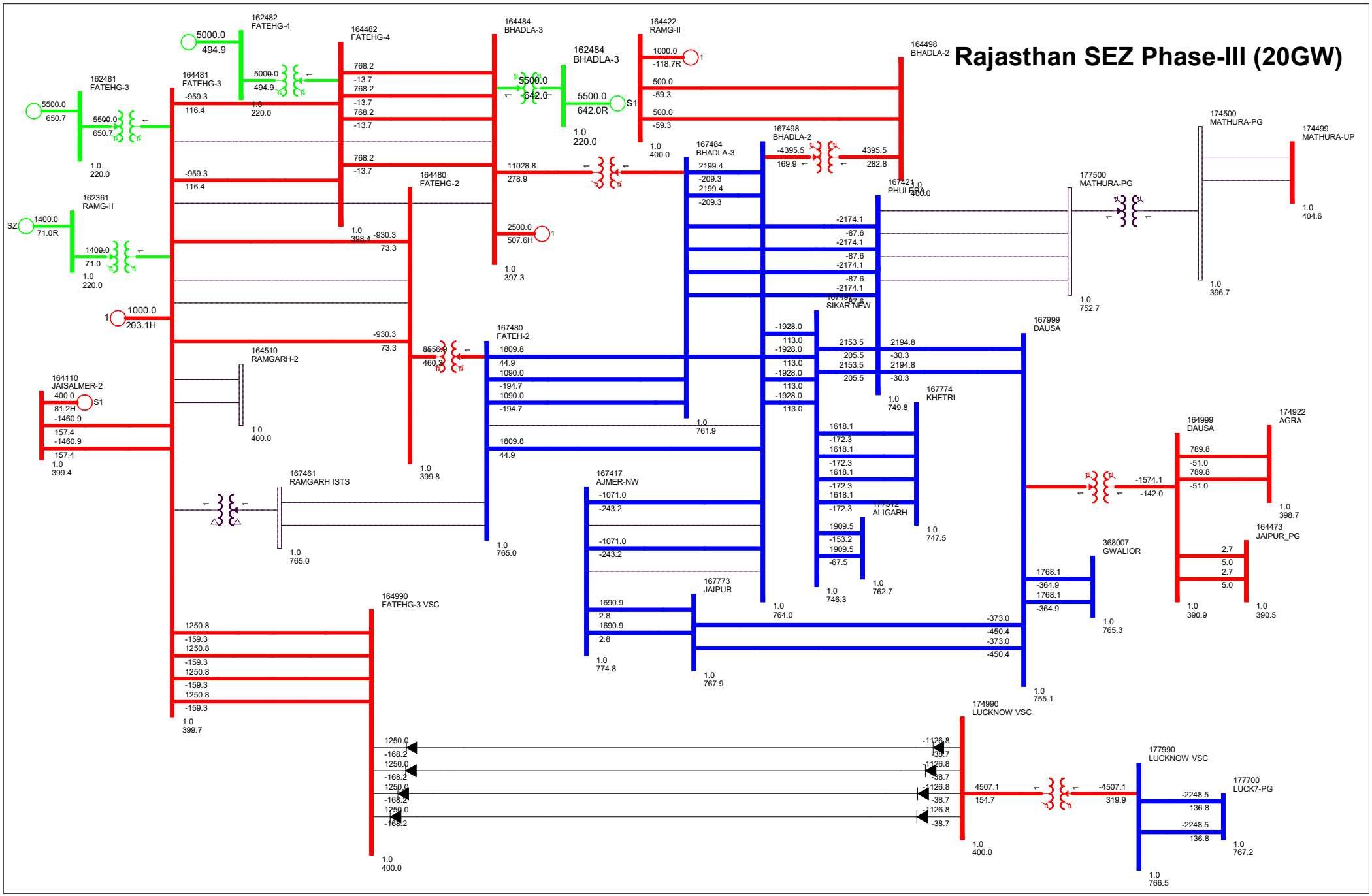
Transmission system strengthening scheme for evacuation of power from Solar Energy Zones (20 GW) in Northern Region (Phase-III)



ALTERNATIVE-1 (HVAC)



ALTERNATIVE-2 (HVAC+HVDC)



ANNEXURE-IV

Transmission elements	Schedule
Phase-II ATS of 400/220kV Bikaner-II S/s	
i) Establishment of 400/220kV, 6x500MVA pooling station at suitable location near Bikaner (Bikaner-II PS) with 2x125 MVAr bus reactor at 400kV level and with suitable bus sectionalisation at 400 kV level and 220 kV level. ii) Bikaner-II PS – Khetri 400kV 2xD/c line (Twin HTLS line on M/c tower) iii) Removal of LILO of one circuit of Bhadla-Bikaner (RVPN) 400kV D/c (Quad) line at Bikaner (PG). Extension of above LILO section from Bikaner(PG) upto Bikaner-II PS to form Bikaner-II PS – Bikaner (PG) 400kV D/c(Quad) line) iv) 1x80 MVAr Switchable line reactor for each circuit at each end of Bikaner-II – Khetri 400kV 2xD/c line v) Khetri - Bhiwadi 400kV D/c line (Twin HTLS) vi) Power reversal on ±500kV, 2500MW Balia – Bhiwadi HVDC line upto 2000MW from Bhiwadi to Balia in high solar generation scenario vii) Establishment of 765/400 kV, 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVAr) bus reactor and 400kV (1x125 MVAR) bus reactor viii) Khetri – Narela 765 kV D/c line ix) 1x330 MVAr Switchable line reactor for each circuit at Narela end of Khetri – Narela 765kV D/c line x) LILO of 765 kV Meerut- Bhiwani S/c line at Narela xi) Removal of LILO of Bawana – Mandola 400kV D/c(Quad) line at Maharani Bagh/ Gopalpur S/s. Extension of above LILO section from Maharani Bagh/Gopalpur upto Narela S/s so as to form Maharanibagh – Narela 400kV D/c(Quad) and Maharanibagh -Gopalpur-Narela 400kV D/c(HTLS) lines on M/c Tower. xii) ± 300 MVAr, 2x125 MVAR MSC , 1x125 MVAr MSR STATCOM at Bikaner – II S/s xiii) 220kV line bays for interconnection of solar projects at Bikaner-II PS (10 nos.)	June'22 onwards (18 months)
Phase-II ATS of 400/220kV Bhadla-II S/s	
i) 3 no. 220kV line bays for interconnection of solar projects at Bhadla-II PS	Dec'21
ii) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II iii) Sikar-II – Aligarh 765kV D/c line iv) Bhadla-II PS – Sikar-II 765kV 2xD/c line v) Sikar-II – Neemrana 400kV D/c line (Twin HTLS) vi) 1x330 MVAr Switchable line reactor for each circuit at Sikar II end of Bhadla-II – Sikar-II 765kV 2xD/c line vii) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV 2xD/c line viii) 1x330MVAr Switchable line reactor for each circuit at each end of Sikar-II –Aligarh 765kV D/c line ix) Augmentation with 765/400kV, 1x1500MVA transformer (4th) at Bhadla-	June'22 onwards (18 months)

II PS. x) Augmentation with 400/220kV, 3x500MVA transformer (6th to 8th) at Bhadla-II PS with suitable bus sectionalisation at 400 kV & 220 kV xi) 2 no. of ± 300 MVAr, 2x125 MVAR MSC , 1x125 MVAr MSR STATCOM at Bhadla-II S/s xii) 1 no. 220kV line bays for interconnection of solar projects at Bhadla-II PS	
Phase-II ATS of 400/220kV Fatehgarh-II S/s	
i) 3 no. 220kV line bays for interconnection of solar projects at Fatehgarh-II PS	Dec'21
ii) 4 no. 220kV line bays for interconnection of solar projects at Fatehgarh-II PS	Jan'22
iii) Augmentation with 765/400kV, 2x1500MVA transformer (5th & 6th) at Fatehgarh-II PS iv) Fatehgarh-II PS – Bhadla-II PS 765kV D/c line (2nd) v) 1x240 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-II – Bhadla-II 765kV D/c line vi) Augmentation with 400/220kV, 4x500MVA transformer (6th & 9th) at Fatehgarh-II PS with suitable bus sectionalisation at 400 kV & 220 kV vii) 2no. of ± 300 MVAr, 2x125 MVAR MSC , 1x125 MVAr MSR STATCOMs at Fatehgarh – II S/s	Mar'22
Phase-II ATS of 400/220kV Fatehgarh-III S/s(erstwhile Ramgarh-II S/s)	
i) Establishment of 400/220kV, 4x500 MVA Fatehgarh-III PS(erstwhile Ramgarh-II S/s) with 2x125 MVAr bus reactor at 400kV level. ii) Fatehgarh-III PS –Fatehgarh-II PS 400 kV D/c Line (Twin HTLS) iii) Fatehgarh -III PS – Jaisalmer-II (RVPN) 400 kV D/c Line (Twin HTLS) iv) 220kV line bays for interconnection of solar projects at Fatehgarh-III PS (7 nos.)	June'22 onwards (18 months)

Annexure-V

Applications granted as per previous Connectivity and LTA meetings of NR

The details of Connectivity/LTA applications granted/agreed for grant in 31st – 37th Connectivity and LTA meetings of NR is given below:

Stage-I Connectivity:

Sl. No.	Application No.	Applicant	Location	Date of Application	Connectivity Sought (MW)	Nature of Applicant	Proposed location for Connectivity	Dedicated Tr. System
1	1200002381	Azure Power India Private Limited	Jodhpur, Rajasthan	03/12/19	500	Solar	Bhadla-II PS (Sought at 400kV)	Azure Power India Private Limited Solar Power Plant (Azure Manufacturing Bhadla-II Tr-I) – Bhadla-II PS 400 kV S/c line (For Application at Sl. No.1 & 4 is considered together and Stage-I Connectivity was agreed to be granted through 400 kV S/c line suitable to carry 1000 MW at nominal voltage)
2	1200002382	Azure Power India Private Limited	Jaisalmer, Rajasthan	03/12/19	500	Solar	Fatehgarh-II PS (Sought at 400kV)	Azure Power India Private Limited Solar Power Plant (Azure Manufacturing Fatehgarh-II Tr-I) – Fatehgarh-II 400 kV S/c line (suitable to carry 900 MW at nominal voltage)
3	1200002383	Azure Power India Private Limited	Jaisalmer, Rajasthan	03/12/19	500	Solar	Ramgarh PS (Sought at 400kV)	Azure Power India Private Limited Solar Power Plant (Azure Manufacturing Ramgarh) – Ramgarh P.S 400 kV S/c line (suitable to carry 900 MW at nominal voltage)
4	1200002384	Azure Power India Private Limited	Jodhpur, Rajasthan	03/12/19	500	Solar	Bhadla-II PS (Sought at 400kV)	Azure Power India Private Limited Solar Power Plant (Azure Manufacturing Bhadla-II Tr-II) – Bhadla-II PS 400 kV S/c line (Ffor Application at Sl. No.1 & 4 is

