

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

सं. उक्षेविस/वाणिज्यिक/210/वाउस(35)/2018/ 46 द्र ४ - ५६ ^६।

दिनांक: १ Y, April, 2018 No. NRPC/ Comml/210/CSC(35)/2018/

Dated : 2 4, April, 2018

सेवा में / To.

Members of Commercial Sub-Committee (As per List) वाणिज्यिक उप समिति के सभी सदस्य (संलग्न सूचीनुसार)

विषय: वाणिज्यिक उप-समिति की 35 वीं बैठक का कार्यवृत्त । Subject: 35th meeting of Commercial Sub-Committee - Minutes.

महोदय, Sir,

उत्तर क्षेत्रीय विद्युत समिति वाणिज्यिक की उप-समिति की 35 वीं बैठक दिनांक 19 फरवरी , 2018 को उक्षेविस, नई दिल्ली में आयोजित की गई थी। इस बैठक के कार्यवृत की एक प्रति आपकी सूचना व आवश्यक कार्यवाही हेत् इस पत्र के साथ संलग्न है।

35th Commercial Sub-Committee meeting of NRPC was held on 19th February, 2018 at NRPC, New Delhi. A copy of the minutes of the meeting is enclosed herewith for favour of information and necessary action.

(हेमन्त कुमार पाण्डेय)

(Hemant Kumar Pandey) अधीक्षण अभियंता

Superintending Engineer

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NORTHERN REGIONAL POWER COMMITTEE

Minutes of 35th MEETING OF COMMERCIAL SUB-COMMITTEE OF NRPC

The 35th meeting of Commercial Sub-Committee of NRPC was held at NRPC, New Delhi on 19th February 2018. The list of participants is enclosed as Annexure-I.

Member Secretary, NRPC welcomed the participants of 35th Commercial Sub-Committee meeting. While giving an outline of agenda, he stated that several important issues viz. Compensation statement for the gas stations for part load operation, open cycle deemed generation certification etc. were to be discussed in the meeting. He requested the Members to submit agenda on any other important issues, which needs to be deliberated in 38th TCC & 41st NRPC meeting, scheduled to be held on 27th & 28th February 2018. He requested the Members to make the conclusive deliberations, so that the outcome of this meeting can be put up before TCC & NRPC for concurrence. With these remarks, he requested Superintending Engineer(C), NRPC to take up the agenda for deliberation.

ITEM-1 CONFIRMATION OF MINUTES OF 34th MEETING OF COMMERCIAL SUB COMMITTEE OF NRPC

- 1.1 The minutes of 34th meeting of Commercial Sub-committee held on 28th July 2017 were issued vide letter No. NRPC/Comml/ 210/ CSC(34)/ 2018/ 998-1039 dated 19th January 2018. NHPC vide letter dated 30th January, 2018 had submitted comments, which was enclosed at **Annexure-1.1** of the Agenda of this meeting. However, in the meeting NHPC representative stated that they agree with the Minutes.
- 1.2 It was deliberated that the date of e-mail should be considered as "Date of presentation of Bill, if, the e-mail is received by 1400 Hours. If e-mail is received after 1400 Hours, the date, next to the date of e-mail should be considered as "Date of presentation of the Bill". This was agreed by all the members.
- 1.3 NTPC vide letter dated 07th February, 2018 have submitted their views on para no. 1.6, which was enclosed at Annexure-1.2 of the Agenda. It was clarified that the issue discussed in the 34th Commercial Sub-Committee was regarding date of presentation of the bill, in case the bill was submitted through e-mail. Members agreed with the recording of the minutes. It was also clarified that the utilities may continue the existing practice of physical bill presentation. However, any utility should not stress upon presentation of the physical copy of the bill.

1.4 With the above clarifications, the minutes of 34th Commercial Sub-Committee meeting were approved.

ITEM-2 Certification of Availability of Transmission Elements of Powergrid - Unchahar Transmission Limited (PUTL)

- 2.1 SE (C), NRPC informed that NRLDC had submitted the verified outage details of the Grid Elements of PUTL to NRPC Sectt. for the months of December 2016 to June 2017. Describing the brief of the case he informed that 400 kV D/C Unchahar Fatehpur line was commissioned by Powergrid Unchahar Transmission Limited (PUTL) under TBCB project. The associated bays at Fatehpur end and Unchahar end were under the scope of POWERGRID and NTPC Ltd., respectively. The transmission licensee had intimated that in line with Section 6.2.1 of Transmission Service Agreement (TSA), the COD of 400 kV D/C Unchahar Fatehpur line was declared w.ef. 01.10.2016.
- He added that under para-23 of CERC order dated 15.11.2017 in petition no. 48/TT/2017, it is mentioned that Unchahar TPS was completed and first time charged its bays on 9.12.2016 and 15.12.2016 and was being used for drawl of startup power for Unchahar-IV project of NTPC w.e.f. 21.12.2016.
- 2.3 Under para-24 of this CERC order, it is mentioned that the instant assets i.e. bays at Fatehpur were anti theft charged on 28.9.2016 and 30.09.2016, but the bays were not put to regular use till 21.12.2016. Accordingly, COD of the assets was considered as 21.12.2016 from which date the assets have been put to regular use.
- 2.4 It was also mentioned that under para-70 of CERC order dated 15.11.2017 in petition no. 48/TT/2017, following is the direction.
 - "70. Under Regulation 8(8) of Connectivity Regulation, the transmission charges from 21.12.2016 till date of start of LTA shall be borne by NTPC and thereafter the transmission charges shall be considered under POC and the billing collection and disbursement of transmission charges shall be governed by provision of Central Electricity Regulatory Commission (sharing of Interstate Transmission Charges and Losses) Regulations, 2010 amended from time to time."
- 2.5 It was noted that regarding payment of transmission charges there seems to be an anomaly in respect of dates as the start of LTA was in November,2015, as per documents received from CTU.
- 2.6 After detailed deliberations the Commercial Sub-Committee decided that availability of the 400 kV D/C Unchahar- Fatehpur line of PUTL may be calculated w.e.f 21.12.2016, as per provisions in Terms and conditions of Tariff Regulations of CERC for 2014-2019 considering the CERC direction regarding COD of the PUTL line as 21.12.2016 .

ITEM-3 Representation by AD Hydro Power Ltd. to CERC

- 3.1 SE (C), NRPC informed that AD Hydro had submitted a representation to CERC on 28.12.2017. The submissions in the application in briefly are:
 - I. The situation that the petitioner is seeking to address is when after the use of the inherent margins, the spare margins left by LTA customers are utilized by other entities. In this situation the LTA customer who had left the spare capacity should be reimbursed as it is his spare capacity that is being used.
 - II. LTA customers other than Generators use this spare capacity during lean season. For example, during winter season in hilly states, utilities may use the system in excess of their Contracted Capacities on account of increased requirement and less hydro generation.
 - III. Though the petitioner is benefitted by the MTOA and STOA charges paid by the customers but these charges are paid to all LTA customers irrespective of whether they have made available any spare capacity or not and therefore such LTA customers are unjustly enriched.
 - IV. Provisions in various regulations and systems installed by various agencies are capable to calculate the quantum of STOA /MTOA charges arisen due to inherent capacities of the ISTS or due to capacity remained unutilized by the LTA customers.
 - V. A pragmatic method may be evolved in such a manner that RoR Hydro stations are reimbursed as far as possible to the extent that they have made available spare capacities from their LTA.
- 3.2 The background of the case, as given in Agenda was explained. It was informed that the application was pending with CERC for hearing and in response to the request in the Agenda for submitting comments, no comment from any utility has been received.
- 3.3 MS, NRPC invited views of the participants in the meeting but none of the Members had expressed any view. Members were requested to submit comments on the submission by A D Hydro to NRPC Sectt. by 15th March,2018, for onward transmission to CERC.

ITEM-4 Draft Report of the FOR Sub-Group on Implementation of 5-Minute Scheduling, Metering, Accounting and Settlement

4.1 SE(C), NRPC informed that the Forum of Regulators (FOR) had constituted a "Technical Committee for Implementation of Framework on Renewables at State Level" to facilitate large scale grid integration of renewables. In the 11th Meeting of the "Technical Committee for Implementation of Framework on Renewables at the State Level" held at Chennai on 28th March 2017, it was

decided to form a Sub-Group comprising members from POSOCO, CEA, RPCs, CTU and RE rich states, to examine the various aspects of migrating from 15-minute to 5-minute scheduling, metering, accounting and settlement at the inter-state level, to facilitate large scale integration of renewables.

- 4.2 It was further informed that a draft Report by the Sub-Group was available on http://nrpc.gov.in/reports/other/.
- 4.3 The main recommendations in the report were deliberated at length. Members were requested to give comments/suggestions, on the report, to NRPC Sectt. at the earliest so that it may be discussed in next TCC & NRPC meetings. It was also decided that based on the comments received from members, if needed, a separate meeting to discuss the report and related issues may also be called.

