सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय विद्युत समिति
Northern Regional Power Committee

सं.: उ.क्षे.वि.स./प्रचालन10/90/4/2017/ 14111 – 132 दिनांक: 27/12/2017

सेवा में / To,

संलग्न सूचीनुसार
As per List

विषय: राज्य स्तर पर नवीकरणीय ऊर्जा पर फ्रेमवर्क के कार्यान्वयन के लिए तकनीकी समिति के अंतर्गत "उप-समूह" की द्वितीय बैठक की बैठक का कार्यवृत्त ।

Subject: Minutes of the meeting of Second Meeting of "Sub-Group" under Technical Committee for Implementation of Framework on Renewable at the State level (IFRSL)-Reg..

महोदय ,
Sir,

उपरोक्त विषय पर उत्तर क्षेत्रीय विद्युत समिति, सम्मेलन कक्ष, कटवारिया सराय, नई दिल्ली में दिनांक 13.11.2017 को आयोजित की गयी बैठक का कार्यवृत आपकी सूचना व आवश्यक कार्यवाही हेतु इस पत्र के साथ संलग्न है ।

Minutes of the meetings held on 13.11.2017 at NRPC Conference Hall, Katwaria Sarai, New Delhi on the above subject is enclosed herewith for favour of information and necessary action.

भवदीय
Yours faithfully,

(एम.ए.के.पी. सिंह)
(M.A.K.P. Singh)
सदस्य सचिव
Member Secretary

18-ए, शहीद जीत सिंह मार्ग ,कटवारिया सराय, नई दिल्ली110016 - फोन:011-26513265 फैक्स: 011-26865206 ई-मेल: ms-nrpc@nic.in वेबसाईट: www.nrpc.gov.in
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016 Phone: 011-26513265 Fax: 011-26865206 e- mail: ms-nrpc@nic.in Website: www.nrpc.gov.in

Fax List

Nominated Members of the Sub-Group

S.N.	NAME	DESIGNATION	ORGANISATION	TELE(O)	FAX.NO
1.	Sh. Kaushik Dey	Manager	NLDC		011-26536901
2.	Sh.R.K.Porwal	DGM	NRLDC	011-26537351	011-26852747
3.	Sh. Abhishek Moza	Deputy Secretary	DERC/Delhi	011-41601674	011-41080417
4.	Sh. Bharti Sambhyal	Executive Director	HPSERC/ HP	0177-2627978	177-2627162
5.	Sh. P.K.Dimri	Director (Technical)	UERC/ Uttarakhand	0135-2641115	0135-2641314
6.	Sh. Ghan Shyam Verma	Deputy Director (Technical)	RERC, Rajasthan	9414455214	0141-2741018
7.	Sh.N.K.Makkar	Executive Engineer	HVPNL		0172-2560622
8.	Sh.Rajesh Kapoor	Chief Engineer	HP SLDC	98164-68662	0177-2837649
9.	Sh. Anupam Sharma	SE	PTCUL		
10.	Sh. S.K.Gupta	SE (REMC)	RVPNL	0141-2740067	0141-2251601
11.	Sh. S. C. Saini	Executive Engineer	Elect. (O), Chandigarh	0172-267905 0172-2655531	0172-2637880
12.	Sh.Rajeev Mohan	SE(OA&Sch)	UP SLDC		
13.	Sh. Vikas Chandra Agarwal	Director(Dist.)	UPERC	0522-2720426	0522-2720423
14.	Sh. Vikas Kadian	Joint Director(Dist.)	HERC	0172-2582531	0172-2572359
15.	Sh.Rajesh Dangi	Director Engineering	JERC	8725011401	
16.	Sh. Manjit Singh Saini	SE	SLDC/PSTCL	0175-2366074,9646118004	0175-2365340,0175-2367490

Nominations awaited

S.N.	DESIGNATION	ORGANISATION	TELE(O)	FAX.NO
1.	Secretary	CERC	11-23353503, 23753915	11-23753923
2.	Secretary	DERC/Delhi	011-41601640	41080416 (Fax)
3.	Secretary	PSERC/Punjab	0172-2648321	(0172) 2664758, 2645163, 2602435
4.	Secretary	JKSERC/J&K	0191-2470160, 2470183	0191-2470163, 01912546188, 01942506133

