

POWER SYSTEM DEVELOPMENT FUND												
Status of the Projects in Eastern Region												
Sl No	State	Entity	Name of the scheme	Grant Approved	Grant sanctioned on	1st Installment grant released on	Completion Schedule	Completion schedule w.r.t date of 1st instalment	Grant availed so far	Under process of release	Total awards amount of placed of till date	Latest status
1	Bihar	BSPTCL	Renovation and Upgradation of protection system of substations. (18)	64.22	11-May-15	16-May-16	24	16-May-18	56.04		69.195	90% grant availed on award cost.
2			Installation of Capacitor bank in 20 Nos of Grid Sub Station. (74)	18.88	5-Sep-16	26-Mar-19	24	26-Mar-21	16.99		20.98	
			Total	83.10					73.03		90.175	
5	Jharkhand	JUSNL	Renovation & Upgradation of protection system of Jharkhand. (161)	138.13	15-Nov-17	28-Mar-19	16	28-Jul-20	114.68	1.01	145.674	90% grant availed on award cost. Project closure is expected by Q-2 of 2021-22.
6			Reliable Communication & data acquisition system upto 132kV Substations ER. (177)	22.36	24-May-19		24					Price bid has been opened. Tender on awarding stage.
			Total	160.49					114.68		145.674	
7	Odisha	OPTCL	Renovation and Upgradation of protection system of substations. (08)	162.50	11-May-15	22-Mar-16	24	22-Mar-18	46.04		60.261	Project Completed on Dec-20. Request for release of final 10 % fund has been placed.
8			Implementation of OPGW based reliable communication at 132 kv and above substations. (128)	25.61	15-Nov-17	29-Mar-19	36	29-Mar-22	7.68		51.22	30% grant availed on award cost.
9			Installation of 125 MVAR Bus Reactor along with construction of associated by each at 400kV Grid S/S of Mendhasal, Meramundali & New Duburi for VAR control & stabilisation of system voltage. (179)	27.23	27-Jul-18	1-Apr-19	18	1-Oct-20	2.72			10% grant availed
10			Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha. (196)	2.93	24-May-19	19-Feb-20	10	19-Dec-20	0.29			
11			Protection Upgradation and installation of Substation Automatic System (SAS) for seven nos of 220/132/33kV Substations (Balasore, Bidanasi, Budhipadar, Katapali, Narendrapur, New-Bolangir & Paradeep). (209)	36.63	24-May-19	13-Feb-20	18	13-Aug-21	3.66			
12		OHPCL	Renovation and Upgradation of protection and control system of OHPCL. (109)	22.35	22-May-17	25-May-18	24	25-May-20	10.96		17.983	90% grant availed on award cost.
			Total	277.25					71.35		129.464	
14	West Bengal	WBSETCL	Installation of switchable reactor & shunt capacitor for voltage improvement. (88)	43.37	22-May-17	22-Jun-18	19	22-Jan-20	33.07		40.83	90% grant availed on award cost.
15			Renovation & Modernisation of Transmission System. (87)	70.13	22-May-17	25-Jun-18	25	25-Jul-20	63.12		93.51	
16			Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid. (210)	71.74	24-May-19	23-Oct-19	19	23-May-21	15.38		45.621	30% grant availed on award cost.
17			Project for establishment of reliable communication and data acquisition at different substation at WBSWTCL. (222)	31.19	24-May-19	23-Oct-19	25	23-Nov-21	3.12			10% grant availed
18			Implementation of Integrated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal. (197)	10.08	20-Mar-20		12					10% grant not yet requested
19		WBPCL	Renovation and Modernization of 220/ 132 kV STPS switch yard and implementation of Substation Automation System. (72)	23.48	5-Sep-16	18-May-17	18	18-Nov-18	21.13		26.09	Target date for completion of project is May-21 subject to availability of shutdown. Request for release for final 10 % grant has been placed.
21			Renovation and Modernization of switchyard and related protection system of different power stations (BTPS, BKTPS and KTPS) of WBPCL (155)	45.16	27-Jul-18	27-Mar-19	12	27-Mar-20	12.02		41.68	30% grant availed on award cost.
			Total	295.15					147.84		247.729	

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22	DVC	DVC	Renovation and Upgradation of the protection and control system of Ramgarh Sub Station. (81)	25.96	2-Jan-17	31-May-17	24	31-May-19	22.95	2.57	28.603	90% grant availed on award cost.
23			Renovation and Modernization of control and protection system and replacement of equipment at Parulia, Durgapur, Kalyanewari, Giridhi Jamsedpur, Barjora, Burnpur, Dhanbad and Bundwan substation. (106)	140.50	16-May-17	14-Dec-17	24	14-Dec-19	102.34	3.29	126.87	
			Total	166.46					125.29		155.473	
24	Sikkim	ENPD, Sikkim	Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim. (173)	10.00	24-May-19		18		3.00		20	30% grant availed on award cost
				10.00					3.00		20.00	
26	ERPC	ERPC	Creation and Maintenance of web based protection database management. (67)	20.00	17-Mar-16	28-Jun-16	18	28-Dec-17	14.83		16.48	Project Completed
27			Study Programme on power trading at NORD POOL Academy for Power System Engineers of Eastern Region. (122)	5.46	27-Jul-18	27-Mar-19	13	27-Apr-20	4.61		5.37	
28			Traning Program for Power system Engineers of various constituents of Eastern Region. (117)	0.61	27-Jul-18	11-Apr-19	24	11-Apr-21	0.54		0.60888	90% grant availed on award cost.
			Total	26.07					19.98		22.45888	
			GrandTotal	1,018.53					555.17		810.97	

