



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./प्रचालन10/9/04/2017/9518

दिनांक: 18/08/2017

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 पहली बैठक की बैठक का कार्यवृत्त।

Subject: Minutes of the meeting of First 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 18.08.2017 को आयोजित की गयी बैठक का कार्यवृत्त आपकी सूचना व आवश्यक कार्यवाही हेतु इस पत्र के साथ संलग्न है।

Minutes of the meetings held on 18.08.2017 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,

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

**Minutes of the 1st Meeting of the Sub-group of Northern Region under
Technical Committee for Implementation of Framework on Renewables at
State Level (IFRSL)**

1st Meeting of the Sub-group of Northern Region under technical committee for Implementation of Framework on Renewable at State Level was held on 16.08.2017 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 informed participants about the background of the formation of this sub-group and briefed about the agenda of the meeting. He stated that the main mandate of this sub-group is to examine the feasibility and modality of cooperation among states in region for ensuring optimum utilization of generation resources with least cost options for balancing across the region. He added that ABT compliant metering, telemetry and forecasting is must for all generating units, without which proper scheduling and imbalance management is not possible.

A presentation on various issues related to balancing, international experience and enabling regulatory provisions in India was made by NRPC Secretariat. It was informed that already there are success stories of cooperation among states in USA in form of Energy Imbalance Market (EIM). Citing example of USA benefits of cooperation among ISOs, large balancing area and shorter settlement period (e.g. 5 minutes in ERCOT) was highlighted. It was emphasised that cooperation among states in NR would facilitate in dealing with issues related to large penetration of Renewable Energy (RE), especially in managing load-generation balance.

Gist of discussions on various issues are as under:

- 1. Actual Installed Capacity and Generation:** Details of RE installed capacity based on NRLDC daily report and as updated by representatives from states are as under :

State	Small Hydro IC(MW)	Wind IC(MW)	Biomass IC(MW)	Solar IC(MW)
Punjab	-	0	303	859
Haryana	10.8	0	106.3	49.8
Rajasthan	-	4292	102	1995
Uttar Pradesh*	-	0	26	102
Uttarakhand*	180	0	127	100
Delhi	-	0	52	5.13
Himachal Pradesh*	486	0	0	0
Jammu and Kashmir*	98	0	0	0
Chandigarh	-	-	-	13.04

*Representatives from UP, Uttarakhand and HP stated that they would send details shortly. J&K representative was not present in the meeting.

(Action: SLDCs of UP, Uttarakhand, HP, J&K; Time line: 25.08.2017)

- 2. Variability of Demand and Generation:** RE generation and demand pattern for few months, as per data provided by NRLDC was discussed. It was noted that during Apr-

Sep. The wind generation is normally high. It was also noted that generally during night hours, the wind generation is more in Rajasthan. Thus, to some extent the wind generation complements the solar generation. MS, NRPC stated that the generation and demand pattern in each state should be analysed in more details to know ramping up/down of generation from wind /solar. NRLDC representative stated that from past experience, it can be generally deduced that wind generation does not come down abruptly. MS, NRPC expressed that SLDCs and concerned state agencies may carry out exercises to study the variability of generation from wind and solar to facilitate assessment of quantum and nature of balancing requirement in each state.

Members 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.

(Action: SLDCs ; Time line : 31.08.2017)

3. Availability of Metering, Telemetry & Forecasting Facility for Renewable Energy (RE) Generation.

SE, NRPC stated that implementation of the recommendations in Scheduling Accounting Metering and Settlement of Transactions in Electricity (SAMAST) report by FOLD are essential to ensure optimum utilization of generation resources. He requested the members to furnish the status of implementation of the recommendations of the SAMAST report.

Representative from Rajasthan stated that Order for ABT meter installation and software development for implementation of DSM had been placed. Out of total requirement of 594 ABT meters 110 have been installed. By November, 17, DSM would be implemented. She further added that order for OPGW/OFC as communication backbone, is under finalization. She informed that the load forecast is done using day before actual load with inputs of weather, holiday, festival, etc. being factored into it. DPR for getting load forecasting through software is under submission to higher authorities. Out of 4292 MW installed capacity of wind generators, forecasting of 3340 MW is being done on a pilot project basis by RE CONNECT. Another agency i.e. NIWE has proposed for taking up pilot project for wind forecasting and scheduling in Rajasthan.

Representative from Uttar Pradesh stated that they have ABT system for conventional intra state generating stations but as of now RE generators are not in ABT regime.

Representative from Uttarakhand stated that they have notified the intra state DSM regulation and will be implemented by 01-04-2018. Presently, RE generators are excluded from ABT but scheduling of RE generators is mandatory.

Representative from Himachal Pradesh stated that presently they haven't implemented intra state ABT system. MS, NRPC insisted that HP should improvise in forecasting since they are Hydro rich state and power variability issue is common for them.

Delhi representative informed that 100% telemetry from RE generators.

Haryana representative informed that out of 49.8 MW solar telemetry for 35 MW is available.

Representative from Chandigarh stated that since they haven't any Load Despatch Centre, they face problem in real time operation of their power system. He requested help of NRPC for facilitating setting up SLDC. It was deliberated that till the permanent SLDC setup is established, as an interim arrangement, SLDC setup for UT of Chandigarh may be made at SLDC BBMB. The modalities would be discussed with concerned agencies at appropriate forum.

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.

(Action: Members from SLDCs & SERCs; Time line: 31.08.2017)

- 4. Availability of reserves (On-line & Off-line):** It was deliberated that each region is required to maintain secondary reserves corresponding to the largest unit size in the region and tertiary reserves are also to be maintained in a de-centralized fashion by each state control area for at least 50% of the largest generating unit available in the state control area.

It was also deliberated that maintaining reserves at the State level would complement cooperation amongst the States of NR, for ensuring optimum utilization of generation resources. Representative of NRLDC stated that for balancing of RE, utilities must maintain adequate reserves. He emphasised that information regarding real time reserves availability and ramping & cycling capability of different type of generators should be available with SLDCs.

Rajasthan representative informed that they does not have much reserve in hydro and gas due to irrigation requirement and gas availability issues ,respectively.

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.

(Action: All SLDC members; Time line: 31.08.2017)

- 5. Commercial arrangement among states for import/export of balancing power:** SE NRPC stated that all Northern Region (NR) constituents may enter into mutual agreements with each other to avail surplus power available with other states of NR. Sample Overarching agreement in line with that decided in SR may be signed. It was emphasised that in NR, the banking arrangement with the provision of yearly settlement would be suitable keeping in view the diversity of demand and generation in NR states. Members were requested to examine the proposal agreed in SR and send their comments within a week to finalise the modalities. Members, especially from SERCs were also requested to suggest any alternate commercial mechanism to facilitate optimum utilisation of RE.

(Action: All members; Time line : 31.08.2017)

Annexure-I

S. No.	Name of Officer	Designation	Organisation	E-mail
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10.	Kaushik Dey	Manager	POSOCO, NLDC	kaushikdey@posoco.in
11.	Naveen Goel	Manager	Delhi SLDC	
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