

Report on Forecast Model (SDDP) Results – October. 2023

The forecast report has been prepared based on the following assumptions,

Assumptions:

1. Demand Forecast
The forecast as given in Annexure-1, has been adjusted following CEB management instructions considering the present system demand pattern and next year expected demand growth.
2. Indicative centrally dispatch Generation rolling Plan
Indicative centrally dispatch generation plan is prepared for average hydro scenario. Results are given in Annexure-02. This is only an indicative Energy dispatch plan and this plan cannot be used for future plant additions and only a guide line for dispatch planning.
3. Fuel Requirement
Indicative fuel oil requirement for average scenario as above is given in Annexure-03.
4. Fuel Availability
No fuel restrictions are considered except for refinery Naptha production.
5. Indicative maintenance plan
Maintenance plan is mainly considered for the generation units and is summarized in Annexure-04.
6. Expected Reservoir operation
Expected reservoir operation under average, 20% upper and 20% lower probability condition is given in Annexure-05 for all major reservoirs. WMS strictly impose restrictions on hydro generation (Mahaweli Complex) from time to time and thus final dispatch/fuel requirement may be varied from indicative figures. Also, depending on higher management instructs from time to time, running pattern of thermal and Hydro machines could be varied significantly from the output results. Thus, dispatch pattern may be different than indicated.
7. Probability of Deficit
Percentage of probability of occurring deficit is estimated and final result is attached as Annexure-06.
8. Fuel Price
As per Annexure-8. existing fuel prices are considered for the study period. (Diesel- 351 Rs/l, Furnace Oil- 240 Rs/l , Low Sulfur Furnace Oil- 240 Rs/l, Naptha- 161 Rs/l, Coal- 52.59 Rs/kg)
9. Hydro Storage
The total storage at the beginning of the October 2023 is assumed to be 518 GWh which is around 43% of total storage

10. Thermal Capacity

The initial total thermal capacity available is assumed to be around 1920 MW with short term addition of ACE Matara and ACE Embilipitiya. Meanwhile 150MW of furnace oil fired plant capacity is assumed to be commissioned for next year. In addition to that, 212 MW of Sobadaanvi GT is assumed to be made available for open cycle operation using diesel from March 2024 onwards.

11. Peak forecast

Estimated average night peak forecast is attached in Annexure-07.

M.B.S Samarasekera

M.B.S Samarasekera
Deputy General Manager
(System Control)

Eng. M.B.S. Samarasekera
D.G.M. (System Control)

- Annexure 01 -Demand Forecast
- Annexure 02 -Indicative dispatch plans for average hydrology conditions
- Annexure 03 -Fuel Requirement under two scenarios
- Annexure 04 -Maintenance Plan
- Annexure 05 -Expected Reservoir Operation
- Annexure 06 -Probability of Deficit
- Annexure 07 -Peak Forecast
- Annexure 08 -Existing Fuel Prices

Demand GWh

ANNEXURE-01

2023/24	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	75.74	73.59	75.29	78.02	74.83	80.18	74.37	81.11	79.55	81.98	81.58	77.99
2	73.04	70.25	72.79	75.37	70.21	75.99	70.89	77.22	74.19	76.15	76.65	76.14
3	67.02	64.33	66.7	70.81	68	74.02	69	74.63	72.06	73.54	74.71	71.04
4	64.08	61.82	62.86	64.4	62.7	69.55	65.15	70.18	67.78	69.98	71.32	66.88
5	62.95	60.33	61.7	62.86	60.77	67.93	62.61	67.6	65.67	67.67	69.26	65.45
6	62.21	59.53	61.04	62.31	60.27	67.18	61.9	66.56	65.04	67.1	68.43	64.8
7	61.62	58.96	60.47	61.46	59.53	66.18	61.11	65.7	64.36	66.49	67.65	64.1
8	60.94	58.28	59.83	60.87	58.85	65.59	60.45	65.02	63.72	65.82	67	63.32
9	60.44	57.79	59.32	60.31	58.47	65.05	59.91	64.56	63.18	65.27	66.46	62.81
10	60.01	57.31	58.83	59.83	57.96	64.49	59.1	63.93	62.67	64.79	65.92	62.38
11	59.4	56.71	58.38	59.18	57.2	63.61	58.2	63.11	62.03	64.29	65.14	61.74
12	58.62	55.9	57.69	58.48	56.29	62.41	56.96	61.98	60.76	62.92	63.71	60.91
13	56.29	53.69	55.95	57.21	55.37	61.42	55.93	60.76	59.83	61.94	62.6	59.4
14	54.84	52.36	53.76	55.83	53.99	59.91	54.66	59.61	58.71	60.95	61.32	58.21
15	52.86	50.68	51.77	54.44	52.61	58.01	52.43	57.32	56.05	58.12	57.44	55.62
16	50.89	49.49	50.57	53.6	51.67	56.14	50.55	54.19	53.07	56.01	55.98	53.4
17	49.06	47.2	47.08	50.36	48.71	53.84	49.48	53.09	52.14	54.79	53.71	51.97
18	45.6	42.76	44.36	47.42	46.29	51.35	47.24	51.08	50.42	53.23	51.85	49.23
19	82.58	77.11	78.27	84.53	82.76	92.58	85.79	92.57	91.16	95.87	92.59	88.95
20	144.63	134.34	138.97	147.93	144.43	164.4	152.82	162.53	160.54	169.93	167.09	155.95
Total	1302.8	1242.4	1275.6	1325.2	1280.9	1419.8	1308.6	1412.8	1382.9	1436.8	1440.4	1370.3

