Confederation of Indian Industry
125 Years - Since 1895

22nd National Award for Excellence in Energy Management 2021

A Maharatna Company

NTPC Ramagundam *(an ISO 50001 Certified station)*

Our Mission:

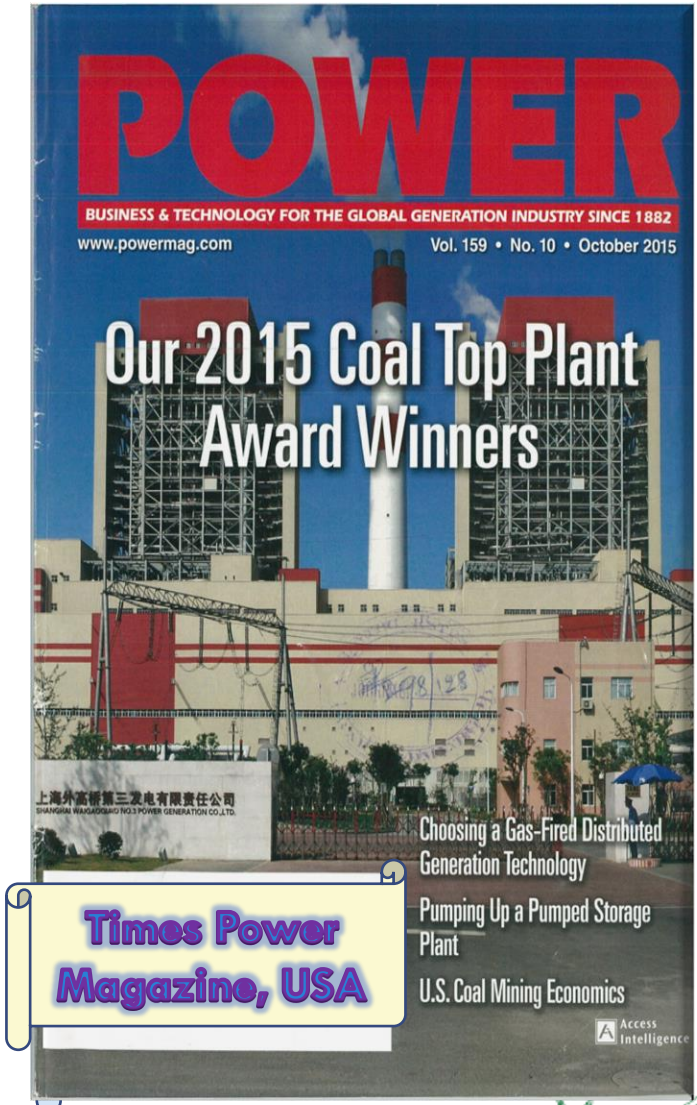
'To Provide Reliable Power & related solutions in an Economical, Efficient & Environment friendly manners driven by Innovations & Agility"

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

Presentation Team: Manoj Kr Jha, Energy Manager & Team leader, Shri Vivek Kumar & Satish Chandra;EnMS team

NTPC Ramagundam – Global footprint..