								considered together and Stage-I Connectivity was agreed to be granted through 400 kV S/c line suitable to carry 1000 MW at nominal voltage)
5	1200002405	Rosepetal Solar Energy Private Limited	Jaisalmer, Rajasthan	17/12/19	**700**	Hybrid (Solar 650MW, Wind 650MW)	Fatehgarh-II PS	Rosepetal Solar Energy Private Limited Solar Power Plant – Fatehgarh-II 220 kV D/c line (High Capacity) (suitable to carry 700 MW at nominal voltage)
6	1200002421	NTPC Ltd.	Bikaner, Rajasthan	31/12/19	**300**	**Solar**	Bhadla-II PS (Sought at 400kV)	NTPC 300 MW Solar Project at Seora – Bhadla-II PS 400 kV S/c line (suitable to carry 900 MW at nominal voltage)
7	1200002380	Avaada Energy Private Limited	Bikaner, Rajasthan	03/12/19	**300**	**Solar**	Bikaner (PG) (Sought at 400kV)	Avaada Sustainable RJ Project Pvt. Ltd. Solar Power Plant - Bikaner PG 400 kV S/c line (suitable to carry 900 MW at nominal voltage
8	1200002337	NTPC Ltd.	Bikaner, Rajasthan	**07/11/2019**	**250**	**Solar**	Bhadla-II PS (Sought at 400kV)	NTPC 250 MW solar Project at Kolayat – Bhadla-II PS 400 kV S/c line. (suitable to carry 900 MW at nominal voltage)
9	1200002427	Adani Green Energy Four Limited	Jodhpur, Rajasthan	08/01/20	2500	Solar	Bhadla-II	Adani Green Energy Four Limited Solar Power Project – Bhadla-II PS 400 kV D/c (high capacity) line (suitable to carry 1250 MW at each circuit at nominal voltage)
10	1200002429	Adani Green Energy Four Limited	Jaisalmer, Rajasthan	08/01/20	2500	Solar	Fatehgarh-II	Adani Green Energy Four Limited Solar Power Project – Fatehgarh-II PS 400 kV D/c (high capacity) line (suitable to carry 1250 MW at each circuitat nominal voltage)
11	1200002431	Adani Green Energy Four Limited	Jaisalmer, Rajasthan	08/01/20	2500	Solar	Ramgarh	Adani Green Energy Four Limited Solar Power Project – Ramgarh PS

								400 kV D/c (high capacity) line (suitable to carry 1250 MW at each circuitat nominal voltage)
12	1200002447	Amp Energy Green Private Limited	Jaisalmer, Rajasthan	22/01/20	300	Solar	Fatehgarh-II	Amp Energy Green Three Solar Power Project – Fatehgarh-II PS 220 kV S/c line
13	1200002446	Amp Energy Green Private Limited	Bikaner, Rajasthan	22/01/20	300	Solar	Bikaner	Amp Energy Green Two Solar Power Project – Bikaner-II PS 220 kV S/c line
14	1200002444	Amp Energy Green Private Limited	Jaisalmer, Rajasthan	22/01/20	300	Solar	Ramgarh	Amp Energy Green One Solar Power Project – Ramgarh PS 220 kV S/c line
15	1200002461	Amp Energy Green Private Limited	Jodhpur, Rajasthan	31/01/20	300	Solar	Bhadla-II	Amp Energy Green Four Solar Power Project – Bhadla-II PS 220 kV S/c line
16	1200002457	Enel Green Power India Private Limited	Bikaner, Rajasthan	31/01/20	300	Solar	Bikaner	Enel Green Power India Private Limited Solar Power Project – Bikaner-II PS 220 kV S/c line
17	1200002464	PradeepChauhan(EkialdeSolar Private Limited)	Jodhpur, Rajasthan	13/02/20	500	Solar	Bhadla-II	Ekialde Solar Private Limited Solar Power Project – Bhadla-II PS 220 kV D/c line
18	1200002496	NTPC Ltd.	Jaisalmer, Rajasthan	29/02/20	90	Solar	Fatehgarh-II	NTPC 90MW Solar Project at Devikoot – Fatehgarh-II PS 220 kV S/c line (through the same line already granted Stage-II Connectivity for 150MW Solar Project–application no. 1200002308)

19	1200002498	NTPC Ltd.	Jaisalmer, Rajasthan	29/02/20	296	Solar	Fatehgarh-II	NTPC 296MW Solar Project at Fatehgarh– Fatehgarh-II PS 220 kV S/c line
20	1200002500	NTPC Ltd.	Bikaner, Rajasthan	29/02/20	300	Solar	Bhadla-II	NTPC 300MW Solar Project at Nokhra– Bhadla-II PS 220 kV S/c line
21	1200002526	Eden Renewable Alma Private Limited	Jodhpur, Rajasthan	06-04-2020	300	Solar	Bhadla-II PS	Eden Renewable Alma Pvt. Ltd. Solar Power Project – Bhadla-II PS 220 kV S/c line
22	1200002555	SBE Renewables Fifteen Private Limited	Jodhpur, Rajasthan	13-04-2020	600	Solar	Bhadla-II PS	SBE Renewables fifteen Pvt. Ltd. Solar Power Project– Bhadla-II PS 220 kV D/c line
23	1200002573	ALTRA XERGI Power Pvt. Ltd.	Jaisalmer, Rajasthan	24-04-2020	380	Solar	Fatehgarh-III PS/Fatehgarh-II PS	Altra Xergi Power Pvt. Ltd. Solar Project - Fatehgarh-III PS 220 kV D/c line
24	1200002565	ReNew Surya Vihaan Private Limited	Jaisalmer, Rajasthan	28-04-2020	300	Solar	Fatehgarh-III PS	Renew Surya Vihaan Pvt. Ltd. Solar Project – Fatehgarh-III PS 220 kV S/c line
25	1200002581	Avaada Energy Private Limited	Jaisalmer, Rajasthan	29-04-2020	600	Solar	Fatehgarh-II PS/ Fatehgarh-III PS	Avaada Energy Pvt. Ltd. Solar Project – Fatehgarh-III PS 220 kV D/c line
26	1200002592	ABC Renewable Energy Pvt. Ltd.	Jaisalmer, Rajasthan	06-05-2020	400	Solar	Fatehgarh-II PS/Fatehgarh-III PS	ABC Renewable Energy Pvt. Ltd.400 MW Solar Power Project – Fatehgarh-III PS 220 kV S/c (High capacity line suitable to carry 400 MW at nominal voltage)
27	1200002602	Eden Renewable Passy Private Ltd.	Barmer, Rajasthan	08-05-2020	300	Solar	Fatehgarh-III PS	Eden Passy NHPC Solar Power Project– Fatehgarh-III PS 220 kV

								S/c line
28	1200002612	SBE Renewables Seventeen Pvt. Ltd.	Jaisalmer, Rajasthan	24-05-2020	600	Solar	Fatehgarh-III PS	SBE Renewables Seventeen Private Limited Solar Power Project - Fatehgarh-III PS 220 kV D/c line (suitable to carry 300 MW per circuit at nominal voltage)
29	1200002613	Avaada Energy Private Limited	Jodhpur, Rajasthan	28-05-2020	600	Solar	Bhadla-II PS	Avaada Energy Solar Power Project – Bhadla-IIPS 220 kV D/c line (suitable to carry 300 MW per circuit at nominal voltage)
30	1200002616	O2 POWER SG PTE. LTD.	Jaisalmer, Rajasthan	31-05-2020	380	Solar	Fatehgarh-II PS/ Fatehgarh-III PS	O2 POWER Solar Project – Fatehgarh-IIIPS 220 kV S/c line (High capacity line suitable to carry 380 MW at nominal voltage)
31	1200002576	NLC India Limited	Bikaner, Rajasthan	05-05-2020	250	Solar	Bikaner PS	NLC Barsingsar Solar power Project-Bikaner PS 220 kV S/c line (suitable to carry 300 MW at nominal voltage)
32	1200002627	Renew Surya Roshni Pvt. Ltd.	Jaisalmer, Rajasthan	05-06-2020	500	Hybrid	Fatehgarh-II PS / Fatehgarh-III PS	Renew Surya Roshni Pvt. Ltd. Solar Power Project – Fatehgarh-III PS 220 kV D/c line
33	1200002630	Avikiran Surya India Pvt. Ltd.	Bikaner, Rajasthan	08-05-2020	300	Solar	Bikaner PS	Avikiran Surya India Pvt. Ltd. Solar Power Project– Bikaner PS 220 kV S/c line
34	1200002654	TEQ Green Power Pvt. Ltd.	Jaisalmer, Rajasthan	28-06-2020	400	Solar	Fatehgarh-III PS	TEQ Green Power Pvt. Ltd. Solar Power Project - Fatehgarh-III PS 220 kV S/c (High Capacity) line

35	1200002652	Energizent Power Pvt. Ltd.	Jaisalmer, Rajasthan	29-06-2020	390	Solar	Fatehgarh-III PS	Energizent Power Pvt. Ltd. Solar Power Project – Fatehgarh-III PS 220 kV S/c (High Capacity) line

Stage-II Connectivity:

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
1.	1200002423	Mahoba Solar (UP) Private Limited	Jodhpur, Rajasthan	31/12/19	Solar	50/ 01/03/2020	Enh St-II L&A	Mahoba Solar (UP) Private Limited – Bhadla 220kV S/c line (220 kV line &1 No. 220 kV bay already granted)
2.	1200002385	Avaada Energy Private Limited	Bikaner, Rajasthan	05/12/19	Solar	300/ 20/08/2021	(SECI ISTS-VI)	Avaada Energy Private Limited – Bikaner 400kV S/c line (400 kV line &1 No. 400 kV bay already granted)
3.	1200002390	Tata Power Renewable Energy Limited	Jaisalmer, Rajasthan	12/12/19	Solar	150 (01/06/2021)	Enh St-II (Tata Power Ltd)	Tata Power Renewable Energy Limited – Bhadla 220kV S/c line (220 kV line &1 No. 220 kV bay already granted)
4.	1200002411	Rosepetal Solar Energy Private Limited	Jaisalmer, Rajasthan	31/12/19	Hybrid (Solar-650MW, Wind-650MW)	700 (31/01/2022)	(Adani Electricity Mumbai Ltd LoA)	Rosepetal Solar Energy Private Limited – Fatehgarh-II 220kV D/c line (High Capacity) (suitable to carry 700 MW at nominalvoltage) (220 kV bays at Fatehgarh-II P.S under ISTS)

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
5.	1200002410	Adani Renewable Energy Park Rajasthan Limited	Jaisalmer, Rajasthan	31/12/19	Solar	500 (31/01/2022)	L&A	Adani Renewable Energy Park Rajasthan Limited - Fatehgarh-II P.S 220kV D/c line (suitable to carry 600 MWat nominalvoltage) (220 kV bays at Fatehgarh-II P.S under ISTS)
6.	1200002340	NTPC Ltd.	Bikaner, Rajasthan	08/11/19	Solar	250 (29/11/2021)	SECI (Tranche-I under CPSU phase-II scheme)	NTPC Limited – Bhadla-II 400kV S/c line (400 kV bay at Bhadla-II P.S under ISTS)
7.	1200002428	Adani Green Energy Four Limited	Jodhpur, Rajasthan	08/01/20	Solar	500/ 31/01/2022	(SECI LOA-Manufacturing)	Adani Green Energy Four Ltd. Power Plant- Bhadla-II P.S 400 kV S/c line (suitable to carry minimum capacity of 900 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 400 kV Bay at Bhadla-II PS shall be under the scope of ISTS.
8.	1200002432	Adani Green Energy Four Limited	Jaisalmer, Rajasthan	08/01/20	Solar	500/ 30/09/2022	(SECI LOA-Manufacturing)	Adani Green Energy Four Ltd. Power Plant- Ramgarh P.S 400 kV S/c line (suitable to carry minimum capacity of 900 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard 400 kV Bay at Ramgarh PS shall be under the scope of ISTS.