ITEM-5 Deemed Availability Certification requiring outage for new Infrastructure development projects to be treated as another Transmission scheme

- 5.1 SE(C), NRPC intimated that an agenda item on this issue was brought by POWERGRID in 34th Commercial Sub-Committee meeting held on 30.11.2017, wherein the sub-committee was requested to recommend the extension of provision of deemed availability in consideration of Appendix-III, Para 5 of CERC tariff Regulation 2014 to the outages due to transmission line diversion works for infrastructure strengthening and development of new corridors for Rail and Road transportation facilities by Central & State Govt. utilities like NHAI/DFCC/ GAIL/ DMRC/ Railways/ UPEIDA etc.
- 5.2 He also mentioned that in that meeting Superintending Engineer (Operation), NRPC had opined that there were already statutory provisions for the recovery of cost for the works mentioned by POWERGRID for such diversion of lines under regulation 63 of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations ,2010,as such there was no need to consider extension of the provisions in Appendix-III, Para 5 of CERC tariff Regulation 2014 for considering deemed availability to the new diversion related construction works. In response, POWERGRID representative had stated that as per sub-regulation 63 (3) and 63 (4) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, the cost of alteration of overhead line would consist of Material, Labor and supervision charges only. He emphadized that recovery of the financial loss on account of less availability of transmission system was not covered under these regulations.
- 5.3 He added that the sub-committee had advised all the members to send their views to NRPC Sectt. Within one month, so that the matter may be deliberated further, but no comment was received from any constituent.
- 5.4 In the meeting representatives from HP and BBMB opined that the deemed availability as requested by POWERGRID should not be allowed; instead the

licensee may recover the loss due any account including less availability from the concerned agency. The views were supported by NRLDC also. NRLDC representative stated that is deemed availability is allowed then there would be possibility of non optimisation of outages of transmission outages. It was stated that under present Regulations the deemed availability is allowed for outages due to new transmission scheme and the request of POWERGRID could not be covered under the existing regulatory provisions.

5.5 After detailed deliberations the sub-committee decided that request of POWERGRID was not acceptable. However, members were again requested to send their views, if any, within one week.

ITEM-6 Replacement of Special Energy Meter (SEM)

- 6.1 SE (C), NRPC stated that during the 7th meeting of National Power Committee (NPC) held on 08.09.2017 at Indore, it was decided that NPC Secretariat may develop a framework for replacement of meters after taking inputs from RPCs on the practice being followed by the Utilities. In this regard, NPC Sectt. had circulated a concept/note for further discussion and collection of status. The same was enclosed as Annexure-6.1 of the Agenda note.
- 6.2 The Sub-Committee advised all the concerned utilities to abide by the Regulatory provisions related to repair/replacement of faulty meters as mentioned in the NPC note. All the concerned utilities were advised to submit information sought by NPC by 20th March 2018 to NPC Division, CEA with a copy to NRPC Secretariat.

(Action: POWERGRID and All the STUs; Time Line:20.03.2018)

ITEM-7 Non-compliance of Merit Order

- 7.1 NTPC representative informed that they had observed some incidences of non-compliance of merit order by some utilities. The details of incidents were enclosed at Annexure 7.1 of the agenda. Representative of Delhi SLDC stated that there was no violation of merit order. He explained that in Delhi scheduling is done by Distribution companies and they strictly follow merit order. Regarding schedule from DVC stations, he mentioned that sometimes there is backing down issues due to involvement of multiple agencies. The representative of some Delhi Discoms, present in the meeting, had also supported Delhi SLDC views. NTPC representative stated that the objective of the agenda was to highlight the importance of merit order and to request all the State utilities to follow the merit order.
- 7.2 The sub-committee noted that specific incidences indicated by NTPC needs more analysis before concluding that there was non-compliance of merit order. However, the Sub-Committee advised all the utilities to follow the merit order as

far as possible to optimise cost, keeping in view the reliability & the safety of grid.

(Action: All SLDCs & Discoms; Time Line: Immediate)

ITEM-8 Procurement of licenses of PoC software.

- 8.1 SE(C), NRPC intimated that in the last TCC/NRPC meeting proposal for procurement of PoC software from IIT Bombay at the estimated expenditure of 32 Lakh plus taxes/year, to be met through NRPC Fund was approved.
- 8.2 He added that PoC mechanism was under review by the committees constituted by CERC and MoP. He mentioned that keeping in view, these developments, which may result in significant modifications in the software also the process of procurement had not been initiated by NRPC Secretariat. He invited views of the members on the issue.
- 8.3 The Sub-Committee decided that the software procurement should be kept on hold till the finalisation of PoC mechanism.

ITEM-9 Compensation w.r.t Partial Loading of Coal Based Stations

- 9.1 SE(C), NRPC intimated that in accordance with Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fourth Amendment) Regulations, 2016 and detailed procedure for Compensation for Degradation of Heat Rate, Aux Compensation and Secondary Fuel Consumption, due to Part Load Operation and Multiple Start/Stop of Units, dated 05th May, 2017, compensation for Coal Based generating station had been calculated. Brief of calculation methodology was as under:
 - i) Average unit loading (AUL) of the station is calculated for the calculation period as per the formula given in the procedure.
 - ii) DC based loading of the station is calculated taking in the account On-Bar DC in line with AUL.
 - iii) If AUL<85% then further calculation is done for ECR.
 - iv) Based on the AUL and DC based loading, degradation in SHR and AEC is determined as per the table given in the Regulation.
 - v) ECR(SE) is calculated based on degraded SHR and AEC as per regulation considering average unit loading of generating station during the calculation period, as per the formula given in the Tariff Regulation.
 - vi) ECR(DC) is calculated based on degraded SHR and AEC as per regulation considering average declared capacity as average unit loading during the calculation period.
 - vii) ECR(A) is calculated based on actual parameters SHR and AEC during the calculation period.

- viii) ECR(N) is calculated based on normative parameters of SHR and AEC during the calculation period.
- ix) Compensation for calculation period is comes out to be minimum of [{ECR(SE)-ECR(DC)} and {ECR(A)-ECR(N)}] multiplied by cumulative scheduled energy.
- Compensation amount Payable/Receivable is distributed among the beneficiaries as per the Table-O of Regional Energy Account issued by NRPC Secretariat.
- 9.2 It was further informed that input data for compensation calculation was submitted by CGS and ISGS to the RPC Secretariat as per Annexure-I of the approved detailed procedure by CERC.
- 9.3 It was also mentioned that the compensation calculation based on the procedure defined by CERC and the data received from CGSs & ISGSs calculation from 15-05-2017 to 31-08-2017 was enclosed at Annexure-9.1 of the Agenda Item. Comments were invited from the utilities in the meeting. No comment was given by any Member.
- 9.4 THE Sub-Committee advised members to send comment, if any, on the compensation calculation done by NRPC Secretariat, within two days for issuance of the compensation statement along with Final REAs from May'17 to August'17.

(Action: All the Members; Time Line: 21.02.2018)

ITEM-10 Compensation w.r.t Partial Loading of Gas Based Stations

10.1 AEE(C), NRPC gave a presentation on the issue (Copy enclosed at Annexure-II). He mentioned that in 33rd commercial sub-committee, it was discussed that as per IEGC (Fourth Amendment) Gas based generating stations of NR would provide OEM's HBD diagram along with degradation curves. As per decision in the Commercial Sub-Committee, to validate the values of the heat rate and AEC at different percentage of loading, a sub-group was formed comprising members from each of the organisation viz. CEA (TE&TD Division), NRPC secretariat, NRLDC, and TPDDL.

Members of the sub-group visited Dadri GPP, IPGCL-PPCL and Faridabad GPP to collect the real time operation data required for Gas compensation calculation such as Gross Generation (Metered data and Control Room Data), Gas Flow (Control Room Data and GAIL Readings) and Gross Calorific value of fuel (GCV) from GAIL at different percentage loading for Half/Full Module mode of operation.

He informed that the collected data was used to calculate Heat Rate and APC and to co-relate it with the characteristic curve. The details of the calculation were discussed in the meeting. It was highlighted that the GHR values had been derived from the Heat Balance Diagram (HBD) provided by the NTPC and

the characteristic curves provided by PPCL. Degradation facts as suggested by NTPC was not considered by the sub-group. The GHR and Auxiliary Power Consumption (APC) values at different loading for full module operation were derived on the basis of these curves. The details of the values are given at Annexure-II.