Special Invitee

S.N.	DESIGNATION	ORGANISATION	FAX.NO/eMail
1.	E.D.	DTL, Delhi	Harjiwan.vyas@gmail.com
2.	CEO	Urja Vikas, Rajasthan	ceorvun@gmail.com
3.	Director (Corporate Planning)	UPPCL, U.P.	0522-2287787
4.	Chief Engineer (C&S)	PDD, J&K	cecnsjmu@gmail.com
5.	Chief Engineer	HPPC, Haryana	0172-2586836, cehppc@gmail.com
6.	Chief Engineer (PPr)	PSPCL, Punjab	0175-2308698
7.	Chief Engineer (Comml)	UPCL, Uttarakhand	0135-2760733

S.N.	DESIGNATION	ORGANISATION	FAX.NO/eMail
8.	CEO	BYPL	011-39999765, prem.r.kumar@relianceada.com
9.	CEO	BRPL	011-26419833
10.	CEO	TPDDL	Arup.ghosh@tatapower-ddl.com
11.	Chairman	NDMC	011-23742762

Minutes of the 2nd Meeting of the Sub-group of Northern Region under Technical Committee for Implementation of Framework on Renewables at State Level (IFRSL)

Second Meeting of the Sub-group of Northern Region under technical committee for Implementation of Framework on Renewable at State Level was held on 13.11.2017 at NRPC, New Delhi. List of Participants is attached as **Annexure-I.**

Shri M.A.K.P. Singh, Member Secretary, NRPC and the Chairman of the sub-group welcomed all the participants. He apprised the members about the deliberations and decisions taken in the 37th TCC/40th NRPC meetings held on 27.10.2017 and 28.10.2017 at Srinagar, related to renewable energy (RE) at state level. He briefed the members about the deliberations of the first meeting of the sub-group and agenda of this meeting. He requested the states to co-operate and work in harmony with other NR constituents to accomplish the main mandate of this group i.e. to ensure optimum utilization of generation resources with least cost options for balancing across the region.

Superintending Engineer(C), NRPC made a detailed presentation on various market mechanism including overarching agreement to be signed by NR states. He also briefed the members on various issues related to balancing, international experience and enabling regulatory provisions in India.

Gist of discussions on various issues are as under:

1. Follow up of the First Meeting:

1.1 The status of decisions taken in the first meeting, as updated by members in the second meeting is enclosed at **Annexure-II.**

1.2 In this meeting, Sub-group stressed upon the availability of real time data at SLDC and RLDC for better visibility of RE sources.

1.3 Punjab representative stated that telemetry from all except 3 RE sources with capacity of 5 MW and above was available with SLDC and RE sources with capacity below 5 MW were under integration process with SLDC. NRLDC representative requested Punjab to make the data available to NRLDC also. Punjab representative had also informed that implementation of intra-state ABT mechanism in the State was under process.

1.4 Uttarakhand Electricity Regulatory Commission (UERC) representative informed that ABT meters would be installed by Dec,2017 and Intra-state ABT would be implemented in the State w.e.f. Jan,2018.

1.5 Delhi, SLD representative informed that telemetry was available in SLDC from most of the RE source in the State. It was requested that the real time data from RE sources in Delhi may be made available to NRLDC also.

1.6 All the SERCs were requested to direct all the intra-state entities and SLDCs not to allow connectivity of the RE sources and the pooling sub-stations without proper

metering and telemetry. MS, NRPC opined that all SERCs should bring out appropriate regulation regarding the same, with strict penal provisions in case of non-compliance of such regulation.

2. Commercial arrangement among states for import/export of balancing power

2.1 Members Secretary, NRPC stated that in the first meeting held on 16.08.2017, all Northern Region (NR) constituents were requested to enter into mutual agreements with each other to avail surplus power available with other states of NR. He added that draft overarching commercial agreement, in line with that discussed in SRPC, for short-term transactions of electricity among NR utilities was discussed and comment from all concerned was invited to finalise the agreement. It was further intimated that the agreement has now been signed by SR constituents and a copy of the same was enclosed as **Annexure-II** of the agenda note of this meeting. It was also intimated that the subject matter was discussed in last TCC & NRPC meetings held on 27th & 28th October,2017, wherein, there was in principle agreement on signing the overarching agreement.

2.2 The draft overarching agreement was deliberated and discussed in detail in this meeting. The final overarching agreement as recommended by the Sub-group is enclosed as **Annexure-III.** Members Secretary, NRPC suggested that a whatsapp group comprising the members of NR constituents may be formed so that information related to available surplus power, duration etc. should be available at short notice to the members concerned. Members agreed for the same.

