



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

उत्तर क्षेत्रीय विद्युत समिति

Northern Regional Power Committee


No. उ.क्षे.वि.स./प्रचालन/102/01/2020/1622-60

दिनांक: 17.02.2020

**विषय: Minutes of 19<sup>th</sup> LGBR Sub-Committee meeting.**

19<sup>th</sup> LGBR Sub-Committee meeting was held on 14.02.2020. The Minutes of the meeting is uploaded on the NRPC website <http://www.nrpc.gov.in>. Any comments on the minutes may kindly be submitted within a week of issuance of the minutes.

संलग्नक: यथोपरि

  
21/02/2020

(सौमित्र मजूमदार)

अधीक्षण अभियंता (प्रचालन)

## Minutes of the 19<sup>th</sup> LGBR Sub-Committee meeting

19<sup>th</sup> LGBR Sub-Committee meeting was held on 14.02.2020 at NRPC Secretariat, New Delhi. The list of participants of the meeting is attached at **Annexure-I**.

MS, NRPC welcomed the participants to 19<sup>th</sup> LGBR Sub-Committee meeting. In the opening remarks, he emphasized on the need for preparation of holistic LGBR report, including transmission outage schedule, so that proper planning can be done for Northern Region. He mentioned that planned outage report and the LGBR report may be finalized by first week and first fortnight of March'20 respectively.

SE (O), NRPC intimated the following:

- i. During 18<sup>th</sup> LGBR Sub-Committee meeting, it was decided to constitute LGBR drafting committee. Based on the nominations received from NLDC and NRLDC, the LGBR drafting committee held 7 meetings for deciding the methodology for demand and availability anticipations.
- ii. As regard the demand projection, CAGR and Weighted average methods have been utilized and results have been compared with the data furnished by states. For computing the availability of Central Generating Stations, State Generators and IPPs, the effective capacity at state boundary, deduction of planned outages and past year's generation trend have been utilized.

Agenda-wise deliberations are as under:

### 1. Confirmation of minutes of 18<sup>th</sup> LGBR Sub-Committee Meeting

***Sub-Committee confirmed the Minutes of 18<sup>th</sup> LGBR Sub-Committee meeting.***

### 2. Review of LGBR 2019-20(Q-4)

Based on the data received from the utilities and states, the planned outages during the month of March-2020 and anticipated availability / demand in Peak and Energy was discussed in the meeting.

Following changes in the planned outage schedules were discussed:

- i. **Delhi** – Earlier planned outage of Unit#2 of PRAGATI-I from 01.03.2020 to 20.03.2020 to be removed.
- ii. **NTPC** - Outage of GT-1 of Dadri Gas from 19<sup>th</sup> Feb'2020 for 30 days & ST-1 of Dadri Gas from 19<sup>th</sup> Feb'2020 for 15 days were agreed as per the revised schedule.

### 3. Review of Power Supply Position of NR (2019-2020)

The Sub-Committee was informed about the noticeable variations between

anticipated and actual availability of both Energy and Power during 2019 (variations enclosed at **Annexure-II**).

Sub-Committee was of the view that excessive availability estimation needs to be avoided in the LGBR 2020-21.

Following revised figures pertaining to the anticipated power supply position for the month of March 2020 have been submitted by the states:

State / UT	Energy Availability (MU)	Energy Requirement (MU)	MW Availability	Peak Demand (MW)
Uttrakhand	1043	1054	1930	1980
HP	863	868	1711	1688
Rajasthan	6800	6800	13200	13200

Sub-Committee took note of the above.

#### **4. Generation outage program for 2020-21**

The draft outage schedule for 2020-21, based on the criteria decided in 18<sup>th</sup> LGBR Sub-Committee meeting, was shared with the sub-committee.

Following utilities submitted revised outage plan (**Annexure-III**):

- i. NHPC
- ii. NTPC
- iii. THDC

Further, representative of Adani Mundra intimated that Unit #8 needs to be replaced by Unit #9 and outage period may be 15.11.2020 to 15.12.2020.

The Sub-Committee concurred the aforementioned revisions.

Representative of NTPC informed the sub-committee that in view of recent CERC Regulations, relatively higher DC is required during off-peak months for safeguarding the commercial interests of thermal plants and as such some planned outages of thermal plants during peak months may be allowed. It was decided that this aspect may be deliberated in a separate meeting with Thermal generators and concerned beneficiaries during first week of March 2020 and thereafter planned outage schedule for 2020-21 may be finalized.

#### **5. Anticipated Demand for LGBR 2020-21**

It was informed that anticipated demand for LGBR 2020-21 has been computed by using two methodologies (*weighted average method – discussed in 18<sup>th</sup> LGBR meeting, and CAGR*) and their variations with the data submitted by the states has been highlighted in the Annexure-VI and Annexure-VII of the Agenda.