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
9.	1200002450	SBE Renewables Sixteen Private Limited	Jaisalmer, Rajasthan	23/01/20	Solar	180/ 11/08/2021	(SECI ISTS-V)	SBE Renewables Sixteen Private Limited Power Plant- Fatehgarh-II P.S 220 kV S/c line (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard 220 kV Bay at Fatehgarh-II PS shall be under the scope of ISTS.
10.	1200002401	Azure Power India Private Limited	Jodhpur, Rajasthan	18/12/19	Solar	500 (07/04/2022)	(SECI Manufacturing)	Azure Power India Pvt. Ltd. Power Plant- Bhadla-II P.S 400 kV S/c line$ (suitable to carry 1000 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard 400 kV Bay at Bhadla-II PS shall be under the scope of ISTS.
11.	1200002402	Azure Power India Private Limited	Jaisalmer, Rajasthan	18/12/19	Solar	500 (31/10/2025)	(SECI Manufacturing)	Azure Power India Pvt. Ltd. Power Plant- Ramgarh-II P.S 400 kV S/c line (suitable to carry 900 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 400 kV Bay at Ramgarh PS shall be under the scope of ISTS.
12.	1200002403	Azure Power India Private Limited	Jodhpur, Rajasthan	18/12/19	Solar	500 (07/04/2023)	(SECI Manufacturing)	Azure Power India Pvt. Ltd. Power Plant- Bhadla-II P.S 400 kV S/c line (suitable to carry 1000 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard 400 kV Bay at Bhadla-II PS shall be under the scope of ISTS.

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
13.	1200002465	Enel Green Power India Private Limited	Bikaner, Rajasthan	08/02/20	Solar	300/ 01/09/2021	L&A	Enel Green Power India Pvt. Ltd power plant – Bikaner (PG) P.S 220 kV S/cline (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (220 kV Bay at Bikaner (PG) PS shall be under the scope of ISTS)
14.	1200002471	ACME Solar Holdings Limited	Jodhpur, Rajasthan	18/02/20	Solar	300/ 21/06/2021	MSEDCL-LOA	ACME Solar Holdings Ltd. Power plant – Bhadla-II P.S 220 kV S/cline (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (220 kV Bay at Bhadla-II PS shall be under the scope of ISTS)
15.	1200002483	NTPC LTD.	Bikaner, Rajasthan	26/02/20	Solar	300/ 25/10/2021 Revised Date(As per NTPC request Let dated 05/04/20): 01/09/2021	SECI CPSU Tr.-II	NTPC Ltd. Power plant – Common pooling station of NTPC's 250MW& 300 MW Solar Project located at Kolayat & Seora 220 kV S/c line & Common Plg station – Bhadla-II PS 400 kV S/c line (already granted for 250 MW plant)(suitable to carry 900 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (400 kV Bay already granted for 250 MW plant at Bhadla-II PS is under the scope of ISTS)
16.	1200002497	NTPC LTD.	Jaisalmer, Rajasthan	29/02/20	Solar	90/ 25/10/2021	SECI CPSU Tr.-II	Common Pooling Station of NTPC's 150 MW& 90 MW Solar Project at Devikoot – Fatehgarh-II PS 220 kV S/c line (already granted for 150 MW plant)(suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
								bay at generation switchyard. (220 kV Bay already granted for 150 MW plant a t Fatehgarh-II PS is under the scope of NTPC)
17.	1200002501	NTPC LTD.	Bikaner, Rajasthan	29/02/20	Solar	300/ 01/09/2021	SECI CPSU Tr.-I & II	NTPC Ltd. Power plant – Bhadla-II P.S 220 kV S/cline (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (220 kV Bay at Bhadla-II PS shall be under the scope of ISTS)
18.	1200002400	Azure Power India Private Limited	Jaisalmer, Rajasthan	18/12/19	Solar	500 (31/10/2023) Revised Date-07/04/2024	(SECI Manufacturing)	Azure Power India Pvt. Ltd. Power plant – Fatehgarh-II P.S 400 kV S/c line (suitable to carry 900 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (400 kV Bay at Fatehgarh-II PS shall be under the scope of ISTS)
19.	1200002430	Adani Green Energy Four Limited	Jaisalmer, Rajasthan	08/01/20	Solar	500 (01/07/2021)	(SECI Manufacturing)	Adani Green Energy Four Ltd. Power plant – Fatehgarh-II P.S 220 kV D/cline (suitable to carry 300 MW per circuit under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. (220 kV Bays at Fatehgarh-II PS shall be under the scope of ISTS)
20.	1200002554	Eden Renewable Alma Private	Jodhpur, Rajasthan	07/04/2020	Solar	1200002526 /	(SECI ISTS VIII)	Eden Alma-ISTS solar power plant - Bhadla-II PS 220 kV S/c line – to be implemented by applicant along

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
		Limited				300		with bay at generation switchyard. 220 kV Bay at Bhadla-II PS shall be under the scope of ISTS.
21.	1200002556	SBE Renewables Fifteen Private Limited	Jodhpur, Rajasthan	13/04/2020	Solar	1200002555 / 600	(SECI ISTS VIII)	SBE Renewable fifteen Pvt. Ltd. solar power plant - Bhadla-II PS 220 kV D/c line (suitable to carry 300 MW per circuit under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bays at Bhadla-II PS shall be under the scope of ISTS.
22.	1200002559	AMP ENERGY GREEN PRIVATE LIMITED	Jodhpur, Rajasthan	13/04/2020	Solar	1200002461 / 300	(SECI ISTS VIII)	Amp Energy Green Four solar power plant - Bhadla-II PS 220 kV S/c line (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bay at Bhadla-II PS shall be under the scope of ISTS.
23.	1200002590	ReNew Surya Vihaan Private Limited	Jaisalmer, Rajasthan	06/05/2020	Solar	200/ Revised: 31/03/2022	SECI	ReNew Surya Vihaan Private Ltd. solar power plant – Fatehgarh-III PS 220 kV S/c line on D/C tower (suitable to carry 300 MW under nominalvoltage) – to be implemented by applicant along with bay at generation switchyard 220 kV Bay at Fatehgarh-III PS to be implemented under ISTS
24.	1200002614	Avaada Energy Private Limited	Jodhpur, Rajasthan	28/05/2020	Solar	240/	SECI	Avaada Energy Private Limited Solar power plant - Bhadla-II PS 220 kV S/c line (suitable to carry 300 MW under nominalvoltage) – to be implemented by

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
						31/12/2021		applicant along with bay at generation switchyard 220 kV Bay at Bhadla-II PS to be implemented under ISTS
25.	1200002628	Renew Surya Roshni Pvt. Ltd.	Jaisalmer, Rajasthan	05/06/2020	Hybrid (Solar+Wind)	400/ 31/08/2022	(SECI Round the Clock Tender)	Renew Surya Roshni Pvt. Ltd. hybrid power plant – Fatehgarh-III PS 220 kV S/c high capacity line on D/c tower (suitable to carry 400 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bay at Fatehgarh-III PS to be implemented under ISTS
26.	1200002637	Altra Xergi Power Pvt. Ltd.	Jaisalmer, Rajasthan	11/06/2020	Solar	380/ 15/02/2022	NHPC LOA	Altra Xergi Power Pvt. Ltd. solar power plant – Fatehgarh-III PS 220 kV S/c high capacity line on D/c tower (suitable to carry 380 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard 220 kV Bay at Fatehgarh-III PS to be implemented under ISTS
27.	1200002636	Avaada Energy Pvt. Ltd.	Jodhpur, Rajasthan	11/06/2020	Solar	320/ 28/02/2022	NHPC LOA	Avaada Energy Pvt. Ltd. solar power plant – Bhadla-II PS 220 kV S/c line (suitable to carry 320 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bay at Bhadla-II PS to be implemented under ISTS
28.	1200002635	SBE Renewables Seventeen Private Limited	Jaisalmer, Rajasthan	13/05/2020		600/ 01/03/2022		SBE Renewables Seventeen Private Limited solar power plant – Fatehgarh-III PS 220 kV D/c line (suitable to carry 300 MW per circuit under nominal voltage) – to be implemented by applicant along with

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
					Solar		NHPC LOA	bay at generation switchyard. 220 kV Bays at Fatehgarh-III PS to be implemented under ISTS
29.	1200002629	Eden Renewable Passy Private Limited	Barmer, Rajasthan	11/06/2020	Solar	300/ 31/03/2022 (Revised)	NHPC LOA	Eden Renewable Passy Private Limited solar power plant – Fatehgarh-III PS 220 kV S/c line on D/c tower (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bay at Fatehgarh-III PS to be implemented under ISTS
30.	1200002642	Avikiran Surya India Pvt. Ltd.	Bikaner, Rajasthan	16/06/2020	Solar	300/ 01/09/2021	SECI-IX/LOA	Avikiran Surya India Pvt. Ltd. solar power plant – Bikaner PS 220 kV S/c line on D/c tower (suitable to carry 300 MW under nominal voltage) – to be implemented by applicant along with bay at generation switchyard. 220 kV Bay at Bikaner PS to be implemented under ISTS
31.	1200002676	Amp Energy Green Private Limited (Enh St-II)	Jodhpur, Rajasthan	15-07-2020	Solar	100/ 11-04-2022	SECI ISTS IX	Common Pooling Station of Amp Energy Green Four & Five Solar Power Plant - Bhadla-II PS 220 kV S/c line (already granted for 100 MW plant)- (suitable to carry minimum 300 MW under nominal voltage) - to be implemented by applicant along with bay at generation switchyard & Common PS. 220 kV Bay at Bhadla-II PS already granted for 100 MW plant (Appl. No. 1200002559) is under the scope of ISTS

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
32.	1200002688	Eden Renewable Bercy Private Limited	Barmer, Rajasthan	15-07-2020	Solar	300/ 13-04-2022	SECI ISTS IX	Eden Renewable Bercy Private Limited solar power plant – Fatehgarh-II PS 220 kV S/c line along with associated bay at generation end: under the scope of applicant. 220 kV Bay at Fatehgarh-II PS shall be under the scope of ISTS.
33.	1200002692	Renew Surya Aayan Private Limited	Jaisalmer, Rajasthan	15-07-2020	Solar	300/ 13-04-2022	SECI ISTS IX	Renew Surya Aayan Pvt. Ltd. solar power plant – Fatehgarh-III PS 220 kV S/c line on D/c tower along with associated bay at generation end: under the scope of applicant. 220 kV Bay at Fatehgarh-III PS shall be under the scope of ISTS.
34.	1200002695	Renew Surya Vihaan Private Limited	Jaisalmer, Rajasthan	15-07-2020	Solar	100/ 13-04-2022	SECI ISTS IX	220 kV Common Pooling Station for 300 MW of ReNew Surya Vihaan Pvt. Ltd. (200MW) &ReNew Surya Vihaan Pvt. Ltd. (100MW) – Fatehgarh-III PS 220 kV S/c line (line already granted with Appl. No. 1200002590) along with associated bay at Common Pooling Station end: under the scope of applicant. 220 kV Bay at Fatehgarh-III PS already granted for 200 MW plant (Appl. No. 1200002590) is under the scope of ISTS
35.	1200002700	IB Vogt Solar Seven Private Limited	Jaisalmer, Rajasthan	16-07-2020	Solar	300/ 05-04-2022	SECI ISTS IX	IB Vogt Solar Seven Private Limited solar power plant – Fatehgarh-III PS 220 kV S/c line along with associated bay at generation end: under the scope of applicant. 220 kV Bay at Fatehgarh-III PS shall be under the

