EASTERN REGIONAL POWER COMMITTEE
14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA-700 033

MINUTES OF THE MEETING ON LOAD - GENERATION BALANCE REPORT (LGBR) FOR THE YEAR 2018-2019 HELD ON 20.12.2017 (WEDNESDAY) AT 11:00 HRS AT ERPC, KOLKATA

List of participants in the meeting is enclosed at **Annexure – I.**

Member Secretary, ERPC welcomed the participants. Initiating the discussion he informed the house that though most of the constituents have furnished the required data but some constituents are there who did not submit the same. He also informed that due to late submission of data by some major utilities thorough scrutiny of the data before preparation of the draft LGBR was not possible by the secretariat. However efforts has been made to compile the data in a comprehensive manner and where ever data were not available, the same were considered based on the historic data available with the secretariat. He requested the constituent members to go through the draft LGBR as prepared by the ERPC secretariat and offer their comments/suggestion, if any.

He also informed that realistic generation and demand projection is an essential tool for future planning and it should be a collective approach to achieve the goal. Shutdown approved in the meeting should be strictly adhered; otherwise total planning would be disturbed. He then requested Executive Director, ERLDC to say few words.

ED, ERLDC stressed that present day generation planning as well as drawal of power from the grid by any particular constituents are mainly controlled by various existing regulations in vogue and purely commercially driven power market. As a real time grid operator, he requested all the constituents to strictly adhere to the instruction of grid operators for avoiding any exigency and smooth function of the system.

Member Secretary, ERPC then requested Shri P. K. De, EE, ERPC to initiate discussion as per agenda.

Shri P. K. De, EE thanked Member Secretary and corroborated that as per the IEGC under Clause 5.7.4 of Principal Regulations, first amendment in 2012 under sub-Regulation (a), (b), (c) and (d), "RPC Secretariat is primarily responsible for finalization of the Annual Load Generation Balance Report (LGBR) and the annual outage plan for the following financial year". In order to fulfill the objectives, this meeting is convened to discuss and finalize the LGBR and annual outage plan for both the generating units as well as transmission elements for the year 2018-19. ERPC Secretariat had requested all concerned utilities to furnish all relevant information pertaining to LGBR for scrutiny and prepare the draft report for discussion in the meeting. All the major utilities have furnished the information except Sikkim. He then requested the members present to offer their views and suggestion on the draft LGBR 2018-19, prepared by ERPC Secretariat based on the information received from the concerned utilities and in line with the present trend.

ITEM NO. 1 DETAILS OF PROPOSED UNITWISE MAINTENANCE PROGRAMME OF THERMAL GENERATING STATIONS IN ER

Shut down proposals for the thermal units of WBPDCL was not received earlier, so could not be made a part of the agenda. However, the same was provided during the meeting and was agreed.

BRBCL also placed their shutdown proposals during the meeting and were agreed.

DPL informed that they have planned not to avail shutdown of both the bigger units 7 & 8 during 2018-19 but to avail shutdown of unit 7 only during 2018-19. This was agreed.

Farakka units 4 & 5 were proposed for shutdown during the period Mar-Apr'18 and Mar-Apr'19 respectively. WBSLDC was not agreed to allow the shutdown during the proposed period as Board exams of the state were there during that period. They proposed to either prepone or postpone the programme. But NTPC did not agree to that. NTPC representative explained that they just want to avail the opportunity based shutdown during the proposed period as there would be shortage of water in the river Ganges during that period due to water sharing treaty between India & Banladesh. Otherwise, automatically the units would go under forced shutdown during that due to shortage of water. However, West Bengal did not agree to that.

On enquiry, NTPC representatives informed the house that various measures are being taken up from their side to overcome the acute water scarcity which may cause force closure of the whole Farakka plant as it was happened during 2016.

No other change or modification suggested by the house. The S/D proposals of the thermal units of various constituents as mentioned in the agenda were agreed.

The schedule of the all thermal units maintenance programme as finalized based on discussion in the meeting and subsequent feedback from the utilities are tabulated in **Annexure-II**.

ITEM NO. 2 ABSTRACT OF SYSTEMWISE PEAK DEMAND (MW) Vs. AVAILABILITY (MW) AND OFF-PEAK DEMAND (MW) Vs. AVAILABILITY (MW) FOR 2018-2019

The month-wise projected Peak Demand (MW) figures have been received from most of the constituents except Sikkim. On the basis of the information furnished by constituents the abstract statement of system wise peak and off-peak demand (MW) were prepared and placed for discussion. The same was reviewed in the meeting and modifications have been made accordingly wherever necessary based on inputs of the various utilities during deliberation.

BSPTCL: Representative from BSPTCL confirmed that the existing bilateral arrangement with M/s Adani and GMR will continue during 2018-19. They also expected that their Barauni units will be available during 2018-19. But ERPC secretariat expressed doubt over the unit's availability as the unit no. 6 & 7 are under shutdown for more than 6 years & 12 years respectively. However, it was decided that presently the units availability would not be considered and if MOP/CEA show some generation target for the units only then during finalization of LGBR 2018-19 the units would be considered. Considering the higher growth on demand, on the advice of ERLDC the demand for 2018-19 has been increased by another 200 MW against the proposed demand figure. The month wise peak demand

(unrestricted) during the year has been considered in between 4300 MW to 4700 MW. As generation availability from own source will be less, there would be significant peak as well as off-peak shortage.