ESTIMATED ENERGY DISPATCH FORECAST - Avg. October 2023 to September 2024 - GWh

ANNEXTURE-2

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	
Total Net Generation	1303	1242	1276	1325	1325	1281	1420	1309	1413	1383	1437	1440	1370	16199
Total Net Generation/day	42.0	41.4	41.1	42.7	42.7	44.2	45.8	43.6	45.6	46.1	46.3	46.5	45.7	46199
Generation Red. due to SPP	209.5	167.0	183.2	179.4	171.3	215.0	174.0	274.2	343.1	300.1	349.9	360.0	300.0	2927.3
No. of days	31.0	30.0	31.0	31.0	29.0	31.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	30.0
Generation (Centrally dispatch)	1093.3	1074.9	1092.4	1145.8	1109.6	1204.9	1134.5	1138.6	1039.8	1136.7	1090.5	1010.3	13271.3	
Reqd. Generation/day(Centrally)	35.3	35.8	35.2	37.0	38.3	38.9	37.8	37.8	36.7	34.7	35.2	35.2	33.7	33.7
IPP/CEB emergency														
Sobadanavi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.3	0.7	0.0	0.0
WCPP	134.9	71.2	52.4	57.0	88.0	120.1	77.6	77.6	0.0	129.9	154.7	105.7	66.2	66.2
ACE_MATARA	8.6	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ACE_Embilipitiya	35.4	6.7	6.5	9.9	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150_FO	0.0	0.0	0.0	7.4	14.3	28.8	24.6	50.6	50.6	57.8	65.7	16.8	9.1	9.1
TOTAL IPP	178.9	78.0	58.9	74.2	133.1	148.9	102.1	102.1	52.6	187.7	226.7	123.1	75.3	1439.6
CEB Thermal Generation														
LAKVIJAYA1	174.8	169.1	174.8	174.8	174.8	157.9	174.8	169.1	174.8	169.1	174.8	174.8	113.3	113.3
LAKVIJAYA2	174.8	169.1	174.8	174.8	174.8	157.9	174.8	169.1	174.8	0.0	174.8	174.8	169.1	169.1
LAKVIJAYA3	0.0	121.8	174.8	174.8	174.8	157.9	174.8	169.1	174.8	169.1	0.0	174.8	169.1	5551.3
SAPU B	38.2	36.9	32.9	32.9	34.5	38.2	30.5	36.0	36.0	36.9	38.2	38.2	36.9	36.9
SAPU A	30.4	22.7	17.2	21.1	16.9	27.4	23.0	18.2	18.2	29.4	30.4	21.4	18.6	18.6
BARGE	34.1	32.1	22.0	36.2	32.7	36.2	28.9	26.7	26.7	33.0	34.1	34.3	26.7	26.7
Uthuru Jannanee	9.3	8.6	7.6	11.8	10.7	11.5	8.3	6.0	6.0	9.0	9.3	9.2	7.1	7.1
KCCP_Naptha	36.2	67.5	0.0	67.5	67.5	67.5	67.5	67.3	67.5	67.5	67.5	67.5	67.5	67.5
KCCP_Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	2.5	0.2	0.0	0.0	0.0
GT7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMALL_GT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KCCPS 2	4.3	0.0	0.6	0.0	3.2	2.2	2.2	0.0	37.6	32.3	11.4	0.0	0.0	0.0
Hambanthota-CEB	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	2.3	0.6	0.0	0.0	0.0
Matugama-CEB	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total CEB Thermal Generation	502.3	627.9	604.5	699.1	639.2	707.3	665.4	665.4	721.3	551.3	541.5	694.9	608.5	7563.3
Prospective Gen. / Energy shortfall														
Total Thermal Generation	681.2	705.9	663.4	773.4	772.3	856.1	767.5	767.5	773.9	739.0	768.2	818.0	683.9	9002.8
Hydro Gen Req'd.	412.0	369.0	429.0	372.4	337.3	348.7	367.0	367.0	364.7	300.8	368.5	272.5	326.4	4268.5
Deficit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power cut saving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Actual hydro req'd.	412.0	369.0	429.0	372.4	337.3	348.7	367.0	367.0	364.7	300.8	368.5	272.5	326.4	4268.5
Inflow	493.9	530.5	547.8	273.8	175.6	188.4	251.5	309.4	342.3	393.1	367.8	367.8	357.9	4232.1
Drawdown from reservoirs	81.9	161.5	118.8	-98.6	-161.7	-160.3	-115.5	-55.4	41.5	24.6	95.3	31.5	31.5	31.5
STARTING STORAGE	517.8	599.7	761.2	880.0	781.4	619.7	459.5	344.0	288.6	330.1	354.7	450.0	481.5	450.0
Month End Storage	599.7	761.2	880.0	781.4	619.7	459.5	344.0	288.6	288.6	330.1	354.7	450.0	481.5	481.5
% Storage	0.50	0.6	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4