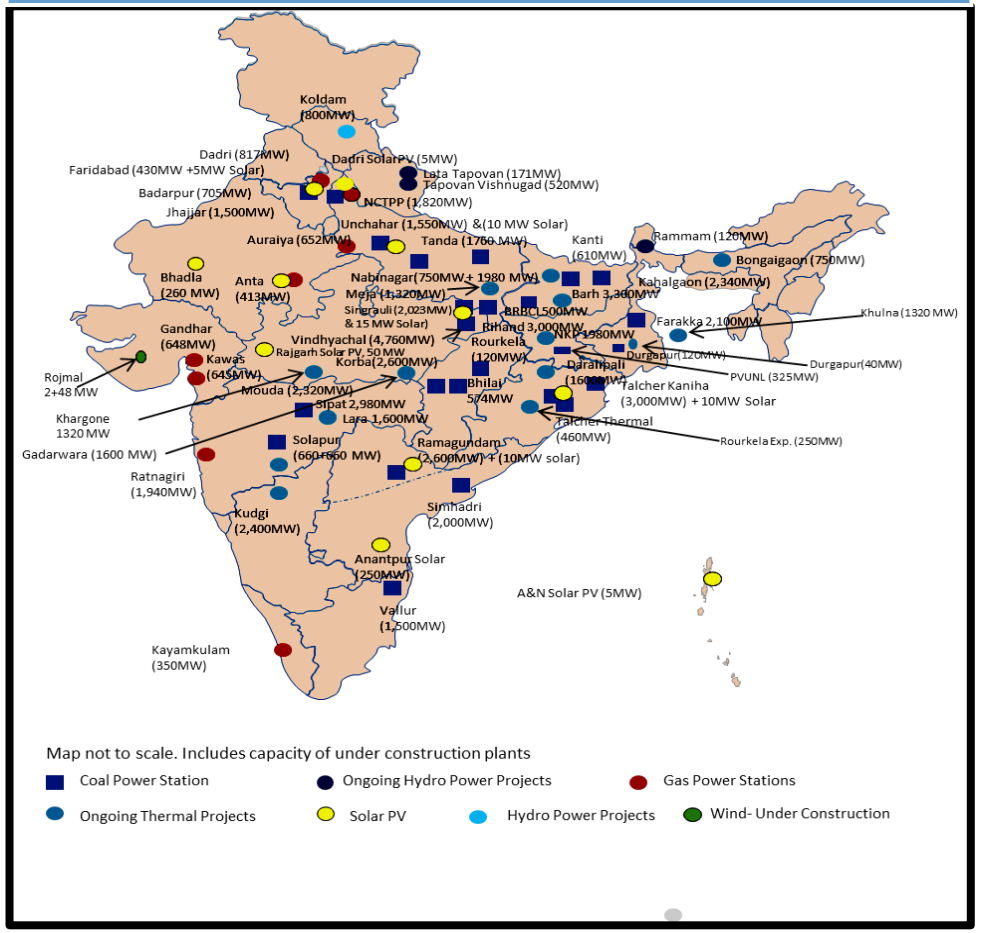


" For nearly four decades this plant has been essential power provider as it had added capacity over the years.

Even as the plant ages, it has been setting new performance records thanks to technological & environmental upgrades "

Profile: NTPC Ramagundam

NTPC Ltd. Pan India presence



Today 66.88 GW → **2032 130 GW**

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
Total Installed Capacity		**2610 MW**

Upcoming Projects Capacity addition:

Capacity: 1600 MW (2x800 MW)

Commissioning by April 22 & Oct 22

Renewable Capacity addition:

Floating Solar : 100 MW Capacity

Test Charge Completed. COD by October 2021

Profile: NTPC Ramagundam

NTPC Ramagundam aligning with The Brighter Plan 2032:

- Responsible Corporate
- Leadership
- Sustainable & progressive business
- Green Environment
- Enriched life

Our Motivation & Drivers for energy and climate sustainability efforts, and goals:

- Achieving our MISSION target & Meeting Statutory requirements
- Natural Resources conservation for future generation
- Competitive Power Market
- Improved CS & CSR Index & Building confidence of stakeholders

Secured & Reliable Power Generator in Southern Region:

- Fuel Security __No Power generation loss due to fuel past years
- Water Security & Efficient use __ Reduced Sp water conspn.
- Ash disposal & Utilization __More than 100% in past years
- Cheaper & Efficient Power to customers _Most preferred supplier