2.3 It was also decided that following official from the state may be designated for signing of Overarching Agreement on behalf of the state utilities:

S.N.	State	Designated official for Overarching Agreement Signing
1.	Uttar Pradesh	Chief Engineer, PPA,UPPCL
2.	Haryana	Chief Engineer, HPPC
3.	Punjab	Chief Engineer (PPR),PSPCL
4.	Uttarakhand	Chief Engineer (Comml),UPCL
5.	Himachal Pradesh	Chief Engineer (SO&P), HPSEBL
6.	Rajasthan	CEO, RUVNL
7.	Delhi	Representatives of DISCOMs
8.	PDD, J&K	Chief Engineer (CNS), PDD, J&K
9.	Chandigarh	To be designated

2.4 In order to resolve the issues of signing of the in Delhi, it was decided that a meeting would be held among officials of DERC, SLDC Delhi and Delhi DISCOMs. The outcome of the meeting would be sent to NRPC Sectt. and if required, a meeting would be called by NRPC, Sectt. to discuss the issues.

2.5 It was also decided that Overarching Agreement may be signed at the earliest by the utilities, which are prepared. Other utilities may sign the Agreement at later stage.

3. Commercial Arrangements Among States Other than Overarching Agreement

SE(C), NRPC informed that a meeting of the Heads / Representatives of the Sub-Groups was convened under the Chairmanship of Shri A.S.Bakshi, Member, CERC on 18.8.2017 in CERC, New Delhi to review the progress on framework for regional co-operation. In this meeting various options, other than overarching agreement, for handling intra-day load / generation variation due to RE or otherwise were also discussed and it was decided to share these options with all RPCs and seek feedback. SE(C), NRPC explained made a presentation on various options and their pros & cons. The same is enclosed as **Annexure-IV.** He informed that these options were also discussed in last TCC & NRPC meeting held on 27th & 28th October, 2017, wherein, it was opined that option 5 may be considered for implementation by CERC.

These market options for short-term power transactions were discussed in detail in the meeting. During the discussion, option -5 i.e. Pool, based on auction (intra-day for the rest of the day) emerged as best option for intra-day contingency transactions in present scenario. It was also felt that option 6 & 7 may be considered at a later stage after experience of implementation of option - 5 mechanism. It was also deliberated that banking of power (Option-1) is already being extensively used in NR for meeting the seasonal load & generation variations.

3. After detailed deliberations following decisions were taken:

a) The draft Overarching Agreement (enclosed at **Annexure-III**) would be signed by the designated officials of state utilities as mentioned at para 2.3 above. However, the States may designate any other office for signing the agreement. The details of the designated official from all the States and UT of Chandigarh , for signing the Agreement would be communicated to NRPC Sectt. by 15th January, 2018. Co-ordination within the state for getting approval of the Agreement and for designation of signing official would be done by the concerned State representatives in this sub-group. The decision for signing of the Agreement in Delhi would be taken in the proposed meeting as mentioned at para 2.4 above.

(Action: all the members from respective States and UT of Chandigarh; Time line: 15th Jan, 2018)

b) Option 5 i.e. Pool, based on auction (intra-day for the rest of the day) is the preferred option for intra-day transactions in the present scenario. However, members may suggest any further improvement or any other mechanism to NRPC Sectt., which may be forwarded to CERC for consideration.

(Action: All the members from respective States and UT of Chandigarh; Time line: 15th Jan, 2018)

c) Connectivity of RE resources without proper telemetry up to SLDC would not be allowed. SERCs /JERC may give direction to intra-state entities and SLDCs.

(Action: STUs, SLDCs & SERCs/JERC ; Time line: As decided by SERCs/JERC)

Annexure-I

List of Participants of the 2nd meeting of Sub-group IFRSL held on 13.11.2017 at NRPC, New Delhi

S. N.	Name of Officer	Designation	Organisation	E-mail
1.	Kaushik Dey	Manager	NLDC, POSOCO	kaushikdey@posoco.in
2.	Vikas Chandra Agarwal	Director	UPERC	vikas@uperc.org
3.	Naveen Goel	Manager	Delhi SLDC	naveengoel06@gmail.com
4.	Anil Vij	Dy. CE	PSPCL Patiala	
5.	Ashok Goyal	Addl. SE	PSPCL	parkash1313@gmail.com
6.	N.K. Makkar	PC	SLDC	crsesldc2@gmail.com
7.	Rajiv Mishra	XEN	HPPC	cehppc@gmail.com
8.	Raghvinder Singh	Dy Dir.	PSERC	raghvinder1@rediffmail.com
9.	Vikas Kadian	J.D/ Dist.	HERC	kadianvikas@yahoo.com
10.	Rajesh Dangi	Director/ Engg.	JERC	direngg-jerc@nic.in
11.	Pratap Singh Sidholi	Sr. XEN	HPSLDC	p.1431980@gmail.com
12.	Bharti Sambyal	ED(Tech)	HPERC	bhartiankee4@gmail.com
13.	Prabhat K Dimri	Dir.(Tech)	UERC	dirtech.uerc@gov.in
14.	Abhishek Moza	Dy. Secretary	DERC	abhishekmoza@gmail.com
15.	Rajeev Porwal	DGM	NRLDC	
16.	Er. Vivek Goel	Sr. XEN	SLDC/PSTCL	ddpc-pseb@rediffmail.com
17.	MAKP Singh	Member Secretary	NRPC	ms-nrpc@nic.in
18.	Hemant Pandey	SE	NRPC	sec-nrpc@nic.in
19.	Ratnesh Kumar	EE	NRPC	sec-nrpc@nic.in
20.	Vikrant Singh Dhillon	AEE	NRPC	sec-nrpc@nic.in
21.	Manish Maurya	AE	NRPC	sec-nrpc@nic.in