- 10.2 NTPC representative stated that the values derived without considering the degradation due to aging were not acceptable. He mentioned that the GHR & APC values need to be reviewed.
- 10.3 He further explained that if compensation is worked out without applying degradation factor to HBD, then most of the gas station would not be eligible for compensation even at 60-65% loading. This way the whole purpose of carrying out actual exercise at stations to substantiate NTPC claimed figures is defied.
- 10.4 He added that CERC while fixing tariff norms of Heat Rate and APC, had taken due consideration of average loading factors of various stations and then only decided Station Specific Norms expected to be met at 85% loading factor. CERC had acknowledged that at lower loading than 85%, actual Net Heat Rate would certainly be higher than the norm given and that is why the concept of compensation at lower loading was notified.
- 10.5 NTPC representative suggested that till such time NRPC decides final figures of compensation for various loading factors, NTPC may be allowed to raise provisional bills based on the figures submitted by NTPC with degradation factor.
 - 10.6 Member Secretary, NRPC requested members to submit comments, in writing, to NRPC Secretariat on the methodology as well as derived values within one month, so that the compensation calculations may be finalised.

(Action: All the Members; Time Line: 19.03.2018)

ITEM-11 Default in payment of outstanding dues and surcharge by beneficiaries

11.1 The details of outstanding dues as updated in the meeting were as under:

Utility	Beneficiary	Total Dues including Surcharge (in Rs Cr.)	Deliberations in the meeting / Updated status
	PDD, J&K	545.88	
	UPPCL, UP	528.86	
NHPC	PSPCL, Punjab	79.47	NHPC stated that as on 19.02.2018, dues were 104 Cr. Representative of PSPCL stated that some payment shall be made by this month.
	BYPL, Delhi	393.65	Representative of BYPL stated that they had submitted liquidation plan to NHPC.
SJVNL	BYPL	144.57	Representative of BYPL stated that they had submitted fresh liquidation plan to SJVNL as earlier proposal of liquidation plan was not

			accepted by SJVNL.		
	Govt. of HP & a/c HPSEB	334.59	Representative of HPSEBL stated that only Dec and Jan. Payment was due rest of the payment had been made and need to be reconciled. SJVNL agreed to reconcile the same.		
	J&K	109.67	The amount (44.83+17.16=61.93 Cr.) was in treasury would be released at the earliest.		
	UPPCL	207.97	The updated status could not be ascertained as representative from UPPCL was not present in the meeting.		
	BRPL, Delhi	292.19	Representative of THDCIL stated that BRPL was making only current payment and not releasing the outstanding.		
THDCIL	BYPL, Delhi	287.95	No action plan submitted by BYPL. Representative of BYPL stated that they would submit the plan by end of the month.		
INDCIL	PDD, J&K	67.64	PDD, J&K representative assured to take up the issue with concerned so that payment is released shortly.		
	UPPCL, Uttar Pradesh	1239.96	The updated status could not be ascertained as representative from UPPCL was not present in the meeting.		
PGCIL	UPPCL	200.16	The updated status could not be ascertained as representative from UPPCL was not present in the meeting.		
	PDD, J&K	30.01	Representative of PDD J&K stated that Cheque of Rs. 111 Cr. had been issued.		
DTL	BRPL, Delhi 1495.30		THE SUB-COMMITTEE advised to settle the issue bilaterally.		
DIL	BYPL, Delhi	933.47			

11.2 The sub-committee requested the defaulting entities to release their outstanding at the earliest.

(Action: All the defaulting entities; Time line: At the earliest)

11.3 The Commercial Sub-Committee expressed concern about non-participation of some of the Utilities e.g. UPPCL, BRPL etc. in Commercial Sub-Committee Meetings as well as TCC & NRPC meetings. The Sub-Committee advised NRPC Secretariat to take up with concerned utilities for ensuring their representation in these meetings.

(Action: NRPC Sectt.; Time line: At the earliest)

ITEM-12 Opening of Letter of Credit (LC)

12.1 It was deliberated that as per PPA/CERC Regulations beneficiaries had to submit a confirmed, revolving, irrevocable Letter of Credit for an amount equivalent to 105% of average monthly billing of preceding 12 months with appropriate bank as mutually acceptable to parties. As per Regulatory provisions, the LC is to be kept valid at all the time during the validity of the Power Purchase Agreement. This matter had been discussed regularly in various Commercial Sub-Committee meeting as well as TCC and NRPC meetings. However, many of beneficiaries have not submitted the requisite Letter of Credit for the FY 2017-18. The details was given in the Agenda.

Utility/Account	Beneficiary	LC Amount (in Rs Cr.)	· ·		
NUIDO	PDD, J&K	LC amount already	**		
NHPC	BRPL, Delhi	intimated to the beneficiaries	Not Present		
	PDD, J&K		**		
SJVNL	HPSEBL		\$		
SOVINE	BRPL, Delhi		Not Present		
	BYPL, Delhi		#		
THDCIL	BRPL, Delhi	8.02			
ITIDOIL	PDD, J&K	11.58			
	Punjab		Punjab representative informed that LC was issued		
POWERGRID	BYPL, Delhi	51	#		
	BRPL, Delhi	97	Not Present		
	PDD, J&K		**		
	BRPL, Delhi	35.79	TOTAL OUTSTANDING DUES		
DTL	BYPL, Delhi	18.62	(INCLUDING LPSC) PAYABLE BY BSE DISCOMS TO DTL FOR THE BILLING PERIOD 01.10.2010 TO 31.12.2017		
	UPPCL,UP	2277.24	Not Present		
	UPCL, UTTARAKHAND	183.34	Not Present		
	HPSEB, Himachal	929.11	HPSEB representative informed that amount needs reconciliation.		
	PDD,J&K	1230.35	**		
	Greenko, Budhil	54.22	Not Present		
DEVIATION CHARGE	Punjab	615.03	Punjab representative informed that amount needs reconciliation.		
ACCOUNT	UT Chandigarh	69.53	Not Present		
AGGG.	Rajasthan	311.73	Rajasthan representative informed that the matter would be taken up with concerned state utilities.		
	APCL	51.28	Not Present		
	BBMB	24.23	\$\$		
	NHPC	306.88	\$\$		
	PGCIL	8.75			
	HPPCL	1.15	Not Present		
	DTL	370.25	DTL representative informed that amount needs reconciliation.		

- ** Representative of PDD, J&K stated that they are in process of establishment of Power Trading Company. After formation of TradeCo. the LC would be opened.
- \$ Representative of HPSEBL stated that they have already requested the bank to open the LC for Rampur HEP and the same would be opened within a week's time. He further stated that they would call a meeting

- among the officials from HPSEBL, SJVNL and GoHP to resolve the LC related issues and report the outcome of the meeting to NRPC Sectt.
- # BYPL representative stated that due to adverse financial condition they could not open LC and assured that as soon as financial position gets better they would open LC.
- \$\$Representative of BBMB and NHPC stated that there was no default in payment against Deviation Charge Account (DSA) during FY 2017-18 and hence LC for the same may not be required during the FY 2018-19.
- 12.2 NRLDC representative stated that if in the next financial year the LC is not opened by the concerned utilities, they may report the matter to CERC, as this is non-compliance of CERC Regulations. It was stated that reconciliation of accounts, if needed, must be done within a week and necessary action for opening of LC should be taken.
- 12.3 The Sub-Committee advised the concerned beneficiaries to open the LC on priority and advised the utilities to take up the matter directly with beneficiaries which were not present in the meeting.

(Action: All the concerned beneficiaries mentioned in the table; Time line: At the earliest)

ITEM-13 Settlement of outstanding dues of SJVN Limited and DTL

- 13.1 Representative of DTL stated that this issue has been deliberated and discussed in various Commercial Sub- Committee meetings of NRPC, wherein both, DTL and SJVNL were directed to sort out the issue mutually. Accordingly, as per MoM dated 07.05.2015, DTL and SJVNL agreed that the release of payment of total principal liability as on 28.09.2011 by DTL for an amount of Rs.3,62,40,995/- to SJVNL was subject to the approval by Boards of both the companies, i.e. DTL and SJVNL. DTL took the approval of its Board of Directors on 15.05.2015, within one week of the meeting between DTL and SJVNL; and the same was intimated to SJVNL on 26.06.2015. However, SJVNL had not taken approval of its Board even after more than 2 years.
- 13.2 Representative of DTL further stated that in spite of repeated reminders, SJVNL had not obtained the approval from its Board and was still continuing to raise LPSC bill on DTL.
- 13.3 Representative of DTL requested SJVNL to expedite the process and waive off the LPSC charges. He stated that DTL had agreed to pay the liability of Rs.3,62,40,995/- to SJVNL but the same should be adjusted against principal amount and not against LPSC.
- 13.4 Representative of SJVN stated that they would revert back on this issue.
- 13.5 As decision had already been taken in the previous Sub-Committee meeting, the Sub-Committee advised DTL and SJNVL to resolve the issue mutually at the earliest.

(Action: DTL and SJVNL; At the earliest)

ITEM-14 Interest/Surcharge of NRLDC charges for Delhi

- 14.1 Representative of DTL stated that a meeting was held on 26th May,2017 at NRPC Delhi, wherein it was deliberated by Delhi that previous interest/surcharge on past outstanding due to double taxation issue, it was not on account of willful default as the outstanding dues were accumulated due to earlier billing practice. Delhi SLDC requested NRLDC to consider one time relaxation on interest/surcharge. NRLDC assured to consider the issue after consultation with their management.
- 14.2 Representative of NRLDC informed that their management did not agree for the relaxation on interest/surcharge.
- 14.3 Further, representative of DTL requested to reconcile the interest/surcharge amount. NRLDC agreed for the same.