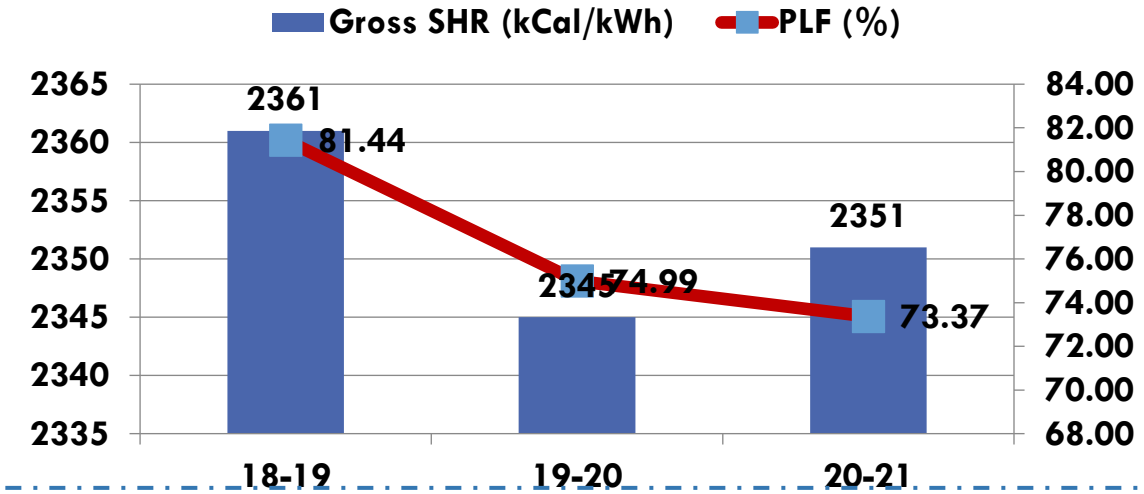
---Beyond Power & Profit

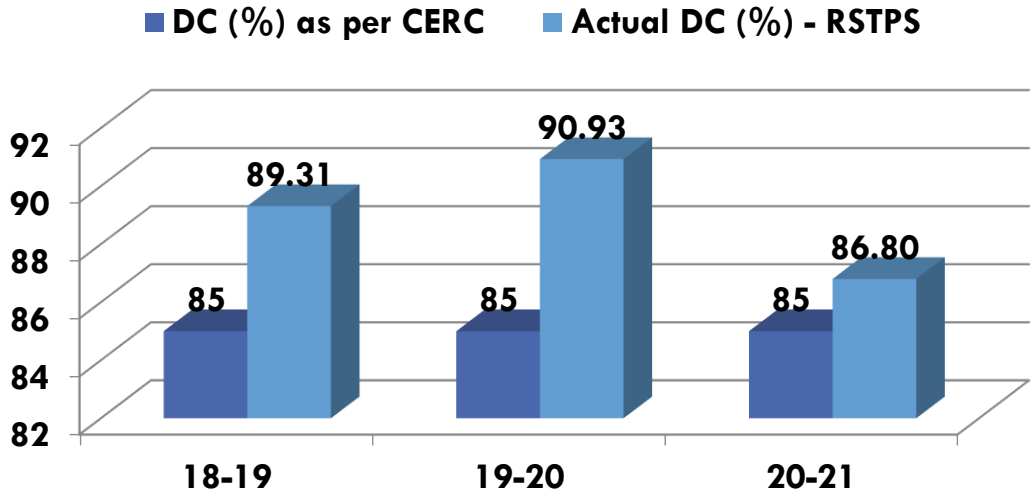
PERFORMANCE FY 20-21

S No	PARAMETER	UNIT	FY 2020-21	
			TARGET	ACHIEVED
1	Generation	MU	15444	16712
2	PLF	%	67.81	73.37
3	Declared Capacity	%	85.00	86.8
4	APC	%	6.88	6.72
5	Sp. Oil Cons.	ml/kwhr	0.50	0.323
6	Heat Rate	KCal/kWh	2399	2351
7	Boiler Efficiencies	%	86.6	86.57
8	Turbine Efficiencies	KCal/kWh	2077	2035.22
9	Raw Water Consumption	Ltr/kWh	3.5	3.27
10	DM Water Consumption	Ltr/kWh	0.07	0.064

Specific Energy Consumption – Last 3 years

CERC Norms for RSTPS: Gross Heat rate (GHR): 2399 kCal/Kwhr and APC of 6.88%



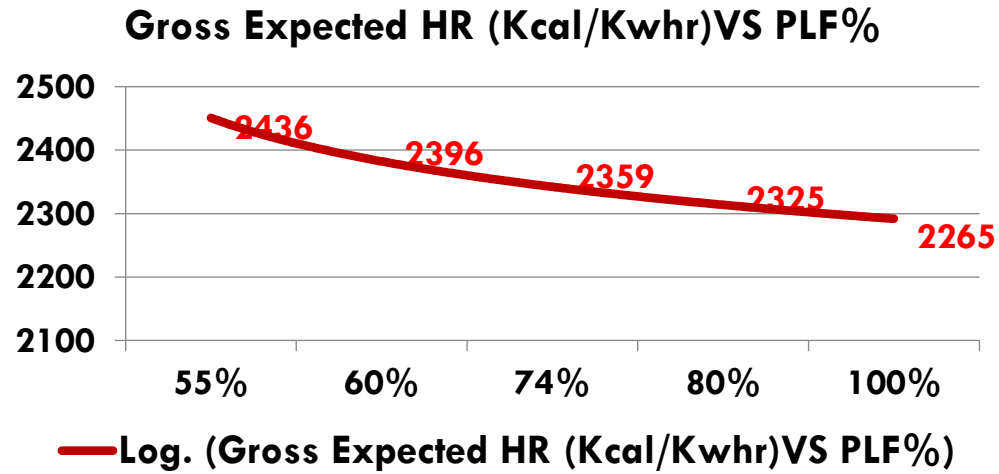


Reasons for variation in GHR & APC in spite of many actions for improvement:

- Higher Backing down during April to Jun'20 and outages of U7 during country wide lockdown (about 20%)