JUSNL: JUSNL demand figures are kept unchanged as proposed in the draft LGBR. The month wise peak demand (unrestricted) during the year has been considered in between 1240 MW to 1300 MW. Jharkhand has confirmed discontinuation of their Patratu plant. As generation availability from own source will be less, there would also be both peak and off-peak shortage.

DVC: DVC has shown discontinuation of their Bokaro "B" & Waria (DTPS) plants and Chandrapura old units (1-3). As their other units are comparatively new, peak availability from DVC's own source has been realistically projected to the range of around 4800 MW. Bilateral transaction of DVC would be maximum to the tune of 1550 MW. The month wise own peak demand (except export) during the year has been considered in between 2750 MW to 2900 MW. As generation availability from own source would be reasonably high, there would be sufficient peak as well as off-peak surplus even after fulfilling bilateral transaction commitment.

GRIDCO: Being the hydro dominated state, minor modification in hydro power availability has been made on some months to overcome the small peak shortage. The month wise peak demand during the year has been considered in between 4100 MW to 4400 MW. Due to less availability during the summer season, Odisha have arranged some power through banking to manage their peak load. Odisha would be able to manage its load in both peak and off-peak condition through suitable management of its hydro source but the same depends on good monsoon.

WBSEDCL: From the data provided by WBSLDC, it appeared that this time WBSEDCL would not import any surplus power of DPL as well as not supply any power to CESC. There is a wide variation between winter peak and summer peak. The month wise peak demand during the year has been considered in between 4800 MW in winter to 6800 MW in March 2019. As indicated by WBSLDC, to meet their full peak demand WBSEDCL have to depend on purchase of significant amount of power through STOA in the summer months even after import from LTOA/MTOA, CPPs, IPPs etc. Export of power by West Bengal to Bangladesh has not been considered in the LGBR 18-19. Representative from the utility assured that they would manage their system through import of additional power to meet the full system requirement from the open market and there would be no shortage. However, at this stage it would not be possible to confirm the exact source. In few months, import figure has been adjusted to the extent it was required to meet the demand only.

DPL: The month wise peak demand during the year has been considered in between 240 MW to 275 MW. As apprehended by DPL representative, there would be no growth in their system demand and even it might be reduced by some amount during the year. If both the bigger units (7 & 8) remained on bar during 2018-19, they would have surplus of around 150 MW peak power barring the months when U#7 would be on shutdown. As this year WBSEDCL may not import surplus power from DPL, they have to find the market for the surplus power which is yet to be tied up.

CESC: Power supply position would remain comfortable as usual during 2018-19 also. This year they would not avail any assistance from WBSEDCL. They would also regulate their generation from own source. As indicated and subsequently confirmed by CESC representative, they planned no generation from their Titagarh plant during 2018-19. Also from Nov'18 to Feb'19 there would be no generation programme from Southern Generating station. On enquiry CESC representative confirmed that they would operate their various plants on cost effective basis on merit order operation. Though there would

be sufficient support from power station of Haldia Energy Ltd., CESC would not be self sufficient to meet its demand. As indicated, CESC would purchase to the tune of 900 MW power during peak hours of some summer months. CESC representative confirmed that they would purchase the same from the open market and assured that there would be no peak shortage. There is a wide variation between winter peak and summer peak. The month wise peak demand during the year has been considered in between 1440 MW in winter to 2220 MW in June'2018.

Sikkim: No information/data was received from Sikkim. No representative from Sikkim was also present. Based on available information, demand and availability forecast have been worked out. However, it is confirmed that there would be peak as well as off-peak surplus throughout the year only after considering the central sector share of power. Apart from CS share there would be significant amount of power availability from its share of free power from the IPPs of the state.
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Region: There would be peak surplus throughout the year and even after considering the backing down, there would be surplus during off peak hours also. This surplus would be even after fulfilling bilateral export commitment of DVC. This is mainly due to huge surplus in DVC system and import of power by WBSEDCL/WBSETCL as well as CESC from various sources apart from regional sources.

The summary statement of Peak demand Vs. Availability and Off-peak demand Vs. Availability (in MW) of each constituent along with the region are enclosed at **Annexure – III & Annexure-IV** respectively.

Moreover, there are also availability of power from the regional thermal IPP source namely Jindal (JITPL), Adhunik (APNRL), GMR & MPL and hydro IPP namely Chuzachen, Zorthang, Dikchu, Tashiding and Teesta-III. Another thermal IPP namely Indbharat are also waiting to contribute to the system.

As far as regional availability of power is concerned, apart from system constraint and financial burden of the concerned utility there is no reason for shortfall in any individual utility system as well as regional system.

ITEM NO. 3 ABSTRACT OF SYSTEMWISE ENERGY REQUIREMENT (MU) vs. AVAILABILITY (MU) FOR 2018-2019

As of now, availability from various stations as projected by the utilities has been considered for preparing the provisional LGBR for 2018-19. After finalization of target generation for 2018-19 by MoP/CEA, the LGBR for 2018-19 would be re-casted and final LGBR would be prepared. Till then, energy availability for the constituents is provisional.