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
								scope of ISTS.
36.	1200002682	Adani Green Energy Four Limited	Ramgarh, Rajasthan	16-07-2020	Solar	1500/ 30-12-2022	SECI Manufacturing LoA	Adani Green Energy Four Limited Solar power plant (900 MW) – Ramgarh PS 400 kV S/c line & Adani Green Energy Four Limited Solar power plant (600 MW) – Ramgarh PS 220 kV D/c line along with associated bay at generation end: under the scope of applicant. 400 kV & 220 kV Bay at Ramgarh PS proposed under the scope of ISTS.
37.	1200002683	Adani Green Energy Four Limited	Jaisalmer, Rajasthan	16-07-2020	Solar	1500/ 30-06-2022	SECI Manufactu ring LoA	Adani Green Energy Four Ltd. Solar power plant (900 MW) – Fathegarh-III PS 400 kV S/c line & Adani Green Energy Four Limited solar power plant (600 MW) – Fatehgarh-III PS 220 kV D/c line along with associated bay at generation end: under the scope of applicant. 400 kV & 220 kV Bays at Fatehgarh-III PS proposed under the scope of ISTS.
38.	1200002699	ABC Renewable Energy Private Limited	Jaisalmer, Rajasthan	17-07-2020	Solar	400/ 31-01-2022	NHPC LoA	ABC Renewable Energy Private Limited solar power plant – Fatehgarh-III PS 220 kV S/c (High Capacity-suitable to carry minimum 400 MW at nominal voltage) line along with associated bay at generation end: under the scope of applicant. 220 kV Bay at Fatehgarh-III PS proposed under the scope of ISTS.
39.	1200002728	Tata Power Green Energy	Bikaner,	22-07-				Tata Power Green Energy Limited Solar Power Plant – Bikaner (PG) S/s 220 kV S/c line along with

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
		Limited	Rajasthan	2020	Solar	225/ 31-12-2021	Tata Power LoA	associated bay at generation end: under the scope of applicant. 220 kV Bay at Bikaner (PG) S/s shall be under the scope of ISTS.
40.	1200002742	$SolarpackCorporacionTecnologica S.A.	Jodhpur, Rajasthan	27-07-2020	Solar	300/ 31-12-2021	SECI ISTS IX	SolarpackCorporacionTecnologica S.A. Solar Power Plant – Bhadla-II PS 220 kV S/c line along with associated bay at generation as well as ISTS PS end: under the scope of applicant.
41.	1200002746	Renew Surya Jyoti Private Limited	Jaisalmer, Rajasthan	28-07-2020	Solar	210/ 30-03-2022	L&A Basis	Common Pooling Station of ReNew Surya Jyoti Pvt. Ltd. Solar Power Plant (210MW) &ReNew Surya Pratap Pvt. Ltd. Solar Power Plant (210MW) at ReNew Surya Jyoti – Fatehgarh-III PS 220 kV S/c line (suitable to carry 420 MW at nominal voltage) along with associated bay at Common PS: under the scope of applicant. 220kV Bay at Fatehgarh-III PS proposed under the scope of ISTS.
42.	1200002775	Avaada Energy Private Limited (Enh St-II)	Bikaner, Rajasthan	30-07-2020	Solar	240/ 31-12-2021	HPPC Bidding	400 kV Common Pooling station of 300 MW (Appl. No. 1200002385), 350 MW (Appl. No. 1200002125) & 240 MW (Appl. No. 1200002775) of Avaada Energy Private Limited Solar Power Plant – Bikaner (PG) S/s 400 kV S/c line (suitable to carry min. 900 MW at nominal voltage) along with bay at generation switchyard and Bikaner (PG) – under the scope of applicant.

Sl. No.	Application No.	Applicant	Location	Date of Application	Nature of Applicant	Stage-II Connectivity (MW)/date	Quantum won / Land & Auditor Basis	Dedicated Tr. System (Under the scope of the applicant/ISTS)
								[400 kV line & 1 No. 400 kV bay already granted vide application no 1200002125 (350MW) & 1200002385 (300MW) and same shall be utilized for present connectivity of 240MW also]
43.	1200002778	Renew Surya Pratap Private Limited	Jaisalmer, Rajasthan	31-07-2020	Solar	210/ 30-03-2022	L&A Basis	Common Pooling Station of ReNew Surya Jyoti Pvt. Ltd. Solar Power Plant (210MW) &ReNew Surya Pratap Pvt. Ltd. Solar Power Plant (210MW) at ReNew Surya Jyoti – Fatehgarh-III PS 220 kV S/c line (suitable to carry 420MW at nominal voltage) along with associated bay at Common PS: under the scope of applicant. 220kV Bay at Fatehgarh-III PS proposed under the scope of ISTS (already granted for 1200002746).

Conventional Connectivity:

Sl. No.	Application ID	Name of the Applicant	Submission Date	Project Location	Connectivity location (requested)	Quantum (MW)	Proposal/Remarks
1.	1200002404	THDC India Limited (Khurja STPP)	17/12/19	Khurja, Bulandshahar, UP	Aligarh (PG) S/s	528	Applicant has requested the connectivity with the ISTS grid at 765/400 kV Aligarh substation of POWERGRID.
2	1200002143	NPCIL	19/06/2019	Gorakhpur, Haryana	Fatehabad & Patran	2800	GHAVP - Fatehabad (PG) 400 kV (Quad) D/c line – to be implemented by applicant GHAVP – Patran (TBCB) 400 kV

Sl. No.	Application ID	Name of the Applicant	Submission Date	Project Location	Connectivity location (requested)	Quantum (MW)	Proposal/Remarks
							(Quad) D/c line – to be implemented by applicant 2x125 MVAR Bus Reactor at Generation switchyard of NPCIL (under scope of NPCIL)
3	1200002527	NTPC Ltd.	18/06/2020	Within NTPC-Rihand Premises	Within NTPC-Rihand Premises	20	Connectivity shall be granted for 20 MW Solar PV Project at NTPC Rihand & Auraiya at respective generation switchyard
4	1200002528	NTPC Ltd.	18/06/2020	Within NTPC-Auraiya Premises	Within NTPC-Auraiya Premises	20	Connectivity shall be granted for 20 MW Solar PV Project at NTPC Rihand & Auraiya at respective generation switchyard
5	1200002649	CHENAB VALLEY POWER PROJECTS [P] LIMITED (Kiru HEP)	25/06/2020	Kishtwar, J&K	Kishenpur S/s	624	➢ 400 kV D/c (Triple HTLS Conductor –Equivalent to about 2400MW-considering 1% overload) line from Kiru HEP – Pakaldul generation switchyard ➢ Switchyard Capacity etc. must be able to handle about 2400MW power generated by the generation projects located in downstream of the Kiru HEP. It is proposed that the GIS switchyard equipment and XLPE cables provided may be designed for carrying 4000 Amps current. ➢ 400 kV, 125 MVAR Bus

Sl. No.	Application ID	Name of the Applicant	Submission Date	Project Location	Connectivity location (requested)	Quantum (MW)	Proposal/Remarks
							Reactor at Kiru generation switchyard

LTA:

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
1.	1200002368 (23/12/19)	ReNew Solar Urja Private Limited	Fatehgarh-II P.S	SR (Target)	300 (Start : 23/08/2021 End : 22/08/2046)	Connectivity (1200002370-300 MW, Stage-II) has been agreed for grant in the 30th Constituent meeting of NR. The same has been considered for present LTA. Transmission system for Solar energy zones (8.9 GW) in Rajasthan was technically agreed in 2nd Meeting of Northern Region Standing Committee on Transmission held on 13/11/18 along with the system studies. The required power transfer of 300 MW from Fatehgarh-II P.S was envisaged under the said system. Accordingly, it wasagreed to grant LTA to M/s ReNew Solar Urja Private Limitedfor 300 MW from Fatehgarh-IIP.S to SR (Target) from 23/08/2021 to 22/08/2046 subject to commissioning of ISTS system mentioned at **Appendix-I.**
2.	1200002422 (31/12/19)	SBE Renewables Ten Private Limited	Fatehgarh-II P.S	NR (Target): 50MW WR(Target): 400MW	450 (Start : 07/05/2021 End : 06/05/2046)	Connectivity (1200002321-450 MW, Stage-II) has been granted vide intimation letter dated 24/12/19. The same has been considered for present LTA. Transmission system for Solar energy zones (8.9 GW) in Rajasthan was technically agreed in 2nd Meeting of Northern Region Standing Committee on Transmission held on 13/11/18 along with the system studies. The required power transfer of 450 MW from Fatehgarh-II P.S was envisaged

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						under the said system. Accordingly, it wasagreed to grant LTA to M/s SBE Renewables Ten Private Limited for 450 MW from Fatehgarh-II P.S to NR (Target): 50MW and WR(Target): 400MW from 07/05/2021 to 06/05/2046 subject to commissioning of ISTS system mentioned at **Appendix-I.**
3.	1200002391 (09/12/19)	Avaada Energy Private Limited	Bikaner PS	SR (Target)	300 (Start : 23/08/2021 End : 23/08/2046)	Connectivity (1200002385-300 MW, Stage-II) has been agreed for grant in the present meeting. The same has been considered for present LTA. Transmission system for Solar energy zones (8.9 GW) in Rajasthan was technically agreed in 2nd Meeting of Northern Region Standing Committee on Transmission held on 13/11/18 along with the system studies. It was informed while evolving aforesaid transmission system, generation potential of 1.85 GW was envisaged at Bikaner PS, out of which 1.8 GW has already been granted. However, simulation studies indicate that loading on transmission system is in order with 2.1 GW(1.8+0.3)injectionat BikanerPS. Accordingly, it wasagreedto grant LTA to M/s Avaada Energy Private Limited for 300 MW from Bikaner P.S to SR (Target) from 23/08/2021 to 23/08/2046 subject to commissioning of ISTS system mentioned at **Appendix-II.**
4	1200002442 (21/01/2020)	Adani Green Energy Seven Ltd.	Fatehgarh-II P.S	NR (Target)	300 (Start : 02/08/2021 End : 01/08/2046)	It was informed that Connectivity (1200002225-300 MW, Stage-II) has been granted at 220 kV level vide intimation letter dated 07/10/19 and the same has been considered for present LTA, which was confirmed by applicant. Transmission system for Solar energy zones (8.9 GW) in Rajasthan was technically agreed in 2nd Meeting of Northern Region Standing Committee on Transmission held on 13/11/18 along with the system studies. The required power transfer of 300 MW from Fatehgarh-II P.S was envisaged under the said system. Accordingly, it was agreed to grant LTA to M/s Adani Green Energy Seven Ltd. for 300 MW from Fatehgarh-II P.S to NR

