25th National Award for Excellence in Energy Management 2024





Profile: NTPC Ramagundam *(An ISO 50001 Certified station)*

Installed Capacity Configuration		
Capacity	No of units	Total Capcity
200 MW	3	600 MW
500 MW	4	2000 MW
10 MW Solar PV	1	10 MW
100 MW Floating Solar PV	1	100 MW
New: 800 MW (USC)	2	1600
Total Installed Capacity	**4310 MW**	

Stg	Unit	Date of Sync.	COD	Unit Capacity	Supplier
I	1	27.10.83	01.03.84	200 MW	Ansaldo
I	2	29.05.84	01.11.84	200 MW	Ansaldo
I	3	13.12.84	01.05.85	200 MW	Ansaldo
II	4	26.06.88	01.11.88	500 MW	BHEL
II	5	26.03.89	01.09.89	500 MW	BHEL
II	6	16.10.89	01.04.91	500 MW	BHEL
III	7	26.09.04	25.03.05	500 MW	BHEL

Plant Technologies			
Area of Plant	Technology adopted		
	Stage I	Stage II	Stage III
Power Generation	Sub critical	Sub critical	Sub critical
Boiler	Front fired Boiler (Ansaldo)	corner fired Boiler (BHEL)	corner fired Boiler (BHEL)
Turbine	GE Common HIP	BHEL Make	BHEL Make
Control System	DDCMIS (Emerson)	DDCMIS (Honeywell)	DDCMIS (Max DNA)

Presentation Team: Manoj Kumar Jha & M Vamsi Krishna

Station Mission & Objectives

Our Mission:

'To Provide Reliable Power & related solutions in an Economical, Efficient & Environment friendly manners driven by Innovations & Agility"

EnMS Objectives:

Providing the solutions for generating Efficient, Economical and Environment friendly Power with Operational Excellence through Systematic practices of Monitoring, Analysis and employing innovation Techniques

Station is firmly guided by its philosophy of:

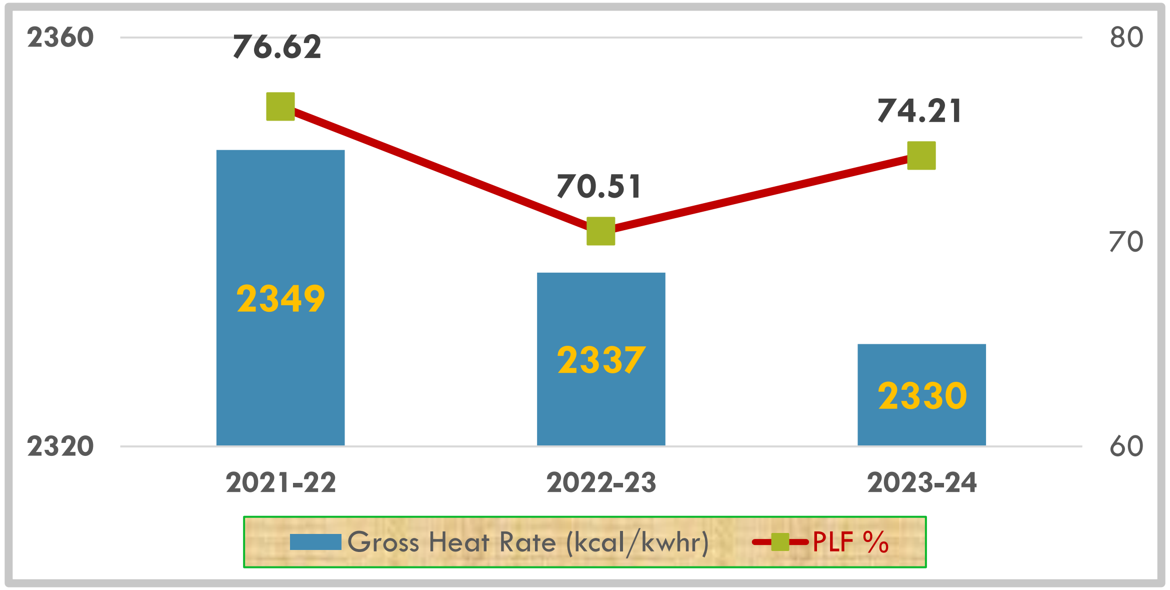
- ***Core business of power generation which is intricately intertwined with social and environmental growth***
- ***Generating reliable energy at competitive prices in a sustained manner***
- ***Employing a mix of energy sources using innovative & eco-friendly technologies.***

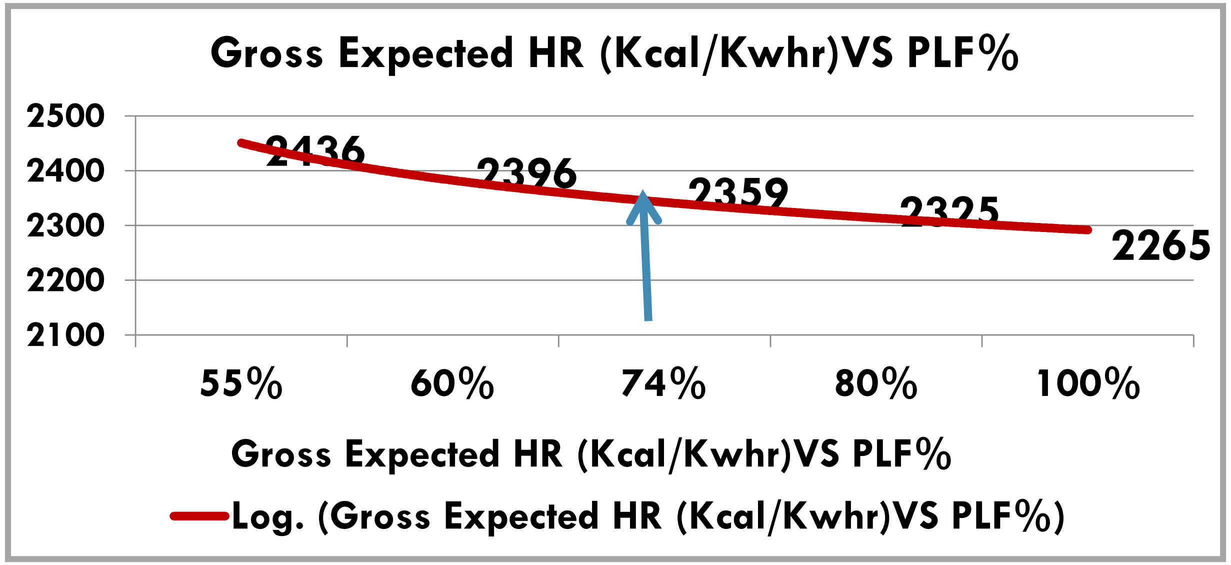
PERFORMANCE FY 23-24

S No	PARAMETER	UNIT	FY 2023-24	
			TARGET	ACHIEVED
1	Generation	MU	16649	16950
2	PLF	%	72.90	74.21
3	Declared Capacity	%	85.00	90.02
4	APC	%	6.88	7.77
5	Sp. Oil Cons.	ml/kwhr	0.50	0.469
6	Heat Rate	KCal/kWh	2399	2330
7	Boiler Efficiencies	%	86.6	86.85
8	Turbine Heat Rate	KCal/kWh	2077	2030
9	Net Heat Rate	KCal/kWh	2576	2526
9	Raw Water Consumption	Ltr/kWh	3.5	3.24
10	DM Water Consumption	Ltr/kWh	0.08	0.079

Specific Energy Consumption – Last 3 years

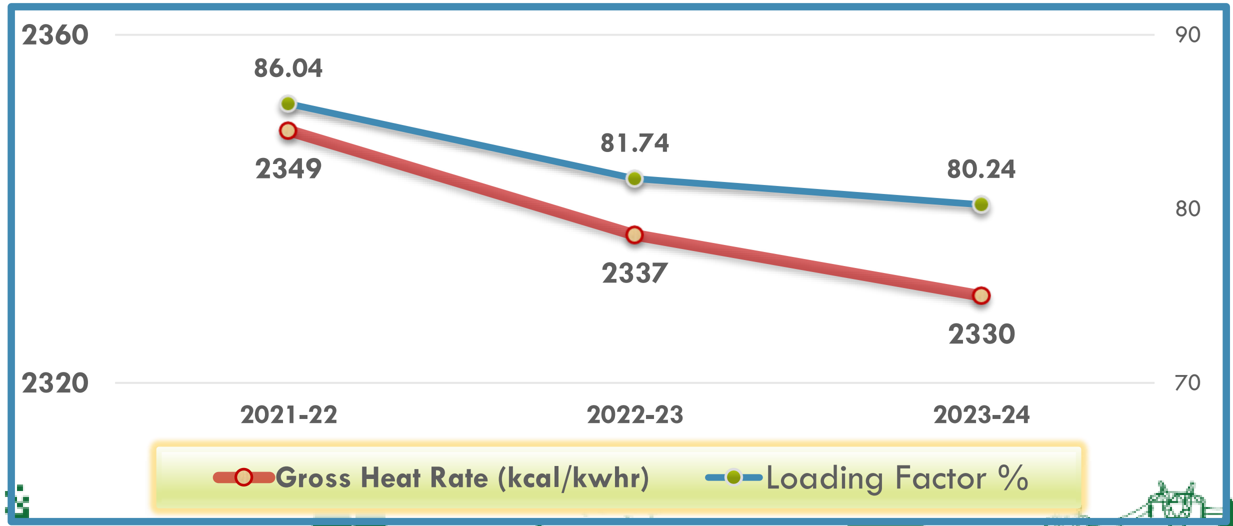
Gross Heat rate (GHR): CERC Norms for RSTPS: 2399 kCal/Kwhr





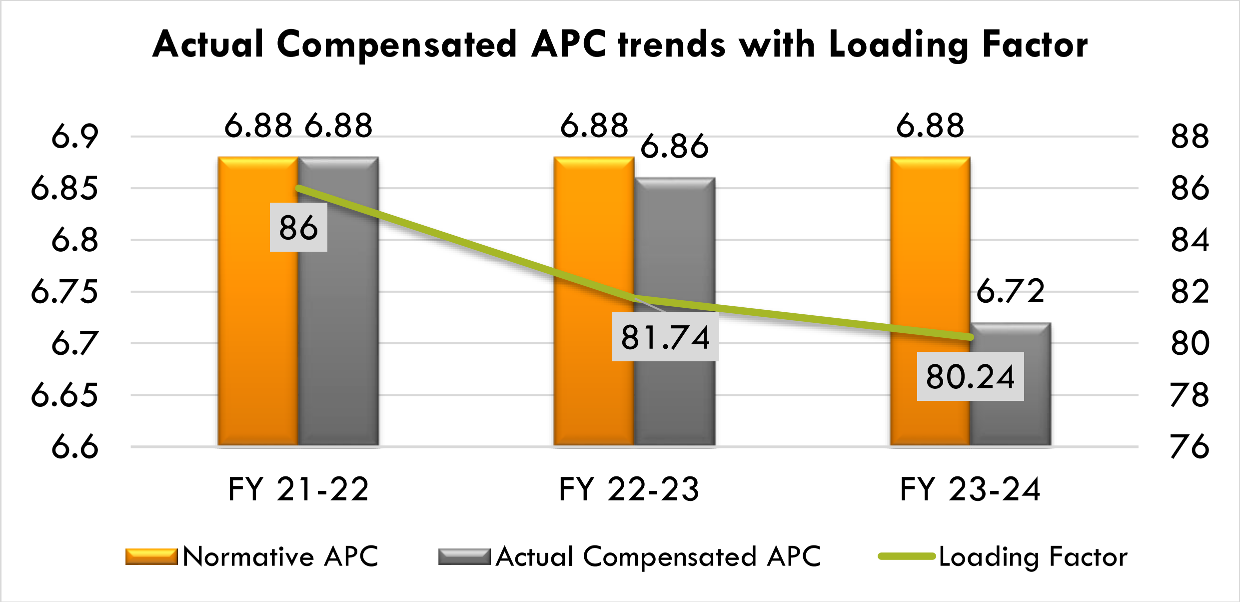
Remarks:

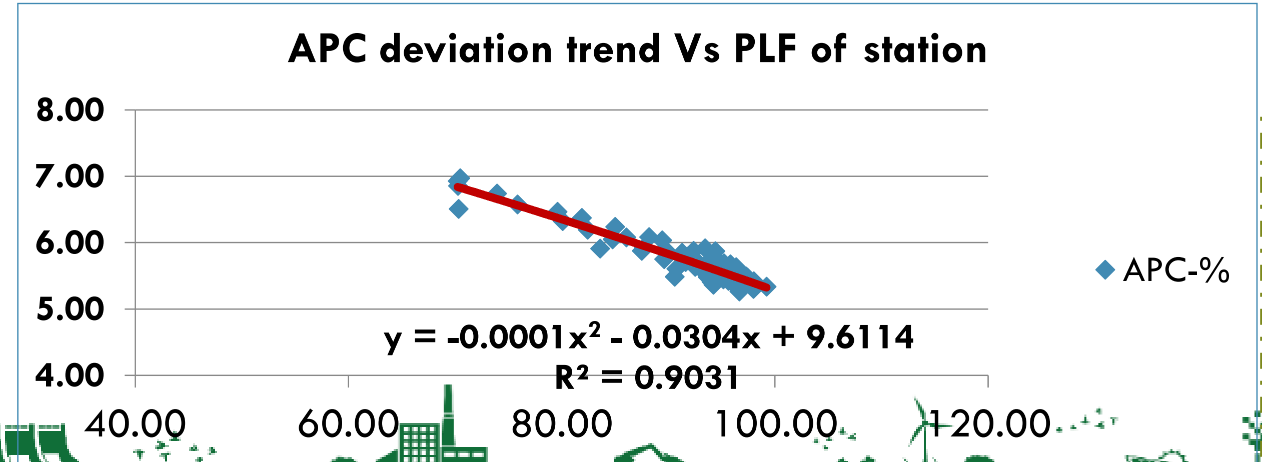
- Unit-2 Turbine Replacement in Feb'2023.Station Heat rate improvement of 15 kcal/kwhr achieved
- Replacement of HPHs in one 500MW unit . HR improvement of 3kcal/ kwhr
- The gross HR at the given PLF is in line of Manufacturer curve



Specific Energy Consumption – Last 3 years

Auxiliary Power Consumption (APC) CERC Norms for RSTPS: APC of 6.88%





Compensated APC Break up

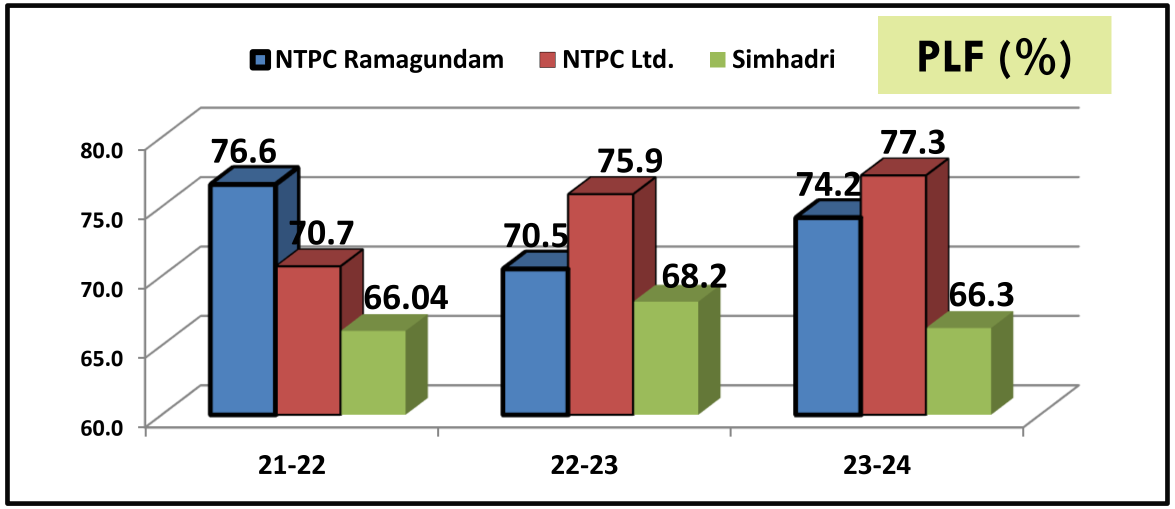
Compensation Head	APC (%) 2021-22	2022-23	2023-24
Loading factor compensation	0	0.35	0.47
ESP R&M (25% of ESP isolated)	0	0.3	0.36
Additional ESP Pass addition in 3 units	0	0.01	0.2
FGD construction & other Environment considerations			0.01
RSD Start up APC	0	0	0.01
Total Compensation	0	0.66	1.05
Actual Total APC	6.88	7.52	7.77

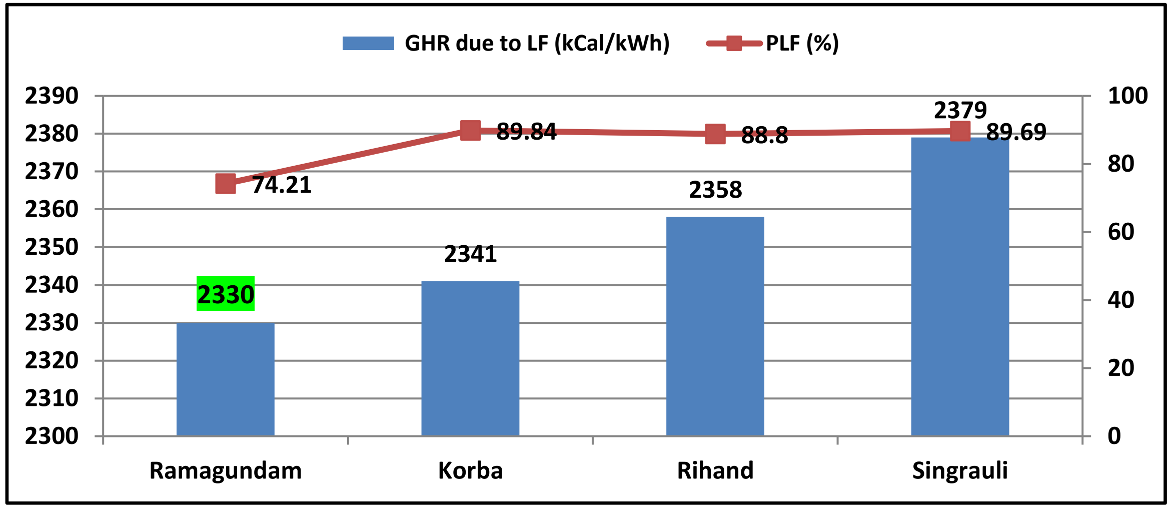
Major Improvement works taken up in FY 2024-25 till Aug 2024:

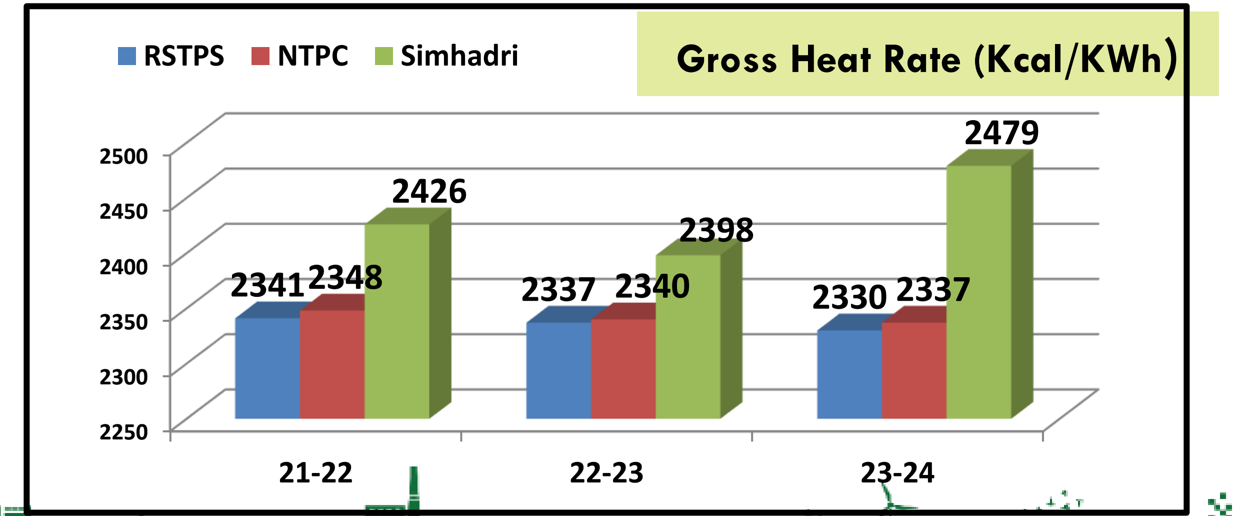
- **Unit-5 Duct and APH basket replacement: APC reduction by 1.2 MW**
- **Unit-7 duct works and APH Complete basket replacement: Expected APC reduction : 1.5 MW**

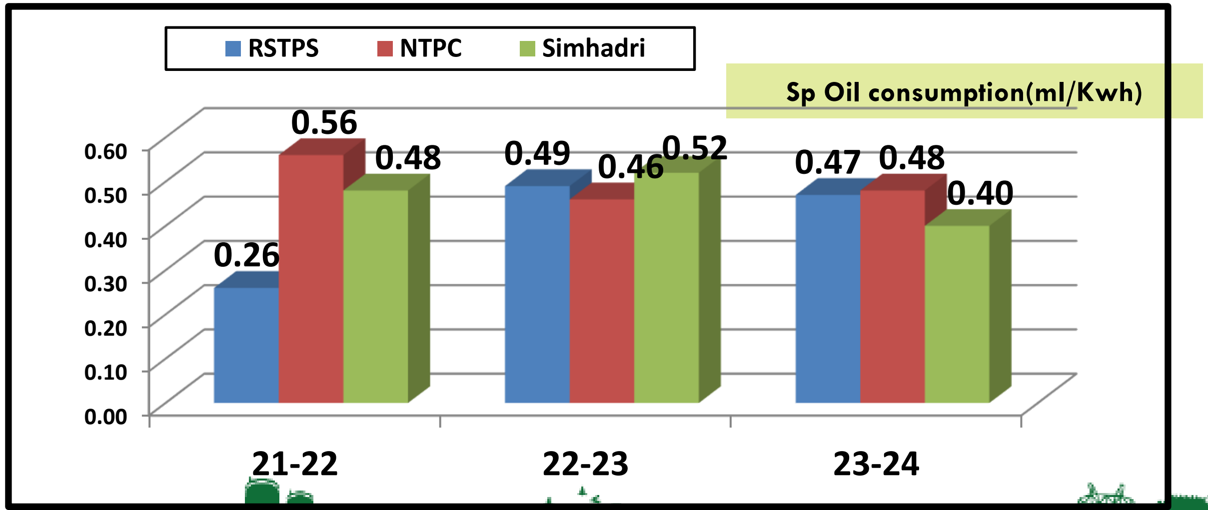
Information on Competitors, National benchmark