Generally there would be energy shortage in BSPTCL and JUSNL system in all the months mainly due to less availability from own source.

If as indicated by Bihar, generation from its Barauni station is available, its shortage might be reduced to that extent only. If at all the units are available, it is doubtful how the units would perform after returning from long shutdown.

Jharkhand also showed discontinuation of their Patratu station. There would be energy shortage round the year.

DVC would be always energy surplus system.

For Odisha, very little shortfall appeared in some months which could be managed by Odisha through proper management in their hydro generation and if required through thermal plants under OPGC (IB TPS) & NTPC (TTPS). Also they could manage the same through banking and as well as regulating drawal of power from CPPs/IPPs.

WBSEDCL system would be in balance as they have planned to import/buy significant amount of power from various sources.

CESC has planned their system uniquely so that there would be neither surplus nor any shortage.

DPL system would be surplus.

Sikkim system will be always energy surplus considering its availability of share from central sector and share from the IPPs in the state.

However, there is possible marginal regional energy shortage in few months which could be managed through proper generation management of the utility system.

The summary statement of Energy Requirement Vs. Energy availability (in MU) of each constituent as well as of the region are enclosed at **Annexure –V**.

Generation plan of some of IPPs during 2018-19 are produced below:

GMR – 7585 MU, JITPL – 9224 MU, MPL – 7819 MU, APNRL – 4021 MU, Teesta III – 5021 MU

Chuzachen, Zorthang, Dikchu, Thasiding, the hydro IPPs, whose generation as well as supply plan also not known. Another thermal IPP namely Indbharat will also likely to come whose generation as well as supply plan also not known.

Only a small portion of the above availability from the IPPs would be used in ER as per past trend and rest would be available for export to outside region or additional requisition from the deficit utilities of ER.

However, after finalization of Generation Target by MoP/CEA, availability will be re-casted accordingly and be a part of the final LGBR.

ITEM NO. 4 SCHEDULE OF COMMISSIONING OF NEW GENERATING UNITS IN THE CONSTITUENTS SYSTEM

During deliberation concerned utility indicated the schedule of commissioning / commercial declaration (COD) of the following new generating units which are likely to come during 2018-19:

Constituent/ State	Power station	Capacity	As reported Expected month of Synchronization
BSPHCL	Baruni Extn.	Unit#8&9 (250MW each)	As indicated by Bihar: U#8 – Mar'18
Ind Bharat, Odisha	IBE(U)L	U#1 & 2 (350 MW each)	As indicated by IBE(U)L: U#1 – Apr'18 U#2 – Oct'18
Joint venture of NTPC & Railways (BRBCL)	Nabi Nagar TPP	U# 3 & 4 (250 MW each)	U#3 – Oct'18 U#4 – Not during 18-19
Joint venture of NTPC & Bihar	New Nabi Nagar TPP	U# 1 - 3 (660 MW each)	U#1 – Jun'18 U#2 – Dec'18 U#3 – Not during 18-19
NTPC	Barh Stage-I	U# 1 - 3 (660 MW each)	Not during 18-19
OPGC	IB Stage-II	U# 3 & 4 (660 MW each)	As indicated by OPGC: U#3 - Sep'18 U#4 - Nov'18
NTPC	Darlipalli	U# 1-2 (800 MW each)	U#1 – Oct'18

ITEM NO. 5 ANNUAL MAINTENANCE OF TRANSMISSION ELEMENTS

Annual maintenance programme of transmission elements as received from the constituents will be circulated along with the final LGBR for 2018-19.

ITEM NO. 6 ANY OTHER POINTS WITH THE PERMISSION OF THE CHAIR.

No further point was raised for discussion. Based on the deliberation in the meeting, provisional LGBR for 2018-19 of ER would be published now. After finalization of Generation Target by CEA & MoP, availability will be re-casted accordingly and be a part of the final LGBR which would be published subsequently.

The meeting ended with vote of thanks to the chair.

ANNEXURE-I

EASTERN REGIONAL POWER COMMITTEE
14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA – 700 033

ATTENDENCE SHEET

MEETING ON LGBR 2018-19

DATE: 20.12.2017 TIME: 11:00 HRS. VENUE: ERPC CONFERENCE HALL

SL. NO.	NAME	DESIG-NATION	ORGANI-SATION	E-MAIL	MOBILE	SIGNATURE
1	J. Bandyopadhyay	M S	ERPC		9432326351	[signature]
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20	P. N. Sarkar	EE	ERPC	pn_sarkar@rediffmail.com	9830027523	[signature]
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22	Tushar Ranjan	AEE	SLDC, Ranchi	ranjtushar@gmail	9326394221	[signature]

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EASTERN REGIONAL POWER COMMITTEE
14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA – 700 033

ATTENDENCE SHEET

MEETING ON LGBR 2018-19

DATE: 20.12.2017 TIME: 11:00 HRS. VENUE: ERPC CONFERENCE HALL

SL. NO.	NAME	DESIG-NATION	ORGANI-SATION	E-MAIL	MOBILE	SIGNATURE
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41						
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43						
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ANNEXURE - II

ERPC:KOLKATA

Proposed Maintenance Schedule of Thermal Generating Units of ER during 2018-19 (as finalised in LGBR meeting dated 20.12.2017)