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						(Target): 300 MW from 02/08/2021 to 01/08/2046 subject to commissioning of ISTS system mentioned at **Appendix-I.**
5	1200002443 (21/01/2020)	Adani Green Energy Nine Ltd.	Fatehgarh-II P.S	NR (Target): 200MW ER(Target): 100MW	300 (Start : 02/08/2021 End : 01/08/2046)	It was informed that Connectivity (1200002226-300 MW, Stage-II) has been granted at 220 kV level vide intimation letter dated 29/10/19 and the same has been considered for present LTA, which was confirmed by applicant. Transmission system for Solar energy zones (8.9 GW) in Rajasthan was technically agreed in 2nd Meeting of Northern Region Standing Committee on Transmission held on 13/11/18 along with the system studies. The required power transfer of 300 MW from Fatehgarh-II P.S was envisaged under the said system. Accordingly, it was agreed to grant LTA to M/s Adani Green Energy Nine Ltd. for 300 MW from Fatehgarh-II P.S to NR & ER(Target): 200 MW and 100 MW respectively from 02/08/2021 to 01/08/2046 subject to commissioning of ISTS system mentioned at **Appendix-I.**
6	1200002438 (22/01/2020)	SJVN Ltd. (Dhaulasidh HEP)	Hamirpur (PG)	NR (Target)	66 (Start : 30/11/24 End : 29/11/49)	It was informed that Connectivity has been granted vide letter dated 16/10/2017 at 400/220 kV Hamirpur (PG) substation and the same has been considered for present LTA. Transmission system granted for Connectivity (66 MW plus 10% overload) is from Dhaulasidh HEP to Hamirpur (PG) 400/220 kV substation through 220 kV D/c line. For transfer of 66 MW to NR (Target), it is observed that loadings on the existing ISTS system beyond Hamirpur (PG) is in order. Accordingly, it was agreed to grant LTA to SJVN Ltd. for 66 MW from Dhaulasidh HEP to NR (Target) from 30/11/2024 to 29/11/2049 through ISTS transmission system beyond Hamirpur (PG) substation.
7	1200002147/	NPCIL Ltd.	Fatehabad & Patran	NR (Target)	2800 (Start : 31/03/26 End : 31/10/49)	1x500 MVA ICT at Patran 400/220 kV (TBCB) substation – to be implemented under ISTS

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
	19/06/2019					
8	1200002486 (inadvertently mentioned as 1200002479 in agenda) (26/02/2020)	NTPC Ltd.	NTPC Auraiya Gas Power Station Switchyard	UP (Firm)	20 (Start : 20/03/2020 End : 19/03/2045)	It was informed that Connectivity (1200001879-20 MW) was granted vide intimation letter dated 25/04/19 and the same has been considered for present LTA, which was confirmed by the applicant. NTPC vide letter dated 26.02.2020 had requested to grant LTA from 20.03.2020 for 10MW, another 5MW from 15.04.2020 and remaining 5MW from 15.05.2020. As start date for 10MW i.e. 20.03.2020 has passed and next date for 5MW was approaching soon, NTPC was requested to respond. On this, NTPC informed that due to Lockdown situation in the Country on account of COVID-19, they may not be able give any firm date for Start of LTA now and requested to inform the same at a later date. It was discussed that NTPC would be required to sign the LTA agreement also within 30days of grant, accordingly, suitable dates for LTA grant should be provided by NTPC considering this aspect as with the proposed dates by NTPC, LTA would also be operationalized subject to signing of LTA Agreement. CTU informed that NTPC may formally submit the revised dates within 7 days, based on the same grant of LTA shall be considered . Also, NTPC would be required to submit the required documents for waiver of transmission charges. Further, it was also informed that NOC submitted by NTPC is valid from 15.03.2020 to 14.03.2045, however, LTA has been sought from 20.03.2020 to 19.03.2045. Accordingly, period of LTA shall be considered upto 14.03.2045. Accordingly, it was agreed to grant NTPC LTA with start date to be informed by them subject to signing of LTA Agreement through existing ISTS system upto 14.03.2045.
9	1200002476	Azure Power	Bhadla	BRPL,	100 (Start :	It was deliberated that M/s Azure vide letter dated 19.02.2020 informed that they were granted 300MW LTA

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
	(19/02/2020)	India Pvt. Ltd.		Delhi (Firm)	15/10/2020 End : 15/10/2046)	(1200001562) on Target Region (ER) basis vide intimation dated 24.10.2018. Further, in order to align their LTAs with PSAs executed by SECI with buying utilities, they have filed fresh application for change of 100 MW Target Region(ER) by firming up of beneficiaries in NR. It was noted that 300MW LTA (1200001562) has already been granted on Target Region (ER) basis to M/s Azure w.e.f. 15.10.2020 with 1x500MVA, 400/220kV (5^{th}) ICT at Bhadla and the present application is only for change in target region by firming up of beneficiaries with same start date i.e. 15.10.2020. Based on query from M/s Azure, it was deliberated that in the instant case, the relinquishment charges may not be applicable as the applicant has not changed the start date of LTA in line with CERC order in petition no. 92/MP/2015. M/s Azure was suggested to submit formal relinquishment letter for change in region within 7 days for which they agreed. Subsequently, M/s Azure has submitted their relinquishment request vide letter dated 27/04/2020. Accordingly, it was agreed to grant LTA to M/s Azure for 100 MW from Bhadla (PG) to BRPL, Delhi (NR) from 15/10/2020 to 15/10/2045 subject to commissioning of 1x500MVA, 400/220kV (5th) ICT at Bhadla. Further, 100MW LTA is required to be relinquished from ER and remaining 200MW LTA shall be on Target Region (ER) basis till firming up of beneficiaries.
10	1200002477 (19/02/2020)	Azure Power India Pvt. Ltd.	Bhadla	MPPCL, WR (Firm)	200 (Start : 15/10/2020 End : 15/10/2046)	It was deliberated that M/s Azure vide letter dated 19.02.2020 informed that they were granted 200MW LTA (1200001565) on Target Region (NR) basis vide intimation dated 24.10.2018. Further, in order to align their LTAs with PSAs executed by SECI with buying utilities, they have filed fresh application for change of 200MW Target Region (NR) by firming up of beneficiaries. It was noted that 200MW LTA (1200001565) has already been granted on Target Region (NR) basis to M/s Azure

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						w.e.f. 15.10.2020 with 1x500MVA, 400/220kV (5th) ICT at Bhadla and the present application is for change in target region by firming up of beneficiaries with same start date i.e. 15.10.2020. Based on query from M/s Azure, it was deliberated that in the instant case, the relinquishment charges may not be applicable as the applicant has not changed the start date of LTA in line with CERC order in petition no. 92/MP/2015. M/s Azure was suggested to submit formal relinquishment letter for change in region within 7 days for which they agreed. Subsequently, M/s Azure has submitted their relinquishment request vide letter dated 27/04/2020. Accordingly, it was agreed to grant LTA to M/s Azure for 200 MW from Bhadla (PG) to MPPCL, WR from 15/10/2020 to 15/10/2045 subject to commissioning of 1x500MVA, 400/220kV (5th) ICT at Bhadla. However, 200MW LTA is required to be relinquished from NR.
11	1200002454 / 30/01/2020	TPREL	Bhadla	Target (WR)	150 (Start : 01/07/2021 End : 30/06/2046)	For evacuation of power beyond Bhadla (PG), Transmission System for Solar Energy Zones in Rajasthan (8.9GW) under Phase-I shall be required which is under implementation with commissioning schedule as Dec'20. Transmission scheme for controlling high loading and high short circuit level at Moga substation shall also be required. Details of the scheme is attached at **Appendix-III**.
12	1200002567/ 30/04/2020	ReNew Surya Vihaan Private Limited	Fatehgarh-III PS, Rajasthan	SR (Target)	200 (Revised Start:31/03/2022 End:04/01/2047)	Connectivity (1200002590-200 MW, Stage-II) agreed for grant in the present meeting. The same has been considered for LTA. CTU informed that new Fatehgarh-III PS (changed location of Ramgarh-II PS) with 1x500 MVA, 400/220kV ICT along with Fatehgarh-III PS – Fatehgarh-II PS 400 kV (Twin HTLS) D/c line,Jaisalmer (RVPN) S/s - Fatehgarh-III PS

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						(Twin HTLS) 400 kV D/c line and 1X1500MVA, 765/400kV ICT (5th) at Fatehgarh-II PS (part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme) shall be required for the present 200 MW LTA. The above transmission system is presently under TBCB bidding process with March'22 completion schedule. In addition to above, Commontransmission system associated with SEZ in Rajasthan under 8.9 GW Phase-I scheme shall also be part of LTA system.The system studies for Phase-I & II transmission system have already been agreed in 2nd and 5th NRSCT meetings held on 13/11/2018 & 13/09/2019, respectively. Applicant requested that due to change in generation project schedule (as also mentioned in the discussions of Stage-II Connectivity application), start date of LTA may be changed to 31/03/2022 instead of 05/01/2022. After deliberations, it was agreed to grant LTA to M/s ReNew Surya Vihaan Private Limited for transfer of 200 MW from Fatehgarh-III PS to SR on target region basis from 31/03/2022 to 04/01/2047 with commissioning of ISTS system broadly mentioned above (details at **Appendix-IV)**.
13	1200002608 /19/05/2020	SJVN Limited (Luhri Stage-I HEP)	Nanje PS, Himachal Pradesh	NR (Target)	210 (Start:31/08/2025 End:30/08/2060) Revised Date: (Start	It was informed that Connectivity to 210 MW Luhri HEP (St-I) was granted vide CTU intimation dated 20/03/2019 at 400/220 kV Nange GIS Pooling Station (new) proposed under ISTS through 220 kV D/c line and the same has been considered for present LTA. Transmission system agreed for grant of Connectivity is as

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
					Date:30/11/2025 End:29/11/2065)	follows: Under the scope of Generator: • Luhri Stage-I – 400/220kV Nange GIS Pooling Station 220kV D/c line along with associated bays at both ends. Under the scope of ISTS: • Establishment of 400/220kV Nange GIS Pooling Station(Tentatively Identified near Luhri Stage-II HEP) • Nange GIS Pooling Station –Koldam (NTPC generation switchyard) 400kV D/c line along with associated bays atboth ends (GIS bays at both ends) It was informed that system studies were carried out for transfer of 210 MW to NR (Target basis) and it has been seen that loadings on the existing ISTS system beyond Koldam is in order. During the meeting, Applicant requested to change their start & end date of LTA, for which CTU informed to submit the dates through formal communication. It was agreed to incorporate the dates to be informed by the applicant. Thereafter, applicant vide email dated 14/07/2020 informed that the start and end date of LTA may be considered as 30/11/2025 and 29/11/2065, respectively.