ANNEXURE - 04

HYDRO

*** Planta: 1 KOT HMALE

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	11	33	8.3	25	0	33	0	0	0
2024	0	0	0	17.5	25	17.5	17.5	0	0	25	0	0

**** Planta: 2 UK UWELA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	50	50	50	17	0	0	0	0	37.5	0	0	0
2024	0	0	0	0	0	0	0	50	50	0	0	0

**** Planta: 3 VI CTORIA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	33	33	33	0	0	0	0
2024	0	0	0	0	17.5	33	33	0	0	0	0	0

**** Planta: 4 RA NDENIGAL

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	0	50	33	0	0
2024	0	0	50	50	0	50	100	100	100	0	0	0

**** Planta: 5 RA NTAMBE

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	50	37.5	0	0	0
2024	0	0	0	0	0	0	0	50	50	0	0	0

**** Planta: 6 R_ BOWA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	66	0	0	0	0
2024	0	0	50	50	0	0	25	50	0	0	0	0

**** Planta: 11 CA NYON

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	0	0	0	0	50
2024	0	0	0	0	0	0	0	0	0	0	0	50

**** Planta: 12 NE W_LAXAPA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	0	0	0	0	50
2024	0	0	0	0	0	0	0	0	0	0	0	50

**** Planta: 13 PO LPITIYA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	25	0	0	0	0	0	0	0	0	0	0	37.5
2024	0	0	0	0	0	0	0	0	0	0	0	37.5

**** Planta: 14 WI MALASURE

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	50	0	0	0	0	0	0	0	0	0	0
2024	0	50	0	0	0	0	0	0	0	0	0	0

**** Planta: 15 OL D_LAXAPA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	0	25	0	0	0
2024	25	25	0	12.5	7	0	0	0	0	0	20	0

**** Planta: 23 SA MANALAWA

A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12
2023	0	0	0	0	0	0	0	0	25	25	0	0
2024	0	0	0	0	0	0	50	0	0	0	0	0

**** Planta: 27 KU KULE													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	100	100	100	33	0	0	0	0	0	0	0	0	0
2024	0	50	25	0	0	0	0	0	0	0	0	0	0

**** Planta: 28 UP PER_KOTH													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	12.5	37.5	0	0	0	0	0	50	0	0	0	0	0
2024	0	50	25	0	0	0	0	0	0	0	0	0	0

**** Planta: 29 BR OADLAND													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	25	25	0	0	0	0	0	0	0	0	0	0	0

**** Planta: 31 UM A_OYA													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	0	0	0	0	0

THERMAL

**** Planta: 1 LA KVIJAYA													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	0	0	0	0	0	0	100	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	33	100	100	100	100