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
Bihar	MTPS (KBUNL)	1	110	15.07.18	05.08.18	22	Boiler Overhauling
		3	195	15.11.18	14.12.18	30	Boiler Overhauling
	BTPS	6	105	Though unit is under S/D since 18.03.12 for R&M work, BSPTCL confirm return and availability for whole year			
		7	105	Though unit is under S/D since 22.08.06 for R&M work, BSPTCL confirm return and availability for whole year			
Jharkhand	TVNL, Tenughat	1	210	05.07.18	30.07.18	26	Overhauling
		2	210	02.08.18	27.08.18	26	Overhauling
DVC	MTPS	2	210	16.09.18	16.10.18	31	AOH (Boiler acid cleaning + LPT)
		3	210	12.06.18	12.07.18	31	AOH (Boiler acid cleaning + LPT)
		6	250	08.02.19	15.03.19	36	COH
	CTPS	7	250	10.09.18	30.09.18	21	BOH
	KTPS	2	500	25.06.18	30.07.18	36	COH
	DSTPS	2	500	10.08.18	04.09.18	26	AOH (Blr, LPT Gen)
ODISHA	TTPS	1	60	01.12.18	30.12.18	30	Capital Maintenance
		2	60	24.04.18	08.05.18	15	Boiler Overhaul
		3	60	26.06.18	25.07.18	30	Capital Maintenance
		4	60	16.09.18	29.09.18	14	Boiler Overhaul
		5	110	29.10.18	04.11.18	7	Boiler License renewal
		6	110	01.08.18	20.08.18	20	Boiler Overhaul
	IB TPS	2	210	01.12.18	21.12.18	21	Minor AOH
WBPDCL	Kolaghat TPS	2	210	01.07.18	28.02.19	243	R&M
		3	210	Contd. 4/17	31.05.18	61 D in 18-19	R&M
		4	210	01.11.18	10.11.18	10	Boiler License
		5	210	01.01.19	10.01.19	10	Boiler License
		6	210	01.09.18	10.09.18	10	Boiler License
	Bakreswar TPS	2	210	03.07.18	01.08.18	30	Boiler Overhauling
		3	210	28.08.18	26.09.18	30	Boiler Overhauling
	Bandel TPS	5	215	01.08.18	22.08.18	22	Boiler Overhauling
	Santaldih TPS	5	250	12.11.18	22.11.18	11	Boiler License
		6	250	01.08.18	25.08.18	25	Capital Overhauling
	Sagarighi TPS	1	300	01.12.18	10.12.18	10	Boiler License
		2	300	01.07.18	09.08.18	40	Capital Overhauling
		3	500	01.06.18	20.06.18	20	Boiler Overhauling
		4	500	01.02.19	20.02.19	20	Boiler Overhauling
CESC	BUDGE-BUDGE	1	250	02.12.18	16.12.18	15	Not Specified
		2	250	19.12.18	23.12.18	5	Not Specified
		3	250	12.11.18	29.11.18	18	Not Specified
	TITAGARH	1	60	04.01.19	18.01.19	15	Not Specified
		2	60	24.02.19	27.02.19	4	Not Specified
		3	60	14.12.18	17.12.18	5	Not Specified
		4	60	29.12.18	12.01.19	15	Not Specified
	SOUTHERN	1	67.5	01.01.19	04.01.19	4	Not Specified
		2	67.5	05.01.19	19.01.19	15	Not Specified
HEL	HALDIA	1	300	No planned maintenance			
		2	300	17.01.19	31.01.19	15	Not Specified
DPL	DPPS	6	110	01.04.18	15.05.18	45	Boiler License & ESP Augmentation
		7	300	01.07.18	14.08.18	45	BTG OH
NTPC	FSTPP	2	200	10.07.18	03.08.18	25	Boiler, LPT
		4*	500	11.03.18	14.04.18	35	Boiler, TG, ESP
		5*	500	22.03.19	15.04.19	25	Boiler, Gen., DDCMIS R&M
		6	500	10.08.18	13.09.18	35	Boiler, TG, ESP
	KhSTPP	2	210	05.04.18	29.04.18	25	Boiler, DAVR
		3	210	15.05.18	08.06.18	25	Boiler, Gen.
		4	210	24.06.18	30.06.18	7	S/D of Boiler
		5	500	01.08.18	04.09.18	35	Boiler, TG
		7	500	16.11.18	10.12.18	25	Boiler
	Barh	4	660	12.12.18	15.01.19	35	Boiler Modification
	TSTPS	2	500	10.11.18	09.12.18	30	Boiler+LPT
		5	500	05.04.18	19.05.18	45	Boiler Mod.+Capital+Gen.
		6	500	20.08.18	13.09.18	25	Boiler+LPT+Boiler & Turbine RLA
BRBCL	Nabinagar TPP	1	250	05.08.18	30.08.18	26	Boiler OH incl. Turbine LP Rot., Gen. Rot. Checking etc.
		2	250	05.09.18	30.09.18	26	Boiler OH incl. Turbine LP Rot., Gen. Rot. Checking etc.
IPP	GMR	1	350	01.07.18	24.07.18	24	Annual Boiler Overhauling
		2	350	No planned maintenance			
		3	350	01.09.18	24.09.18	24	Annual Boiler Overhauling
	JITPL	1	600	No information received			
		2	600	No information received			
	MPL	2	525	15.08.18	15.09.18	32	AOH
	APNRL	1	270	13.10.18	06.11.18	25	Not Specified
		2	270	17.012.19	10.02.19	25	Not Specified