NTPC Ramagundam (RSTPS) has been the best performing station amongst its internal peers over the years









Heat Rate Improvement future action plan

Action Plan Proposed	UHR improvement (Kcal/Kwhr)	Station HR Improvement (Kcal/Kwhr)			Heat Rate Improvement Action plan Roadmap		
		2024-25	2025-26	2026-27	2024-25	2025-26	2026-27
Unit-5 OH & APH Basket replacement	40	8			**Completed in Aug 2024**		
Unit-7 OH and complete Basket replacement	50	**10**			**Nov 2024**		
Unit-1 Boiler & APH OH	40	**3**			**Dec 2024**		
Augmentation of LP Economizer in one Stage-I unit. Expected Temp reduction by 15-20 deg C	15			**1.15**			Under SG R&M: package under approval. For one unit
Unit-2 Boiler & APH OH	40		**3**		Jan2025		
Unit-6 OH Boiler OH and LPT	30		**8**			**Aug 2025**	
Unit 4 Boiler OH and LPT	30		**8**			Completed in Jun’23	
Total HR Improvement		**21**	**21**				

MAJOR ENCON PROJECT completed IN 23-24

S.N	Particulars	Investment (Rs in Million)	Annual Electrical Savings (Million kWh)	Payback Prd (Yrs)	Target Date
1	Reduction in draft power consumption after overhauling of Unit-6,4 & Unit-3	OH	30.32	--	Unit-6 Completed (June-23) Unit-4 in Oct'23 & Unit-3 (Feb'24)
2	Replacement of Township conventional electrical fittings with energy efficient equipment	15.2	3.97	1.5	Feb-24
3	Installation of Soft starters for CT Fans in Stage II Units	3	1.3	0.7	Completed . May-23
4	Installation of Soft Starters for Stage-2 Bottom ash series pumps (8 PUMPS)	3.26	0.73	1.3	Sep-23
5	Installation of VFD in ID Fan motors of 1 units of 500 MW	30	3.8	2.5	Completed . June-23

Total Energy Saving achieved due to ENCON PROJECT in 2023-24 : 40.12 Mus

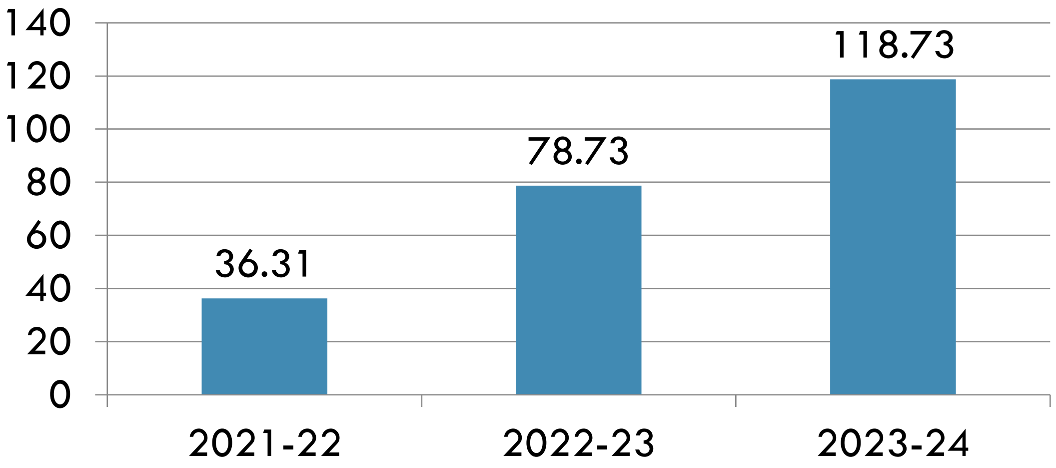
Major EC project planned in 2024-25 & beyond

Action Plan Proposed	Expected APC Reduction (KW)	Station Thermal Savings(kcal)	Target completion		
			2024-25	2025-26	2026-27
Unit-5 Flue gas Ducts works & Boiler& LPT OH	1200	3.85	Completed in Aug 2024		
Unit-7 Flue gas ducts OH , APH basket replacement ,Boiler & LPT OH	1500	7.69	Nov 2024		
Unit-1 Flue gas ducts OH, Boiler and APH basket replacement & condenser Acid cleaning	500	3.07	Dec 2024		
Unit-2 Flue gas ducts OH, Boiler and APH basket replacement & condenser Acid cleaning	500	3.07	Jan 2025		
CEP VFD Augmentation in on 500 MW units	100	-		Aug 2025	
CEP VFD Augmentation in on 500 MW units	100	-			Dec 2026
UNIT-3 APH Replacement under R&M		3.07			

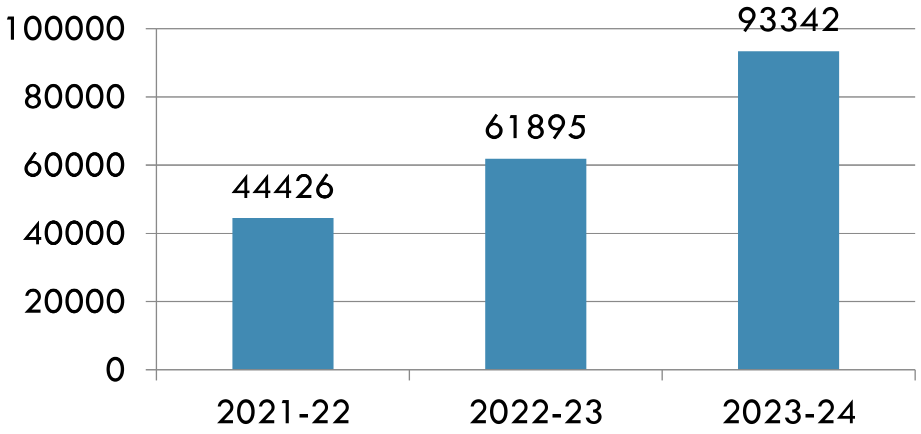
Energy Saving projects implemented in last three years

No of Energy saving projects implemented in last three years					
FY	No. of Proposal	Investment (In Rs. Millions)	Electrical Savings (in MUs)	Savings (In Rs. Millions)	Payback Year
2021-22	8	36.05	18.8	52.65	0.68
2022-23	9	44.13	22.22	74.43	0.6
2023-24	4	35.5	9.8	40	1.28

Commulative Energy Saving (Mus)

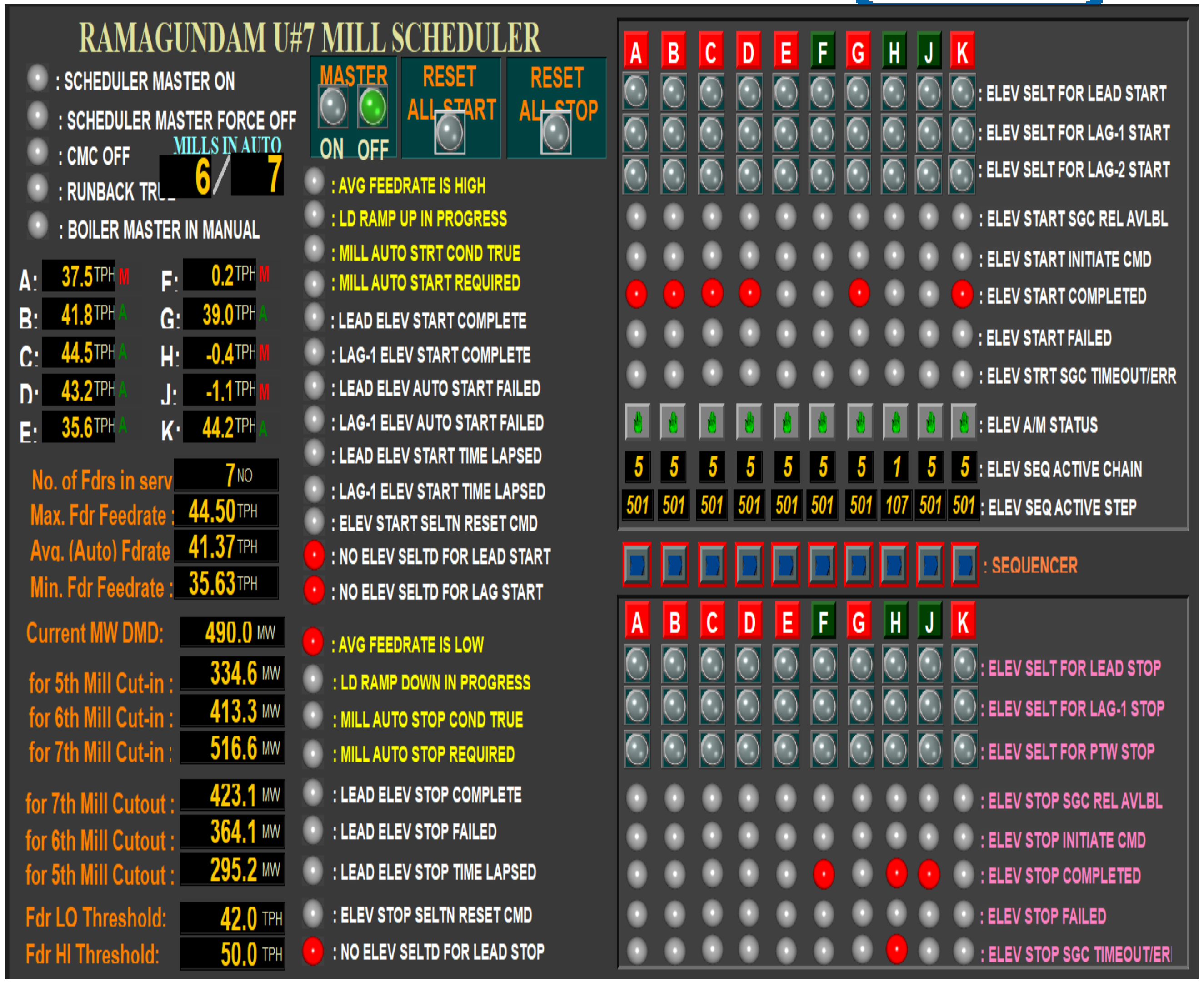


Cummulative CO2 Emission reduction due to EC activities (MTs)



Innovative Project-1: Mill scheduler for Flexibilization

- Mill change over plays critical role to meet flexibilization
- From Flexible operation study experience, Mill scheduler Implemented in All Four 500 MW units
- Achieved 94% of 1% Ramps in FY 2024-25



Benefits :