**** Planta: 2 SA PU A													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	25	25	25	25	25	25	25	25	25	25	25	25	25
2024	25	25	25	25	25	25	25	25	25	25	25	25	25

**** Planta: 3 SA PU B													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	25	25	25	25	25	25	25	25	25	25	25	25	25
2025	25	25	25	25	25	25	25	25	25	25	25	25	25

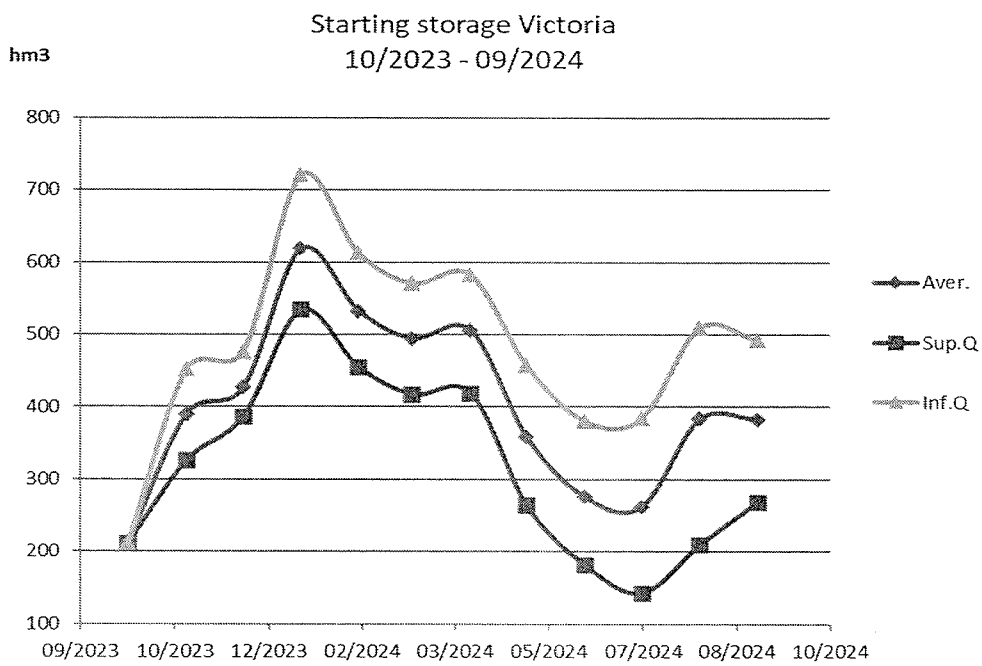
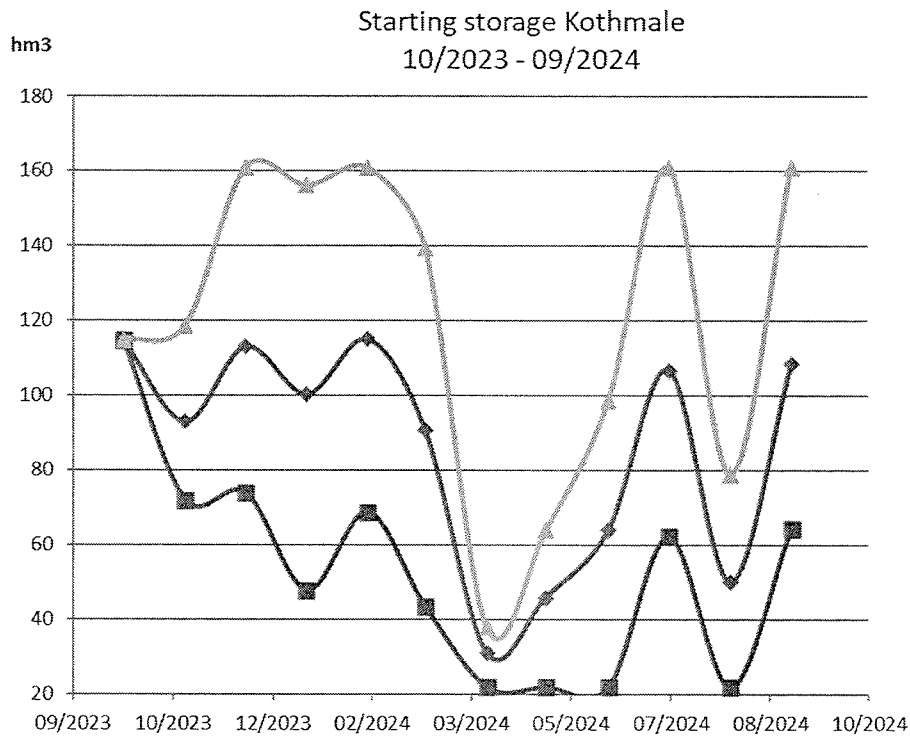
**** Planta: 5 BA RGE													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	10	10	10	10	15	15	15	10	15	15	15	33	
2024	10	10	10	10	25	15	15	10	15	15	15	15	