Following decisions were taken in respect of anticipated Peak and Energy demand for 2020-21:

- **Delhi** - It was decided to utilize the energy demand data of the state for March 2021 as demand growth is not likely to follow the pattern of last year.
- **Uttar Pradesh** - Energy and Peak demand projection data may be re-examined by UP and same may be retained in the LGBR 2020-21.
- It was decided to discuss the reasons of significant variations between the data of other states with respect to computation done by the drafting committee in the upcoming 168<sup>th</sup> OCC meeting.

## 6. Anticipated Availability for LGBR 2020-21

SE(O), NRPC briefed the sub-committee about the generation pattern of 2019, along with the sources of the data used for the same. He further explained the following methodology used for computing MW availability of plants:

- i. If planned outage in a month is greater than 15 days, then MW availability contribution of that unit for meeting peak demand has been assumed as zero in that month.
- ii. Effective capacity is calculated by deducting auxiliary consumption and transmission losses (*zero for plants located within the state and 3.5% for plants outside the state*) from the installed capacity.
- iii. Regarding solar power, the time of state's monthly peak demand during 2019 has been examined and if it has fallen between 10 am to 4 pm, then contribution of solar generation to meet state's peak has been considered in the particular month of 2020-21.

In respect of energy availability, contribution of units has not been considered during the period of their planned outage. Further, monthly PLF pattern of the higher capacity plants and monthly generation pattern of sector specific (*Thermal/Hydro/Gas/Solar/Wind/Biomass*) state / IPP generation during 2019 has been compiled and same pattern has been adopted for working out the energy availability during 2020-21. In order to nullify the effect of planned outages from the generation pattern of 2019, incremental factor has been considered for computing generation pattern for 2020-21.

After deliberations, following decisions were taken in respect of availability computation:

- a. If the variation between the availability data of state and LGBR drafting committee is more than  $\pm 10\%$ , then data submitted by utilities/states may be considered after getting justification.

- b. LGBR drafting committee would re-examine the timings of peak demand of all the states for computing the solar contribution on the MW availability as UP representative highlighted the necessity to rectify the timings of peak demands for UP.

***MS, NRPC mentioned that a separate meeting may be scheduled with Thermal Generating utilities along with their beneficiaries to finalize the outage program of the generating stations.***

The meeting ended with vote of thanks to the chair.

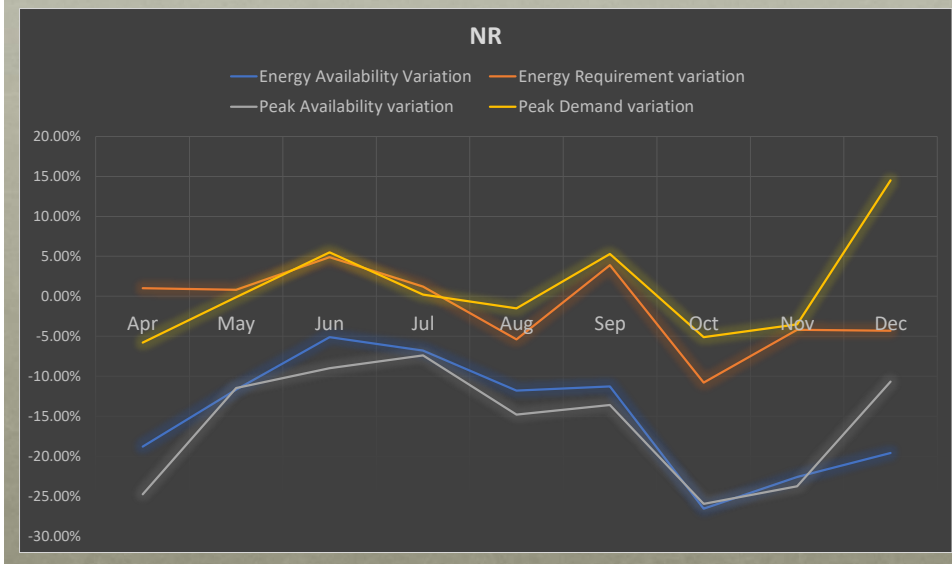
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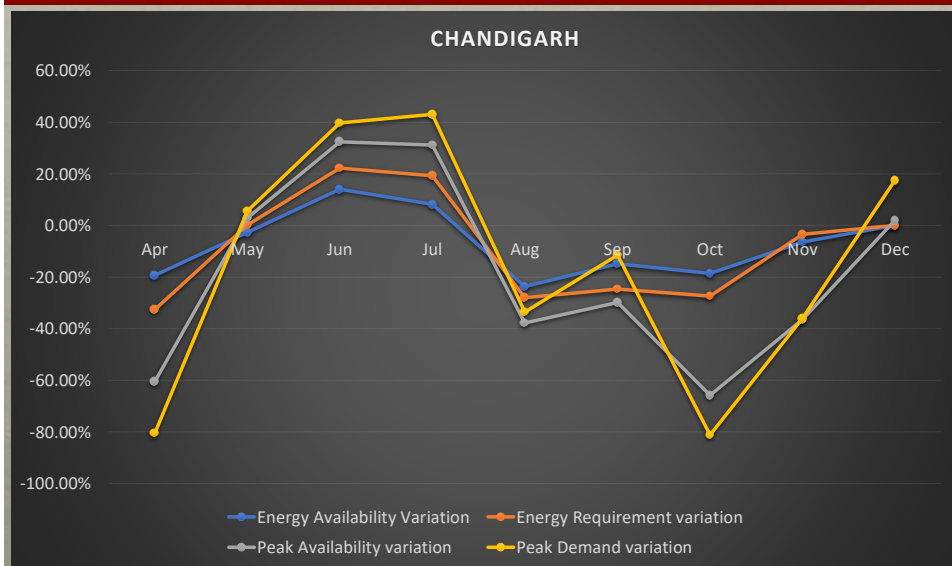
List of Participants of 19<sup>th</sup> LGBR Sub-Committee Meeting held on 14.02.2020 at NRPC Sectt.