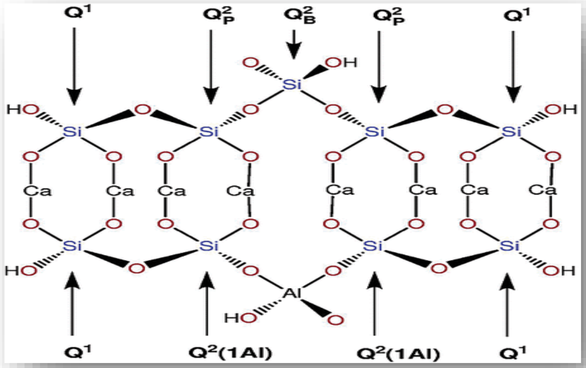
- Eliminates the manual intervention
- Helps to achieve Ramps & flexibilization with better stability of the unit
- supports to manage Standard Deviation of Temperatures within +/- 3.5 deg c
- Monetary gains : **12** crores/Annum (No ROE reduction due to non achieving of ramp rate)

Innovative Project-2: Descaling of Ash slurry Discharge lines

एनटीपीसी NTPC

Scaling overview

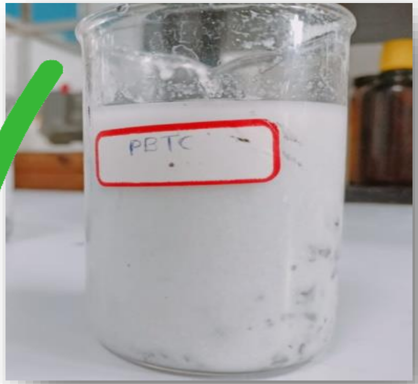
PBTC



Key challenge : Preparedness to changing environment

Action plan: In-house Scientific support

issue	solution
Heavy thick stone like scale formation in ash disposal systems Such as sump and disposal pipes	Scale is removed. However, in vertical position, reaction gets saturated. Needed solution replacement frequently. Long reaction time (more than 48 hrs)
Alkaline nature of fly ash because of exces & MgOs, CaO. Non availability of intermittent water flushing system	PBTC is working on scales . To reduce reaction time, circulation was proposed



Benefits:

1. Ash slurry series running hours reduction
2. 800 KW pumping power reduction
3. APC reduction in Mus 5.95 Mus
4. Monetary benefits achieved : 24 Lakhs/Annum
5. Improved safety

Addition of descalant

Reaction

Scale removed

Innovative Project-3: NOGS TYPE ASH LEVEL MEASUREMENT

New Technology Adoption for ESP hoppers level monitoring :

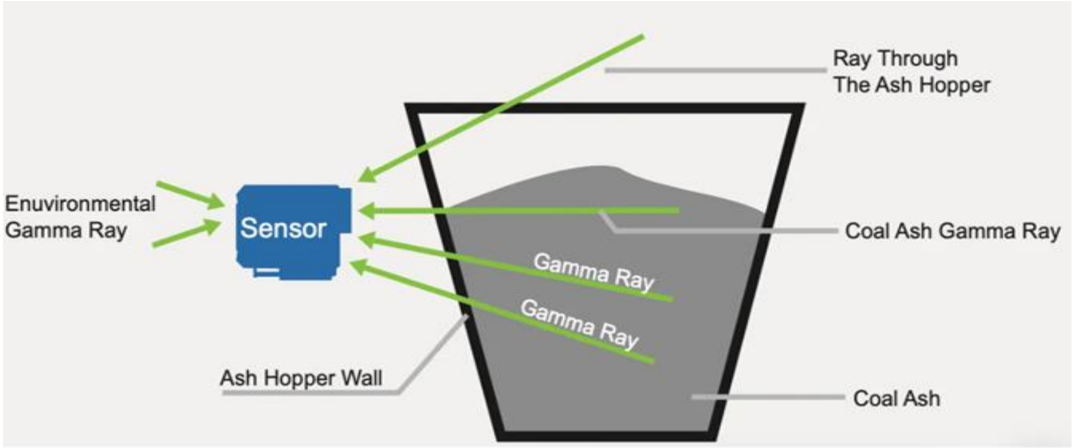
Issues faced: Non reliable conventional ash level switch in ESP hoppers causing frequent field outages

Solutions

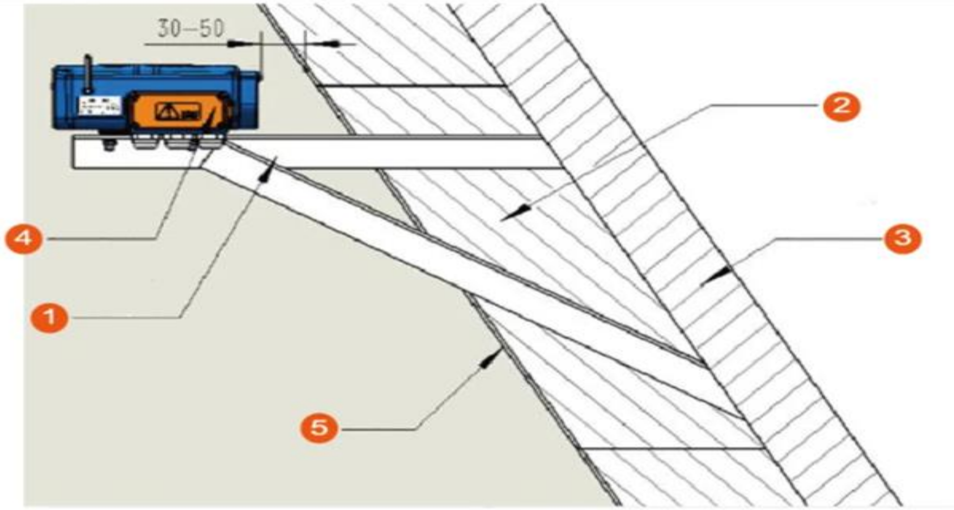
- Installation of NOGS sensor for all 16 hoppers of 1st Field of ESP Unit#7 completed
- Field tripping provided from these sensors which is user configurable.
- Continuous Level provided in UCB DCS system

Benefits :

- Increased availability of ESP fields & less Emissions
- Improved safety of ESP structures and personal
- Reduced Maintenance cost on ESP pass outage
- No partial loss on account of ESP pass isolation due to level monitoring



Principle of operation



Installation

Innovative Project-4: HPH 5A&5B Replacement

HPH Replacements at Ramagundam

Issues faced: Frequent tube leakages after 40 years of Operation

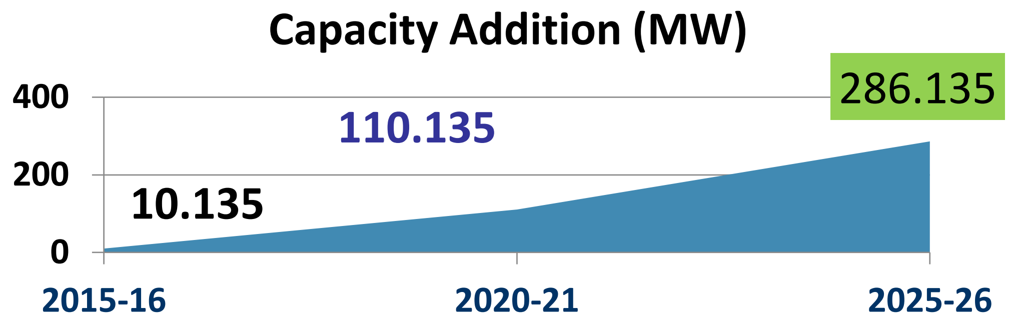
a. HPH replacement- First in NTPC plants

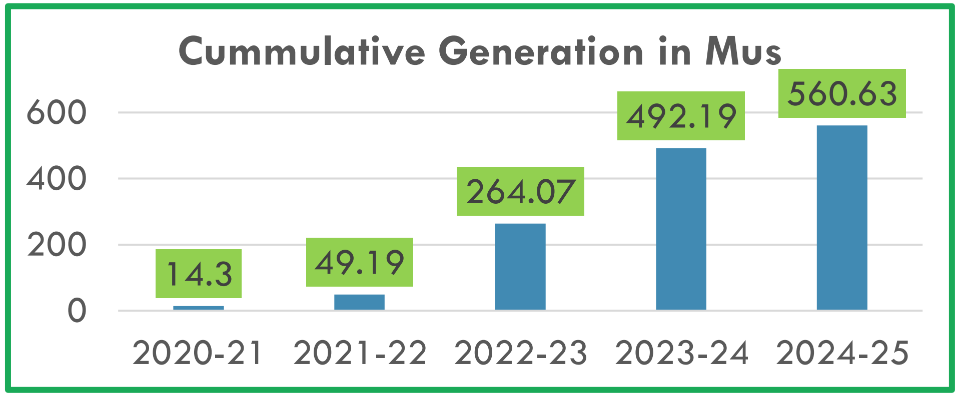
Benefits :

- Improved Reliability of Units
- Heat rate improvement of 15 kcal/kwh
- Annual Monetary gain : 4.5 crores/unit
- Pay back Period: less than one year

Existing RE Capacity & Future projects

Present RE capacity : 110.135 MW





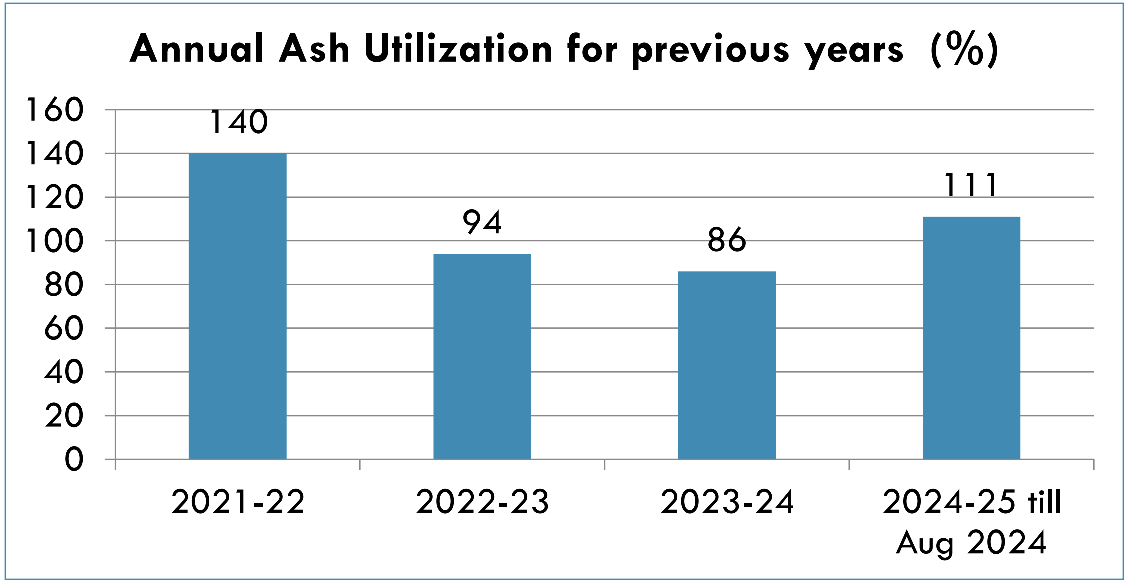
Upcoming Renewable Energy Projects			
Name of Project & Location	Project Capacity	Investment made (Rs Million)	Expected Power generation year
Additional 56 MW Floating Solar PV plant on water reservoir &120 MW Land	176 MW	9090 Rs.Million/ Awarded to L&T	2025
Battery energy Storage System	400MWh/10MW capacity Li-ion BESS	Under plan	2025