Standard Operating Procedure(SoP) to be referred for restoration of 765 kV Angul – Srikakulam D/c in case high standing phase angle is observed

The existing Special Protection Scheme (SPS) on NEW-SR corridor (namely for 765kV Solapur-Raichur 2x S/c lines & HVDC Talcher-Kolar Bipole) were implemented long back as per the system requirements. Over the years, the connectivity of Southern region with NEW grid has strengthened through many high capacity inter-regional lines. In view of strengthening of transmission system as stated above, both the aforesaid SPS schemes were reviewed in consultation with RPCs. NLDC communication dated 21st Oct 2020 for review of HVDC Talcher – Kolar Bipole & NLDC communication dated 09th Dec 2020 for review of SPS of 765kV Solapur-Raichur-2 X S/c lines was shared with all concerned RPCs. The copies of both the communication are enclosed as Annexure I. The proposal for review of SPS were discussed, deliberated and agreed in ERPC/SRPC. After deliberation at ERPC(174th and 175th OCC) /SRPC (38th TCC), it was agreed that Standard Operating Procedure need to be developed to tackle the issue of high Standing Phase Angle (SPA) between Angul and Srikakulam station in case of outage of 765 kV Angul-Srikakulam-D/C. The extracts of the NLDC communication dated 09th Dec 2020 is given below:

“The 765 kV Angul-Srikakulam-D/c is carrying 1583 MW each circuit in the limiting case with 13900 MW of import in SR. The line length is 276 km and under high loading the angular separation between two buses may reach more than 25 degrees. Under N-1 scenario of tripping of one circuit of 765 kV Angul-Srikakulam-D/c, it is observed that loading on other circuit reaches 2606 MW. In case the double circuit line trips (a highly probable contingency since line crosses through the terrain near to Eastern Coast of India bordering Bay of Bengal which is prone to tropical cyclones with high speeds), the Standing Phase Angle (SPA) between Angul and Srikakulam station would become high. The high SPA would cause the delay in restoration and many a times would make it impossible for the smooth synchronisation of line. Therefore an Standard Operating Procedure need to be developed to tackle the issue and to minimise the possible delays in restoration.”

The SoP in this regard is proposed for tackling this issue which may be implemented as per existing real time conditions in the system.

SoP Proposed: The standing phase angle between 765 kV Angul station (Eastern Region) and 765/400 kV Srikakulam station (Southern Region) has been observed to be very high in case of 765 kV Angul – Srikakulam D/C outage during high import by Southern Region. In order to reduce this angular separation and facilitate synchronization of lines, following actions need to be followed in real-time to restore 765 kV Angul – Srikakulam D/C after outage: -

1. HVDC towards southern region shall be maximized to the extent possible.
 - a. HVDC Gazuwaka has the highest sensitivity (-0.87 degrees per 100 MW) on the angle between Angul and Srikakulam and power order of HVDC may be increased to 800 MW keeping in view the constraints of associated line loadings and voltages in Eastern/Southern region.
 - b. Overload capacity of HVDC Talcher – Kolar and HVDC Raigarh – Pugalur may be utilized.
2. Import of SR shall be reduced to bring the angle within safe limits through increase in generation, reduction in load in southern region or a combination of both. The generation reduction may also be carried out in Eastern region.
 - a. Generation in southern region shall be increased based on the existing system conditions. The generators in the vicinity of Srikakulam station such as Simhadri Stage-I & II, HNPCL, KTPS etc have higher sensitivity on the angle difference.
 - b. Similarly, generation in eastern region may be reduced based on the existing system conditions. The generators in the vicinity of Angul station such as GMR (IPP), JITPL etc. have higher sensitivity on the angle difference.
 - c. Load reduction in Southern region may be carried out based on the existing system conditions.

The sensitivities of change in HVDC power orders, Generation Reduction/Increase in Eastern/Southern region and load reduction in Southern region on angular difference between Angul and Srikakulam stations are given as Table-1.

3. Based on the sensitivities of various actions as mentioned in Sl. No. 1 and 2 above and real time conditions, the suitable actions may be taken in real time to reduce the Standing Phase Angle.