S. No	Name	Designation & Organization	Mobile No.	Email Id	Signature
1.	Anurag Vats	AEM RRVPNL	9413347172	vats.anurag@rvpn.co.in	
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4.	HARIDAS MAITY	GM/BYPL	9350110156	haridas.maity@vel.orissa.gov.in	
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6.	Saunabh Mishra	AE/UPSLDC	9891738624	eemis@upslde.org	
7.	A.K. Gere	JE/SIDC Delhi	8840392011	dtldata@govtel.com	
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18.	S.K. Dubey	AGM, NTPC, DBF	9650993044	byadar@ntpc.co.in	
19.	शशि शर्मा	AGM - NTPC LKO	9415803138	skdubey02@ntpc.co.in	
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22.	शशि शर्मा	AEE (CO) NRPC	9502825155	BC.see@gmail.com	
23.	शशि शर्मा	शशि शर्मा	989989861	seo-nrpc@govt.in	

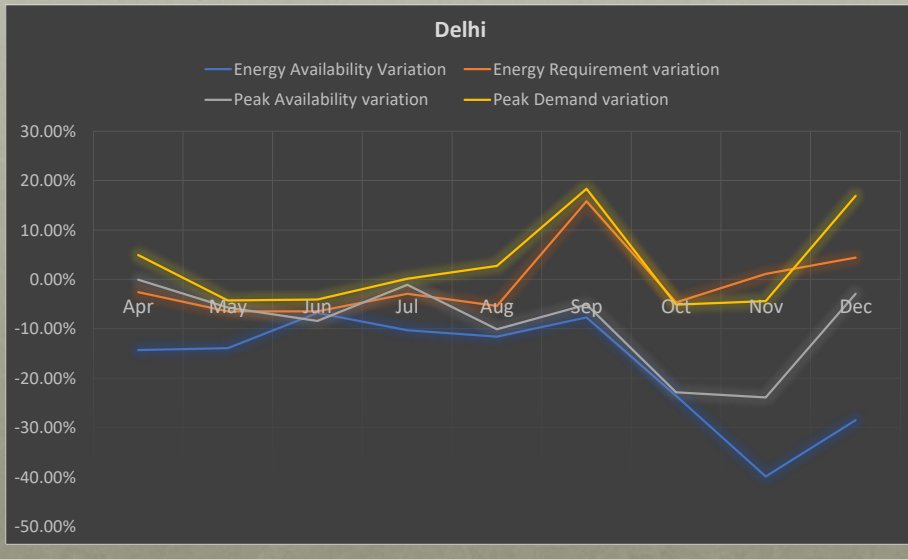
# ACTUAL V/S ANTICIPATED VARIATION (2019)