Annexure-II

Sl. No.	Points of discussion	Decision taken in the 1st meeting	Status updated in 2nd meeting
1.1	**Actual Installed Capacity and Generation**	Details of RE installed capacity based on NRLDC daily report and as updated by representatives from states was enclosed as Annexure-I of the Agenda note of this meeting.	Updated status enclosed as **Annexure-IIA**.
1.2	**Variability of Demand and Generation**	embers from SLDCs in the sub-group were requested to provide Demand and Generation (Conventional and RE) pattern of states for assessing balancing requirements during different seasons/months in a year. Members were requested to submit the information to NRPC Sectt. within two weeks.	Members were again requested to submit the information to NRPC Sectt. within a week.
1.3	**Availability of Metering, Telemetry & Forecasting Facility for Renewable Energy (RE) Generation**	MS, NRPC suggested that in absence of proper telemetry of their RE generation, manual data collection may be started initially by e-mail data for short intervals (say every 10 minute) may be collected in excel format, so that some idea of generation may be obtained as it is always better to have some data rather than having nothing. All the members from SLDCs were requested to send the status of metering, telemetry and forecast of RE generation to RPC Sectt. Members from SERCs were requested to provide status of intra-state ABT and RE scheduling & forecasting regulations by respective SERCs.	In 2nd meeting, Sub-group stressed upon the availability of data at SLDC and RLDC for better visibility of RE and also requested all SERCs to instruct the concerned entity in their state that without proper metering and telemetry, there should not be any connectivity. Further, MS, NRPC opined that all SERCs should bring out appropriate regulation in their intra-state ABT regarding the same and if needed, there may be penal provision in case of non-compliance of such regulation. Punjab representative stated that data for RE capacity of 5 MW and above, mostly integrated with SLDCs and capacity below 5 MW is under integration process with SLDC (details enclosed at **Annexure-IIB**). Rajasthan SLDC submitted the telemetry status of renewable generators integrated to SLDC Heerapura, Jaipur (details enclosed at **Annexure-IIC)** Other SLDCs were requested to update the status within a week to NRPC Sectt.
1.4	**Availability of reserves (On-line & Off-line)**	Members were requested to explore the possible reserves in respective state control areas and may provide the details to sub-group for further discussion in order to facilitate optimum utilisation of the same.	Members were requested to update the status.

Annexure-IIA

State	Small Hydro IC(MW)	Wind IC(MW)	Biomass IC(MW)	Solar IC(MW)
Punjab	PEDA owned-10.3 PSPCL owned-105.95 Pvt. Owned-36.15	0	245.4	934.27
Haryana	10.8	0	106.3	49.8
Rajasthan	-	4292	102	1995
Uttar Pradesh	32	0	16	245
Uttarakhand	126	0	52	215
Delhi	-	0	52	54
Himachal Pradesh	535.5	0	0	0
Jammu and Kashmir	98	0	0	0
Chandigarh	-	-	-	15.2

Annexure-IIB

Status of Telemetry in Renewable Energy Generators in Punjab

A. Solar Projects

1) Detail of Solar project having capacity 5MW & above is as under:

Sl. No.	Description	No. of Intrastate plants	Capacity
1.	Total no. of Solar Plants installed in Punjab	37 No.	776.52 MW
2.	Solar plants integrated with SLDC of Punjab	21 No.	447.52 MW
3.	Solar plants for which connectivity work is under Progress at SLDC	13 No.	289.00 MW
4	Solar plant for which telemetry scheme sent to SLDC on dated 06.11.17 and the same is under approval of SLDC	1 No.	10.00 MW
5.	Remaining plants for which Solar developers are being pursued for connectivity with SLDC	2 No.	30.00 MW