(Action: DTL and NRLDC; At the earliest)

ITEM-15 Double recovery of BBMB transmission charges by PGCIL & BBMB and follow up thereof

- 15.1 Representative of HPSEBL stated that in the 37th TCC Meeting & 40th NRPC meeting held on dated 27th & 28th Oct., 2017 at Srinagar (J&K) wherein the issue was deliberated in the meeting. Earlier this issue was also deliberated in 33rd Commercial Sub-Committee of NRPC meeting held on dated 28th July 2017at NRPC Conference Hall Delhi.
- 15.2 He further stated that the issue of recovery of double charges on a/c of HP share from BBMB projects i.e. 168.171MW by BBMB as well by PGCIL for the period Oct., 2016 to March 2017, had been deliberated in detail against agenda item No.C.15 of minutes of meeting wherein the representative of the BBMB had stated that by next month they would release the amount for the period Jan, 2017 to March 2017. The amount for the period Oct.,16 to Dec., 16 was stated to be under consideration of CERC and was to be settled in accordance with the decision of CERC in the matter. However, no refund of the amount paid for this period had been received from PGCIL so far.
- 15.3 He further added that for the period Jan.'17 to Mar.'17, BBMB had telephonically informed that they had refunded an amount of Rs. 2.0 Crore in the O&M Charges bill for the month of Nov.-17. However, no supporting documents/calculation was provided by the BBMB in the said bill to show the refunded amount. He also mentioned that PGCIL had billed/recovered an amount of Rs. 6.4781511 Cr for the period Jan.'17 to Mar.'17 in respect of HP share in BBMB vide their monthly PoC bills.
- 15.4 Representative of POWERGRID stated that status quo had been maintained for the period Oct.,16 to Dec.,16, as it was under consideration of CERC and the

- issue would be settled in accordance with the decision of CERC in the matter.
- 15.5 Representative of POWERGRID further stated that the bill for the period of Jan.'17 to Mar.'17 had been sent to BBMB and its partner states. He added that there was a meeting among the officials from POWERGRID and Punjab to resolve the issues. He further added that a separate meeting, if required, may be called among the officials from POWERGRID, BBMB and its partner states.
- 15.6 BBMB representative informed that all the details about the refunded amount had been provided to HP. He also suggested to call a separate meeting for resolving the issue.
- 15.7 MS, NRPC suggested POWERGRID and BBMB to send agenda note with details of the issues, so that a special meeting may be convened.

(Action: BBMB, POWERGRID, NRPC Sectt.; Time Line: 20th March,2018)

ITEM-16 Status of DSM Charges

- 16.1 Representative of NRLDC informed that Deviation Pool Account Fund of NR is being maintained & operated by NRLDC, in accordance with the CERC Regulations. As per Regulations 10 (1) of "Deviation Charges Related matters" the payment of charges for Deviation shall have a high priority and the concerned constituents shall pay the indicated amounts within 10 days of issue of statement of Charges for Deviation including Additional Charges for Deviation by the Secretariat of the respective Regional Power Committee in to the "Regional Deviation Pool Account Fund" of the concern region.
- 16.2 He further informed that the major defaulting entities towards Deviation charges-Payable (considering week no.-30) were UPPCL, PDD J&K, WR, Punjab, Delhi, Greenko Budhil, Himachal Pradesh and NER. The Status of Deviation Charges was enclosed as agenda of this meeting. NRLDC representative intimated that they had blocked the punching of STOA application of some utilities in view of huge outstanding.
- 16.3 NRLDC representative requested all payable utilities to clear the outstanding at the earliest so that receivable parties including RRAS Regulation-up service providers may be paid in order to avoid further increase of delayed payment interest.
- 16.4 The Sub-Committee requested all the defaulting entities to clear the outstanding on priority so that payment of pending receivable amount including RRAS up regulation charges can be made from DSM Pool account.

(Action: All defaulting entities; Time line: At the earliest)

ITEM-17 Long pending outstanding of PDD J&K and UPPCL

17.1 Representative of NRLDC informed that there was a long pending outstanding of UPPCL & PDD J&K regarding payment towards DSM Pool. UP and PDD J&K had been intimated several times vide NRLDC letters dated 24th Nov 2017, 15th Dec 2017, 08th Jan 2018, & 17th Jan2018, and in various meeting to liquidate all the pending outstanding of Deviation and Reactive Energy Charges. However, they had not cleared the outstanding despite several reminders.

- 17.2 Representative of NRLDC again requested PDD J&K and UPPCL to submit the action plan immediately to liquidate all outstanding. In case the outstanding was not cleared by 9th February 2018, NRLDC shall be constrained to invoke denial of STOA as per provisions stipulated in Regulation 25A of CERC (Open Access in inter-State Transmission Regulations), 2008 from 10th February 2018, in accordance with CERC Order dated 02.09.2015 in Petition No. 142/MP/2012.
- 17.3 This was for kind information of the members.

(Action: PDD J&K and UPPCL; Time line: At the earliest)

ITEM-18 Reversal of Payment from DTL to NRLDC

- 18.1 Representative of NRLDC informed that NRPC bill dated 30th July 2014, pertaining to UI charges delay payment interest for Qtr-3 &4 of FY 2013-14 had been settled by NRLDC on dated 08.08.2014, in which EPPL had been paid an amount of Rs. 12,24,058/- as per the bill.
- 18.2 Representative of NRLDC further stated that EPPL vide email dated 29-11-2017 informed & submitted the declaration of their bank (PNB) for non-receipt of above payment and requested to clarify the same. NRLDC vide email sought for clarification form the bank (SBI) regarding the issue. SBI intimated that the payment had been inadvertently made to the credit account of Delhi instead of EPPL.
- 18.3 Representative of NRLDC further added that NRLDC had been issuing reconciliation statement quarterly and all utilities were requested to get the statement reconciled at their end and send a signed copy of the reconciled statement to NRLDC by a certain due date. However, NRLDC had not received any communication in this regard and accordingly NRLDC presumed that the Statement stands reconciled after the due date. In the instant case, M/s EPPL had reported the mismatch after a gap of more than 3 years.
- 18.4 However, since the matter had come to notice of NRLDC, NRLDC Vide letter dt. 08-01-2018, the matter had been conveyed to Delhi for reversal of the payment to NRLDC for onward transmission to EPPL. The same was yet to be received. Further, NRLDC had not received any communication in this regard.
- 18.5 Representative of DTL stated that reconciliation was pending and they would make the payment accordingly. He further stated that the whole process may take one to two months. SE(C), NRPC requested DTL to reconcile the statement latest by 20th March, 2018. DTL agreed for the same.
- 18.6 Representative of NRLDC requested DTL to reverse the payment in NRLDC

- account at the earliest so that same amount would be transferred to M/s EPPL account.
- 18.7 The Sub-Committee requested all the constituents to reconcile the account statements on quarterly basis so that such type of incident do not recur in future.

(Action: Delhi; Time line: March'18)

ITEM-19 Reactive Energy charges status as on 30.01.2018

- 19.1 The status of payment of Reactive Energy (RE) charges payable/Receivable by utilities as on 30.01.2018, as per the information received from NRLDC was shared. It was noted that Delhi, PDD J&K and Punjab had net outstanding amount.
- 19.2 Representative of PSPCL requested to reconcile the statement. NRLDC agreed to reconcile the same.
- 19.3 The Sub-committee advised the Payable entities to release outstanding RE charges payments at the earliest so that receivable parties would be paid and to avoid further increase of Delay payment Interest.

(Action: Delhi, PDD J&K and Punjab; Time line: At the earliest)

ITEM-20 Congestion Charges

- 20.1 Representative of NRLDC informed that the amount received in the congestion charges account was disbursed to the receivable parties. The details of outstanding amount against the entities (as on 30th January 2018) were indicated in the agenda of this meeting. It was noted that major outstanding was due to Uttar Pradesh, Himachal Pradesh, PDD J&K, Punjab, Railways, Greenko Budhil. Delhi etc.
- 20.2 Some utilities impressed upon the reconciliation of the congestion charges, which was agreed by NRLDC.
- 20.3 The Sub-Committee advised all payable constituents to release outstanding Congestion Charges payments at the earliest so that, receivable parties would be paid and to avoid further increase of Delay payment Interest.

(Action: Entities having Net outstanding; Time line: At the earliest)

ITEM-21 NRLDC Fee & Charges

21.1 Representative of NRLDC informed that an amount of Rs 1,07,476/- was outstanding against PDD J&K (part payment of Nov-17) and amount of Rs.1,68,203 was Outstanding against Delhi (Part Payment of Aug-17, Sep-17, Oct-17 and Nov-17) towards NRLDC Fee & Charges. It was requested to pay outstanding amount at the earliest.