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						In view of the above, it was agreed to grant LTA to SJVN Ltd. for transfer of 210 MW from Luhri-Stage-I HEP to NR on target region basis from 30/11/2025 to 29/11/2065 through existing ISTS transmission system beyond Koldam HEP.
14	1200002634/ 09-06-2020	Renew Surya Roshni Private Limited	Fatehgarh-III PS, Rajasthan	WR (Target)-200MW NR (Target)-200MW	400 (Start:01/08/2022 End:31/07/2047)	Connectivity (1200002628-400 MW, Stage-II) was taken up for discussion in the subject meeting and the same was considered for present LTA. CTU informed that New Fatehgarh-III PS (changed location of Ramgarh-II PS) is part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme which shall be required for evacuation of present 400 MW LTA. This Transmission system is presently under TBCB bidding process with March'22 completion schedule. In addition to above, Common transmission system associated with SEZ in Rajasthan under 8.9 GW Phase-I scheme shall also be part of LTA system. The system studies for Phase-I & II transmission system have already been agreed in 2nd and 5th NRSCT meetings held on 13/11/2018 & 13/09/2019, respectively. The required power transfer of 400 MW from Fatehgarh-III P.S was envisaged under the said system. After deliberations, it was agreed to grant LTA to M/s ReNew Surya Roshni Private Limited for 400 MW from Fatehgarh-III P.S to WR & NR (Target) from 01/08/2022 to 31/07/2047 subject to commissioning of ISTS system mentioned at **Appendix-IV.**
15	1200002639/ 09-06-2020	Altra Xergi Power Private Limited	Fatehgarh-III PS, Rajasthan	(As per application) WR	380 (Start:01/03/2022	Connectivity (1200002637-380 MW, Stage-II) was taken up for discussion in the subject meeting and the same was considered for present LTA.

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
				(Target)-330MW NR (Target)-50MW Revised: WR (Target)-380MW	End: 28/02/2047)	CTU informed that New Fatehgarh-III PS (changed location of Ramgarh-II PS) is part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme which shall be required for evacuation of present 380 MW LTA. This Transmission system is presently under TBCB bidding process with March'22 completion schedule. In addition to above, Common transmission system associated with SEZ in Rajasthan under 8.9 GW Phase-I scheme shall also be part of LTA system. The system studies for Phase-I & II transmission system have already been agreed in 2nd and 5th NRSCT meetings held on 13/11/2018 & 13/09/2019, respectively. The required power transfer of 380 MW from Fatehgarh-III P.S was envisaged under the said system. Further, applicant requested vide letter dated 20/07/2020 that they intend to change their target region from NR to WR for 50 MW capacity. The same was noted and agreed. Accordingly, after deliberations, it was agreed to grant LTA to M/s Altra Xergi Power Private Limited for 380 MW from Fatehgarh-III P.S to WR (Target) from 01/03/2022 to 28/02/2047 subject to commissioning of ISTS system mentioned at **Appendix-IV.**
16	1200002656/ 30-06-2020	SBE Renewables Sixteen Private Limited	Fatehgarh-II PS, Rajasthan	Bihar, ER (firm)	180 (Start:03/11/2021 End:03/11/2046)	Connectivity (1200002450-180 MW, Stage-II) was granted at Fatehgarh-II PS and the same is considered for present LTA. CTU informed that Common transmission system associated with SEZ in Rajasthan under 8.9 GW Phase-I scheme shall be required for power evacuation. In addition to above, Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme shall also

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Deliberations
						be required for evacuation of present 400 MW LTA. This Transmission system is presently under TBCB bidding process with March'22 completion schedule. The system studies for Phase-I & II Transmission system have already been agreed in 2nd and 5th NRSCT meetings held on 13/11/2018 & 13/09/2019, respectively. The required power transfer of 180 MW from Fatehgarh-II P.S was envisaged under the said system. After deliberations, it was agreed to grant LTA to M/s SBE Renewables Sixteen Private Limited for 180 MW from Fatehgarh-II PS to Bihar, ER 03/11/2021 to 03/11/2046 subject to commissioning of ISTS system mentioned at **Appendix-IV.**

Appendix-I

Transmission system for LTA applications at Fatehgarh-II S/s

1) Establishment of 765/400kV, 3X1500MVA ICT (2nd, 3rd& 4th), pooling station at suitable location near Fatehgarh (Fatehgarh-II PS)
2) Establishment of 400/220kV, 3X500MVA (3rd& 4th), ICT at Fatehgarh-II Pooling station
3) Establishment of 765/400kV, 2x1500MVA pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-II PS)
4) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
5) Charging of Fatehgarh-II PS–Bhadla section at 765kV level
6) LILO of both ckts of 765kV Ajmer – Bikaner D/c line at Bhadla-II PS
7) Fatehgarh-II PS – Bhadla -II PS 765kV D/c line
8) Bhadla-II PS – Bhadla (PG) 400kV D/c Line (Twin HTLS)
9) Bikaner(PG) – Khetri S/s 765kV D/c line
10) Khetri – Jhatikara 765kV D/c line
11) Khetri – Sikar (PG) 400kV D/c line (twin AL59)
12) Augmentation with 1x1000MVA,765/400kV transformer (3rd) at Bhiwani (PG)
13) Ajmer (PG)– Phagi 765kV D/c line
14) 1x125 MVAr (420kV), 2x240 MVAr (765kV) Bus Reactor each at Fatehgarh-II PS, Bhadla-II PS &Khetri Substation
15) 1x240 MVAR Switchable Line reactors for each circuit at Jhatikara end of Khetri – Jhatikara 765kV D/c line
16) 1x240 MVAr Switchable line reactor for each circuit at each end of Bikaner – Khetri 765kV D/c line
17) 1x330 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Ajmer - Bhadla-II PS 765kV line (after LILO)
18) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Bikaner-Bhadla-II PS 765kV line (after LILO)
19) Suitable bus splitting arrangement at 765/400/220 kV Moga S/s

In addition,following Transmission System for Connectivity shall also be required:

1) Establishment of 1x1500MVA, 765/400kV, Fatehgarh-II Pooling station at suitable location near Fatehgarh.
2) Establishment of 1x500 MVA, 400/220kV ICT at Fatehgarh-II Pooling station
3) LILO of Fatehgarh (TBCB) – Bhadla (PG) 765kV D/c line (to be operated at 400kV) at Fatehgarh-II so as to establish Fatehgarh (TBCB) – Fatehgarh-II 400kV D/c line (765kV line operated at 400 kV) and Fatehgarh-II - Bhadla 765kV D/c line or Fatehgarh-II – Bhadla-II 765 kV D/c line

Appendix-II

Tr. System for LTA applications at Bikaner (PG)

1) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
2) Bikaner(PG) – Khetri 765kV D/c line
3) Khetri – Jhatikara 765kV D/c line
4) Khetri – Sikar (PG) 400kV D/c line (Twin AL59)
5) Ajmer (PG) – Phagi 765kV D/c line
6) Augmentation with 765/400kV, 1x1000MVA transformer (3^{rd}) at Bhiwani (PG)
7) Suitable bus splitting arrangement at 765/400/220 kV Moga S/s
8) Associated suitable Reactive Compensation

Appendix-III

Transmission system for LTA application at Bhadla

1) Establishment of 765/400kV, 1X1500MVA ICT (3rd), pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-II PS)
2) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
3) LILO of both ckts of 765kV Ajmer – Bikaner D/c line at Bhadla-II PS
4) Bhadla-II PS – Bhadla (PG) 400kV D/c Line (Twin HTLS)
5) Bikaner(PG) – Khetri S/s 765kV D/c line
6) Khetri – Jhatikara 765kV D/c line
7) Khetri – Sikar (PG) 400kV D/c line (Twin AL59)
8) Augmentation with 1x1000MVA,765/400kV transformer (3rd) at Bhiwani (PG)
9) Ajmer (PG)– Phagi 765kV D/c line
10) 1x125 MVAr (420kV), 2x240 MVAr (765kV) Bus Reactor each at Bhadla-II PS &Khetri Substation
11) 1x240 MVAR Switchable Line reactors for each circuit at Jhatikara end of Khetri – Jhatikara 765kV D/c line
12) 1x240 MVAr Switchable line reactor for each circuit at each end of Bikaner – Khetri 765kV D/c line
13) 1x330 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Ajmer - Bhadla-II PS 765kV line (after LILO)
14) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Bikaner-Bhadla-II PS 765kV line (after LILO)
15) Transmission scheme for controlling high loading and high short circuit level at Moga substation (Suitable bus splitting arrangement at 765/400/220 kV Moga S/s)

Appendix-IV

Transmission system for 200 MW LTA to ReNew Surya Vihaan Private Limited for transfer of power from Fatehgarh-III PS to SR

A. Transmission system for present LTA (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)

1) Establishment of 1x500 MVA (1st) 400/220kV ICT at Fatehgarh-III Pooling station
2) Fatehgarh-II PS – Fatehgarh-III PS 400 kV (Twin HTLS) 400 kV D/c line
3) Jaisalmer (RVPN) S/s - Fatehgarh-III PS (Twin HTLS) 400 kV D/c line
4) 1X1500MVA, 765/400 kV ICT (5th) at Fatehgarh-II PS

B. Common transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.9 GW Phase-I scheme)

1) Establishment of 765/400kV, 4X1500MVA ICT (1st to 4th) pooling station at suitable location near Fatehgarh (Fatehgarh-II PS)
2) Establishment of 765/400kV, 3x1500MVA pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-II PS)
3) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
4) Charging of Fatehgarh-II PS–Bhadla section at 765 kV level
5) LILO of both ckts of 765kV Ajmer – Bikaner D/c line at Bhadla-II PS
6) Fatehgarh-II PS – Bhadla -II PS 765kV D/c line
7) Bhadla-II PS – Bhadla (PG) 400kV D/c Line (Twin HTLS)
8) Bikaner (PG) – Khetri S/s 765kV D/c line
9) Khetri – Jhatikara 765kV D/c line
10) Khetri – Sikar (PG) 400kV D/c line (twin AL59)
11) Augmentation with 1x1000MVA,765/400kV Transformer (3rd) at Bhiwani (PG)
12) Ajmer (PG)– Phagi 765kV D/c line
13) 1x125 MVAr (420kV), 2x240 MVAr (765kV) Bus Reactor each at Bhadla-II PS & Khetri Substation

14) 1x240 MVAr (765kV) bus reactor at Phagi (RVPN)
15) 1x240 MVAR Switchable Line reactors for each circuit at Jhatikara end of Khetri – Jhatikara 765kV D/c line
16) 1x240 MVAr Switchable line reactor for each circuit at each end of Bikaner – Khetri 765kV D/c line
17) 1x330 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Ajmer - Bhadla-II PS 765kV line (after LILO)
18) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II PS end for Bikaner-Bhadla-II PS 765kV line (after LILO)
19) Transmission scheme for controlling high loading and high short circuit level at Moga substation (Suitable bus splitting arrangement at 765/400/220 kV Moga S/s)

Details of LTA/Connectivity granted in other regions with beneficiaries as NR

1. Connectivity and LTA applications agreed in various Connectivity & LTA meetings

1.1. Following LTA applications were agreed for grant in various WR Connectivity and LTA Meetings:

Sl. No.	Application No.	Applicant	Location	Date of Application	LTA (MW)	Beneficiaries (MW)	Date of start of LTA (as per intimation)
44th WR LTA & Connectivity meeting held on 28/01/2020							
3	1200002413	SitacKabini Renewables Private Limited	Bhuj, Gujarat	28/12/19	200	100MW-SR Puducherry 200MW-NR (100MW-BSES Rajdhani Power Ltd, Delhi) (100MW-BSES Yamuna Power Ltd, Delhi)	30/06/2021

1.2. Following stage-II applications were agreed for grant in various WR Connectivity and LTA Meetings:

Sl. No.	Application No.	Applicant	Location	Date of Application	Stage-II (MW)	ISTS Substation at which connectivity was proposed	Date of start of Stage-II connectivity
49th WR LTA & Connectivity meeting held on 30/07/2020							
1	1200002597	Rewa Ultra Mega Solar Limited	Neemuch, MP	08/05/2020	500	Neemuch SEZ PP (Proposed) • Establishment of 400/220	30/06/2022