*** Considering the Board Exam. in West Bengal & approching summar WBSLDC requested NTPC to defer/prepone S/D plan of FSTPP U# 4 & 5 to after Durga Puja / to winter months as convenient to NTPC. But NTPC did not agreed to that and they opined that due to water sharing agreement with Bangladesh during March & April water availability would be less and they would be compelled to shut down the units during that period. Availing the oportunity NTPC planned to take the S/D during that period.**
However, WBSLDC did not agreed to that.

ANNEXURE - III

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE PEAK DEMAND- vs- AVAILABILITY IN EASTERN REGION FOR THE PERIOD FROM APRIL-2018 TO MARCH-2019

(ALL FIGURES IN MW & NET)

SL.NO	PARTICULARS	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
1	BIHAR												
	i) NET MAX DEMAND	4300	4400	4500	4500	4500	4650	4700	4500	3800	3800	3900	4500
	ii) NET POWER AVAILABILITY- Own+KBUNL+BRBCL	331	341	357	312	341	357	370	268	275	373	380	369
	Central Sector+Bi-Lateral	3062	3143	3185	3184	3111	3171	3224	3044	2763	2898	3179	3140
	iii) SURPLUS(+)/DEFICIT(-)	-907	-916	-958	-1004	-1048	-1122	-1106	-1188	-762	-529	-341	-991
2	JHARKHAND												
	i) NET MAX DEMAND	1240	1250	1270	1270	1280	1280	1300	1280	1250	1240	1250	1260
	ii) NET POWER AVAILABILITY- Own Source	321	341	341	262	262	386	386	341	341	341	341	341
	Central Sector+Bi-Lateral+KBUNL	803	831	848	840	790	818	851	807	759	778	830	822
	iii) SURPLUS(+)/DEFICIT(-)	-116	-78	-81	-168	-228	-76	-63	-132	-150	-121	-79	-97
3	DVC												
	i) NET MAX DEMAND (OWN)	2800	2800	2825	2750	2780	2900	2900	2800	2800	2800	2825	2850
	ii) NET POWER AVAILABILITY- OWN SOURCE	4889	4889	4706	4531	4696	4702	4888	4889	4889	4889	4741	4794
	- Central Sector+MPL+KBUNL	318	325	334	334	313	321	334	324	299	292	316	318
	BI-LATERAL EXPORT BY DVC	1564	1564	1537	1512	1443	1511	1410	1426	1384	1454	1474	1468
	iii) SURPLUS(+)/DEFICIT(-) AFTER EXPORT	842	850	678	603	786	612	912	987	1003	926	758	793
4	ODISHA												
	i) NET MAX DEMAND	4300	4400	4400	4300	4300	4300	4200	4100	4100	4100	4200	4350
	ii) NET POWER AVAILABILITY- OWN+IPP+CPP	3327	3265	3210	3035	3282	3210	2931	2956	2976	2919	2963	3094
	- Central Sector+KBUNL	1184	1234	1270	1266	1197	1244	1284	1147	1126	1187	1278	1257
	iii) SURPLUS(+)/DEFICIT(-)	211	99	79	1	179	154	15	3	2	6	41	1
5	WEST BENGAL												
5.1	WBSEDCL												
	i) NET MAX DEMAND (OWN)	6097	5580	5960	5708	6220	6185	6354	4950	4777	5534	5507	6871
	ii) CESC's DRAWAL	0	0	0	0	0	0	0	0	0	0	0	0
	iii) TOTAL WBSEDCL's DEMAND (incl. Export)	6102	5585	5970	5718	6230	6195	6364	4960	4787	5539	5512	6876