- 21.2 Representative of NRLDC stated that they have received payment from Delhi.
- 21.3 He further informed that NRLDC was sending the hard copies of bills to all the users regularly on monthly basis. The bills were also being mailed to all users on the day of billing and soft copies of bills also available to the link "https://nrldc.in/commercial/bill-details/". NRLDC intended to go for paperless billing.
- 21.4 NRLDC Fee & Charges Format for Payment made /TDS Deduction.

USER Name BILI] LING DETAILS	<u> </u> 			SETTLEM	IENT DETAILS			
BILL MONTH AND YEAR -	-	Billed AMOUNT	Bill Receipt	Mode of Payment RTGS/NEF T/Others	lPayment		deducted	Rebate- deducted by Users if any	Amount-Admitted (Paid+TDS +Rebate) by Users
			(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)+(5)+(6)

21.5 The Sub-committee advised the concerned utilities to clear outstanding at the earliest.

ITEM-22 Issues of NFL (National Fertilizer Ltd.)

- 22.1 Representative of NRLDC informed that a meeting was held at NRPC on 10.11.2017 in presence of NFL, BBMB, PSTCL, NRLDC and NRPC representative in order to resolve the NFL issues. NRLDC advised NFL to get registered as regional entity latest by 15.12.2017 by completing all the formalities and clear all the dues against NRLDC fees and charges. NFL representative stated that the matter is already under consideration of NFL higher management and the formalities for registration with NRLDC would be completed by 15th Dec, 2017. NRLDC again reminded the matter vide letter dated 11.01.2018 for registration as regional entity and clear the outstanding.
- 22.2 NFL representative stated that the approval from management was awaited and the membership issue would be resolved shortly.
- 22.3 NRLDC vide email dated 28.03.2018 intimated that NFL had become regional entity and confirmation regarding the same had been conveyed to NFL.

ITEM-23 Inter State Transmission losses in NR

- 23.1 Representative of NRLDC informed that for injections & drawl the list of points being used for injections / drawl points along with their CT/PT ratios were uploaded in NRLDC website. The constituents were requested to check their drawl / injection points and CT/PT ratios being used. Comments/discrepancies, if any, on the same may be communicated to NRLDC at the earliest.
- 23.2 The Sub-committee advised all the concerned utilities to check the drawl points and CT/PT ratios to avoid any discrepancy in data, as inter-state transmission

losses have substantial financial implications.

(Action: All constituents: Time line: Periodical- at least once in every month)

ITEM-24 Disbursement of payments from POOL Accounts.

- 24.1 Representative of NRLDC informed that NRLDC was operating the Regulatory pool accounts (Deviation, RE, and Congestion Charges), and the soft copies of disbursement details of all the accounts also available in NRLDC Web-site in the following link "https://nrldc.in/uireactiveinterest-letters/".
- 24.2 Representative of NRLDC further informed that disbursement of payments of above account to all the parties was being done online (RTGS) except for Railway, UT Chandigarh and PDD J&K which is being done through Cheque.
- 24.3 The Sub-committee requested PDD J&K to provide the bank details for smooth disbursement of payment through online. As no representative from UT of Chandigarh was present in the meeting and Railway is not member of the Subcommittee, The Sub-committee advised NRLDC to take the matter directly with them.

(Action: PDD, J&K: Time line: March,18)

ITEM-25 Status of Ancillary Services

- 25.1 Representative of NRLDC shared the status of Ancillary services from week 01 to 4. The details were given in the agenda for the meeting. It was noted that amount of Rs, 150.89 Cr. and Rs. 31.96 Cr was yet to be paid to NTPC and APCPL respectively.
- 25.2 It was also intimated that Automatic Generation Control (AGC) had been first time implemented in India since 04th January 2018 as a pilot project at Dadri II STPS. This was a landmark achievement and would pave the way for much awaited secondary control through AGC in the Indian Grid.
- 25.3 Hon'ble Commission had issued the order for settlement of AGC through NR DSM Pool account. Accordingly, NRPC is issuing AGC settlement a/c also along with RRAS account since week 41. As there is no provision for interest payment due to delay in payment, the AGC settlement is done on priority over RRAS after payment to all receivable parties from DSM Pool A/c.
- 25.4 The status of AGC settlement a/c from week 41 to 43 was shared and the details were given in the agenda for the meeting.
- 25.5 Members noted the information.

ITEM-26 Reconciliation of NRLDC Fee and charges

26.1 Representative of NRLDC intimated that they had sent the reconciliation statements of NRLDC Fee and Charges for the billing period Aug-17 to Oct-17

- to all the users vide their letter dated 23-01-2018. The users were requested to send the duly signed and verified copy of reconciliation statement as a token of acceptance by 16.02.18. He further intimated that reconciliation statement had been received only from Bairasul HEP.
- 26.2 Entities were again requested to verify the Reconciliation statements and send the duly signed copy as a normal practice. In case non-receipt of any communication till 26.02.2018, it would be presumed that statement stands reconciled.
- 26.3 Members noted the information.

ITEM-27 Reconciliation of Deviation Account

- 27.1 Representative of NRLDC intimated that they had sent the reconciliation statement of RE accounts for the period Oct-17 to Dec-17, on 10.01.2018 and uploaded the same on their website on 10.01.2018. The constituents were requested to verify /check the same & comments if any on the same were to be reported to NRLDC by 31.01.2018. He further intimated that till now signed reconciliation statement of all the parties had not been received.
- 27.2 Entities were again requested to verify the Reconciliation statements and send the duly signed copy as a normal practice. In case non-receipt of any communication till 26.02.2018, it would be presumed that statement stands reconciled.
- 27.3 Members noted the information.

ITEM-28 Reconciliation of RE Account

- 28.1 Representative of NRLDC intimated that they had sent the reconciliation statement of RE accounts for the period Oct-17 to Dec-17, on 10.01.2018. The constituents were requested to verify /check the same & comments if any on the same were to be reported to NRLDC by 31.01.2018. He further intimated that till now signed reconciliation statement of all the parties had not been received.
- 28.2 Entities were again requested to verify the Reconciliation statements and send the duly signed copy as a normal practice. In case non-receipt of any communication till 26.02.2018, it would be presumed that statement stands reconciled.
- 28.3 Members noted the information.

ITEM-29 Reconciliation of STOA Charges disbursement

29.1 Representative of NRLDC intimated that they had sent the reconciliation

statement of open access disbursement for the Quarter- 3 of financial year 2017-18 on 15th Jan 2018. The applicants/STU/SLDCs were requested to verify /check the reconciliation statement & comment if any on the same by 31st Jan 2018. He further stated that till now signed reconciliation statement of all the parties had not been received.

- 29.2 Entities were again requested to verify the Reconciliation statements and send the duly signed copy as a normal practice. In case non-receipt of any communication till 26.02.2018, it would be presumed that statement stands reconciled.
- 29.3 Members noted the information.

ITEM-30 STOA Rates of State Network in Northern Region (Agenda by NRLDC)

30.1 Representative of NRLDC intimated that as on date STU charges being applied for STOA transactions were given below:-

S No.	Name Of Constituents	Rates in Rs / MWh				
1	Punjab	1640				
2	Haryana	360				
3	Delhi	251.9				
4	Rajasthan	299.9				
5	Uttar Pradesh	233				
6	Himachal Pradesh	17				
7	Uttrakhand	125.95				
8	Jammu & Kashmir *	80				
9	UT Chandigarh *	80				
*ST Rates not intimated to NRLDC						

30.2 Representative of NRLDC requested the representative of the states within NR that if STU rate of any state is revised, the same may be immediately intimated to NRLDC via e-mail and Phone.

ITEM-31 TDS Certificates against STOA Charges

- 31.1 Representative of NRLDC intimated that STOA charges were being deposited by the applicants in the STOA account maintained by the Nodal RLDCs. Applicants are deducting TDS in the PAN of POWERGRID for PoC Charges and in the PAN of POSOCO for STU/ SLDC/ RLDC charges. The major portion of bilateral transaction charges pertains to CTU (POWERGRID), STUs & SLDCs as compared to RLDCs operating charges.
- 31.2 He further intimated that applicants had been requested vide letter ref no: POSOCO/NRLDC/2017/1084-1131 dt: 21.09.17 to deduct TDS in PAN of concerned PoC Charges (POWERGRID PAN), STU/SLDC Charges (concerned STU/SLDC PAN) & operating charges / application fee (POSOCO PAN) for

approvals issued on and after 1st October-2017. Applicants have started deducting the TDS accordingly. Applicants were also requested to submit the TDS details Monthly & Quarterly in the prescribed formats which were available on NRLDC website.

31.3 Members noted the information.

ITEM-32 TDS Reconciliation

- 32.1 Representative of NRLDC intimated that TDS verification for FY 2010-11 to FY 2016-17 had been done by NRLDC. After Verification of TDS from Form-26AS, applicant's viz. NDPL, HNGIL, and Provestment had been requested to pay the short deposited TDS amount in NRLDC STOA account.
- 32.2 The Sub-Committee advised concerned entities to make payment at the earliest.