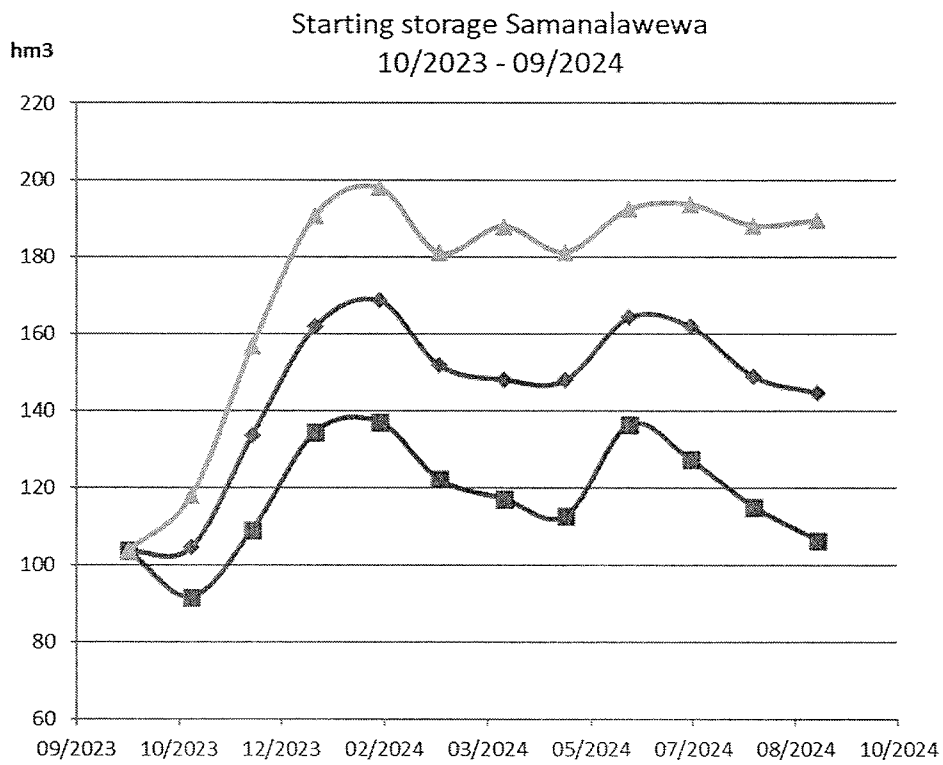
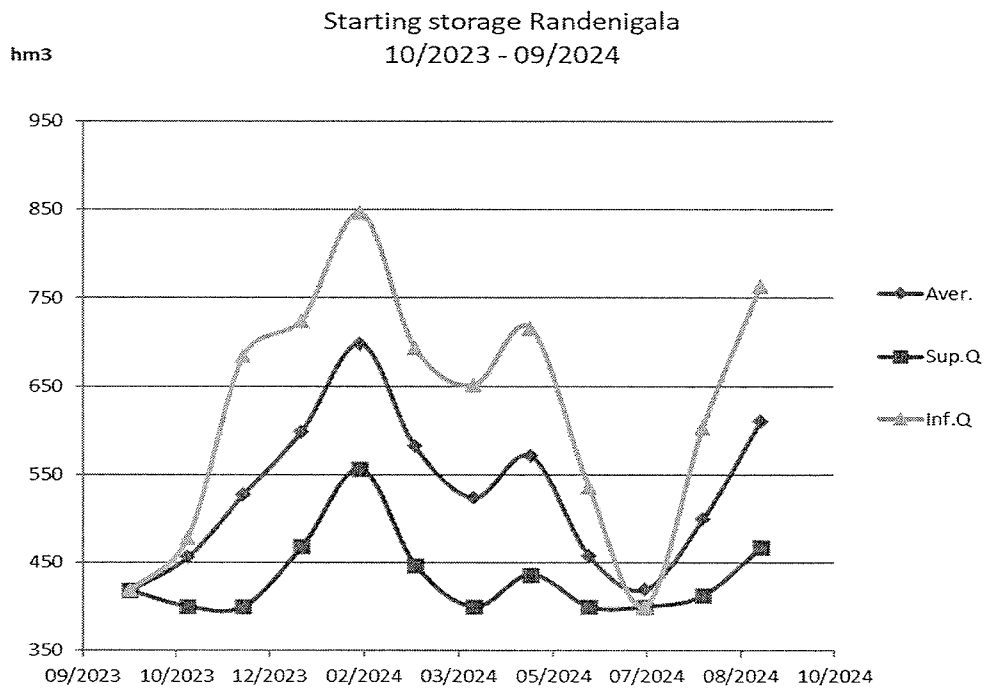
**** Planta: 7 AS IA_POWER													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2022	100	100	100	100	100	100	100	100	100	100	100	100	100
2023	100	100	100	100	100	100	100	100	100	100	100	100	100