	iv) NET POWER AVAILABILITY- Own Source	3740	3690	3480	3456	3214	3373	3577	3255	3610	3375	3449	3632
	- Import from DPL	0	0	0	0	0	0	0	0	0	0	0	0
	- Central Sector+Bi-lateral+IPP&CPP+TLDP+KBUNL	2362	2086	2490	2262	3016	2822	2787	1910	1861	2164	2063	3244
	v) SURPLUS(+)/DEFICIT(-) AFTER EXPORT	0	191	0	0	0	0	0	205	684	0	0	0
	vi) EXPORT (TO B'DESH & SIKKIM)	5	5	10	10	10	10	10	10	10	5	5	5
5.2	DPL												
	i) NET MAX DEMAND	272	274	275	268	274	270	251	249	240	243	247	262
	ii) NET POWER AVAILABILITY	387	428	465	253	370	465	465	465	363	363	465	465
	iii) SURPLUS(+)/DEFICIT(-)	115	154	190	-15	96	195	214	216	123	120	218	203
5.3	CESC												
	i) NET MAX DEMAND	2050	2180	2220	1850	1880	2010	1990	1750	1500	1440	1650	1870
	ii) NET POWER AVAILABILITY - OWN SOURCE	750	750	750	750	750	750	750	670	450	670	670	710
	IMPORT FROM OTHER SOURCE (INCL. IPP/CPP -40 MW)	760	890	930	560	590	720	700	540	510	520	440	620
	IMPORT FROM HALDIA ENERGY LTD.	540	540	540	540	540	540	540	540	540	250	540	540
	iii) TOTAL AVAILABILITY	2050	2180	2220	1850	1880	2010	1990	1750	1500	1440	1650	1870
	iv) SURPLUS(+)/DEFICIT(-)	0	0	0	0	0	0	0	0	0	0	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)												
	i) NET MAX DEMAND OWN (Excl. Export)	8419	8034	8455	7826	8374	8465	8595	6949	6517	7217	7404	9003
	ii) NET POWER AVAILABILITY- Own Source	4877	4868	4695	4459	4334	4588	4792	4390	4423	4408	4584	4807
	iii) CS SHARE+BILETARAL+IPP/CPP+TLDP+HEL	3662	3516	3960	3362	4146	4082	4027	2990	2911	2934	3043	4404
	iv) SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP.	120	349	200	-5	105	205	224	431	817	125	223	208
	v) SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	115	344	190	-15	95	195	214	421	807	120	218	203
7	SIKKIM												
	i) NET MAX DEMAND	85	85	85	85	85	85	85	85	90	90	90	90
	ii) NET POWER AVAILABILITY- Own Source	1	1	2	2	2	2	2	1	1	1	1	1
	- Central Sector+KBUNL	154	158	158	157	158	159	159	151	124	129	157	157
	iii) SURPLUS(+)/DEFICIT(-)	70	74	75	75	75	76	77	67	34	39	68	68
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR												
	i) NET MAX DEMAND	20528	20358	20908	20127	20698	21048	21145	19140	18017	18687	19096	21411
	ii) BI-LATERAL EXPORT BY DVC	1564	1564	1537	1512	1443	1511	1410	1426	1384	1454	1474	1468
	iii) EXPORT BY WBSEDCL	5	5	10	10	10	10	10	10	10	5	5	5
	iv) NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+CPP+HEL)	22928	22911	23065	21745	22630	23041	23249	21307	20885	21147	21813	23503
	v) PEAK SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv - i -ii - iii)	831	984	611	96	479	472	683	731	1474	1002	1238	620