Table-1**765 kV Angul - Srikakulam D/C Outage - Angle Sensitivity**

S. No.	Description	Angular Separation (Deg) (Angul - Srikakulam)	Relief in Angle (Deg)	Relief in Angle (Deg) per 100 MW change in Power Order/Generation/Load
1	Base Case	11.25	-	
2	Base Case + N-1 of 765 kV Angul - Srikakulam S/C	18.99	-	
3	Base Case + N-1-1 of 765 kV Angul - Srikakulam D/C	56.17	-	
	Relief from change in HVDC Power Order			
1	HVDC Talcher - Kolar Bipole (+500 MW)	53.75	-2.42	-0.48
2	HVDC Gazuwaka (+150 MW)	54.87	-1.30	-0.87
3	HVDC Raigarh - Pugalur (+100 MW)	55.66	-0.51	-0.51
4	HVDC Bhadrawati (-200 MW)	57.03	0.86	+0.43
	Relief from change in Generation (ER)			
1	GMR IPP (-100 MW Generation)	55.87	-0.30	-0.30
2	JITPL (-100 MW Generation)	55.88	-0.29	-0.29
3	OPGC (-200 MW Generation)	55.99	-0.18	-0.09
4	Talcher Stage-II (-500 MW Generation)	55.83	-0.34	-0.07
5	Indarvati (-200 MW Generation)	56.03	-0.14	-0.07
6	Balimela (-100 MW Generation)	56.1	-0.07	-0.07
7	Odisha Generation (-500 MW Generation in Odisha)	55.64	-0.53	-0.11
	Relief from change in Generation (SR)			
1	Simhadri Stg-II (+100 MW Generation)	55.36	-0.81	-0.81
2	HNPCL (+100 MW Generation)	55.37	-0.80	-0.80
3	KTPS (+200 MW Generation)	55.57	-0.60	-0.60
4	AP Generation (+500 MW Generation in AP)	52.97	-3.20	-0.64
5	SR Generation (+500 MW Generation in SR)	53.42	-2.75	-0.55
	Relief from change in Load			
1	Srikakulam Load (-100 MW Load in Srikakulam Area)	55.23	-0.94	-0.94
2	Viz-Nagar Load (-100 MW Load in Vizianagaram Area)	55.26	-0.91	-0.91
3	Vishakhapatnam Load (-200 MW Load in Vizag Area)	54.47	-1.70	-0.85
4	AP Load (-500 MW Load in AP)	52.71	-3.46	-0.69
5	SR Load (-1000 MW Load in SR)	50.33	-5.84	-0.58

Assumptions: -

a) SR Limiting Case (13900 MW) considered for study purpose.

b) HVDC Power Orders in Limiting case: -

Talcher - Kolar: 2000 MW

Raigarh - Pugalur: 1500 MW

Bhadrawati: 1000 MW

Gazuwaka: 650 MW

Annexure-C1

Power System Operation Corporation Ltd.

178th OCC Meeting

At ERPC, Kolkata
20th April, 2021

ER Grid Performances

ERLDC POSOCO

Highlights for the month of
March-2021

Frequency Profile

Average Freq:- 50.0 Hz
Avg FVI:- 0.040
Lowest FVI:- 0.025

Max- 50.32 Hz on 21st
March'21
Min- 49.66 Hz on 17th
March'21

72.81 % of the time
frequency was with in
IEGC Band

Peak Demand-

ER: 23647 MW on 31st March
2021 at 19:12 hrs

% Growth in Average Demand
Met w.r.t. last year: (+)30.8%

BSPHCL : 5309 MW ; ON 23/03/21

JUVNL: 1582 MW; ON 27/03/21

DVC: 3300 MW; ON 18/03/21

GRIDCO: 5013 MW; ON 22/03/21

WB: 8734 MW; ON 31/03/21

SIKKIM: 112 MW; ON 06/03/21

New Unit
NILOpen Access
STOA transactions
approved : 432 nos.

Energy Approved-
871.45 MUs

Energy met

Max. 501 MU on 24th Mar' 2021

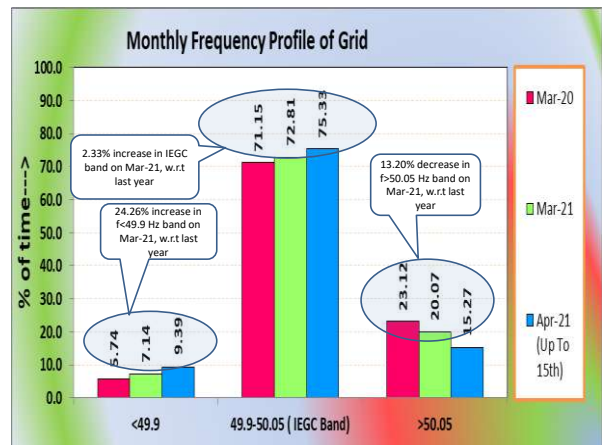
%Growth w.r.t. last year on Max
energy : 30.83%

Avg. 451 MU in Mar' 2021

%Growth w.r.t. last year on Avg.
energy : 32.34%

New Element addition during the month:

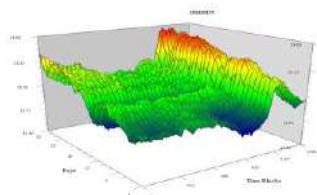
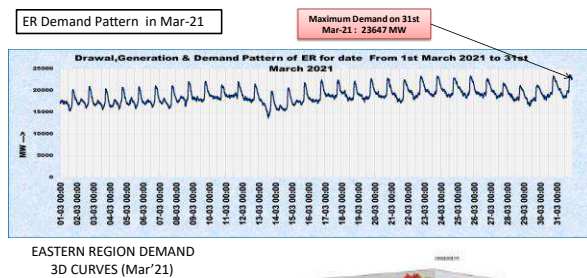
Sl. No.	Element Name	Owner	Charging Date	Charging Time	Remarks
1	125MVAR 400KV B/R-2 AT CHANDAUTI	PMTL	01-03-21	17-50	
2	125MVAR 400KV B/R-1 AT CHANDAUTI	PMTL	01-03-21	16-21	
3	220KV/132KV 200 MVA ICT 3 AT CHANDAUTI	PMTL	05-03-21	18-16	Charged from 220 kv side
4	220KV/132KV 200 MVA ICT 1 AT CHANDAUTI	PMTL	05-03-21	16-15	First timed charged from 220 kv side
5	220KV-CHANDAUTI - SONENAGAR-2	PMTL	19-03-21	11-02	
6	400 KV RANGPO-BINAGURI D/C	PGCIL	24-03-21	16:27 for CKT 1 16:55 for CKT 2	Reconductoring from Twin Moose to HTLS.
7	400KV-ALIPURDUAR (PG)-JIGMELLING-1	PGCIL	26-03-21	17-42	Anti theft charged upto 55 km
8	400KV-ALIPURDUAR (PG)-JIGMELLING-2	PGCIL	26-03-21	17-57	
9	220KV - GAYA CHANDAUTI 1	PMTL	27-03-21	17-21	Idle charged from Gaya end only
10	220KV-RONGNICHU-RANGPO-2	MBPCL	28-03-21	17-35	
11	220KV-RONGNICHU-RANGPO-1	MBPCL	28-03-21	17-03	
12	220KV - GAYA CHANDAUTI 2	PMTL	29-03-21	11-14	Idle charged from Gaya end only
13	400KV/220KV 500 MVA ICT 3 AT MALDA	PGCIL	29-03-21	14-46	First time Loaded with 178 MW
14	400KV-SITAMARH-DARBHANGA (DMTCL)-1	PMTL	31-03-21	14-02	
15	125MVAR 400KV B/R-2 AT SITAMARH	PMTL	31-03-21	19-45	



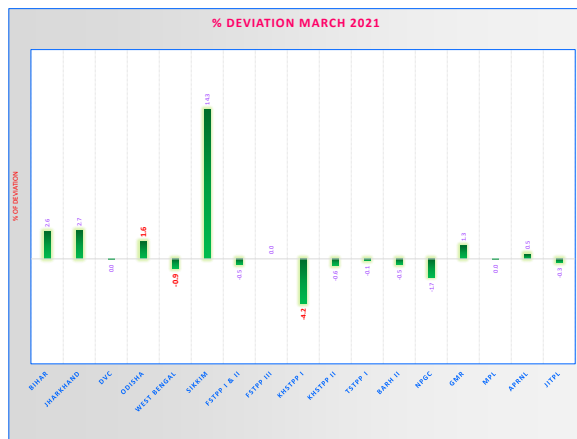
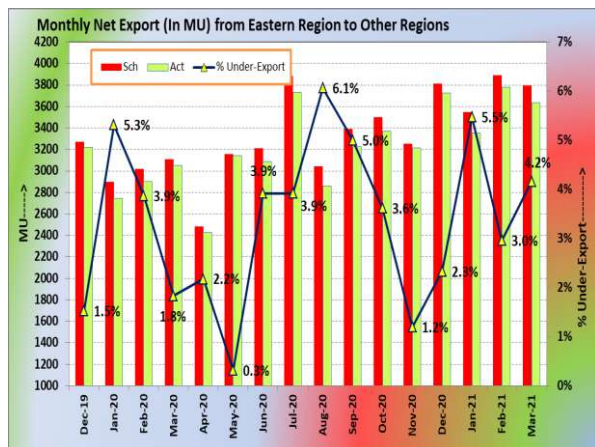
So Far Highest Demand (* As on 18-Apr-21)					
Constitute	Demand (in MW)	Date	Time	Demand met (MW) on 07 th April'21 (Max. demand met day)	
				MW	Time
Bihar	6123	3-Aug-20	20:07	5849	19:38
DVC	3542	21-Dec-19	18:06	3397	05:43
Jharkhand	1701	13-Apr-21	21:06	1498	21:32
Odisha	5617	5-Apr-21	20:21	5264	19:39
Sikkim	155	11-Jan-20	19:22	80	07:53
W. Bengal	9546	27-May-19	23:31	9046	18:51
ER	24446	7-Apr-21	19:51	24446	19:51

So Far Highest Energy Consumption			
Constitute	Energy consumption (in MUs)	Date	Energy met on 07 th April'21 (Max. demand met day)
Bihar	121.4	2-Sep-19	106.8
DVC	75.8	12-Jul-18	72.55
Jharkhand	30.9	13-Apr-21	28.89
Odisha	123.5	2-Oct-18	113.35
Sikkim	2.5	28-Jan-20	1.13
W. Bengal	199.9	28-May-19	182.52
ER	508.0	13-Apr-21	505.24