2) Detail of solar projects having capacity less than 5MW:-

1	Total no. of Solar Plants installed in Punjab	51 No.	92.75 MW
2.	Solar plants integrated with SLDC of Punjab	2 No.	5.00 MW
3.	Solar plants for which connectivity work is under Progress at SLDC	12 No.	20.50 MW
4.	Solar plants have submitted their schemes and the same are under approval of SLDC	2 No.	8.00 MW
5.	Remaining plants for which Solar developers are being pursued for connectivity with SLDC	35 No.	59.25 MW

Annexure-IIC

Status of Telemetry in Renewable Energy Generators in Rajasthan

TELEMETRY STATUS OF RE GENERATORS AS ON 10.11.17 AT SLDC HEERAPURA, JAIPUR				
Name of Entity	**No. of RTUs integrated to SLDC**	**Capacity Integrated(MW)**	**REPORTING**	**NOT REPORTING**
Solar	42	906	32	10
Wind	7	712	2	5
TOTAL	49			

LIST OF SOLAR PLANTS-Rajasthan

S. No.	SOLAR	NAME OF POOLING STATION	VOLTAGE LEVEL(KV)	CAPACITY(MW)	STATUS AS ON 10.11.17
1	ACME SOLAR	220 KV BADISID	132	100	REPORTING
2	SINDICATUM SOLAR ENERGY	220 KV TINWARI	33	5	NOT REPORTING
3	ALEX SPECTRUM	132 KV KOLAYAT	33	6	REPORTING
4	AZURE CLEAN ENERGY	220 KV BHAWAD	132	57	REPORTING
5	AZURE GREEN TECH	220 KV BHAWAD	132	69	REPORTING
6	AZURE POWER MARS	220 KV RAMGARH	33	6	NOT REPORTING
7	AZURE POWER JAYAL	132 KV JAYAL	132	46	REPORTING
8	FRONCHE RAJHANS	220 KVGAJNER	33	5	REPORTING
9	FRONCHE SARAS	220 KVGAJNER	33	15	NOT REPORTING
10	FORTUM AMRIT ENERGY	220 KV GULABPURA	33	5	REPORTING

11	GAIL INDIA LTD.	132 KV Ramgarh (GTPS)	33	5	REPORTING
12	GODAWARI G.ENERGY	220 KV BAP	132	50	REPORTING
13	GREEN TECH KOLAYAT	132 KV KOLAYAT	33	5	REPORTING
14	HELIOS P.VOLTAIC	220 KV TINWARI	33	5	NOT REPORTING
15	JACKSON POWER 1	132 KV PS-3	33	10	REPORTING
16	JACKSON POWER 2	132 KV PS-3	33	10	REPORTING
17	JK LAXMI SOLAR	132 KV LUMBANIYA	33	7	REPORTING
18	LANCO SOLAR(7*5 MW)	132 KV AJASAR	132	35	REPORTING
19	LAXICON VINIJYA	132 KV PS-3 AT LUMBANIYA	33	10	NOT REPORTING
20	LEPL PROJECT	220 KV BAP	33	10	REPORTING
21	MAHINDRA SOLAR(5MW+ 2*20 MW+ 10MW)	220 KV BAP	132	55	REPORTING
22	MAHINDRA SUSTEN(6*10 MW)	220 KV GAJNER	132	60	REPORTING
23	NORTHERN SOLAIRE PRAKASH	132 KV KHETUSAR	33	20	REPORTING
24	NVR INFRASTURCTURE	132 KV KOLAYAT	33	11	REPORTING
25	OIL INDIA LIMITED(5 MW)	220 KV RAMGARH	33	5	NOT REPORTING
26	OIL INDIA LIMITED(9 MW)	220 KV RAMGARH	33	9	NOT REPORTING
27	OPG ENERGY	220 KV BAP	33	5	REPORTING
28	OSWAL JATISARA	220 KV AAU	33	5	REPORTING