(Action-Payment: NDPL, HNGIL and Provestment; Time line: At the earliest)

ITEM-33 Status of Outstanding STOA Delay Payment Interest

- 33.1 Representative of NRLDC intimated that as per Regulations 19(2) of Open Access Inter State Regulations 2008, the person committing default in payment had to pay simple interest @ of 0.04% for each day of default. The applicant-wise outstanding interest amount (computed till 30.09.2017) was shared in the meeting. The details were given in the agenda for the meeting. It was noted that utilities viz. Provestment, RDPPC and PDD J&K had outstanding due to which the portal for punching STOA applications was blocked for these utilities.
- 33.2 Representative of RUVNL stated that the amount of outstanding interest up to 31.03.2016, as per their calculation was Rs. 9.52 lakh against Rs. 2502273/- as shown by NRLDC. Representative of RUVNL requested to reconcile this statement. NLDC agreed for the same.

(Action: Provestment, RDPPC, PDD J&K; Time line: At the earliest)

ITEM-34 Information of Deviation/reactive payment in NR pool account (Agenda by NRLDC)

- 34.1 Representative of NRLDC intimated that the matter regarding furnishing of information of Deviation/reactive payment in NR pool account was being deliberated in commercial Sub-committee meetings. He further added that UPPCL, Railways, SJVNL HBPCL (KWHPS) & AD Hydro were furnishing the details
- 34.2 Remaining NR pool members (payable) were again requested to intimate the details of payment being made by them in the format given below:
- 34.3 Email account: Nrpool2010@gmail.com

S. No	Name of Utility	Amount	Deviation/Reactive account Week No		Mode of Payment

(Action: All NR DSM & Reactive Charges pool members; Time line: At the earliest)

ITEM-35 Status of AMR (Agenda by NRLDC)

- 35.1 Representative of NRLDC informed that LOA for installation and commissioning of AMR system for Northern Region was awarded by POWERGRID to M/s Kalkiteck way back in February 2012. However the progress was very slow. The issues were regularly being updated in every OCC Meeting and Commercial Sub-committee meeting of NRPC.
- 35.2 He added that till date, Site Acceptance Test (SAT) of 205 locations had been completed covering 1323 SEM and 266 DCU. However, out of 205 locations through AMR, only around 150 locations the data could be used for preparation of accounts due to various reasons as deliberated earlier also. The main reason as informed by representative of M/s Kalkitech was as below:
 - Replacement/addition of meters with Elster makes. Protocol for Elster meter is to be shared with M/s Kalkitech.
 - Communication issues (at present using 2G SIM services, which is not reliable)
 - Sometime Optical Reading Unit (ORU) of the SEMs was found removed /not placed properly.
 - Data Collecting Unit (DCU) not working
- 35.3 NRLDC informed that SEM data from all interface meter locations are required for calculation of losses and preparation of weekly accounts. Non-availability of data from so many stations was making it difficult for NRLDC to process the meter data for loss calculation and timely submission of data to NRPC Secretariat for preparation/issuance of weekly energy accounts.
- 35.4 POWERGRID was requested to take up the matter with M/s Kalkitech and ensure that AMR data from all sites is made available to NRLDC lasted by Tuesday F/N. POWERGRID agreed for the same.
- 35.5 The sub-Committee advised POWERGRID to ensure data availability through AMR from all the locations and take corrective immediately.

ITEM-36 Integration of AMR System with Elster Meters

36.1 NRLDC representative informed that in 33rd meeting of commercial subcommittee held at NRPC, New Delhi on 28.07.2017 the issue of integration of Elster make meters with AMR was discussed. However, there was no progress on this issue. 36.2 POWERGRID representative informed that the issue had been resolved and the integration of Elster Meters with AMR system would be completed by April'18.

(Action: POWERGRID; Time line: April,2018)

ITEM-37 AMR data through Fibre Optic Network

- 37.1 NRLDC representative stated that the issue of exploring possibility of meter data transmission through optic fibre network (wherever available) was discussed in the 12th Meeting of TeST Sub-committee of NRPC held on 22.12.2017. During the meeting it was decided that POWERGRID would first do a pilot at Maharanibagh sub-station for sending data through optic network. Subsequently the project can be taken up for all locations. Further, it was decided by the sub-committee that the expenditure on this work may be booked under Add-CAP in any relevant Project. As per the minutes of meeting of 12th meeting of TeST sub-committee, POWERGRID was to ensure the pilot by 31st January 2018.
- 37.2 POWERGRID representative informed that the pilot project was completed successfully. For other meters the approval of NRPC was required.
- 37.3 The sub-committee recommended for implementation of the work for all the locations.
- 37.4 At present the AMR is based on 2G communication. At many locations, where optical fibre network is not available the data can be transmitted over 4G instead of 2G for improving reliability and speed of data transmission.
- 37.5 Regarding this issue, POWERGRID representative clarified that the upgradation to 4 G is not possible in the present system as the hardware is not compatible to 4G. Moreover, the up-gradation work cannot be covered under the present contract.

ITEM-38 Time drift Correction in SEMs

- 38.1 NRLDC representative informed that NRLDC is regularly uploading the discrepancy report on weekly basis indicating the likely time drift in meters and also replacement/rectification required in special energy meters. All constituents in whose premises the meters are installed are required to take corrective action for time correction based on the weekly discrepancy report of NRLDC. Besides uploading of weekly report many times, the NRLDC metering group takes up the matter with concerned over telephone and/or through e-mail also. However, no improvement is observed.
- 38.2 He added that NRLDC vide its letter Ref. No. NRLDC/MO/2018/108-118 dated 04.01.18 had circulated the list of SEMs, where time correction was required, and had requested all the state utilities, SLDCs, POWERGRID Stations,

Generation stations to submit the reports to NRLDC after necessary time correction. But NRLDC had yet to receive the compliance report from them. Details of the SEM meters which requires time correction are available on http://nrpc.gov.in/reports/others.html.

38.3 The sub-committee expressed concern about time drift in large number of meters (more than 500) including more than 300 in POWERGRID premises. Keeping in view the commercial impact, the sub-committee advised all the concerned utilities to start immediate action and submit report on action taken, within one month to NRPC Sectt. and NRLDC.

(Action: All the Generation & Transmission Utilities; Time line: At the earliest)

ITEM-39 Installation of SEM at HV side of 66/11kV transformers at NFL Plant

- 39.1 NRLDC representative mentioned that as per MOM dated 17.11.2017, on metering related issues at NFL end, it was decided that Special Energy Meter (SEM) at BBMB load point (i.e. NFL load from BBMB) would be installed by CTU. NFL informed that the installation of CT/CVT required for metering and same shall be installed during Annual Maintenance of Plant which had been scheduled on March/April-2019.
- 39.2 As an interim arrangement, it was decided that SEM at HV side of 66/11kV transforms at NFL Expansion Plant would be installed by CTU. SE, NRPC informed that matter was taken up with PSTCL and the response was awaited.
- 39.3 The Sub-Committee advised all the concerned to take action for early resolution of the issue.

(Action: POWERGRID, NRLDC, NRPC Sectt.; Time line: April,2018)

ITEM-40 Replacement/Rectification of SEM meters

- 40.1 NRLDC representative stated that, NRLDC was regularly uploading the Discrepancy report of meters on weekly basis on NRLDC website. The discrepancy report also contains the details, where replacement/rectification of energy meter is required. POWERGRID in its capacity as CTU is to ensure that such rectification/replacement is carried out at the earliest to ensure proper energy account. He added that NRLDC vide its letter Ref No. NRLDC/MO dated 04.01.18 have intimated about the details of defective SEMs to concerned RHQ of POWERGRID for its replacement/rectification. List of Defective/Faulty SEM meters in Northern Region was enclosed at Annexure-40.1.
- 40.2 The sub-committee expressed concern over the number of faulty meters and advised POWERGRID to take necessary action for rectification/replacement of meters and submit report to NRPC Sectt. and NRLDC within one month. It was emphasised that healthiness of meters must be ensured, as fault in meter may result in huge commercial impact. All the utilities, in whose premises the meters are installed, were requested to report, immediately, fault in meter, when ever

any fault is noticed, to NRLDC and NRPC Sectt. for effective follow up.