**** Planta: 8 GT 7													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	2	2	2	2	2	2	2	2	2	2	2	2	2
2024	2	2	2	2	2	2	2	25	100	100	100	100	100

**** Planta: 9 SM ALL_GT													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	50	50	50	50	50	50	100	100	50	50	50	50	50
2024	50	50	50	50	50	50	50	50	50	50	50	50	50

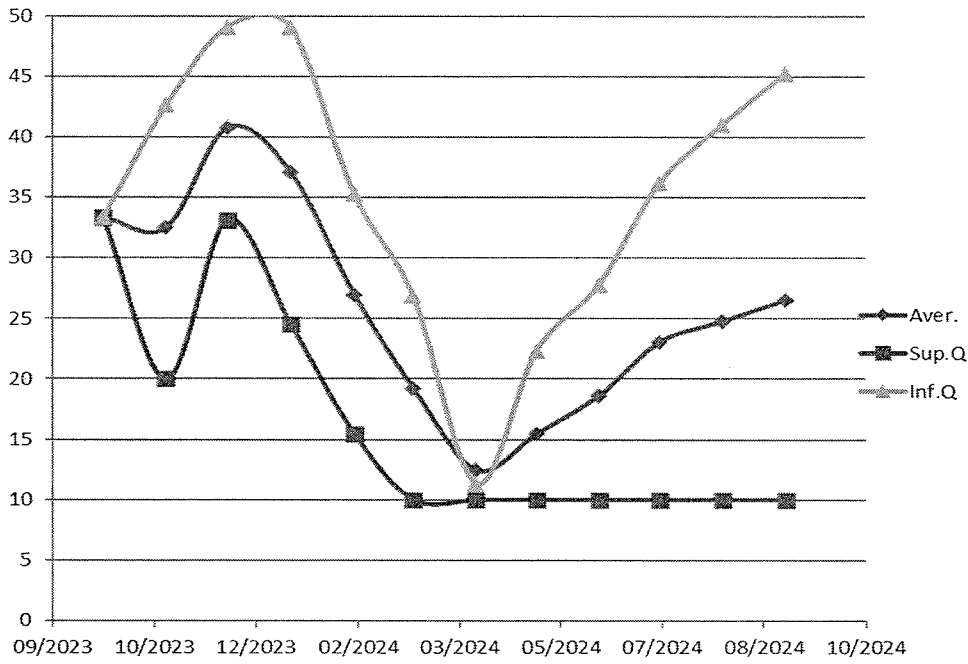
**** Planta: 10 KC BPS 2													
A~NO	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	.....11	.....12	
2023	5	5	5	5	5	5	5	5	5	15	5	5	5
2024	5	5	5	5	5	5	5	100	25	5	5	5	5