ANNEXURE - IV

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE OFF-PEAK DEMAND- vs- AVAILABILITY IN EASTERN REGION FOR THE PERIOD FROM APRIL-2018 TO MARCH-2019

(ALL FIGURES IN MW & NET)

SL.NO	P A R T I C U L A R S	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
1	BIHAR												
	i) NET MIN DEMAND	2800	2800	2900	2900	2900	3000	3000	3000	3100	3200	3200	3300
	ii) NET POWER AVAILABILITY- Own+KBUNL+BRBCL	331	331	331	303	325	338	345	261	274	345	345	345
	Central Sector+Bi-Lateral	2096	2184	2225	2553	2484	2445	2254	2096	1880	1994	2193	2158
	iii) SURPLUS(+)/DEFICIT(-)	-373	-285	-344	-44	-91	-217	-401	-643	-946	-861	-662	-797
2	JHARKHAND												
	i) NET MIN DEMAND	945	971	971	971	971	971	998	998	998	998	998	998
	ii) NET POWER AVAILABILITY- Own Source	286	286	286	226	226	346	346	286	286	286	286	286
	Central Sector+Bi-Lateral+KBUNL	568	593	610	765	717	701	608	569	547	560	577	571
	iii) SURPLUS(+)/DEFICIT(-)	-91	-93	-75	19	-28	76	-43	-143	-165	-151	-134	-140
3	DVC												
	i) NET MIN DEMAND (OWN)	2236	2203	2243	2164	2203	2322	2215	2302	2247	2254	2255	2254
	ii) NET POWER AVAILABILITY- Own Source	3885	3885	3740	3591	3738	3728	3857	3885	3885	3885	3767	3809
	- Central Sector+MPL+KBUNL	193	198	209	339	319	306	211	195	188	186	185	187
	BI-LATERAL EXPORT BY DVC	1564	1564	1537	1512	1443	1511	1410	1426	1384	1454	1474	1468
	iii) SURPLUS(+)/DEFICIT(-)	278	316	168	254	411	201	443	352	442	363	223	274
4	ODISHA												
	i) NET MIN DEMAND	3300	3350	3300	3250	3250	3250	3150	3150	3000	2900	2900	3200
	ii) NET POWER AVAILABILITY- Own Source+CPP	2471	2603	2498	2708	2367	2535	2392	2443	2178	2297	2297	2297
	- Central Sector+KBUNL	853	906	943	1076	1010	1045	955	840	837	888	926	912
	iii) SURPLUS(+)/DEFICIT(-)	24	159	141	533	127	330	197	134	14	285	322	8
5	WEST BENGAL												
5.1	WBSEDCL												
	i) NET MIN DEMAND (OWN)	4820	3990	4413	4165	4177	4240	3611	2974	2794	3390	3721	4986
	ii) CESC's DRAWAL	0	0	0	0	0	0	0	0	0	0	0	0
	iii) TOTAL WBSEDCL's DEMAND (INCL. EXPORT)	4825	3995	4423	4175	4187	4250	3621	2984	2804	3395	3726	4991
	iv) NET POWER AVAILABILITY- OWN SOURCE	2840	2790	2580	2541	2297	2443	2604	2555	2635	2434	2486	2669
	- Import from DPL	0	0	0	0	0	0	0	0	0	0	0	0
	- Central Sector+Bi-lateral+IPP&CPP+TLDP+KBUNL	1993	1533	1850	2101	2025	1902	1498	1223	1281	1290	1352	2332
	v) SURPLUS(+)/DEFICIT(-) AFTER EXPORT	8	328	7	467	135	95	481	794	1112	329	112	10
	vi) EXPORT TO BANGLADESH & SIKKIM	5	5	10	10	10	10	10	10	10	5	5	5
5.2	DPL												
	i) NET MIN DEMAND	245	247	248	241	247	243	226	224	216	219	222	236
	ii) NET POWER AVAILABILITY	308	339	369	202	294	369	369	369	339	339	434	369
	iii) SURPLUS(+)/DEFICIT(-)	63	93	122	-40	47	126	143	145	123	120	212	133
5.3	CESC												
	i) NET MIN DEMAND	1260	1410	1401	1166	1226	1335	1119	795	625	605	710	899
	ii) NET POWER AVAILABILITY - OWN SOURCE	675	675	675	675	675	675	675	603	405	603	603	639
	FROM/TO OTHER SOURCE EXP/IMP	153	303	294	59	119	228	12	-240	-212	-198	-325	-172
	FROM HALDIA ENERGY LTD.	432	432	432	432	432	432	432	432	432	200	432	432
	iii) TOTAL AVAILABILITY	1260	1410	1401	1166	1226	1335	1119	795	625	605	710	899
	iv) SURPLUS(+)/DEFICIT(-)	0	0	0	0	0	0	0	0	0	0	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)												
	i) NET MIN DEMAND	6325	5647	6062	5572	5650	5818	4956	3993	3635	4214	4653	6121
	ii) NET POWER AVAILABILITY- Own Source	3823	3804	3624	3418	3266	3487	3648	3527	3379	3376	3523	3677
	CENTRAL SECTOR SHARE+BILETARAL+IPP/CPP+TLDP+HEL	2578	2268	2576	2592	2576	2562	1942	1415	1501	1292	1459	2592
	iii) SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP.	76	426	139	437	192	232	635	949	1245	454	329	148
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	71	421	129	427	182	222	625	939	1235	449	324	143
7	SIKKIM												
	i) NET MIN DEMAND	50	50	50	50	50	50	50	50	55	55	55	55
	ii) NET POWER AVAILABILITY- Own Source	0	0	0	0	0	0	0	0	0	0	0	0
	- Central Sector+KBUNL	70	79	83	142	141	144	82	66	63	66	69	69
	iii) SURPLUS(+)/DEFICIT(-)	20	29	33	92	91	94	32	16	8	11	14	14
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR												
	i) NET MIN DEMAND	15200	14583	15074	14473	14586	14962	13950	13100	12655	13223	13651	15463
	ii) BILATERAL EXPORT BY DVC	1564	1564	1537	1512	1443	1511	1410	1426	1384	1454	1474	1468
	iii) EXPORT BY WBSEDCL	5	5	10	10	10	10	10	10	10	5	5	5
	iv) NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION +BILATERAL+CPP)	17153	17138	17125	17712	17168	17637	16641	15584	15017	15175	15627	16904
	v) OFF-PEAK SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv- i - ii - iii)	384	985	505	1717	1129	1154	1271	1048	968	493	496	-33

ANNEXURE -V

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE ENERGY REQUIREMENT- vs- AVAILABILITY IN EASTERN REGION FOR THE PERIOD FROM APRIL-2018 TO MARCH-2019

(ALL FIGURES IN MU & NET)