(Action: POWERGRID & State Transmission Utilities; Time line: At the earliest)

ITEM-41 Considering Date of Presentation/Acknowledgement Date for the bills related to Wind Power of NHPC as on date of actual receipt of bills in hard copy by JdVVNL (RUVNL)

- 41.1 NHPC representative informed that Wind Power Project (50MW) of NHPC Ltd. is situated in Jaisalmer Distt. of Rajasthan and Power from the project is being supplied to JdVVNL (Jodhpur Vidyut Vitran Nigam Limited), a subsidiary company of Rajasthan Urja Vikas Nigam Limited (RUVNL).
- 41.2 He mentioned that RUVNL vide its letter dated 19.12.2017 had intimated that the invoices/bills sent though e-mail would not be considered as acknowledgement date. Further, RUVNL had clarified that the Renewable Energy Generators in Rajsthan are governed by Rajsthan Electricity Regulatory Commission (RERC), therefore, the decision taken in the meetings of NRPC would not be applicable on Renewable Energy Bills.
- 41.3 He intimated that NHPC vide letter dated 03.01.2018, had replied that the power from the Jaisalmer Wind Power Project is injected in Northern Grid and supplied to RUVNL (JdVVNL) who is a constituent of NRPC. Therefore, the decisions taken at the NRPC forums shall be applicable to RUVNL (JdVVNL). As a matter of acceptance of energy bills through e-mail the same had been discussed in the 31st TCC/35th NRPC (Item No. C.5) meetings held on 8th & 9th July'2015 and 30th & 31st Commercial Sub-Committee (Item No. Meetings held on 23.09.2017 & 04.07.2016 and agreed by the representative of Rajsthan Discoms also and hence shall be applicable on JdVVNL (RUVNL) for the Wind Power Project of NHPC. He stated that the issue had not been resolved even after regular follow up with RUVNL (JdVVNL).
- 41.4 The sub-committee advised RUVNL to follow the decisions in the NRPC, as it would facilitate all the entities, in a long run, including Rajasthan Discoms. RUVNL representative RUVNL representative agreed to abide by the decisions of NRPC regarding representation of bills.

(Action: RVUNL; Time Line: March,2018)

ITEM - T1: Guidelines for Open Cycle Certification

AEE (C), NRPC informed that as per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, Energy charge rate for a gas/liquid fuel based station is to be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee for the open cycle operation during the month. The certification was being by NRPC Sectt. .done based on established guidelines / procedure.

He added that the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fourth Amendment), 2016 notified in Apr,2017, and the CERC order dated 5th May,2017, regarding detailed procedure on reserve shutdown, stipulates the technical minimum for operation in respect of CGS and ISGS as 55% of the MCR loading or installed capacity of the unit, at the generating station. In view of this stipulation, the procedure for certification of open cycle generation needed some changes.

The revised procedure was discussed in the meeting. NTPC representative stated that when one GT & one ST is already running, the time taken for coupling the second GT from synchronisation to combined cycle mode of operation is about 1.5 to 2 hours. The representative from PPCL had also given similar views. Based on the discussions the finalised guidelines/procedure for certification of Open Cycle Generation is enclosed at **Annexure-III.**

DATE AND TIME OF THE NEXT MEETING

The date and venue of next (36th) meeting of the Commercial Sub-committee would be intimated later.

Annexure-I

List of Participants of 35th Commercial Subcommittee Meeting on 19.02.2018 at NRPC Sectt., New Delhi

No.	Name of Officer	Designation	Organisation	E-mail
1	BBMB			
	Shri Anil Gautam	Dir.Power.Reg.	BBMB	dirpr@bbmb.nic.in
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3	HIMACHAL PRADESH			
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6	PUNJAB	1.040	DCDCI	dues sish @ grasil som
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10	PGCIL		1	
	Shri R.K.Arora	GM(AM)	Powergrid	
	Shri Vineet Srivastava	DGM(Comml)	Powergrid	
	Shri M.S.hada	Manager	Powergrid	
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15	NRPC			
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16	Others			
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	Shri RBJ Gautam	CM(E)	NFL	rbjgautam@nfl.co.in

Compensation due to Part Load Operation of Gas Power Plants

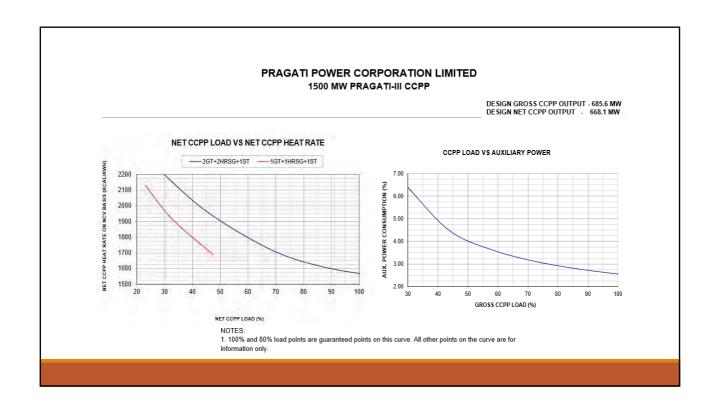
CERC- DOP on Reserve Shutdown and Compensation Mechanism (15-05-2017)

- The RPCs shall work out a mechanism for compensation for station heat rate and auxiliary energy consumption for low unit loading on monthly basis in consultation with generators and beneficiaries at RPC forum and its sharing by the beneficiaries.
- >NTPC and PPCL had submitted values for degraded SHR and APC values in their stations at the 33rd CSC meeting held on 28.07.2017
- A sub group was constituted under the chairmanship of Member Secretary, NRPC with representatives from NRLDC, TE&TD Division-CEA, TPDDL and NRPC Sectt.
- ➤ The sub group visited Gas Stations in Dadri (28.09.2017 & 07.11.2017), Bawana (11.10.2017) and Faridabad (17.01.2017) and carried out run tests at different loading conditions.
- In addition to that, some historical data regarding GHR and APC values for Anta, Auraiya and Faridabad GPPs at different loading conditions were also received from NTPC.

CERC- DOP on Reserve Shutdown and Compensation Mechanism (15-05-2017)

For Gas based generating stations, degraded SHR and AEC shall be decided based on the characteristic curve provided by manufacturer. If the characteristic curve is not provided for the entire range of the operating range i.e. up to 55% of module rating, then the extrapolation of the curve provided by the manufacturer shall be done to extend the curve up to 55% of module loading.

No compensation for SHR degradation or increase in AEC shall be payable if the Average unit loading for the generating station for the computation period works out more than or equal to 85%.

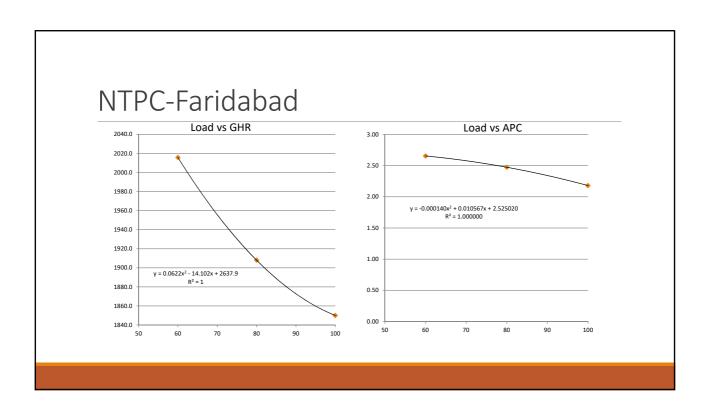


PPCL-Bawana

Loading	Net Heat Rate at NCV (kcal/kWh)	Net Heat Rate at GCV (kcal/kWh)	APC (%) Normative= 2.5%	Gross Heat Rate at GCV (kcal/kWh) Normative= 1845 kcal/kWh
100%	1569	1757	2.50	1713
95%	1580	1769	2.58	1724
90%	1596	1787	2.67	1739
85%	1617	1811	2.78	1760
80%	1643	1840	2.90	1787
75%	1674	1875	3.03	1818
70%	1711	1916	3.17	1855
65%	1753	1963	3.33	1898
60%	1800	2016	3.50	1945
55%	1852	2074	3.68	1998

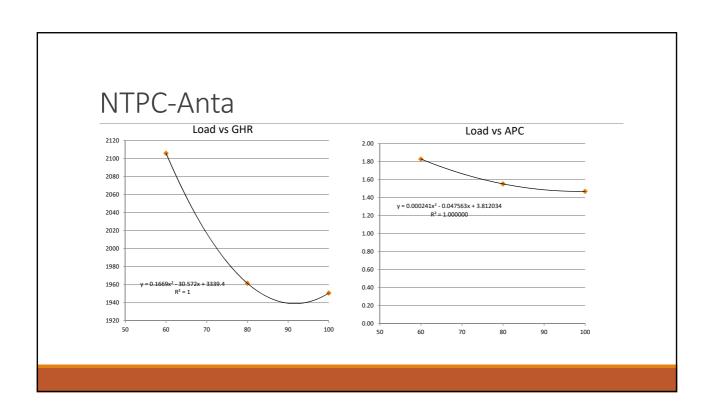
NTPC-Faridabad

Loading (%)	Efficiency (%)	NCV	Heat Rate at GCV (kcal/kWh)	Gross Output (MW)	Net Output (MW)	APC (%)
100	51.3	1677.2	1850.0	442.29	432.65	2.18
80	49.74	1729.8	1908.0	355.276	346.49	2.47
60	47.08	1827.6	2015.8	268.096	260.98	2.65