29	OSWAL KOLAYAT	132 KV KOLAYAT	33	5	REPORTING
30	POKARAN SOLAIRE ENERGY	220 KV BAP	33	5	REPORTING
31	PRECISION TECHNIK	220 KV BAP	33	5	REPORTING
32	PUNJ LLYOD	220 KV BAP	33	9	REPORTING
33	RDA ENERGY	132 KV SHAHPURA	33	10	REPORTING
34	REFEX INDUSTRIES	220 KV BALOTRA	33	5	REPORTING
35	RSTEPL(RAJASTHAN SUN TECHNIQUE ENERGY PVT. LTD)	220 KV DECHU	220	100	NOT REPORTING
36	DSPPL(DHURSAR ENERGY PVT. LTD)	220 KV DECHU	220	40	NOT REPORTING
37	SAI MAITHILI POWER	132 KV KOLAYAT	33	13	REPORTING
38	SOLAR ENERGY CORPORATION OF INDIA LTD.	220 KV BADISID	33	10	REPORTING
39	SURYAUDAY SOLAIRE PRAKASH	132 KV KHETUSAR	33	10	REPORTING
40	SYMPHONY VYAPAR	132 KV PS-3 AT LUMBANIYA	33	10	NOT REPORTING
41	SWISS PARK	220 KV TINWARI	33	5	REPORTING
42	SP PHOTOVOLTAIC	220 KV KANASAR	132	50	REPORTING
TOTAL CAPACITY(INTEGRATED)				**906**	
LIST OF WIND PLANTS-Rajasthan					
S. No.	**WIND**	**NAME OF POOLING STATION**	**VOLTAGE LEVEL(KV)**	**CAPACITY(MW)**	**STATUS AS ON 10.11.17**
1	NIDHI WIND FARM	220 KV RAMGARH	132	90	REPORTING
2	RAJGARH WIND PARK(DEVIKOT)	400 KV AKAL	220	300	NOT REPORTING

3	VEER ENERGY(LUDARWA)	220 KV AMARSAGAR	132	80	NOT REPORTING
4	REGEN POWER TECH DALOT	132 KV DALOT	33	8	NOT REPORTING
5	REGEN POWER TECH SALAMGARH	33 KV SALAMGARH	33	8	REPORTING
6	REGPL , DALOT	132 KV DALOT	132	125	NOT REPORTING
7	REGPL , DEVGARH	132 KV DEVGARH	132	102	NOT REPORTING
TOTAL CAPACITY(INTEGRATED)				**712**	

Annexure-III

OVERARCHING AGREEMENT

THIS AGREEMENT is entered into on this the 25th day of January, 2018

1. **AMONG**

1.1 The **Rajasthan Urja Vikas Nigam Limited.** represented by its _____and having its principal offices at _____ (hereafter referred to as the "RUVNL" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.2 The **Uttar Pradesh Power Corporation Limited (UPPCL)** represented by its _____and having its principal offices at ....., Lucknow (hereafter referred to as the **"UPPCL"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.3 The **Haryana Power Purchase Centre (HPPC)** represented by its Power Purchase department of _____and having its principal offices ..... (hereafter referred to as the **"HPPC"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.4 The **Punjab State Power Corporation Limited (PSPCL)** represented by its Power Purchase department of _____and having its principal offices at _____ (hereafter referred to as the **"PSPCL"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.5 The **Uttarakhand Power Corporation Limited** (**UPCL)** represented by its _____and having its principal offices _____ (hereafter referred to as the **"UPCL"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.6 The **Himachal Pradesh State Electricity Board Limited (HPSEBL)** represented by its _____and having its principal offices at _____ (hereafter referred to as the "HPSEBL" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.7 The **BSES Yamuna Power Ltd. (BYPL)** represented by its _____and having its principal offices at _____ (hereafter referred to as the "DTL" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.8 The **BSES Rajdhani Power Ltd. (BRPL)** represented by its _____and having its principal offices at _____ (hereafter referred to as the "DTL" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.9 The **Tata Power Delhi Distribution Ltd. (TPDDL)** represented by its _____and having its principal offices at _____ (hereafter referred to as the "DTL" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.10 The **PDD J&K** represented by its _____and having its principal offices at _____ (hereafter referred to as the "....." which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

1.11 The **UT of Chandigarh** represented by its _____and having its principal offices at _____ (hereafter referred to as the "....." which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One part;

All the above parties are herein after called as **'Entities'**.

2. **BACKGROUND**

2.1. Government of India (GoI) has set up a target of harnessing 175 GW of Renewable Energy by 2022. In line with this, Commissioning of Renewable Energy Resources are going on a fast pace. For balancing the generation variation from these Renewable resources, power transactions from one entity to other on a short notice is envisaged. During high injection of RE, some states may have to back down large amount of conventional generation and limit requisition from ISGS power in order to maintain Load-Generation balance , whereas other state(s) may need power from sources outside of State. Such cases may be dealt through co-operation among the Northern Region States.

2.2 A Sub Group had been formed with participation from SERCs/ SLDCs/ RLDC/ NLDC/ RPCs to examine feasibility and modality of cooperation among state in the respective region for ensuring optimum utilisation of generation resources with least cost options for balancing across the region. Issue of regional cooperation for better harnessing of renewable energy facilitating optimum harnessing of renewable integration, without endangering grid security, within the frame work of regulations, was deliberated.