100 mw Floating

10 MW Land solar

Share % w.r.t to overall energy consumption is 14%

Environmental Management- Ash Utilization



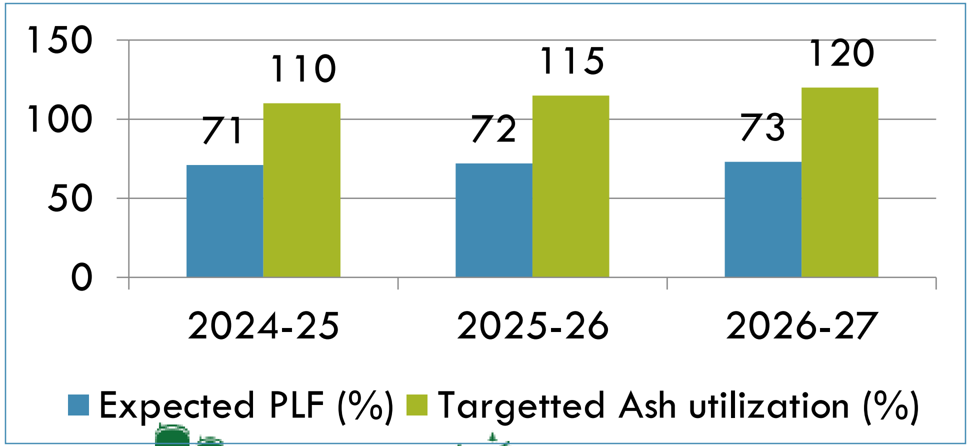
Mode of Ash conveying at station

✓ Stage I 200 MW unit	✓ Partial Dry with Transport air	✓ Wet evacuation
✓ Stage II 500 MW unit	✓ Partial Dry with Transport air	✓ Wet evacuation
✓ Stage III 500 MW unit	✓ Dry with vacuum conveying	✓ Wet evacuation

Reason for variation in Ash utilizations

- ✓ Completion of NHAI projects & delay in fresh agreement with new road projects
- ✓ Auctioning process for pond ash
- ✓ Heavy monsoon in July to Sep 2024 reduces pond ash lifting
- ✓ Less lifting in first quarter from pond ash

Future Ash Utilization Action Plan



Environmental Management- Ash Utilization

NTPC

Distribution of Areas of Ash Utilization

Particulars	UOM	21-22	22-22	23-24
Ash Generated	Tons	3938331	4325326	4549218
Ash Utilization	Tons	5550065	4063238	3924027
Ash Utilization	%	141	94	86
Ash utilized in manuf. Of cement/RMC	%	15	20	25
Ash utilized in FA bricks	%	16	7	30
Ash utilized in Mine filling	%	8	10	9
AU for road works	%	38	62	22
TeSTPP Ash dyke construction	%	2	0	13
Land Development	%	0	1	1

Environmental Management- Ash Utilization

Best Practices:

Ash Pond Management


Ipoma Plantation


Sprinkler system


Lagoon Clean water


Water sprinkling on haul roads

Lagoons


Earth Cover

Firm actions for : For sustainable generation
✓ Ash Dyke Life available for next 12 months
✓ Buttressing in N2S2 Dyke is in progress
✓ 100% ash utilization in last 5 years
✓ Target of 120-130% Ash utilization in coming years
✓ Future use of Ash dyke for Solar PV project, capacity around 200 MW


Fog Cannon Dust suppression system in Ash Dyke


Dry Ash supply Rake Loading System

Other Best Practices:

- Ash sale through Auction
- Re-use of Dyke length by Buttressing
- Installation New Brick Batching Plant

Environmental Management-Emission

Absolute Emissions and Emission Intensities				
Particulars	**UOM**	**21-22**	**22-23**	**23-24**
Total CO_2 Emissions Per kW of Generation	Ton/kW	0.000813	0.000792	0.000771
Current SOx Emissions at Full Load*	mg/Nm3	1350	1341	1412
Current NOx Emissions at Full Load*	mg/Nm3	409	401	388
Particulate Matter *	mg/Nm3	71	74	76
Mercury*	Mg/Nm3	0	0	0

Current Emission Details							
Parameters	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**
SOX (mg/Nm3)	746	537	1176	677	573	1292	935
NOX (mg/Nm3)	476	422	438	418	322	252	240
Opacity (mg/Nm3)	45	90	82	92	88	85	74

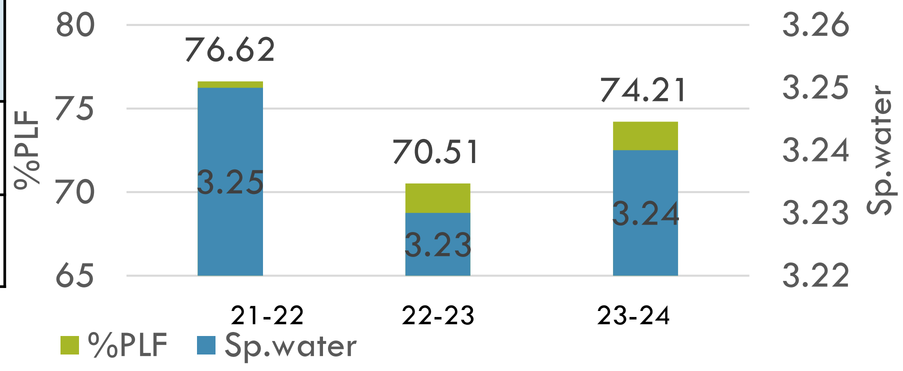
FGD under implementation .Completion by March’25

NOX modification of Stage-3 is completed.

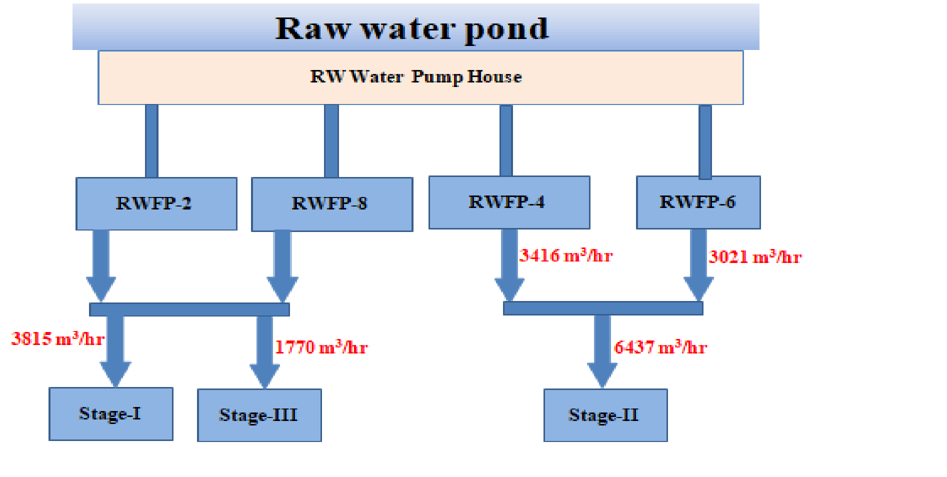
ESP R&M of stage-1 units is completed and Stage-2 ESP R&M : 25% completed. Target completion : Dec’2025

Environmental Management- Water

DM water consumption (%)			Raw water consumption m3/mwhr		
21-22	22-23	23-24	21-22	22-23	23-24
0.82	0.87	0.85	3.21	3.25	3.24



Plant has implemented Zero Liquid Discharge

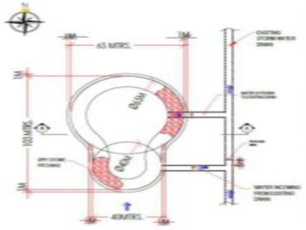


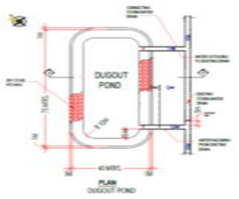
Raw Water System

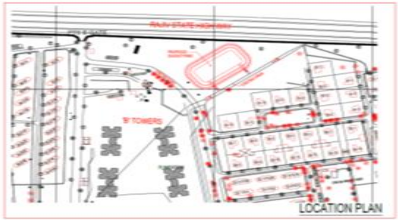
Best Practices in Water Management

i. Third Party Water Balance Audit completed in FY 22-23
ii. Target Sp water consumption for FY 2024-25 is 3.0 lit/Kwhr against Regulatory norms of 3.5 lit/kwhr.
iii. Total 52 meters installed in Plant & Township
iv. Use of Municipal sewage water through STP. 3.5LPD STP in place
v. Township rain water harvesting (In use).
vi. Bottom ash timing optimization based on monitoring leading to ash water ratio improvement.
vii. Ash Water Recirculation system recovers 1500 m3/Hr water from Ash Pond.
viii. Fire water line replacement & lying over ground for No Leakage

Station is ZLD Complied







Best practices in the plant:

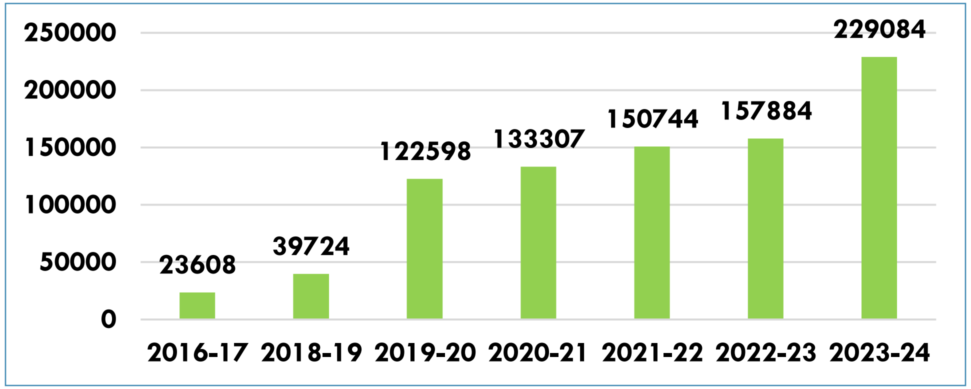
Biodiversity & Afforestation *: Including water catchment.*





YEAR	LOCATION	PLANTED NO OF SAPPLINGS	SURVIVED SAMPLINGS	RATE OF SURVIVAL	AMOUNT SPENT (Rs Lah)
2021-22	Plantation by Miyawaki method at RMC parks Ganganagar and Gouthamnagar park	17848	17437	98%	144
2022-23	Head works area Miyawaki plantation	7140	7140	100%	65
2023-24	Telangana phase-1 ashdyke area Miyawaki plantation	71200	71200	100%	862
	TOTAL	2,81,110	2,46,240		1,071

Cumulative no of plantation in last years



Benefits

- Self sustaining and low maintenance
- Occupies less space and called mini oxygen factories
- Reach biodiversity of n no of species
- Very high survival rate
- Thick vegetations and denser plantation

Flexibilisation Initiatives: 40% Load Pilot study & Ramp Rate Improvements

Major Steps taken for flexibilization

- Units are being operated with Flexibilization with 1% Ramp Rate and study is going on for achieving 3% Ramp rate.
- Already achieving ramps up to 1.2%
- Mills Automatic scheduler for Mill Changeovers during Ramps
- AI based State variable control is incorporated in place of conventional PID. For preventing Metal Temperature excursion
- TDBFP R/C valve modification for smooth Drum level control
- SCAPH Auto Control
- Boiler Health monitoring App
- Soft starters in CT fans to maintain vacuum at low loads(40%)
- 400MWh/10MW BESS and 100 MW floating solar power will be used for bundling of thermal power.