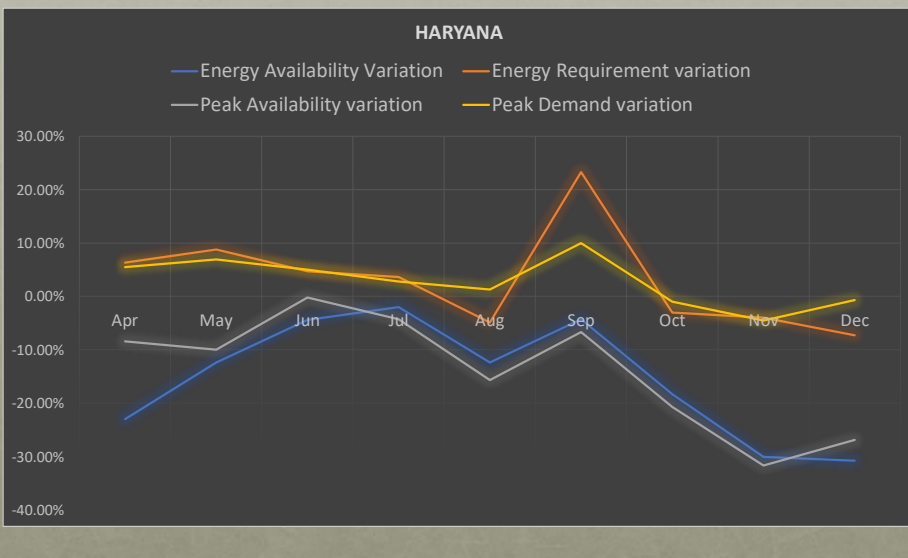
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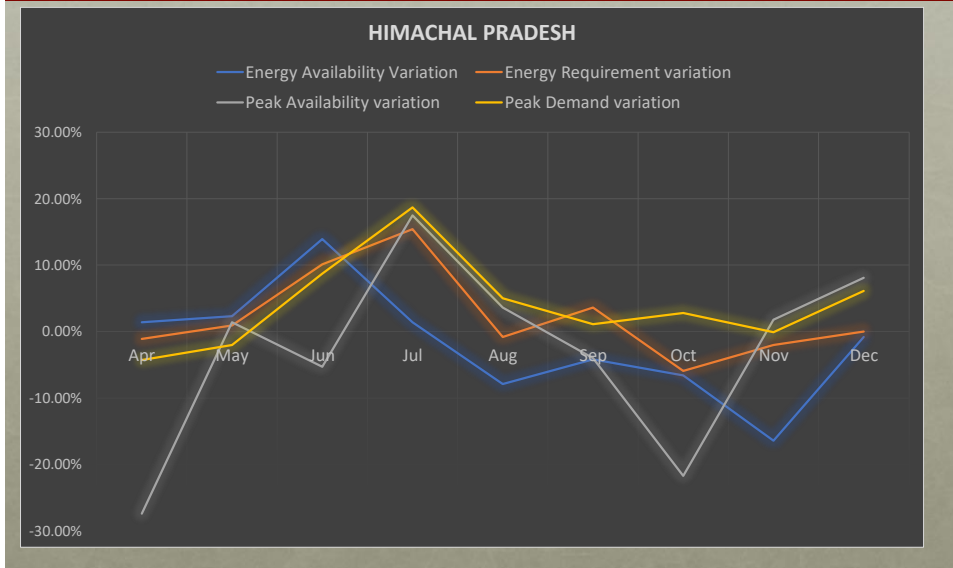


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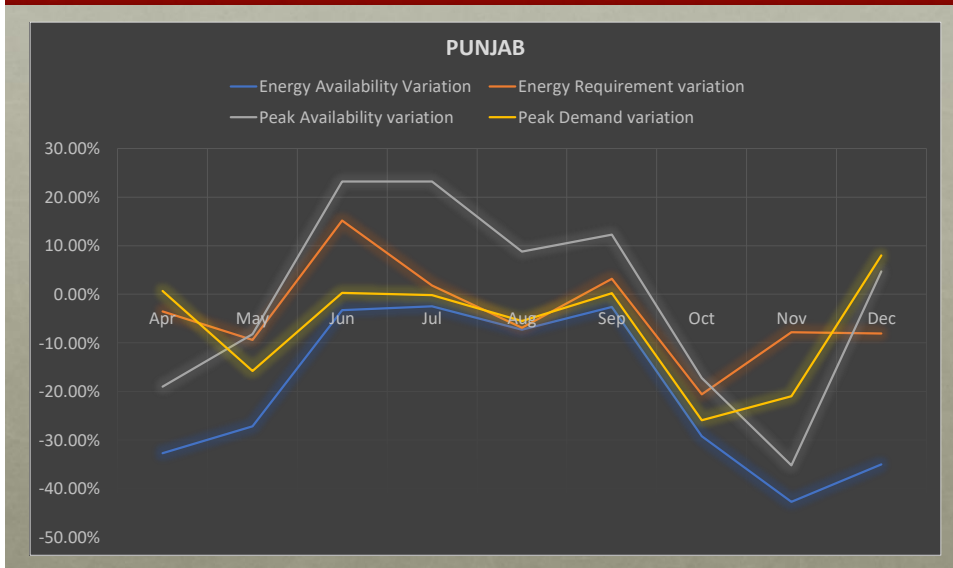