2.3. It was opined that NR constituents could enter into mutual agreements with each other to avail the surplus power available with other NR states. The agreement could be open ended and if no transactions are made through this scheme there would not be any commercial liability to any of the constituents. Possibility of implementing over-arching agreements and working out sample rate contract on experimental basis was to be explored.

2.4. All states/UT agreed that entering into overarching agreements which could be used judiciously through the SLDCs in the shortest possible time within the regulatory framework may be beneficial to them.

2.5 Power may be delegated to SLDCs to decide on the quantum of MW to be exported or imported and also the duration of time.

2.6. Constituents could enter into swapping agreements also and the balance unreturned power could be settled at mutually agreed rate.

NOW, THEREFORE, in pursuance of the above proceedings, the entities have agreed to enter into this Overarching Agreement on the terms and conditions set forth hereinafter.

3. **TERMS OF AGREEMENT**

3.1. This Agreement shall come into effect from the date it is executed and delivered by those Entities who have signed and ratified the agreement and such date shall be referred to as the Effective Date.

3.2. There shall be no defined expiry date for this agreement, which shall be valid from the Effective Date.

4. **MODE OF TRANSACTIONS**

4.1 All the Entities shall carry out Load Forecasting and ensure RE forecasting by the concerned Generators on a Day Ahead basis. The same shall be reviewed and revised in real time basis also.

4.2 Entities would assess the position of Generation vis-à-vis the Electricity Demand in advance on a Month ahead/ ahead or Day Ahead or on real time basis. In case surplus generation is anticipated or experienced in any state and power requirement exists in any other state, the surplus state(s) may intimate the deficit or prospective buyer state. Both Entities may agree upon the quantum and duration of power supply and mode of transaction ie Option-1 or Option-2.

4.3 The exchange of power may be transacted in two options ie. Option-1: as a standalone export, Option-2: Swapping.

4.4 In either option, the transaction shall be through Short Term Open Access mode. The importing entity would punch the Short Term Open Access (STOA) application to

NRLDC as Advance/ First Come First Serve/ Day Ahead/ Contingency application in the Web based Open Access portal of NRLDC, with copy of consent from the SLDC of the state from which Power is being exported and the SLDC of the state to which the power is being imported.

4.5 NRLDC, on receipt of the Short Term Open Access (STOA) application from Entities, shall process the application, within the timelines specified in the prevailing Regulations.

4.6 The Importing state shall pay the STOA charges, as applicable as per the extant regulations, to NRLDC for each application. The same shall be considered for disbursement to CTU/STU/SLDC on post-facto basis.

4.7 **Option 1 Standalone Export**

In this mode, the power may be exported from surplus state to deficit state on a standalone mode.

4.8 **Option 2 Swapping**

In this mode, the power may be exported from surplus state to deficit state on a 'Give-and Take mode'. The power may be returned in instalments at a mutually agreed Quantum, duration and time.

Balance energy yet to be returned after the end of the month may be shown in the REA and would be carried forward in the forthcoming months. At the end of financial year, the residual energy, if any, would be settled fully.

4.9 In all the above options, the rate of energy is as per item 7 of this agreement

5. **Scheduling and Despatch**

5.1 The quantum of MW would be indicated at Regional periphery. The quantum, as approved, shall be scheduled from time block as per extant regulations.

5.2 Loss treatment shall be as per the provisions of the extant Regulations. The Exporting Entity shall bear the PoC Injection loss and the importing Entity shall bear the PoC withdrawal loss.

5.3 Any errors in Real time Scheduling or implemented Schedules may be brought to the notice of NRLDC and NRPC immediately.

6. **Metering and Energy Accounting**

6.1 Metering is as per the existing interface meters with ISTS and the power scheduled under this agreement is deemed to have been delivered or drawn on first charge basis. The approval-wise schedules of these transactions would be shown in the monthly Regional Energy Account (REA) issued by NRPC.

6.2 The Accounting of energy within the State shall be done by respective SLDC.

7. **Energy charge Rate of power exchanged**

7.1 The price for settlement at Regional periphery shall be based on:

- Option-1 (Item No.4.7) –MCP Market Clearing Price (Unconstrained) of IEX on the particular day for the particular time block.

- Option-2 (Item No.4.8) - The residual energy during swap at the end of the financial year would be settled at the average MCP of IEX (Indian Energy Exchange) of the financial year.

7.2 The entities shall have option for settlement at any other mutually agreed price also.

8. **Settlement**

8.1 The Energy scheduled for all such transactions over the month, shall be shown as a part of Monthly Regional Energy Account, issued by NRPC.