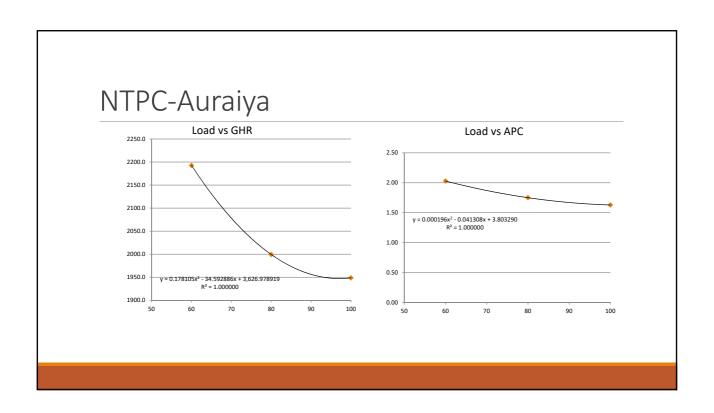
NTPC-Anta

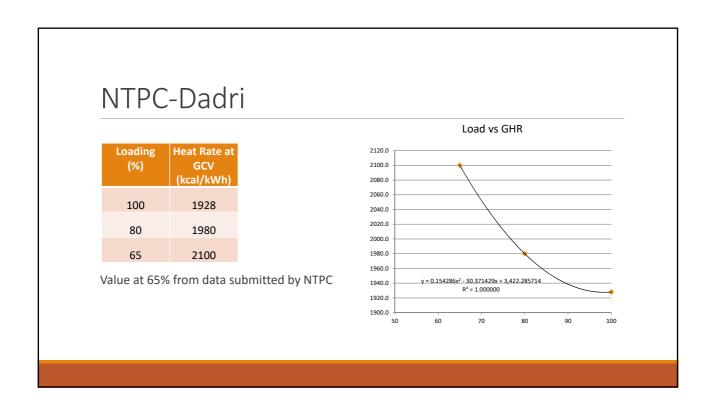
Loading (%)	Fuel Flow / GT (T/Hr)	Total Module Fuel Input (T/Hr)	NCV (kcal/kg)	GCV (kcal/kg)	Gross Output (MW)	Net Output (MW)	Gross Heat Rate (kcal/kWh)	APC (%)
100	24.444	73.332	10115	11156.84	419.41	413.25	1951	1.47
80	19.642	58.926	10116	11157.95	335.2	330	1961	1.55
60	15.941	47.823	10117	11159.05	253.43	248.8	2106	1.83



NTPC-Auraiya

Loading (%)	Net Heat Rate at NCV (kcal/kWh)	Net Heat Rate at GCV (kcal/kWh)	Gross Heat Rate at GCV (kcal/kWh)	Gross Output module (MW)	Net Output module (MW)	APC (%)
100	1796	1981.0	1948.7	331.68	326.28	1.63
80	1845	2035.0	1999.4	265.68	261.03	1.75
60	2029	2238.0	2192.6	195.68	191.71	2.03

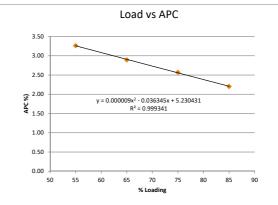




NTPC-Dadri

Loading (%)	APC (%)
55%	3.26
65%	2.89
75%	2.57
85%	2.20

Values from test carried out on 07.11.2017



NTPC-HBD GHR values

Loading (%)	Anta Normative= 2075 kcal/kWh	Auraiya Normative= 2100 kcal/kWh	Faridabad Normative= 1975 kcal/kWh	Dadri Normative= 2000 kcal/kWh
85%	1940	1973	1889	1955
80%	1956	1999	1908	1980
75%	1980	2034	1930	2012
70%	2013	2078	1956	2052
65%	2053	2131	1984	2100
60%	2102	2193	2016	2155
55%	2160	2263	2050	2219

NTPC-HBD APC values

Loading (%)	Anta Normative= 2.5%	Auraiya Normative= 2.5%	Faridabad Normative= 2.5%	Dadri Normative= 2.5%
85%	1.51	1.71	2.41	2.21
80%	1.55	1.75	2.47	2.38
75%	1.60	1.81	2.53	2.56
70%	1.66	1.87	2.58	2.73
65%	1.74	1.95	2.62	2.91
60%	1.83	2.03	2.66	3.08
55%	1.93	2.12	2.68	3.26

NTPC submitted that APC for Anta was calculated for CW system running in Open Cycle mode of operation (once through). However, nowadays Anta station runs the CW system in closed cycle operation for almost 10 months due to limited water availability. Hence, APC figures submitted to NRPC were based on CW system in closed cycle mode of operation.

Sub group discussions

- The values derived based on HBD diagram may be used for compensation calculation. A common value for intervals of 5% from 55% to 85% may be given by taking the average of the values at the its extremes of the interval. Final decision on the values may be taken after getting full curves from OEM and PG test if possible.
- With regard to part load operation, it was stated that since even CERC has not issued any separate heat rates for part module operation for either Bawana or NTPC stations, no separate values for part module operations would be given.
- With regard to degradation based on running hours, the subgroup stated that in the absence of PG test values it would not be possible to ascertain with certainty the amount of degradation. Thus, no degradation based on running hours has been recommended at the moment.
- The details of the increased APC in Anta due to closed cycle operation of CW system may be sought from NTPC. Further, NTPC may be asked to submit the complete SHR vs loading and APC vs loading curves.

Final Table- GHR

Loading (%)	Bawana Normative= 1845 kcal/kWh		Anta Normative= 2075 kcal/kWh		Auraiya Normative= 2100 kcal/kWh		Faridabad Normative= 1975 kcal/kWh		Dadri Normative= 2000 kcal/kWh	
100-85										
84.99-80										
79.99-75										
74.99-70									2032	1.6%
69.99-65	1877	1.7%			2105	0.2%			2076	3.8%
64.99-60	1922	4.2%	2078	0.1%	2162	2.9%	2000	1.3%	2128	6.4%
59.99-55	1972	6.9%	2131	2.7%	2228	6.1%	2033	2.9%	2187	9.4%

Final Table-APC

Loading (%)	Bawana Normative= 2.5%		Anta Normative= 2.5%		Auraiya Normative= 2.5%		Faridabad Normative= 2.5%		Dadri Normative= 2.5%	
100-85										
84.99-80	2.84	0.34								
79.99-75	2.97	0.47					2.50	0.00		
74.99-70	3.10	0.60					2.55	0.05	2.64	0.14
69.99-65	3.25	0.75					2.60	0.10	2.82	0.32
64.99-60	3.42	0.92					2.64	0.14	2.99	0.49
59.99-55	3.59	1.09					2.67	0.17	3.17	0.67

Annexure-III

Guidelines/Procedure for Certification of Open Cycle Operation of Combined Cycle Gas Based Generating Stations

- 1. When operating under full module, if the schedule of generation given by NRLDC is less than 55% of the MCR loading of the module, one GT may go under Reserve shutdown and the unit may operate under part-module condition. Subsequently, when the injection schedule for the station is more than the on bar declared capacity of the part-module, GT under RSD may be brought on bar. Open Cycle Generation for the 2nd GT may be certified up to a maximum of 1.0 hrs in case of hot start up, 2.0 hrs in case of warm start up and 2.5 hrs in case of cold start up.
- 2. When operating under half module, if the injection schedule given by NRLDC is less than 55% of the MCR loading of the part-module, the entire module may go under Reserve shutdown. Subsequently, when schedule received is more than 55% of the MCR loading, then one or more GT may be brought back in operation. Open Cycle Generation for the 1st GT may be certified up to a maximum of 1.0 hrs in case of hot start up, 2.5 hrs in case of warm start up and 4.0 hrs in case of cold start up. For 2nd GT, the time certified for Open Cycle Generation would be same as in case of (1) above.
- 3. When operating under full module, if the schedule of generation given by NRLDC is less than 55% of the MCR loading of the part module, all GTs may go under Reserve shutdown. The procedure for open cycle certification shall be as in case (2) above.
- 4. No maintenance activities on unit under RSD shall be undertaken by the Generating station, otherwise Open Cycle Generation shall not be certified.
- 5. When a GT is started within 3 hours of shutdown, it would be considered as a hot start-up, 3 to 24 hours warm start-up, and beyond 24 hours cold start-up.
- 6. Open Cycle Generation shall also be certified when:
 - a. If STG is under outage and instruction for running GT(s) on Open Cycle is given by NRLDC.
 - b. If the unit is re-started after tripping due to grid contingencies.

- c. If the unit is re-started after scheduled OEM inspection and/or statutory boiler inspection duly approved in the OCC meetings and schedule is given for running these units.
- 7. The generating station shall submit the requisite data to NRPC Secretariat for the period for which it seeks certification of open cycle generation.