SL.NO	PARTICULARS	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	TOTAL 2017-18
1	BIHAR													
i)	NET ENERGY REQUIREMENT	2477	2534	2592	2592	2592	2678	2707	2592	2189	2189	2246	2592	29980
ii)	NET ENERGY AVAILABILITY- Own +KBUNL+BRBCL	181	189	186	196	189	184	205	192	198	201	183	201	2306
iii)	Central Sector+Bi-Lateral	1752	1900	1920	2056	2011	1981	2010	1734	1635	1701	1646	1812	22156
iv)	SURPLUS(+)/DEFICIT(-)	-543	-446	-486	-340	-392	-513	-492	-666	-356	-287	-417	-579	-5518
2	JHARKHAND													
i)	NET ENERGY REQUIREMENT	800	810	815	790	770	760	800	780	800	800	750	810	9485
ii)	NET ENERGY AVAILABILITY- Own Source	210	214	222	170	203	263	232	223	217	217	217	217	2603
iii)	Central Sector+Bi-Lateral+KBUNL	436	483	491	519	489	491	503	432	426	432	398	442	5545
iv)	SURPLUS(+)/DEFICIT(-)	-154	-113	-102	-101	-78	-6	-65	-125	-157	-151	-135	-151	-1337
3	DVC													
i)	NET ENERGY REQUIREMENT (OWN)	1695	1725	1700	1695	1725	1760	1735	1745	1760	1765	1595	1765	20665
ii)	NET ENERGY AVAILABILITY- OWN SOURCE	2845	2933	2760	2673	2803	2715	2926	2842	2933	2938	2575	2877	33820
iii)	Central Sector+MPL+KBUNL	175	201	220	245	233	232	225	175	164	157	139	161	2327
iv)	Bi- lateral export by DVC	1126	1164	1107	1125	1074	1088	1049	1027	1030	1082	991	1092	12955
v)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	200	245	174	98	237	99	367	245	307	247	128	180	2527
4	ODISHA													
i)	NET ENERGY REQUIREMENT	2520	2678	2628	2678	2604	2520	2455	2268	2344	2344	2150	2567	29756
ii)	NET ENERGY AVAILABILITY- OWN+IPP+CPP	1851	1824	1758	1794	1953	1937	1807	1518	1353	1560	1442	1670	20467
iii)	Central Sector+KBUNL	711	779	751	810	761	777	808	658	674	709	661	731	8831
iv)	SURPLUS(+)/DEFICIT(-)	42	-75	-119	-74	110	194	160	-92	-317	-75	-47	-166	-458
5	WEST BENGAL													
5.1	WBSEDCL													
i)	WBSEDCL'S OWN REQUIREMENT	3791	3556	3723	3547	3663	3588	3662	2577	2612	2955	2901	3671	40246
ii)	SUPPLY TO CESC	0	0	0	0	0	0	0	0	0	0	0	0	0
iii)	TOTAL ENERGY REQUIREMENT	3795	3560	3730	3554	3670	3595	3669	2584	2619	2959	2904	3689	40328
iv)	NET ENERGY AVAILABILITY- OWN SOURCE	2187	2216	1993	2032	1850	1897	2084	1977	2107	1954	1802	2135	24234
v)	Contribution from DPL	0	0	0	0	0	0	0	0	0	0	0	0	0
vi)	Central Sector+Bi-lateral+IPP&CPP+TLDP+KBUNL	1608	1344	1737	1522	1820	1698	1585	1008	997	1005	1102	1554	16981
vii)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	0	0	0	0	0	0	0	401	485	0	0	0	887
viii)	EXPORT (TO B'DESH & SIKKIM)	4	4	7	7	7	7	7	7	7	4	3	4	68
5.2	DPL													
i)	NET ENERGY REQUIREMENT	176	180	174	179	181	169	169	155	156	160	150	169	2018
ii)	NET ENERGY AVAILABILITY	311	337	336	180	239	323	334	355	365	359	331	367	3836
iii)	SURPLUS(+)/DEFICIT(-)	135	157	162	1	58	154	165	200	209	199	181	198	1818
5.3	CESC													
i)	NET ENERGY REQUIREMENT	1042	1159	1118	1016	1065	1064	989	742	694	680	675	862	11106
ii)	NET ENERGY AVAILABILITY - Own Source	525	543	528	522	523	508	532	372	351	427	398	492	5721
iii)	FROM OTHER SOURCE (INCL. IPP/CPP-29-30 MU/M)	156	225	211	135	170	184	120	71	60	57	39	66	1494
iv)	FROM HEL	361	391	379	359	372	372	337	299	283	196	238	304	3891
v)	TOTAL AVAILABILITY OF CESC	1042	1159	1118	1016	1065	1064	989	742	694	680	675	862	11106
vi)	SURPLUS(+)/DEFICIT(-)	0	0	0	0	0	0	0	0	0	0	0	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)													
i)	NET ENERGY REQUIREMENT	5009	4895	5015	4742	4909	4821	4820	3474	3462	3795	3726	4702	53370
ii)	NET POWER AVAILABILITY- Own Source	3023	3096	2857	2734	2612	2728	2950	2704	2823	2740	2531	2994	33791
iii)	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	2125	1960	2327	2016	2362	2254	2042	1378	1340	1258	1379	1924	22366
iv)	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP	139	161	170	8	66	161	172	608	701	203	183	216	2787
v)	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	135	157	163	1	59	154	165	601	694	199	180	212	2719
7	SIKKIM													
i)	NET ENERGY REQUIREMENT	34	35	32	34	33	34	35	37	38	38	35	38	423
ii)	NET POWER AVAILABILITY- Own Source	3	3	7	7	7	7	7	2	2	2	2	3	52
	- Central Sector+KBUNL	72	90	98	106	105	105	94	66	60	60	56	66	977
iii)	SURPLUS(+)/DEFICIT(-)	41	59	72	78	79	78	66	30	24	24	23	31	606
8	EASTERN REGION													
i)	NET ENERGY REQUIREMENTOF ER	12535	12677	12782	12531	12633	12573	12552	10896	10593	10931	10502	12474	143679
ii)	BILATERAL EXPORT BY DVC	1126	1164	1107	1125	1074	1088	1049	1027	1030	1082	991	1092	12955
iii)	EXPORT BY WBSEDCL	4	4	7	7	7	7	7	7	7	4	3	4	68
iv)	NET TOTAL ENERGY AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)	13385	13672	13598	13327	13729	13674	13809	11923	11825	11975	11228	13097	155241
v)	ENERGY SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv - i -ii - iii)	-280	-173	-299	-337	16	6	201	-7	195	-42	-268	-473	-1461