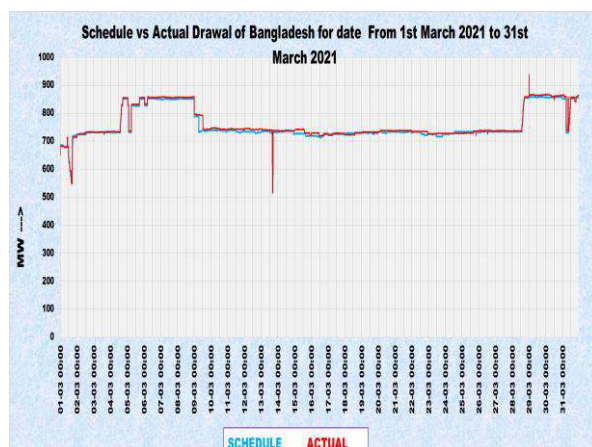
3D VIEW OF ER DEMAND PATTERN

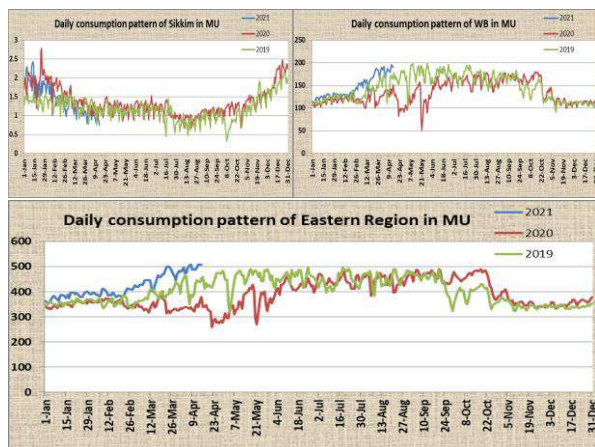
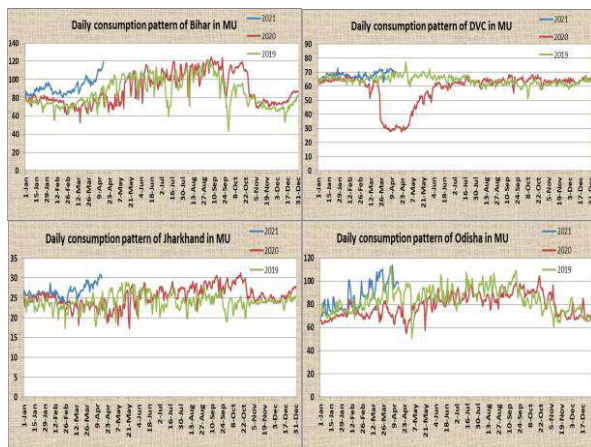
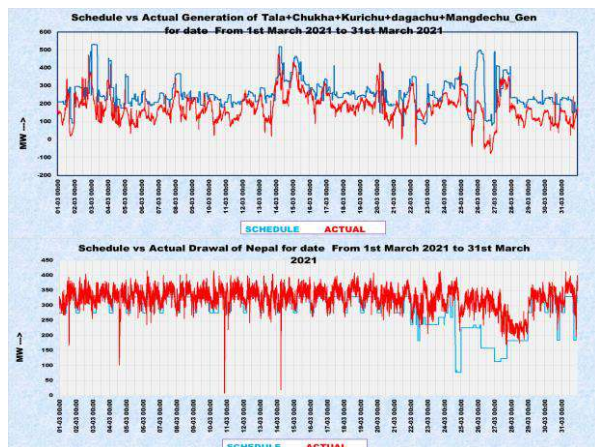


Over Drawl / Under Injection by ER
Entities
Non-compliance of direction issued by
SLDC

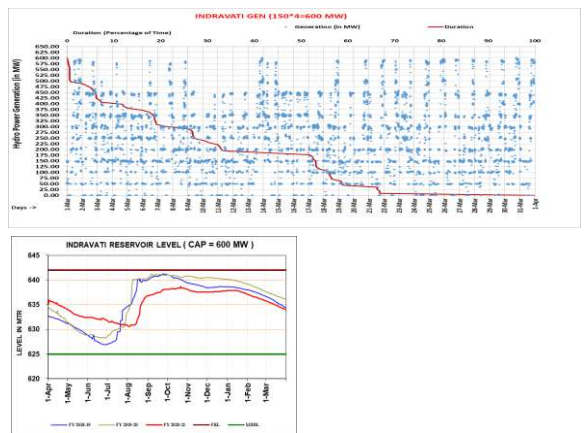
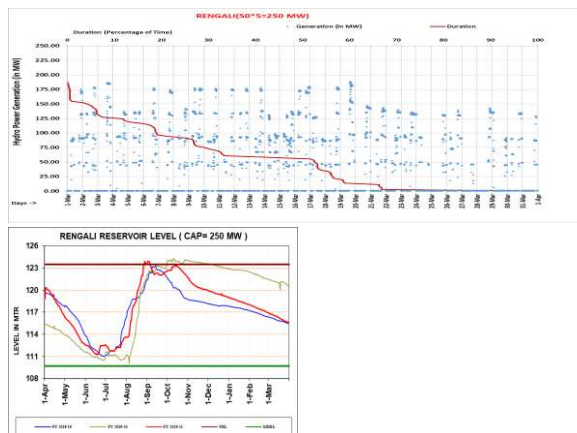
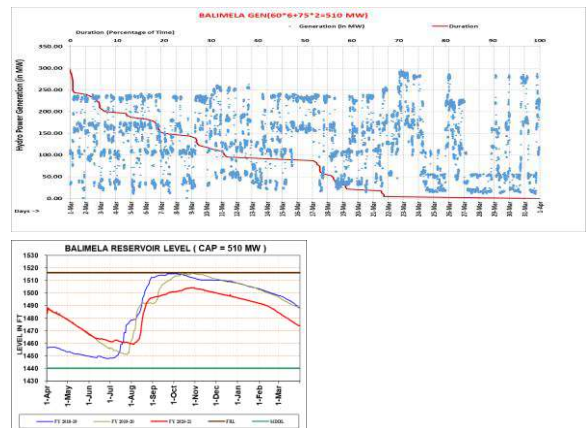
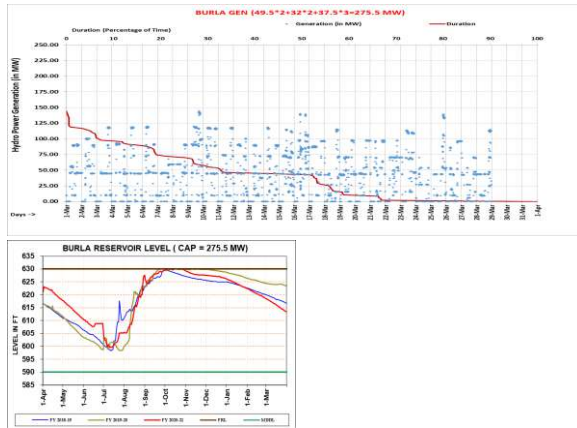