Sl. No.	Application No.	Applicant	Location	Date of Application	Stage-II (MW)	ISTS Substation at which connectivity was proposed	Date of start of Stage-II connectivity
		(Neemuch Solar Park)				kV, 1X500 MVA Neemuch SEZ PP • Neemuch SEZ PP – Kota 400kV D/c line	

Annexure-VI

List of MTOAs received during Jan'20 to Jul'20 & granted

Sl. No.	Application number	Date of grant	Name of Organization	Quantum (MW)	Injection point	Drawl Point	Period	
							From	To
1	1200002487	10/04/20	Jindal India Thermal Power Limited	59.24	Angul S/s (ER)	West Central Railway, Rajasthan	01/08/20	19/01/21

ANNEXURE –VII

S.No.	Name of the transmission scheme	SCM/NRSCT meeting reference
1.	Creation of LILO of both circuits of 220 kV D/C Badshahpur - Sector 77 Gurugram at 400 kV Sohna Road, Gurugram	**40th SCM** Item no. 36.1 and 36.2 **1st NRSCT** Item no. 14.2 and 14.3 **2ndNRSCT** Item no. 12.2 and 12.3 **3rd NRSCT** Item No. 33 **1st NRPC(TP)** Item No. 26.0
2.	Creation of LILO of both circuits of 220 kV Sector 69- RojKaMeo D/C line at 400 kV Sohna Road, Gurugram	
3.	Augmentation of balance conductor of 220 kV D/C Badshahpur-Sohna Road line after the LILO work placed at Sr. No. 1 above from 0.4 sq inch ACSR conductor to 0.4 sq inch AL-59 conductor	
4.	Creation of 220 kV D/C line from 800 kV substation PGCIL Bhadson to 220 kV substation Salempur	
5.	Creation of 220 kV D/C line from 765 kV substation PGCIL Bhiwani to 220 kV substation Isharwal (HVPNL)	
6.	Creation of 220 kV D/C line from 765 kV substation PGCIL Bhiwani to 220 kV substation Bhiwani (HVPNL)	
7.	Creation of LILO of both circuits of 220 kV Narwana-Mundh D/C line at 400 kV substation Khatkar, Jind (PGCIL)	
8.	Creation of LILO of both circuits of 220 kV Pali- Sector 56 Gurugram D/C line at 400 kV substation Kadarpur	
9.	Creation of LILO of both circuits of 220 kV Pali- Sector 65 Gurugram D/C line at 400 kV substation Kadarpur	
10.	Creation of 220 kV D/C line from 400 kV substation PGCIL Panchgaon to 220 kV HVPNL Panchgaon (2x160 MVA, 220/66 kV + 1x100 MVA, 220/33 kV)	**31st SCM** Item No. 18 The downline system of 400 kV Panchgaon (PGCIL) was submitted to CEA vide HVPNL office letter memo no. Ch-23/HSS-152/Vol-XV dated 20.3.2013
11.	Creation of 2x160 MVA, 220/132 kV + 2x100 MVA, 220/33 kV GIS substation at HSIIDC, Rai (Sonepat). 220 kV GIS bays: i. 4 No. 220 kV bays for 2x160 MVA, 220/132 kV+2x100 MVA, 220/33 kV transformers. ii. 1 No. 220 kV bays for 220 kV bus coupler iii. 4 No. 220 kV line bays for D/C line each from Deepalpur and Jajji iv. Space for 2 No. 220 kV line bays in future.	**39th SCM** Item No. 7.0 It has been stated that 2 No. of bays at Jajji (PG) would be utilized for connectivity of HSIIDC Rai S/s. HVPNL has awarded the work for creation of HSIIDC Rai.
	The connectivity of the 220 kV GIS substation, HSIIDC, Rai (Sonepat) at 220 kV level is given as under: i. Creation of 220 kV D/C line (0.5 sq inch ACSR) from 400 kV substation Jajji (PGCIL) to 220 kV substation HSIIDC, Rai (Sonepat)	
	ii. Creation of 220 kV D/C line (0.5 sq inch ACSR conductor) on multi circuit towers from 400 kV substation Deepalpur to 220 kV substation HSIIDC Rai enroute 220 kV substation RGEC.	**31st SCM** Item No. 18 The downline system of 400 kV Deepalpur was submitted to CEA vide HVPNL office letter memo no. Ch-23/HSS-152/Vol-XV dated 20.3.2013

ANNEXURE-VIII

Down Stream network by State utilities from ISTS Station

S. No.	Substation	Downstream network bays	Commissioning status of S/s / Transformer	Planned 220kV system and Implementation Status	Remarks
1	400/220kV, 3x315 MVA Samba	2 nos. bays utilized under ISTS. Balance 4 nos to be utilized	Commissioned (1st& 2nd – Mar'13 3rd – Oct'16) Bays – Mar'13	• 220kV D/c Samba (PG) – Samba (JKPDD) approved in 1st NRSCT.	• 88% work completed. • Expected Date of completion- 31.12.2020
				• LILO of 220 kV Bishnah –Hiranagar D/c line.	• Expected Date of completion for one circuit- 31.12.2020 • Due to poor response, Retendering was done for LILO of second circuit and is under evaluation • Expected Date of completion for the second circuit- within six months of issuance of LOA.
2	400/220kV, 2x315 MVA New Wanpoh	6 Nos. of 220 kV bays to be utilized	Commissioned in Jul'14. Bays – Jul'14	• 220 kV New Wanpoh - Mirbazar D/c line. Target completion – March, 2019. • 220 kV Alusteng - New Wanpoh Line.	• No update received from PDD, Kashmir
3	400/220kV, 2x500 MVA Kurukshetra (GIS)	4 nos. of 220 kV bays to be utilized	Commissioned in Mar'17	• 220kV D/c Bhadson (Kurukshetra) – Salempur with HTLS conductor equivalent to twin moose. P.O. issued on 15.10.18. Contract agreement signed on 30.11.18. Target completion - 30.04.2020.	• Commissioned on 15.08.2020
4	400/220kV, 2x315 MVA Dehradun	Out of 6 bays, only two bays used. Balance 4 bays to be utilised.	Commissioned in Jan'17	• 220 kV Dehradun-Jhajra line. Target completion: Nov, 2021	• No update received from PTCUL
5	Shahjahanpur, 2x315 MVA 400/220 kV	Partially utilized. Balance 4 Nos. of 220 kV bays to be utilized.	Commissioned in Jun/Sep'14	• 220 kV D/C Shajahnapur (PG) - Azimpur D/C line. Target completion - Dec, 2020.	• Target completion date - Oct, 2020.

S. No.	Substation	Downstream network bays	Commissioning status of S/s / Transformer	Planned 220kV system and Implementation Status	Remarks
				• 220 kV D/C Shahajahanpur (PG) - Gola line. Target completion - Dec, 2020.	• Target completion date - Sep, 2021.
6	Hamirpur 400/220 kV 2x 315 MVA Sub-station (Augmentation by 3x105 MVA ICT)	2 nos. bays utilized under ISTS. Balance 6 nos. to be utilized.	1st – Dec'13, 2nd – Mar'14 & 3rd – Mar'19. 4 bays – Dec'13, 2 bays – Mar'14, 2 bays – Mar'19	• 220 kV D/C Hamirpur-Dehan line. Target completion - Dec, 2020.	• No update received from HPSEBL
7	Kaithal 400/220 kV 1x 315 MVA Sub-station	July 2017 (Shifting of transformer from Ballabhgarh)	Commissioned	• 220 kV Kaithal(PG)-Neemwala D/c line. Target completion - 25.02.2020.	• Commissioned on 04.08.2020
8	Sikar 400/220kV, 1x 315 MVA S/s	2 Nos. of 220 kV bays	Commissioned	Retendering to be done in Dec'19	No update received from RRVPNL
9	Bhiwani 400/220kV S/s	6 nos. of 220kV bays	Commissioned	• 220 kV D/C line from 765 kV S/stn. PGCIL Bhiwani to 220 kV S/stn. HVPNL Bhiwani • Contractual completion is on 08.11.2020.	• Likely Date of Commissioning-31.03.2021
				• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.PO issued on 09.07.2019. • Contractual completion is on 08.11.2020.	• Likely Date of Commissioning-07.11.2020
10	Jind 400/220kV S/s	6 nos. of 220kV bays	Commissioned	• LILO of both circuits of 220kV Narwana – Mund D/c line at Jind (PG). • PO issued on 09.07.2019. • Contractual completion is on 08.11.2020.	• Likely Date of Commissioning-07.11.2020
11	400/220kV Tughlakabad GIS(4x 500)	10 no of 220kV bays	Commissioned	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line. Scheme will be revised Target completion – March 2023. • Okhla – Tughlakabad	• No update received from DTL

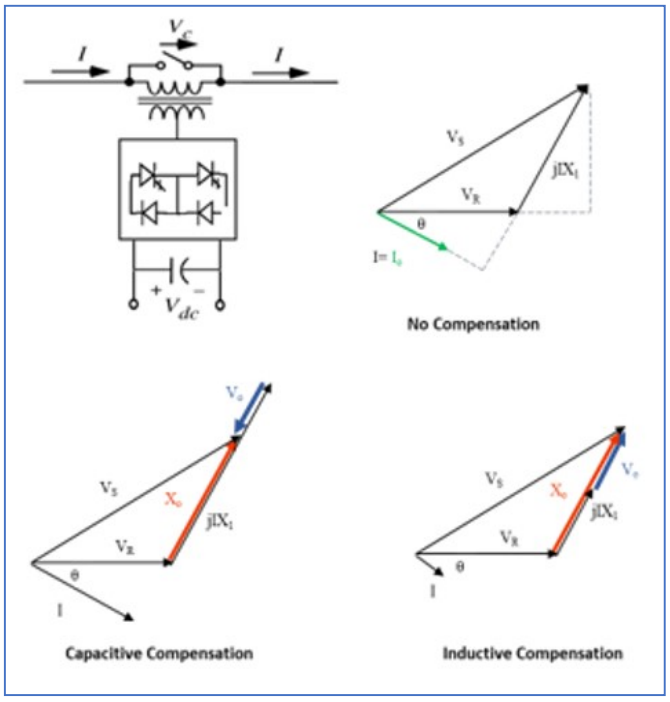
S. No.	Substation	Downstream network bays	Commissioning status of S/s / Transformer	Planned 220kV system and Implementation Status	Remarks
				220kV D/c line. • Mehrauli – Tughlakabad 220kV D/c line. • BTPS – Tughlakabad 220kV D/c line. Commissioned. • Masjid Mor – Tughlakabad 220kV D/c line. Target completion – Dec., 2021	
12	400/220kV Kala Amb GIS (TBCB) (7x105)	6 nos. of 220kV bays	Commissioned (Jul'17)	HPSEBL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s. Details for remaining 4 nos. of line bays may be provided. Target completion – Dec 2021	No update received from HPSEBL
13	400/220kV Kadarpur Sub-station (TBCB) (2x500)	8 nos. of 220kV bays	Commissioned on 11.12.19, as informed by TBCB licensee	• LILO of both circuits of 220 KV Pali - Sector 56 D/C line at Kadarpur along with augmentation of existing conductor from 220 KV Sector-56 to LILO point with 0.4 sq inch AL-59 conductor. • NIT re-floated on 03.09.2019. • Likely date of award-15.02.2020. • LILO of both circuits of 220KV Sector 65 - Pali D/C line at Kadarpur along with augmentation of balance 0.4 sq. inch ACSR conductor of 220 kV Kadarpur - Sector 65 D/C line with 0.4sq inch AL-59 conductor	• NIT re-floated on 06.07.2020. • The 1st part opened on 21.08.2020 and under evaluation. • Likely date of award is 31.10.2020