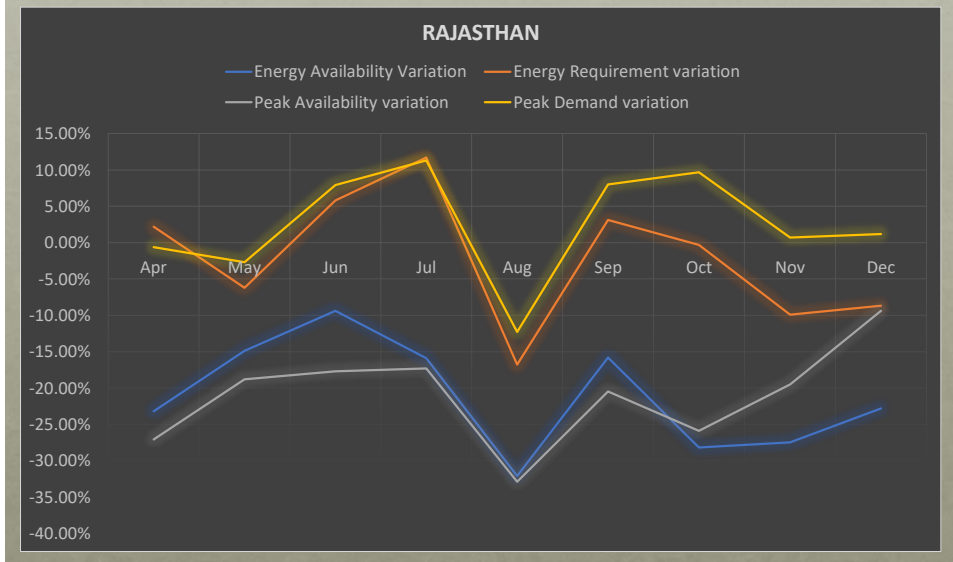
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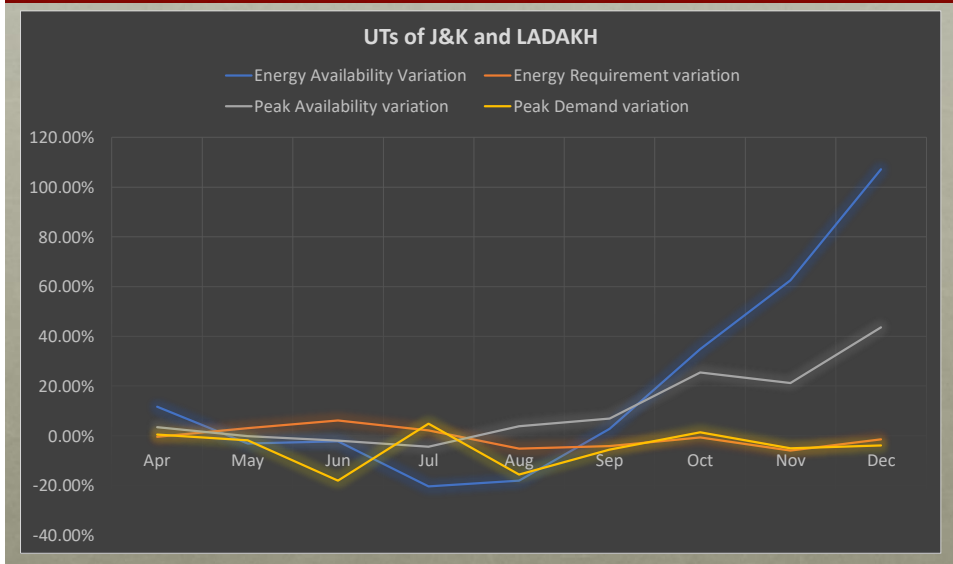
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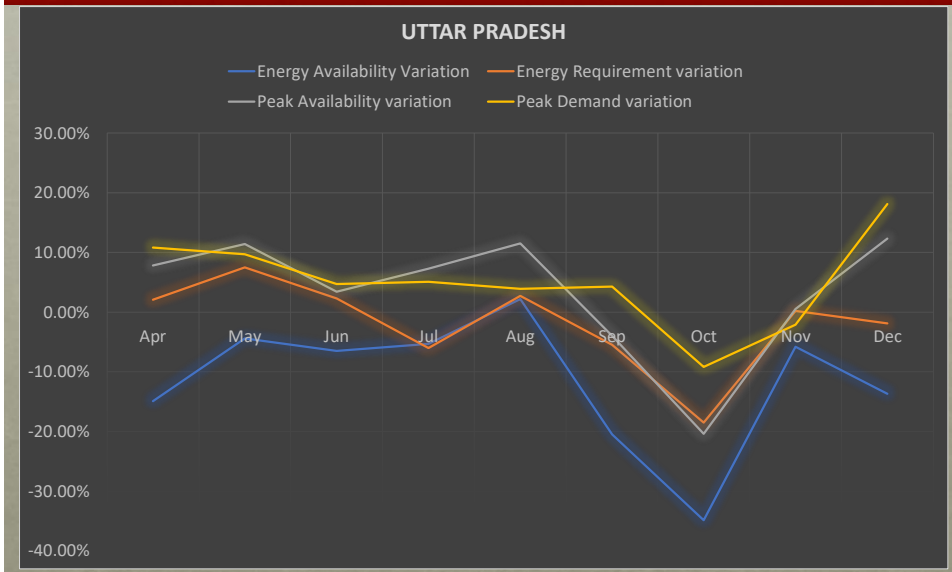
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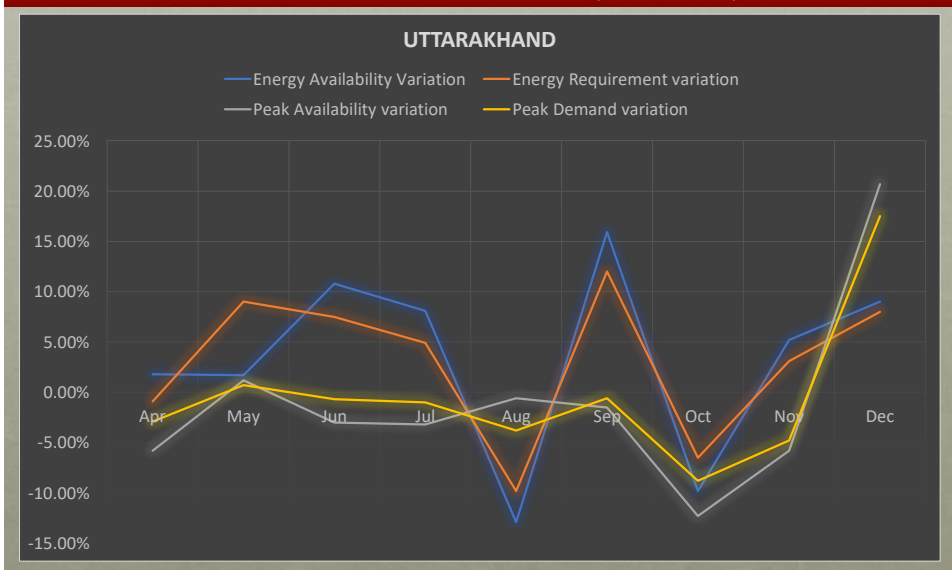
# ACTUAL V/S ANTICIPATED VARIATION (2019)