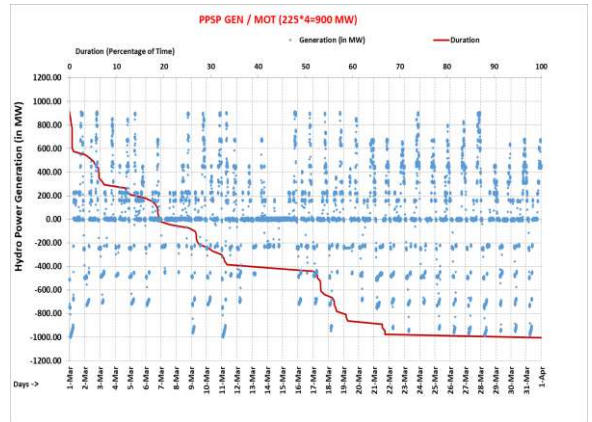
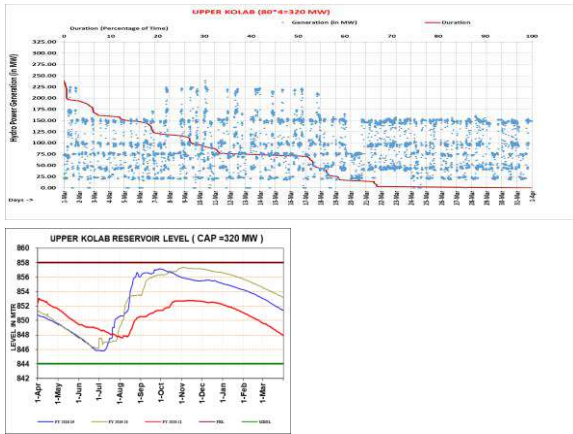
March 2021 Schedule vs Actual Status					
	Schedule (MU)	Actual (MU)	OD (MU)	Daily Avg OD (MU)	% Deviation
Bihar	2516	2582	66	2.1	2.6
Jharkhand	621	637	17	0.5	2.7
DVC	-1682	-1682	0	0.0	0.0
Odisha	875	889	14	0.5	1.6
West Bengal	927	919	-8	-0.3	-0.9
Sikkim	45	51	6	0.2	14.3
PSTPP I & II	919	914	-5	-0.2	-0.5
PSTPP III	325	323	-2	-0.1	0.0
KHSTPP I	410	393	-17	-0.6	-4.2
KHSTPP II	988	982	-6	-0.2	-0.6
TSTPP I	320	319	0	0.0	-0.1
BARH II	873	868	-5	-0.1	-0.5
NPGC	329	323	-6	-0.2	-1.7
GMR	469	475	6	0.2	1.3
MPL	685	685	0	0.0	0.0
APRNL	342	343	2	0.1	0.5
JITPL	655	653	-2	-0.1	-0.3





State Hydro Generators Performance





Date of PFR testing scheduled /completed for generating stations in ER

Sr. No	Station	Generating Unit	Test schedule	Remarks
1	TALCHER STAGE 2	3	Unit 3 - 5: 23-11-2020 to 28-11-2020	Testing for unit 6 yet to be conducted
2		4		
3		5		
4		6		
5	Farakka	2	01-02-2021 to 10-01-2021	Testing completed
6		3		
7		4		
8		5		
9		6		
10	Kahalgaon	1	23-02-2021 to 02-03-2021	Scheduled
11		5		
12		6		
13		7		
14	Barh	4	18-02-2021 to 21-02-2021	Scheduled
15		5		
16	Teesta V	1	07-01-2021 - 08-01-2021	Testing completed
17	Teesta III	1	30-01-2021 - 10-02-2021	Testing completed
18		2		
19		3		
20		4		
21		5		
22		6		
23	Dikchu	1	Unit#1: 6th & 7th April' 21 Unit#2: 8th & 9th April' 21	Scheduled
24		2		
25	MPL	1	11th – 20th March 2021	Scheduled
26		2		