8. 2 The STOA charges collected by NRLDC shall be borne by the importing entity. The energy charges shall be settled among the Exporting and Importing entities bilaterally

8.3 The energy would be settled at:

For Option-1: The Exporting Entity shall raise the bills on a monthly basis. The Importing Entity shall settle the energy charges for the energy scheduled at the Regional periphery at the rates agreed in Section 7 within 30 days of presenting bill.

For Option-2 : The net exporting entity shall raise the bill after the end of the financial year for the residual energy. The Importing Entity shall settle the residual energy at the rates agreed in Section 7 within 30 days of presenting bill.

9. **Dispute Resolution**

9.1 NRLDC / NRPC Secretariat shall be indemnified harmless from all disputes of the issues mentioned above. NRLDC shall be responsible only for scheduling the STOA transactions as per the prevalent Regulations. NRPC Secretariat shall be responsible for issuing weekly DSM accounts and monthly REA.

9.2 All the Entities shall bilaterally reconcile the accounts of energy exchanged and payments made and received on a monthly basis.

9.3 All efforts shall be made by Importing and Exporting Entities to sort out any disputes bilaterally in an amicable manner. Any unresolved differences thereafter may be brought to the notice of NRPC Forum through Commercial Sub-committee/TCC.

Authorised Signatories of

UPPCL	UPCL
HPPC	DTL
HPSEBL	RUVNL
PSPCL	PDD J&K
UT of Chandigarh	

Witnesses:

1.

2.

Annexure-IV

I. Options for Intra-Day / Hour Ahead transactions:

Seven options have been proposed for Hour Ahead Transactions.

Option-1: Banking

- Pros: Voluntary;No price transaction;Easy to implement
- Cons:Still bilateral;Opaque to cheaper options;True marginal cost of meeting demand not known;Elements of Cost and Value missing;No knowledge of gain or loss

Option-2: Day Ahead Market Price on Power Exchange as reference

- Pros:Well accepted reference price; Dispute free
- Cons:Very remote chance of availability of generation sources with marginal cost equal to or less than Day Ahead Market(DAM) price; Liquidity will always be an issue

Option-3: Pool, based on variable cost as approved by the Regulator and on payment of cost

- Pros:Visibility of all options for purchase decision; Dispute free as regulator approved Variable Cost (VC); All resources get paid as per their cost or marginal cost; Improvement over option 2, liquidity
- Cons: Still based on cost and not on value; VC difficult to ascertain; Merchant plants cannot participate as their tariffs are not determined by regulator

Option-4: Pool, based on variable cost as approved by the Regulator and on payment of marginal cost

- Pros:Same as Option 3; Improvement over Option 3 – element of 'value' introduced because of marginal cost based payment
- Cons:VC difficult to ascertain; Merchant plants cannot participate as their tariffs are not determined by regulator; Payment based on marginal cost may lead to heart burn; still administered

Option-5: Pool, based on auction (intra-day for the rest of the day)

- Pros:Market Discovered Price; Dispute free; Not administered; Akin to DAM but closer to real time
- Cons:Preparedness of Power Exchange (PX); Discoms' decision making process; OA registry, a pre-requisite

Option-6: Pool, based on auction (hourly)

- Pros:Market Discovered Price; Dispute free; Not administered; Akin to DAM but closer to real time
- Cons:Preparedness of PX; Discoms decision making process; OA registry, a pre-requisite

Option-7: Pool, based on auction (intra-hour i.e. 15 min. block)

- Pros:Market Discovered Price; Dispute free; Not administered; Akin to DAM but closer to real time
- Cons:Preparedness of PX; Discoms' decision making process; OA registry, a pre-requisite

II. Illustration:

a. Auction: 7.30 Hrs. – 8.00 Hrs. window, transaction for 'rest of the day' (Intra-day : Option 5) / 'for 9.00 – 10.00 Hrs.' (Hourly : Option 6) / 'for 9.00 – 9.15 Hrs.' (Intra-hour : Option 7), and so on
b. Generators can participate for sale of surplus power (over and above already scheduled on day-ahead basis)
c. Sellers (other than generators) and buyers can participate for surplus / deficit vis-à-vis their schedule on day-ahead basis
d. After the trade materializes under Option 5, 6 or 7 as the case may be, net schedule for the buyers and sellers shall be prepared, which will serve as reference point for DSM / UI
e. However, payment for 'Day-ahead' transaction and 'Intra-day' (Option 5) / 'Hourly' (Option 6) / 'Intra-hour' (Option 7) transactions shall be settled separately based on the schedules for the respective segments
f. Open Access Registry and delegation of decision making authority to operating level at Discom are pre-conditions to success of this framework.