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# ACTUAL V/S ANTICIPATED VARIATION (2019)



## PROPOSED PLANNED OUTAGE SCHEDULE 2020-21

SL. NO.	स्टेशन/ STATION	यूनिट/ Unit	स्टेशन क्षमता/ CAPACITY (MW)	वार्षिक आउटेज योजना के अनुसार अनुरक्षण शेड्यूल/Maintenance Schedule as per Annual Outage Planning			अभ्युक्ति/ Remarks
				से/From	तक/To	दिनों की संख्या/No. Of days	
<b>NHPC</b>							
1	BAIRA SIUL	I	60	Not required			R&M
		II	60	1-Dec-20	30-Dec-20	30	AM
		III	60	5-Jan-21	4-Feb-21	31	AM
2	SALAL	I	115	14-Nov-20	3-Dec-20	20	AM
		II	115	4-Dec-20	23-Dec-20	20	AM
		III	115	24-Dec-20	12-Jan-21	20	AM
		IV	115	13-Jan-21	1-Feb-21	20	AM
		V	115	2-Feb-21	21-Feb-21	20	AM
		VI	115	22-Feb-21	13-Mar-21	20	AM
3	TANAKPUR	I	31.4	25-Feb-21	31-Mar-21	35	AM
		II	31.4	20-Jan-21	23-Feb-21	35	AM
		III	31.4	15-Nov-20	3-Mar-21	109	CM
		Proposed Complete Shutdown for construction of Indo-Nepal Link Canal during Feb-21 & Mar-21.					
4	CHAMERA-I	I	180	6-Jan-20	24-Jan-20	19	AM
		II	180	30-Jan-20	20-Feb-20	22	AM
		III	180	11-Dec-19	30-Dec-19	20	AM
5	URI	I	120	1-Nov-20	20-Nov-20	20	AM
		II	120	22-Nov-20	21-Dec-20	30	AM
		III	120	23-Dec-20	11-Jan-21	20	CM
		IV	120	13-Jan-21	1-Feb-21	20	CM
6	CHAMERA-II	I	100	11-Nov-20	25-Nov-20	15	AM
		II	100	13-Dec-20	27-Dec-20	15	AM
		III	100	27-Nov-20	11-Dec-20	15	AM
7	DHAULIGANGA	I	70	2-Dec-20	23-Dec-20	22	AM
		II	70	1-Jan-21	22-Jan-21	22	AM
		III	70	1-Feb-21	2-Mar-21	30	AM
		IV	70				