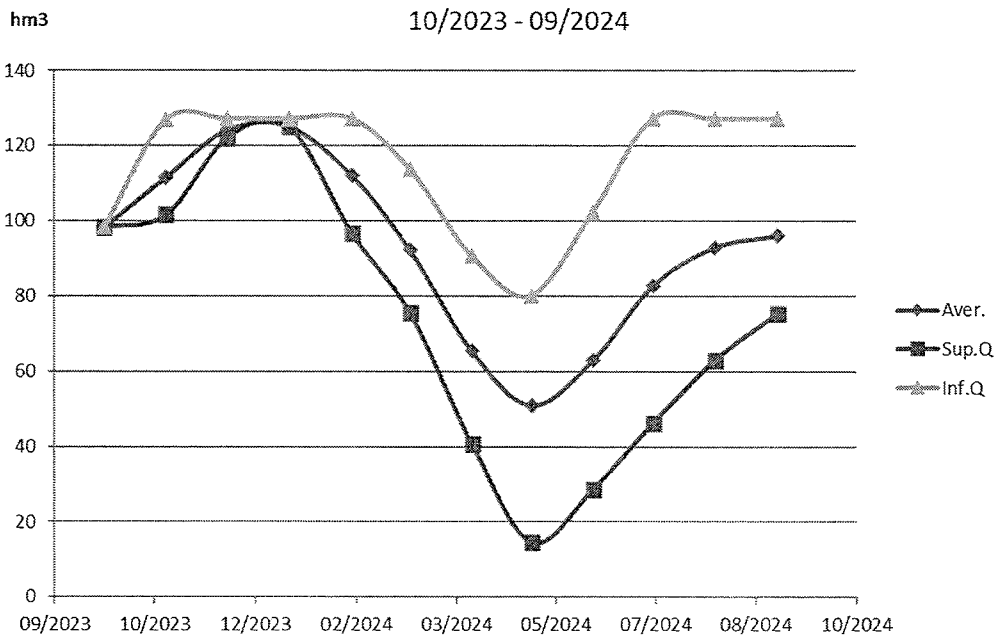


hm3

Starting storage Castlereigh
10/2023 - 09/2024

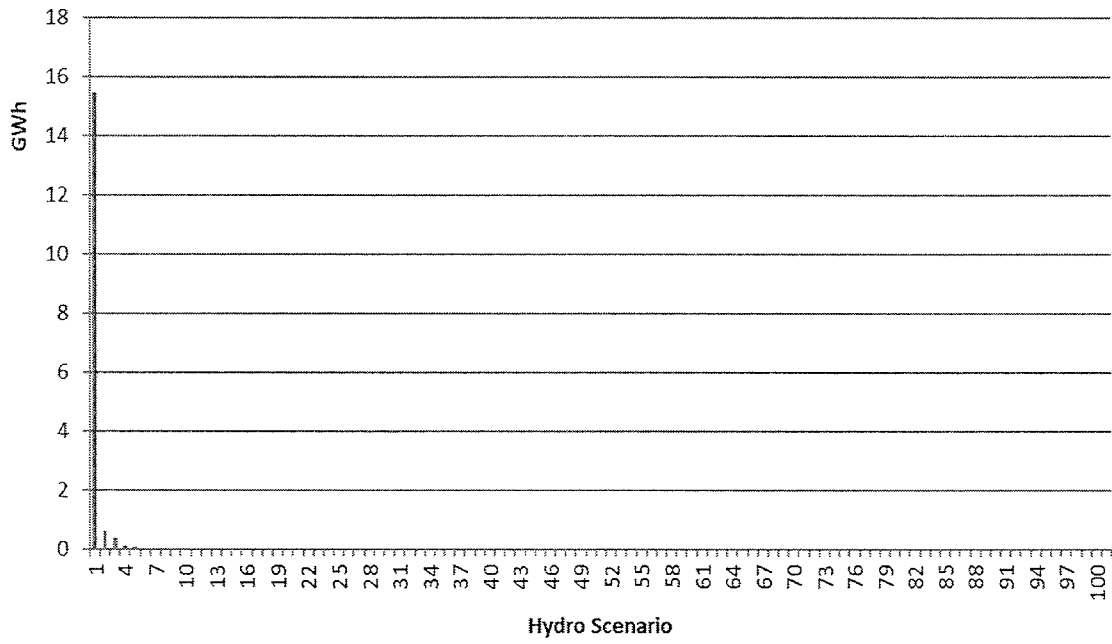


Starting storage Maussakele
10/2023 - 09/2024



ANNEXTURE-06

Deficit



ANNEXTURE-07

Peak Demand Forecast

2023/24

Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
MW	2443	2453	2429	2517	2580	2586	2479	2616	2652	2645	2632	2600

Annexure-08

Fuel prices

DEISEL	1.067 LITER
NAPTHA	0.489 LITER
LFO LS	0.729 LITER
HFO	0.729 LITER
COAL	0.16 kg
LFO	0.729 LITER

Exchange Rate 329.014 Rs/\$