Annexure-C5

Power Plant	Unit No	PSS tuned (Yes/No)	PSS in Service (Yes/No)	Last PSS Tuning Date	Whether Done in Last 3 Years	Whether Next to be planned	Planned Next PSS Tuning
West Bengal							
Kolaghat-WBPDCL	1	No	Yes	Long Back	No	Yes	Under retirement
Kolaghat-WBPDCL	2	No	Yes	Long Back	No	Yes	Under retirement
Kolaghat-WBPDCL	3	No	Yes	Long Back	No	Yes	When Unit will be on Bar
Sagardighi-WBPDCL	2	No	No	Long Back	No	Yes	When Unit will be on Bar
Bakreshwar-WBPDCL	2	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	3	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	4	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	5	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
DPL	7	No	No	N.A	No	Yes	Planned in March 2021
DPL	8	No	Yes	No	No Detail	Yes	To be updated by WBPDCL/DPL
PPSP	1	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	2	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	3	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	4	No	Yes	2009	No	Yes	To be updated by WBSEDCL
TLDP III	4 x 33			No Detail	No Detail	Yes	To be updated by WBSEDCL
TLDP IV	4 X 44			No Detail	No Detail	Yes	To be updated by WBSEDCL
CESC							
Budge Budge-CESC	1	Yes	Yes	2015	No	Yes	2021-22
Budge Budge-CESC	2	Yes	Yes	2015	No	Yes	2021-22
DVC							
Bokaro B 210 MW	3				No Detail	Yes	Unit Is out of Service
Mejia-DVC	4	Yes	Yes	2009	No	Yes	Jun-21
Raghunathpur-DVC	1	No	No		No Detail	Yes	Will be done after AOH
Raghunathpur-DVC	2	No	No		No Detail	Yes	Jun-21
Koderma-DVC	1	Yes	Yes	2013	No	Yes	Sep-21
Waria	4	Yes	Yes	2008	No	Yes	Unit Is out of Service
ISGS							
Kahalgaon NTPC	1	Yes	Yes	2017	Yes	Yes	Apr-21
Kahalgaon NTPC	2	Yes	Yes	2018	Yes	Yes	April 2021 (During AOH)
Kahalgaon NTPC	3	Yes	Yes	2016	Yes	Yes	Jul-21
Kahalgaon NTPC	4	Yes	Yes	2015	No	Yes	Mar-21
Kahalgaon NTPC	6	Yes	Yes	2009	No	Yes	Mar-21
Talcher Stage 2	3	Yes	Yes	2016	Yes	Yes	July 2021 (As per SRPC decision)

Talcher Stage 2	4	Yes	Yes	No Details	No Details	Yes	July 2021 (As per SRPC decision)
Talcher Stage 2	5	Yes	Yes	No Details	No Details	Yes	July 2021 (As per SRPC decision)
Talcher Stage 2	6	Yes	Yes	2016	Yes	Yes	July 2021 (As per SRPC decision)
Barh NTPC	4			2015		Yes	In Next AOH
Barh NTPC	5			During Unit commissioning		Yes	June 2021 (AOH)
Teesta V	1	Yes	Yes	2008	No	Yes	Jun-21
Teesta V	2	Yes	Yes	2008	No	Yes	Jun-21
Teesta V	3	Yes	Yes	2008	No	Yes	Jun-21
BRBCL	1	No	Yes	Vendor to Do	No	Yes	Jun-21
BRBCL	2	Yes	Yes	2019	Yes	Yes	Jun-21
BRBCL	3	No	Yes	Vendor to Do	No	Yes	Jun-21
KBUNL	1	Yes	Yes	2014	No	Yes	2021-22
KBUNL	2	Yes	Yes	2014	No	Yes	2021-22
KBUNL	3	Yes	Yes	Not Available	No	Yes	2021-22
KBUNL	4	Yes	Yes	Not Available	No	Yes	2021-22
Rangit	3 x 20			Not Available	No	Yes	To be updated by NHPC
IPP							
Jorethang	1	Yes	Yes	2015	No	Yes	Apr-21
Jorethang	2	Yes	Yes	2015	No	Yes	Apr-21
ADHUNIK	1	Yes	YES	2013	No	Yes	Mar-21
ADHUNIK	2	Yes	YES	2013	No	Yes	Mar-21
JITPL	1	Yes	Yes	2016	Yes	Yes	Jul-21
JITPL	2	Yes	Yes	2016	Yes	Yes	Jul-21
GMR	1	Yes	Yes	2013	No	Yes	May-21
GMR	2	Yes	Yes	2013	No	Yes	May-21
GMR	3	Yes	Yes	2013	No	Yes	May-21
Orissa							
IB TPS	1	Yes	Yes	2011	No	Yes	Mar'2021
IB TPS	2	Yes	Yes	2012	No	Yes	Mar'2021
Upper Indravati	1	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	2	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	3	Yes	No	2000	No	Yes	To be updated by OHPC
Upper Indravati	4	Yes	No	2001	No	Yes	To be updated by OHPC
Balimela	1 (60 MW)			No detail		Yes	To be updated by OHPC
Balimela	2 (60 MW)			No detail		Yes	To be updated by OHPC
Balimela	3 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	4 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	5 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	6 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	7 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC

Balimela	8 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Upper Kolab	1	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	2	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	3	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	4	Yes	Yes	2007	No	Yes	To be updated by OHPC
Rengali	1	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	2	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	3	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	4	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	5	No	Yes	Not tuned	No	Yes	To be updated by OHPC
Sterlite	4 X 600			No detail		Yes	To be updated by SLDC Orissa
Jharkhand							
Tenughat	1	Yes	Yes	2017	Yes	Yes	No report has been submitted. So tuning to be planned
Tenughat	2	Yes	Yes	2017	Yes	Yes	No report has been submitted. So tuning to be planned
Subarnrekha	2 X 65					Yes	To be updated
Bihar							
BTPS	6 (110)					Yes	To be updated by BSPGCL
BTPS	7 (110)					Yes	To be updated by BSPGCL
BTPS	8					Yes	To be updated by BSPGCL
BTPS	9					Yes	To be updated by BSPGCL
Bhutan							
Tala	1	No	Yes			Yes	To be updated by BPC
Tala	2	No	Yes			Yes	To be updated by BPC
Tala	3	No	Yes			Yes	To be updated by BPC
Tala	4	No	Yes			Yes	To be updated by BPC
Tala	5	No	Yes			Yes	To be updated by BPC
Tala	6	No	Yes			Yes	To be updated by BPC
Chukha	1	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	2	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	3	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	4	No	Yes	2005	No	Yes	To be updated by BPC
Mangdechu	1	No	Yes			Yes	To be updated by BPC
Mangdechu	2	No	Yes			Yes	To be updated by BPC
Mangdechu	3	No	Yes			Yes	To be updated by BPC
Mangdechu	4	No	Yes			Yes	To be updated by BPC

SL.NO	PARTICULARS	PEAK DEMAND IN MW	ENERGY IN MU
1	BIHAR		
i)	NET MAX DEMAND	6183	3550
ii)	NET POWER AVAILABILITY- Own	842	185
iii)	Central Sector+Bi-Lateral	4958	2864
iv)	SURPLUS(+)/DEFICIT(-)	-383	-315
2	JHARKHAND		
i)	NET MAXIMUM DEMAND	1540	860
ii)	NET POWER AVAILABILITY- Own Source	389	187
iii)	Central Sector+Bi-Lateral+IPP	1040	618
iv)	SURPLUS(+)/DEFICIT(-)	-111	-55
3	DVC		
i)	NET MAXIMUM DEMAND	3160	2111
ii)	NET POWER AVAILABILITY- Own Source	5500	2978
iii)	Central Sector+MPL	240	266
iv)	Bi- lateral export by DVC	2500	1636
v)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	80	-503
4	ODISHA		
i)	NET MAXIMUM DEMAND(OWN)	4450	2946
ii)	NET MAXIMUM DEMAND(In Case,600 MW CPP Drawal)	5050	3018
ii)	NET POWER AVAILABILITY- Own Source	4140	2498
iii)	Central Sector	1563	954
iv)	SURPLUS(+)/DEFICIT(-) (OWN)	1253	506
v)	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	653	434
5	WEST BENGAL		
5.1	WBSEDCL		
i)	NET MAXIMUM DEMAND	7300	4385
iii)	TOTAL WBSEDCL's Energy Requirement (incl.B'Desh+Sikkim)	7305	4473
iv)	NET POWER AVAILABILITY- Own Source	4684	2133
v)	Contribution from DPL	450	243
vi)	Central Sector+Bi-lateral+IPP&CPP+TLDP	2604	1331
vii)	EXPORT (TO B'DESH & SIKKIM)	5	4
viii)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	433	-766
5.2	IPCL DEMAND	130	84
5.3	CESC		
i)	NET MAXIMUM DEMAND	2290	1150
ii)	NET POWER AVAILABILITY- Own Source	830	550
iii)	FROM OTHER SOURCE (INCL. IPP/CPP-29-30 MU/M)	920	205
iv)	IMPORT FROM HEL	540	395
v)	TOTAL AVAILABILITY OF CESC	2290	1150
vi)	SURPLUS(+)/DEFICIT(-)	0	0
	WEST BENGAL (WBSEDCL+IPCL+CESC)		
	(excluding DVC's supply to WBSEDCL's command area)		
i)	NET MAXIMUM DEMAND	9720	5619
ii)	NET POWER AVAILABILITY- Own Source	5964	2926
iii)	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	4064	1931
iv)	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	308	-762
v)	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	303	-766
7	SIKKIM		
i)	NET MAXIMUM DEMAND	107	47
ii)	NET POWER AVAILABILITY- Own Source	8	1
	- Central Sector	188	110
iii)	SURPLUS(+)/DEFICIT(-)	89	64
8	EASTERN REGION		
i)	NET MAXIMUM DEMAND	24667	15133
ii)	NET MAXIMUM DEMAND (In Case, 600 MW CPP Drawal of Odisha)	25255	15205
iii)	BILATERAL EXPORT BY DVC	2500	11636
iv)	EXPORT BY WBSEDCL TO SIKKIM	5	4
v)	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	605
v)	NET TOTAL POWER AVAILABILITY OF ER	28896	115518
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
vi)	SURPLUS(+)/DEFICIT(-) OF ER	1082	-1861
vii)	SURPLUS(+)/DEFICIT(-) OF ER (In Case, 600 MW CPP Drawal of Odisha)	482	-1933