SL. NO.	स्टेशन/ STATION	यूनिट/ Unit	स्टेशन क्षमता/ CAPACITY (MW)	वार्षिक आउटेज योजना के अनुसार अनुरक्षण शेड्यूल/Maintenance Schedule as per Annual Outage Planning			अभ्युक्ति/ Remarks
				से/From	तक/To	दिनों की संख्या/No. Of days	
8	DULHASTI	I	130	1-Dec-20	20-Dec-20	20	AM
		II	130	23-Dec-20	11-Jan-21	20	AM
		III	130	14-Jan-21	2-Feb-21	20	AM
9	SEWA-II	I	40	14-Nov-20	28-Nov-20	15	AM
		II	40	1-Dec-20	15-Dec-20	15	AM
		III	40	18-Dec-20	1-Jan-21	15	AM
10	CHAMERA-III	I	77	2-Jan-21	16-Jan-21	15	AM
		II	77	20-Jan-21	3-Feb-21	15	AM
		III	77	7-Feb-21	28-Feb-21	22	CM
		Complete shutdown for repair works of GIS for 08 days, tentatively in April					
11	URI II	I	60	1-Nov-20	20-Nov-20	20	AM
		II	60	23-Nov-20	12-Dec-20	20	AM
		III	60	15-Dec-20	3-Jan-21	20	AM
		IV	60	6-Jan-21	25-Jan-21	20	AM
12	PARBATI III	I	130	15-Nov-20	5-Dec-20	20	AM
		II	130	6-Dec-20	26-Dec-20	20	AM
		III	130	27-Dec-20	17-Jan-21	21	AM
		IV	130	18-Jan-21	8-Feb-21	22	AM
13	NIMMO BAZGO	I	15	18-Nov-20	10-Dec-20	23	AM
		II	15	14-Dec-20	5-Jan-21	23	AM
		III	15	9-Jan-21	31-Jan-21	23	AM
14	CHUTAK	I	11	24-Dec-20	22-Jan-21	30	AM
		II	11	24-Jan-21	22-Feb-21	30	AM
		III	11	25-Oct-20	23-Nov-20	30	AM
		IV	11	24-Nov-20	23-Dec-20	30	AM
15	K'GANGA	I	110	14-Dec-20	28-Dec-20	15	AM
		II	110	30-Dec-20	13-Jan-21	15	AM
		III	110	15-Jan-21	29-Jan-21	15	AM

NTPC							
1	Dadri Coal (NCTPS)	1	210	27-Oct-20	30-Nov-2020	35	Capital overhaul+DSI
2	Dadri Coal (NCTPS)	2	210	28-Mar-21	16-Apr-21	20	Boiler OH
3	Dadri Coal (NCTPS)	5	490	24-Feb-21	20-Mar-21	25	Boiler OH+ LP + Generator OH
4	Anta GPS	GT 1	88.7	2-Apr-20	1-May-20	30	16000 EOH Inspection+ WHRB License renewal
5	Anta GPS	GT 1	88.7	26-Nov-20	29-Nov-20	4	4000 EOH Inspection
6	Anta GPS	GT2	88.7	15-May-20	18-May-20	4	4000 EOH Inspection
7	Anta GPS	GT 2	88.7	1-Oct-20	4-Oct-20	4	WHRB License renewal
8	Anta GPS	GT 2	88.7	13-Dec-20	18-Dec-20	6	8000 EOH Inspection
9	Anta GPS	GT 3	88.7	20-Apr-20	23-Apr-20	4	8000 EOH Inspection
10	Anta GPS	GT 3	88.7	3-Sep-20	8-Sep-20	6	12000 EOH Minor inspection
11	Auraiya GPS	GT 1	111.19	28-Apr-20	28-Apr-20	1	WHRB License renewal
12	Auraiya GPS	GT 1	111.19	30-Nov-20	14-Dec-20	15	Turbine inspection+ RLA work og WHRB1
13	Auraiya GPS	GT 2	111.19	15-Jun-20	15-Jun-20	1	WHRB License renewal
14	Auraiya GPS	GT 2	111.19	10-Nov-20	11-Nov-20	2	Filter replacement
15	Auraiya GPS	GT 3	111.19	1-Oct-20	7-Oct-20	7	Combustion chamber inspection + RLA work of WHRB
16	Auraiya GPS	GT 3	111.19	19-Nov-20	19-Nov-20	1	WHRB License renewal
17	Auraiya GPS	GT 4	111.19	10-Feb-21	10-Feb-21	1	WHRB License renewal
18	Auraiya GPS	GT 4	111.19	5-Nov-20	6-Nov-20	2	Filter replacement
19	Auraiya GPS	ST 2	109.3	1-Oct-20	30-Oct-20	30	Steam turbine overhauling
20	Dadri Gas	GT 1	130.9	24-May-20	28-May-20	5	4000 EOH Inspection
21	Dadri Gas	GT 1	130.9	21-Oct-20	27-Oct-20	7	8000 EOH Inspection
22	Dadri Gas	GT 1	130.9	25-Dec-20	26-Dec-20	2	Boiler licence renewal + Filter replacement+ Compressor washing
23	Dadri Gas	GT 2	130.9	11-Apr-20	15-Apr-20	5	4000 EOH Inspection
24	Dadri Gas	GT 2	130.9	24-Jun-20	25-Jun-20	2	Boiler licence renewal
25	Dadri Gas	GT 2	130.9	24-Sep-20	30-Sep-20	7	8000 EOH Inspection