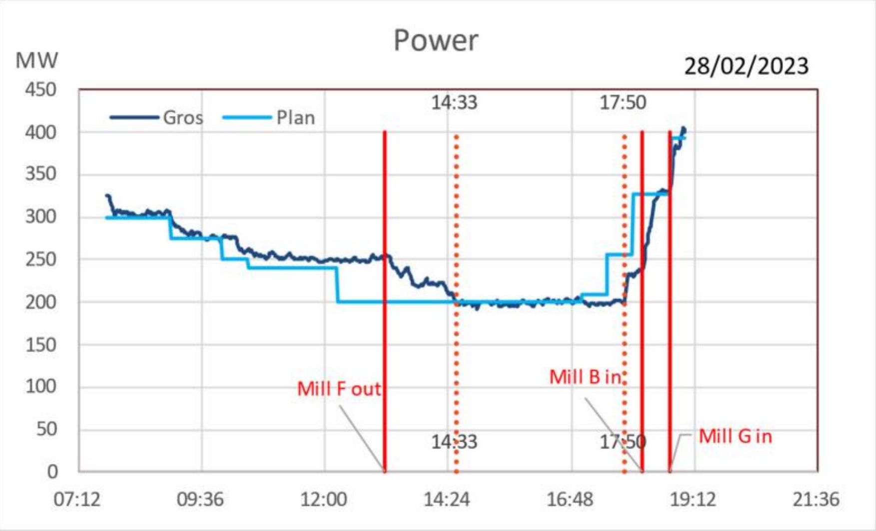


Figure 1. Load progress 1st test day.

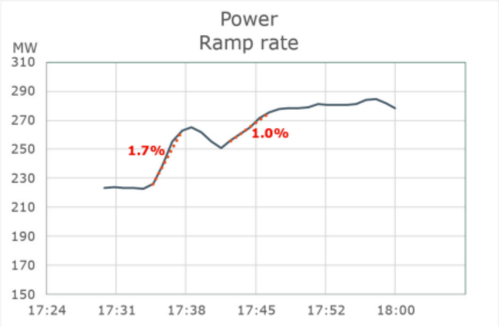


Figure 21. Obtained upward ramp rates in low load.

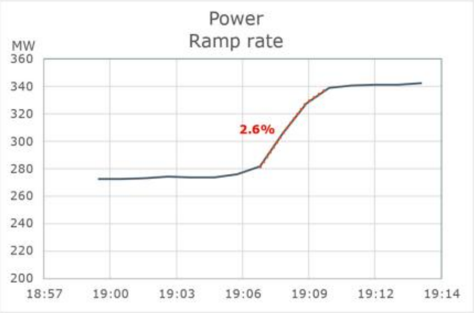


Figure 22. Obtained upward ramp rates in mid load.

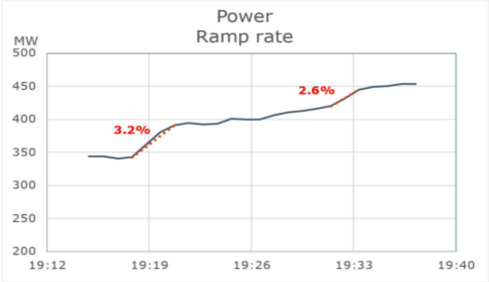


Figure 23. Obtained upward ramp rates in high load.

In House Innovation in CHP- Conveyor belt joint patch open detection system using Internet of Things (IoT)

Problem : In CHP, Conveyor belt joint opening is a very common problem. 90% time this problem is detected by local workers in initial level and get attended. But sometimes this problem go unnoticed and belt patch stuck up in nip points and joint opened beyond repair and this lead to high restoring time of system and may lead to generation loss.

By using problem solving methodologies ***we have developed a belt joint patch open detection system by using Internet of Things.***

- ✓ **This system will detect belt patch open in its initial level and will give alarm to local worker and control room.**
- ✓ **TANGIBLE BENEFITS: 1) Prevention of Belt through cut due to early detection of opening of belt patch**

Way Forward:

1) Water proof and dust proof enclosure for circuit.
2) Interfacing of alarm with CHP PLC at control room.

UNIQUE first time in NTPC -ASLD system Interfaced with DDCMIS

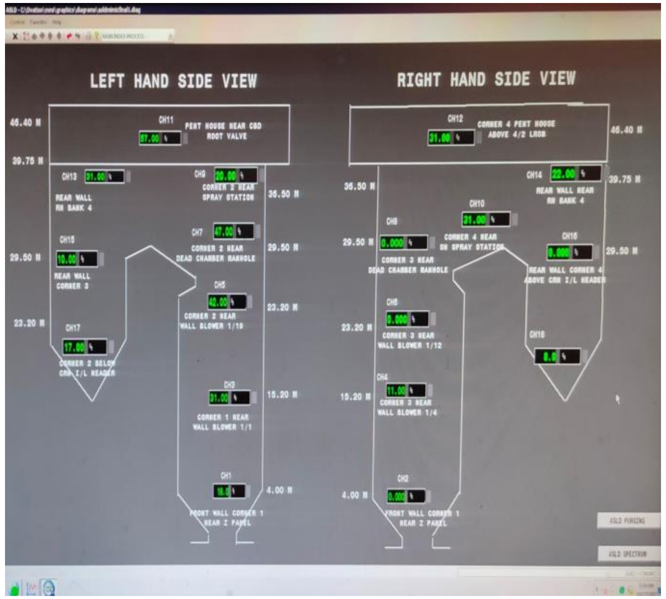
Challenge: Improvement in Reliability, Availability of ASLD system

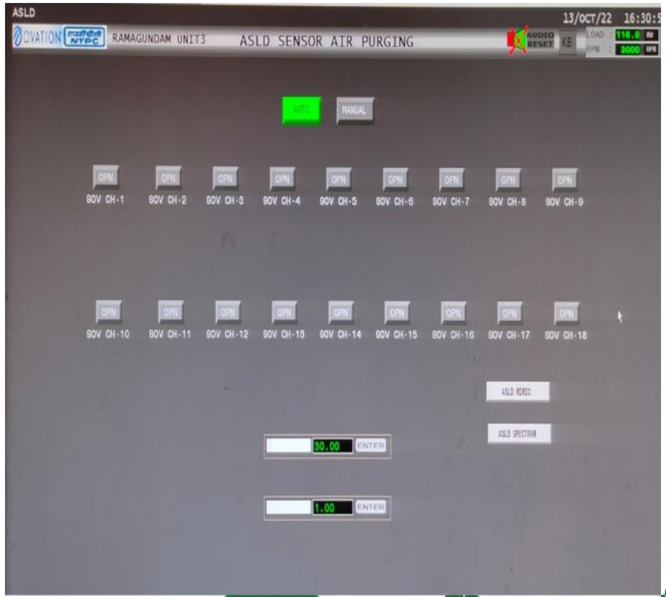
Solution:

ASLD system interfaced with DDCMIS for effective monitoring & early detection of BTL to avoid Secondary Damage

Future planning

Data captured in DDCMIS data can be effectively utilized for predictive detection of primary steam leakages using advanced Artificial intelligence/Machine Learning algorithms and thus avoiding the boiler tube leakages





<u>Tangible benefits:</u>

1.Secondary damage of BTL

2. Reduction of outage hours by 15-20 hrs

3. Monetary gains: 20 Lakhs/BTL

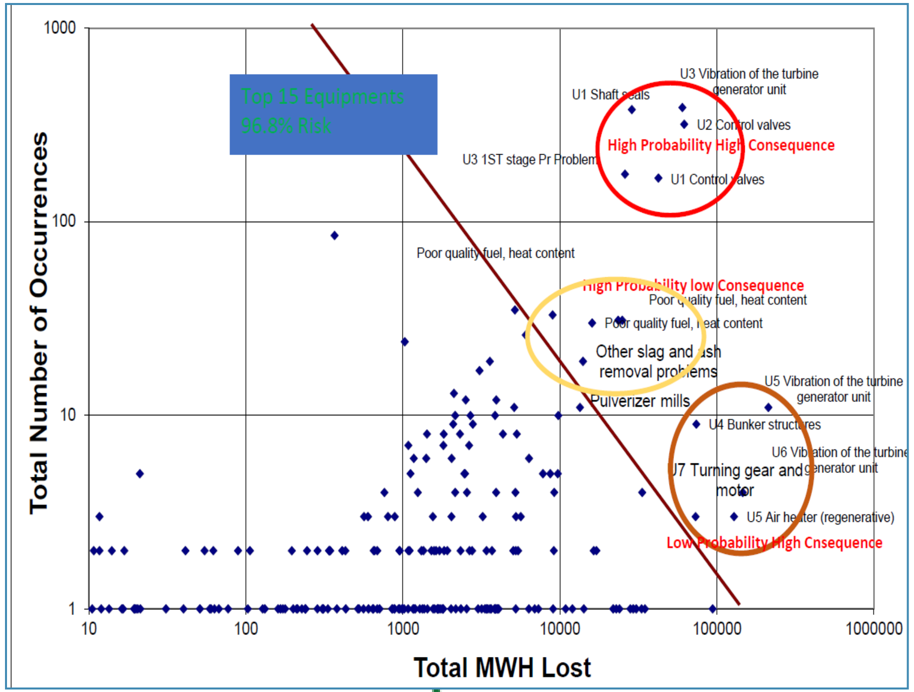
Best practices in the plant: Maintenance & Reliability

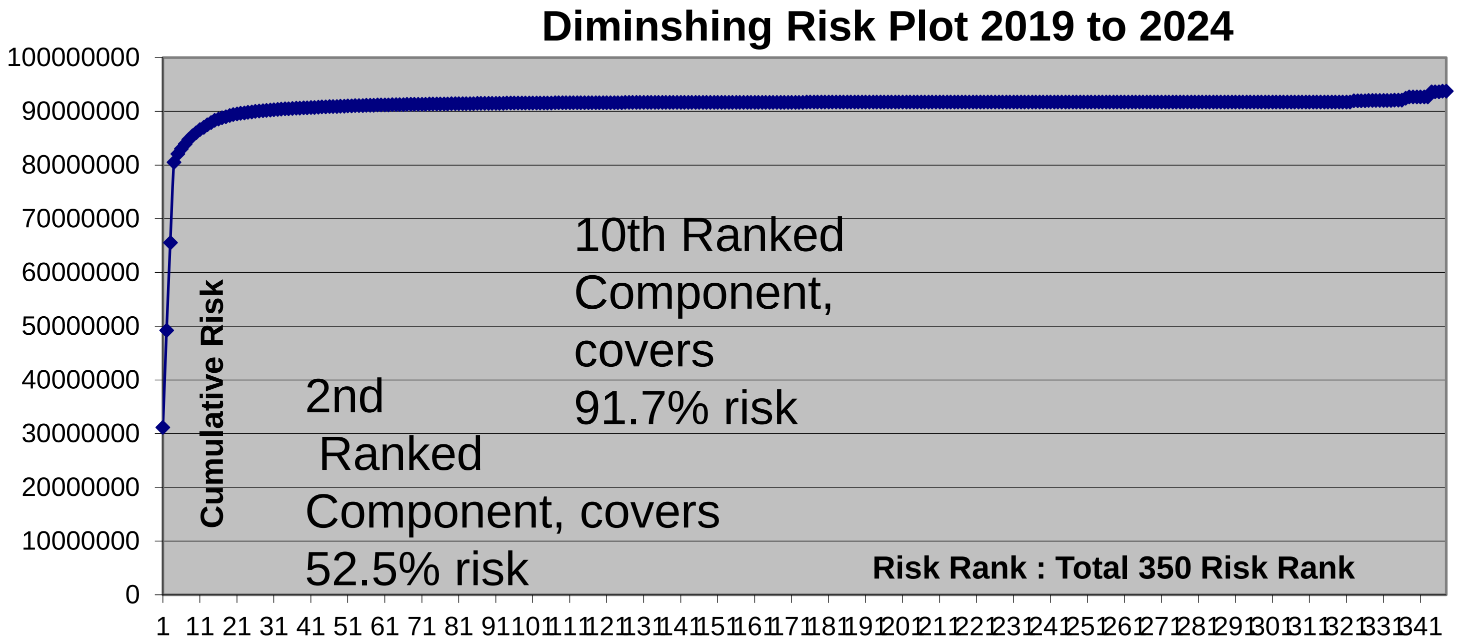
Risk plots and risk grids to decide maintenance priorities