Establishment of new 400/220kV substations in Northern Region:

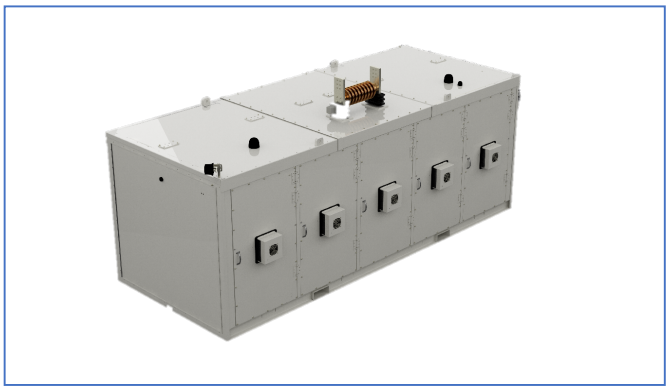
Sl. No.	Name of Substation	MVA Capacity	Expected Schedule	Downstream connectivity by States
1	400/220kV Dwarka-I GIS (8 nos. of 220kV bays)	4x 500	Oct'20	**No updates received**
2	220/66kV Chandigarh GIS (8 nos. of 66kV bays)	2x 160	Dec'20	• Construction of 2 nos of 66 kV lines is in progress and is targeted to be completed by 31st March, 2020. • Work of 4 nos. of 66 kV lines for evacuation of power from 220 kV Hallomajra S/s is in estimation/tendering stage. • 2 nos. of 66 kV bays will be utilized for future expansion/feeding of new 66 kV S/s **No updates received**
3	400/220kV Jauljivi GIS Out of these 8 nos. 220kV Line Bays, 4 nos. (Pithoragath-2, &Dhauliganga-2) would be used by the lines being constructed by POWERGRID and balance 4 nos. bays would be used by the lines being constructed by PTCUL.	2x315	Dec'20	• 220kV Almora-Jauljibi line. • 220kV Brammah-Jauljibi line **No updates received**

1. Introduction:

The line compensation may be shunt (e.g.: SVC, STATCOM) or series (e.g.: FSC, TCSC, PST) or combined (e.g.: UPFC) based on the application and need. **SmartValve** (Trademark of SmartWire Inc) is a member of the FACTS family and is a Static Synchronous Series Compensator (SSSC). It is a device connected in series with the line. SmartValve controls power flow by injecting an adjustable voltage in quadrature with line current, that increases or decreases the effective reactance of the line. Unlike physical capacitors or inductors, the injected voltage is independent of the line current.



It is **modular, scalable, relocatable, bi-directional, voltage-agnostic** power flow controller, beneficial for operational and investment flexibility.

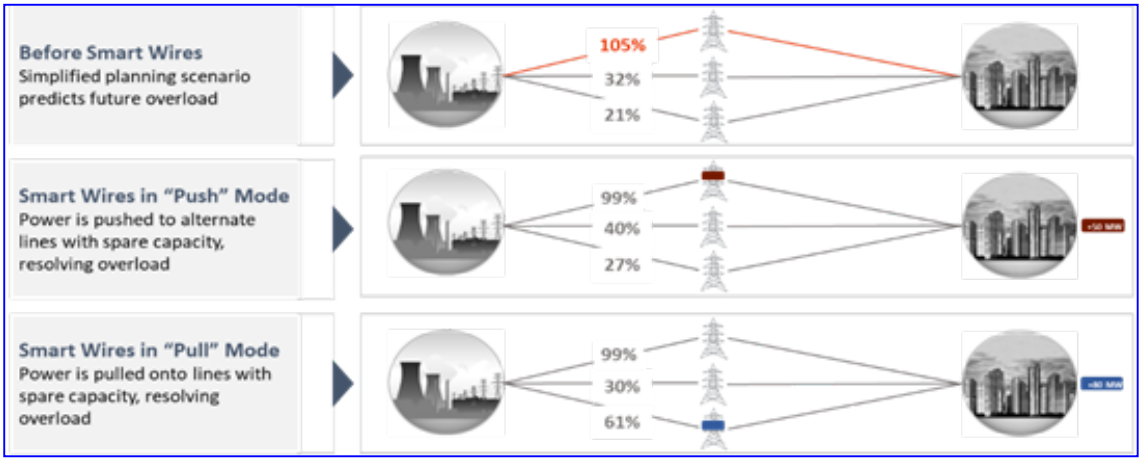


SmartValve 10-3600i and SmartValve 10-1800i

SmartValve is a modular Voltage Source Converter (VSC) and more than one modules can be connected in series to get the desired compensation. The device is maintained at line potential, so no injection transformer is required. The same device can work across voltage levels from 30 kV to 550 kV (solutions for higher voltages could also be developed).

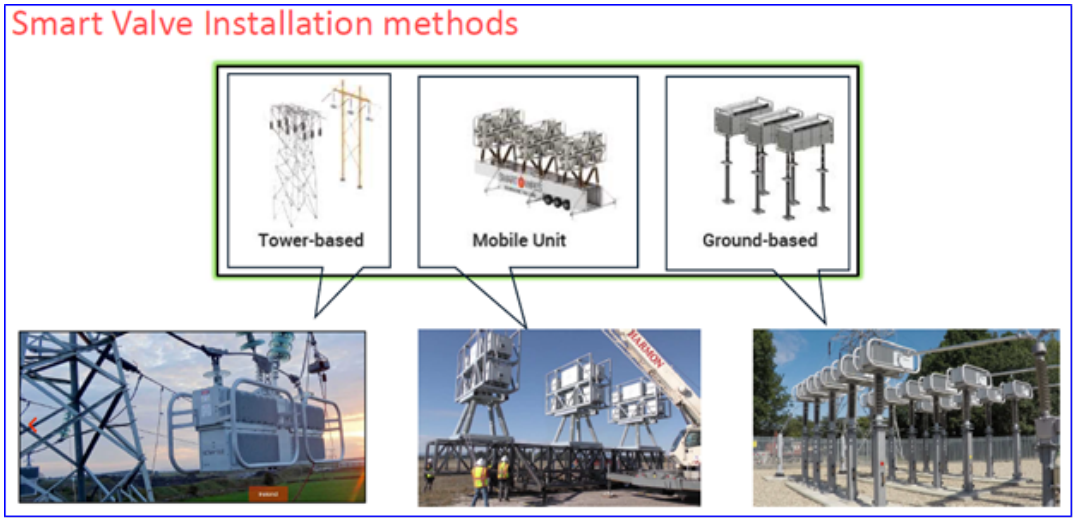
2. Application example

As seen in below figure, SmartValve is installed in series with the transmission line to push power away from the line or to pull power into the line and thereby relieve the line(s) from overloads. The same device can operate in both push and pull modes to meet different network requirements at different times.



Examples of applications include where there is unequal power flow in parallel circuits having unequal lengths (impedance) or parallel circuits at different voltages. An application can be validated through system studies at planning stage or to solve any operational concern.

SmartValve can be installed within substations (post insulator mounted), or on transmission towers (hung from cross arms), or if required, on a mobile platform as shown in the pictures below.



3. Operation Modes & Protective Bypass

The SmartValve has two distinct modes of operation. The modes during normal operation are determined by the state of the bypass as follows:

a) **Monitoring Mode** – No voltage is injected into the line in this mode. A mechanical contactor in parallel to the VSC is closed and the VSC is bypassed. As SmartValve draws it power from the line current; when line is not charged or power flow is less than a threshold value, SmartValve remains in this mode by default

b) Injection Mode – In this mode voltage is injected to the line in quadrature with the line current using the converters (VSC). The contactors are opened to move from monitoring mode to injection mode

The bypass action, enabled by quick firing of thyristors (in parallel to VSC and mechanical contactors) provides fast protective action during line fault conditions. When the internal bypass mechanism senses a line current indicative of a line fault, it automatically fires the fast-acting thyristors, bypassing the VSC converters within 1 msec.

Since the bypass operates faster than the distance protection relay, existing protection system and relay setting are not impacted. Unlike in case of series capacitor-based compensation schemes there is no need to install additional circuit breakers or dedicated protection schemes. Additional protection logics are available to safeguard and bypass the SmartValve.

SmartValve can be made to operate in single phase mode or three phase mode during faults. Further it can automatically restore to pre-fault operation condition, post fault clearance or it can wait to receive operator command to go back to injection mode.

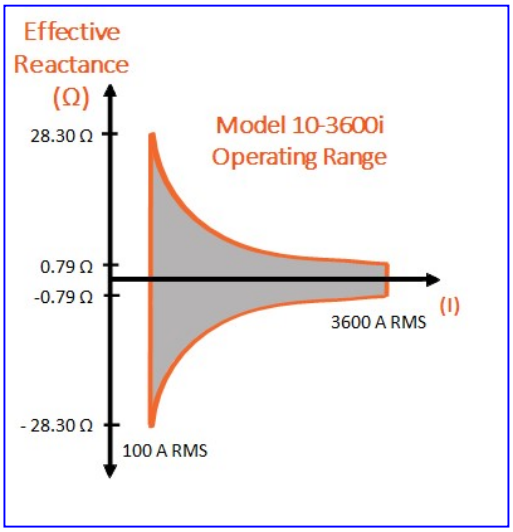
4. Control modes

SmartValve offers various control modes for the ease of system operation.

a) Injection at a fixed voltage – Outputs a fixed voltage injection level, that is either capacitive or inductive. The injected reactance varies as the line current changes.

b) Injection at a fixed reactance – Outputs a fixed reactance that is either capacitive or inductive (X_o). The injected voltage varies as the line current changes to keep the reactance at a set value. This is comparable to how a series reactor operates.

c) Current setpoint mode – The SmartValve is set to regulate the line current towards a set value. In this control method, the injected voltage will vary within rated values to maintain a desired line current (to as close as possible).



The control modes and operating points can be set by the operators through existing EMS communication systems. SmartValves can be configured to automatically move between control modes for example, move from reactance control to current set point mode following a fault on a nearby line.

The SmartValve Operating Range for a single 10-3600i unit as a function of the line current is shown in adjacent picture. The outer orange boundary is when the SmartValve is injecting

the full output voltage, in this case ± 2830 V RMS. The injected voltage is fully controllable independent of the line current or voltage. This means that the device can operate at any point within the grey shaded area reflecting the full operating range of the device. Multiple SmartValves can be connected in series with each other and the capability is additive meaning two devices provide double the operating range and three provides triple etc.

5. References

SmartValve have been installed in many of the leading utilities across the globe. Some of those utilities are shown in the picture below.

6. Further Contact

More information can be found on https://www.smartwires.com/

For organizing detailed presentation on the subject and to explore possible applications in your network, please contact amitabh.singhal@sterlite.com (Mob # +91-9958095213) OR Jeetendra.bisht@sterlite.com (Mobile # +91-7042552553).