SL. NO.	स्टेशन/ STATION	यूनिट/ Unit	स्टेशन क्षमता/ CAPACITY (MW)	वार्षिक आउटेज योजना के अनुसार अनुरक्षण शेड्यूल/Maintenance Schedule as per Annual Outage Planning			अभ्युक्ति/ Remarks
				से/From	तक/To	दिनों की संख्या/No. Of days	
26	Dadri Gas	GT 2	130.9	1-Dec-20	2-Dec-20	2	Filter replacement + Compressor washing
27	Dadri Gas	GT 3	130.9	1-Jun-20	5-Jun-20	5	4000 EOH Inspection
28	Dadri Gas	GT 3	130.9	18-Nov-20	24-Nov-20	7	8000 EOH Inspection
29	Dadri Gas	GT 3	130.9	25-Dec-20	26-Dec-20	2	Boiler licence renewal+ Filter replacement & compressor washing
30	Dadri Gas	GT 4	130.9	3-Apr-20	9-Apr-20	7	8000 EOH Inspection
31	Dadri Gas	GT 4	130.9	1-Sep-20	10-Sep-20	10	25000 EOH Inspection
32	Dadri Gas	GT 4	130.9	12-Nov-20	13-Nov-20	2	Filter replacement + Compressor washing
33	Dadri Gas	GT 4	130.9	22-Feb-21	26-Feb-21	5	4000 EOH Inspection
34	Dadri Gas	GT 4	130.9	29-Mar-21	30-Mar-21	2	Filter replacement + Compressor washing
35	Dadri Gas	ST 1	154.51	21-Oct-20	30-Oct-20	10	Annual Inspection
36	Dadri Gas	ST 2	154.51	1-Sep-20	10-Sep-20	10	Annual Inspection
37	Faridabad GPS	GT 1	137.758	1-Jun-20	5-Jun-20	5	Minor Inspection
38	Faridabad GPS	GT 2	137.758	15-Feb-21	21-Mar-21	35	R&M of C&I system
39	Koldam HEP (NTPC)	1	200	8-Dec-20	12-Dec-20	5	Annual Inspection
40	Koldam HEP (NTPC)	2	200	14-Dec-20	18-Dec-20	5	Annual Inspection
41	Koldam HEP (NTPC)	3	200	2-Feb-21	6-Feb-21	5	Annual Inspection
42	Koldam HEP (NTPC)	4	200	8-Feb-21	12-Feb-21	5	Annual Inspection

THDC							
1	Tehri HPP (4X250MW)	Unit#1	250	17.05.20	05.06.20	20	Annual Maintenance
2	Tehri HPP (4X250MW)	Unit#2	250	29.04.20	18.05.20	20	Annual Maintenance
3	Tehri HPP (4X250MW)	Unit#3	250	20.03.20	28.04.20	40	Major Maintenance + Replacement of GT
4	Koteshwar HEP (4X100MW)	Unit#1	100	01.04.20	30.04.20	30	Annual Maintenance
5	Koteshwar HEP (4X100MW)	Unit#3	100	01.10.20	30.10.20	30	Annual Maintenance
6	Koteshwar HEP (4X100MW)	Unit#4	100	01.03.21	30.03.21	30	Annual Maintenance