Risk Plot & Risk Grid
Risk plot which is a quantitative assessment of risk is a plot of probability Vs loss
It is plotted on actual partial loss & FO event of equipment/unit etc
Top critical components/equipments are segregated using risk plot of 5 years of notifications data from SAP historian
Risk Grid is a qualitative tool to capture likelihood of failure of an equipment and potential loss

Maintenance & Reliability

1. Advanced tools like PM, PdM, REAP, regular vibration measurement of critical equipment & RCM
2. Condition monitoring tools & Techniques, WDA of identified critical equipment, Infra-red thermograph and dissolved gas analysis periodically
3. 100% Overhauling Performance Index Score before start of OH



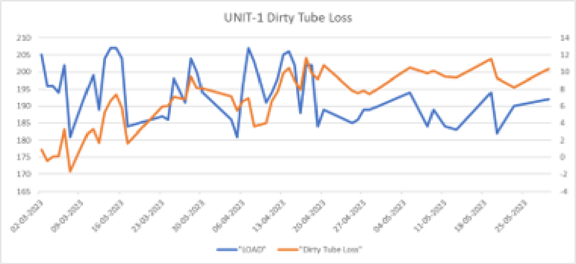


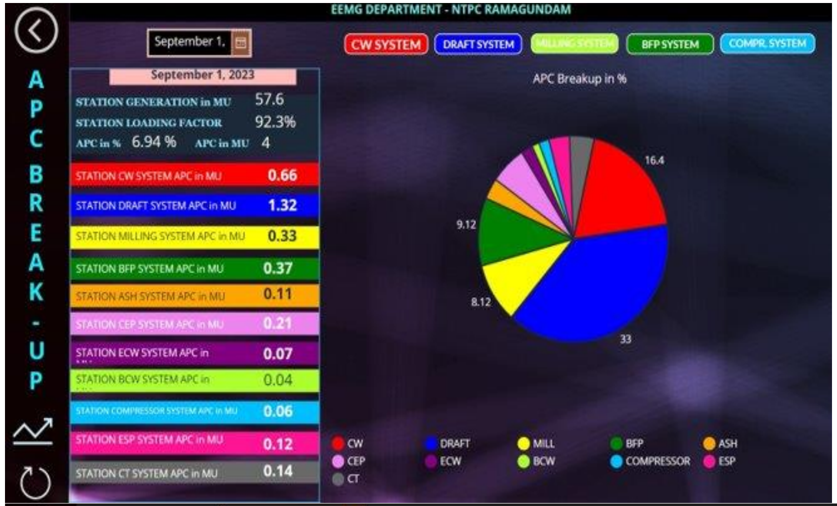
Digital Initiatives: In house Developed Performance Monitoring APP

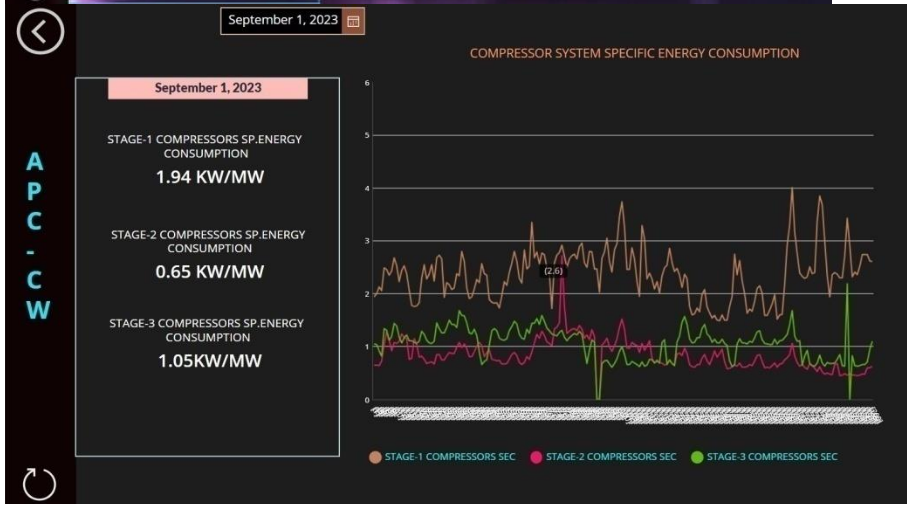
- Automated Alerts to the concerned Maintenance Team in case of Excess Power consumption & Suggested corrective Action Message

- It will Guide the Operator to operate efficient Drive during Normal operation especially during Start up & Shutdowns

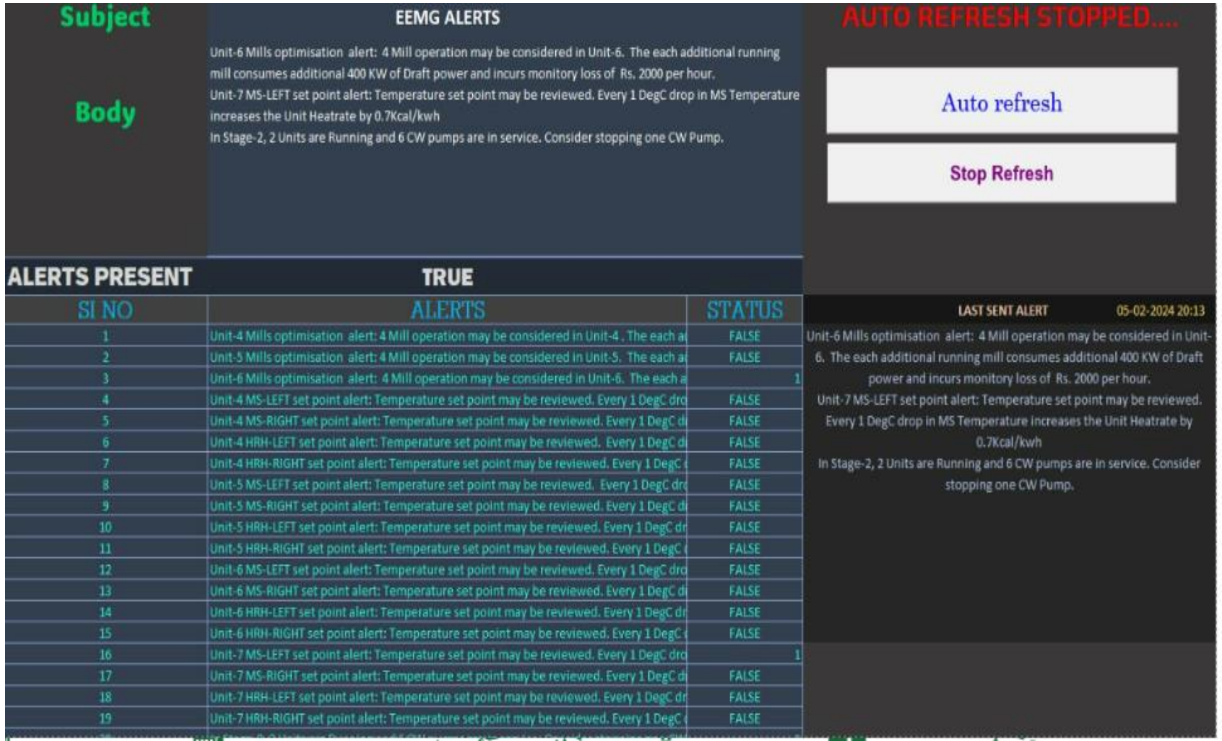
- Real time monitoring of Condenser losses enables us to take timely decisions which results in optimising the unit heat rate.
- Based on this we have carried out chemical cleaning of condenser tubes which results in better vacuum and hence the heat rate.
- Benefits in Unit-4,5,6







Digitalization: APC OPTIMIZATION TOOLS



Implemented Projects:

a. CT Fans running optimization

b. ID FD Fans starting and stopping during unit start ups and shutdowns.

c. Modelling of Specific power consumption of Mills and Mill performance alerting system.

d. HP Heaters DCA monitoring and Alerting system

Tangible Benefits:

1. Timely alerts to operator & concerned engineers for optimizing running hours of Auxiliaries
2. APC saving of around 1.2 MUs for timely optimization of Auxiliaries
3. Monetary benefits achieved 48 Lakhs
4. Saving potential is very huge

Timely Revision of DC in case of unit outage

If DC revision delays by 2 time blocks (30 mins)

The Monitory loss in DSM would be 3.5 lakhs.

(Assuming frequency in the range of 49.95-50.03 Hz)

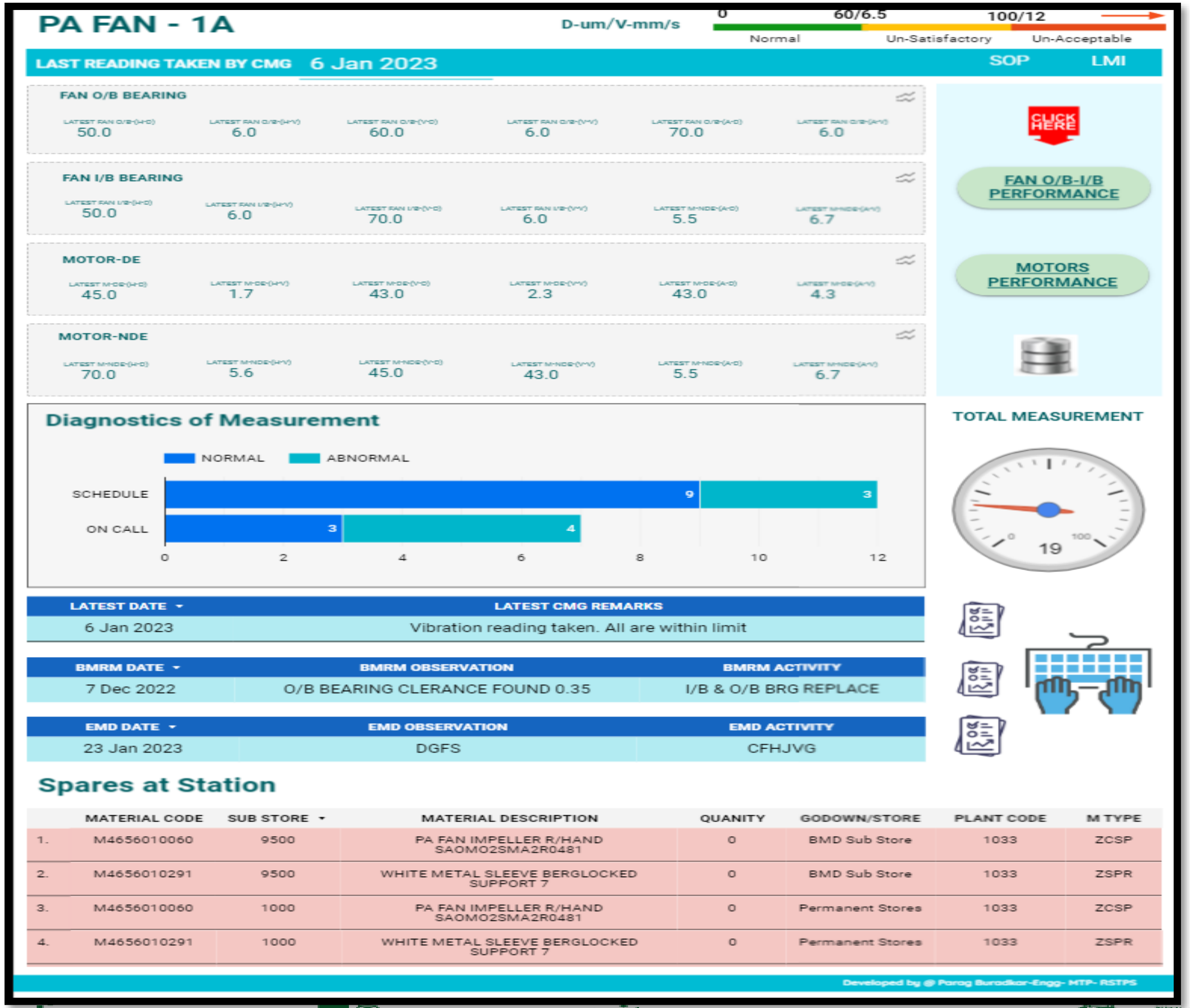
Best practices in the plant:

Asset Management: In house integrated dashboard for asset monitoring and management:

Features of dashboard
Equipment History with Design Data Availability
Availability of Spares at station
Live trending of parameter
Total Measurement classification
Standard Operating Procedures and LMI

Link of dashboard:
https://lookerstudio.google.com/reporting/050c4a80-abcc-4516-ac35-2ddd70ca2b63/page/p_23h6aeia1c

Benefits of dashboard
DATA AVAILABLE AT SINGLE PLATFORM :SAVE DATA CAPTURING TIME
DATA MAINTAINED LIVE Support FOR PREDECTIVE MAINTENANCE
EASY ACCES FROM ALL DIGITAL DEVICES GIVES IMPROVEMENT MONITORING
ALL SPARES MONITORING IS LIVE HELPS TO IMPROVE OPI.
LIVE TRENDING SHOWS HEALTHINESS OF EQUIPMENTS.

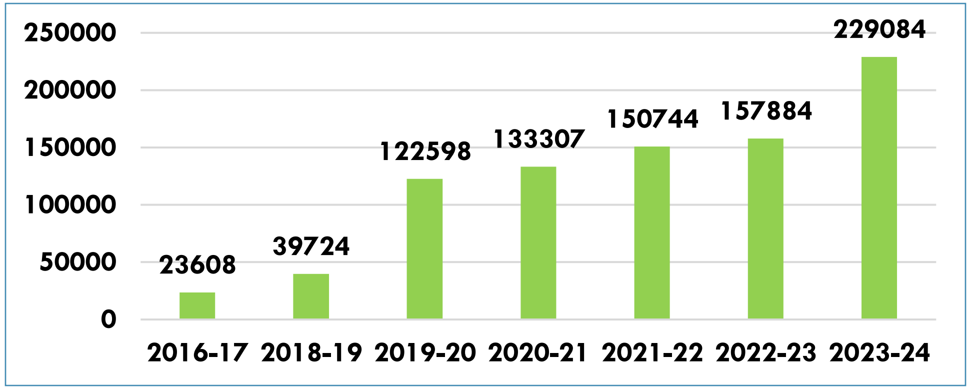


Best practices in the plant:

Biodiversity & Afforestation ***: Including water catchment.***

YEAR	LOCATION	PLANTED NO OF SAPPLINGS	SURVIVED SAMPLINGS	RATE OF SURVIVAL	AMOUNT SPENT (Rs Lah)
2021-22	Plantation by Miyawaki method at RMC parks Ganganagar and Gouthamnagar park	17848	17437	98%	144
2022-23	Head works area Miyawaki plantation	7140	7140	100%	65
2023-24	Telangana phase-1 ashdyke area Miyawaki plantation	71200	71200	100%	862
	TOTAL	2,81,110	2,46,240		1,071

Cumulative no of plantation in last years



Benefits

- Self sustaining and low maintenance
- Occupies less space and called mini oxygen factories
- Reach biodiversity of n no of species
- Very high survival rate
- Thick vegetations and denser plantation

AI/ML: In house developed Boiler Health Monitoring App

In house, Boiler Health monitoring app was developed to assess the life of Boiler and Tube leakage prediction.

All tags are taken from PI

The App deploys unit operating, chemical parameters and AI model to assess the Life consumption of Boiler.

Major monitoring Parameters are Current per day health consumption & desired per day health consumption

MS temperature standard deviation LHS and RHS

RED line indicates – Actual BTL & Blue line indicates – Overhauling & Dash Green line indicated – Predicted BTL

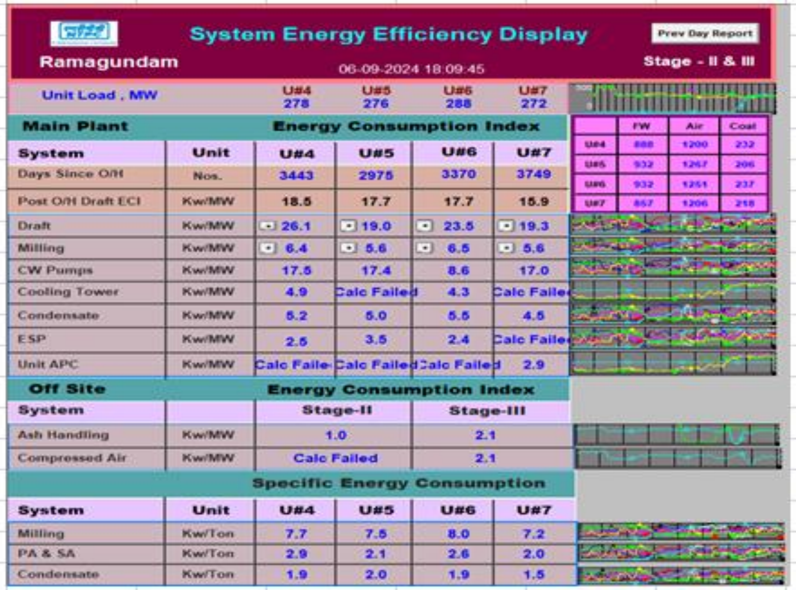
New Initiatives:

- **AI/ML: In house developed Boiler Health Monitoring App to** assess the life of Boiler and Tube leakage prediction
- Real time Plant performance monitoring using Mobile Apps
- Optimization of Bottom De-ashing time using PI based Tools. Saving in Water & APC
- 400 MWH BESS & 25 MWH PSP
- People's Participation in Energy & Environment Awareness competitions/Programmes

EMS System and other requirements

1. Existing Monitoring system:

Real time Energy efficiency Performance parameters Monitoring through PI vision



SEED Tool : System Energy Efficiency display:Real time systemwise APC analysis

Plant Generation and performance monitoring through power Mobile App

2. ISO 50001 Certification: NTPC Ramagundam is certified ISO 50001:EnMS station

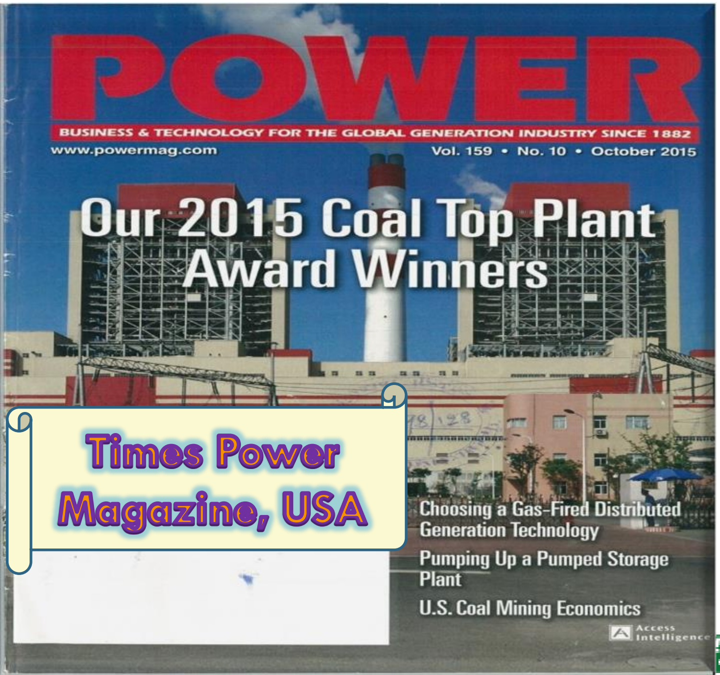
3. Details of RLA conducted in the station

RLA of steam piping of 500 MW units
RLA of Turbine casings and rotors of Unit 4 and Unit 6. No major deviation found
RLA of Steam piping and hangers of all units boiler side defects of hangers attended

NTPC Ramagundam – Global footprint

*NTPC Ramagundam received the **Energy Management Insight Award for 2024** from the **international Clean Energy Ministerial (CEM)** forum under **Department of Energy, United Nation Industrial Development Organization.***

"This award recognizes organizations that have implemented energy management systems to achieve energy, economic, and sustainability benefits"



*NTPC Ramagundam **received POWER MAGAZINE Award, USA**. This award recognizes diverse state-of-the-art technologies to address both unique and global challenges towards climates and economic environments*

"For nearly four decades this plant has been essential power provider as it had added capacity over the years. Even as the plant ages, it has been setting new performance records thanks to technological & environmental upgrades "

Awards & Accolades

CII
Confederation of Indian Industry

24th National Award for
Excellence in Energy Management 2023

This is to certify that

NTPC Limited, Ramagundam

has been recognized as

"Excellent Energy Efficient Unit"

This acknowledgement is based on the evaluation by the panel of judges at the "National Award for Excellence in Energy Management" held during 13 - 15 Sep 2023, Hyderabad

K S Venkatagiri
Executive Director
CII - Godrej GBC

Ravichandran Purushothaman
Chairman, Energy Efficiency Council
CII - Godrej GBC

State level National Energy Conservation Award 2020 by TSREDCO, Govt of Telangana

APEX INDIA Green Leaf Award 2019 For Energy Efficiency

APEX INDIA FOUNDATION

Certificate

This is to certify that

NTPC LIMITED, RAMAGUNDAM SUPER THERMAL POWER STATION

Has been declared winner of

PLATINUM AWARD in THERMAL SECTOR

for outstanding achievement in

Energy Efficiency

ISSUED ON
08th December 2020

PRESIDENT
APEX INDIA FOUNDATION

BEE PUBLISHED THE VIDEO ON ENERGY MANAGEMENT SYSTEM PRACTICES OF NTPC RAMAGUNDAM AND SAME CAN BE SEEN USING THE LINK

HTTPS://BEEINDIA.GOV.IN/SITES/DEFAULT/FILES/VIDEO_UPLOAD/THERMAL%20POWER.MP4

2021,2022 & 2023

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