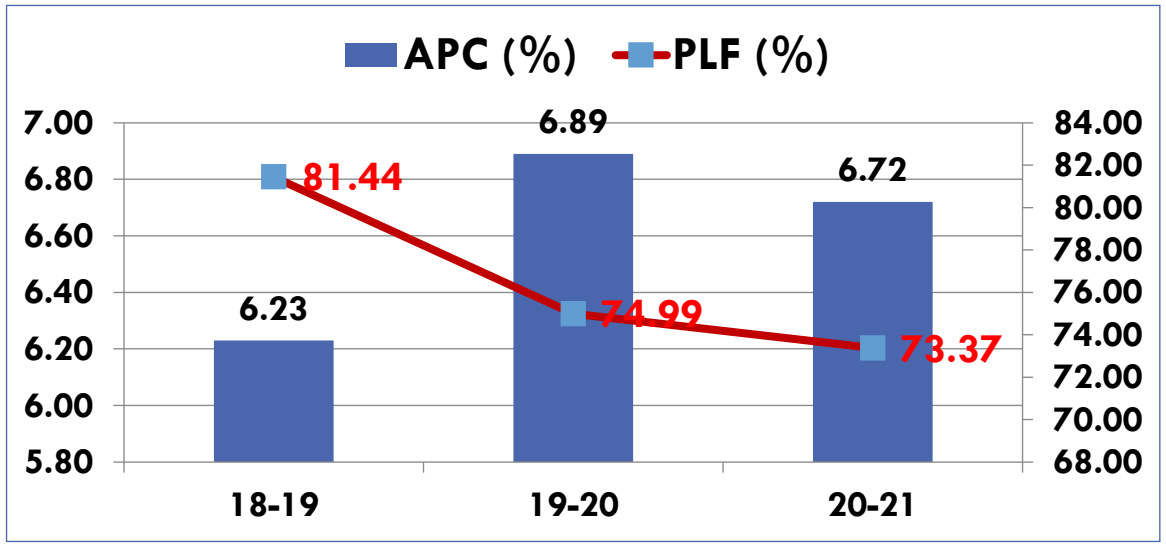
Reasons for variation in DC over PY

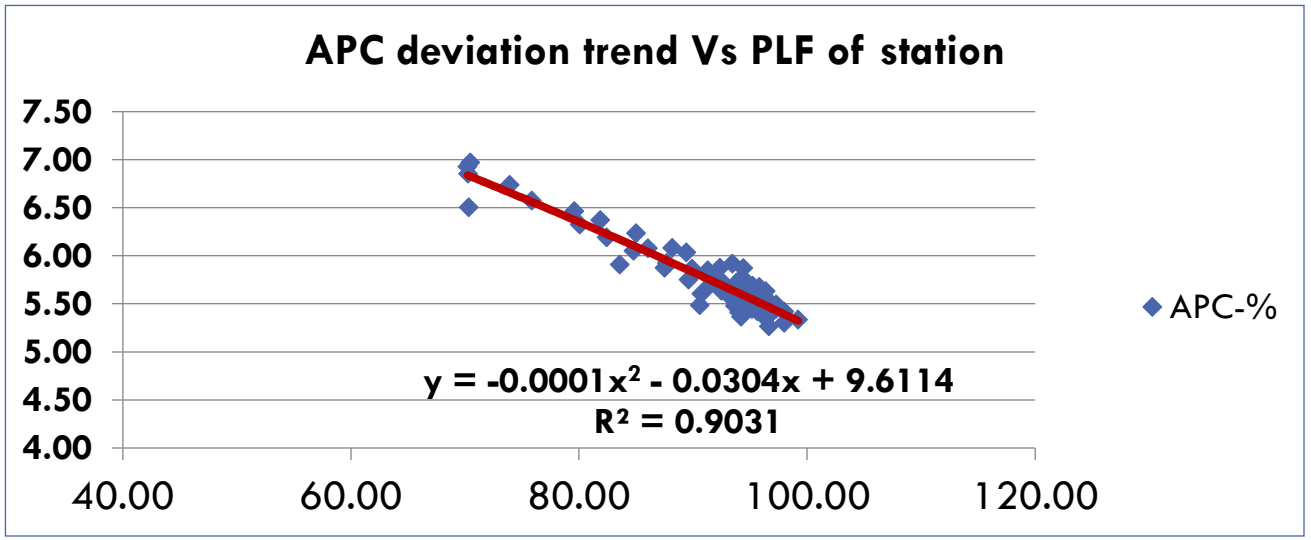
- U7 (500 MW) outage due to HP Turbine U seal leakage took 68 days due to Nationwide COVID lockdown



Specific Energy Consumption – Last 3 years

CERC Norms for RSTPS: APC of 6.88%





PLF of the station shown reducing trend due to followings:

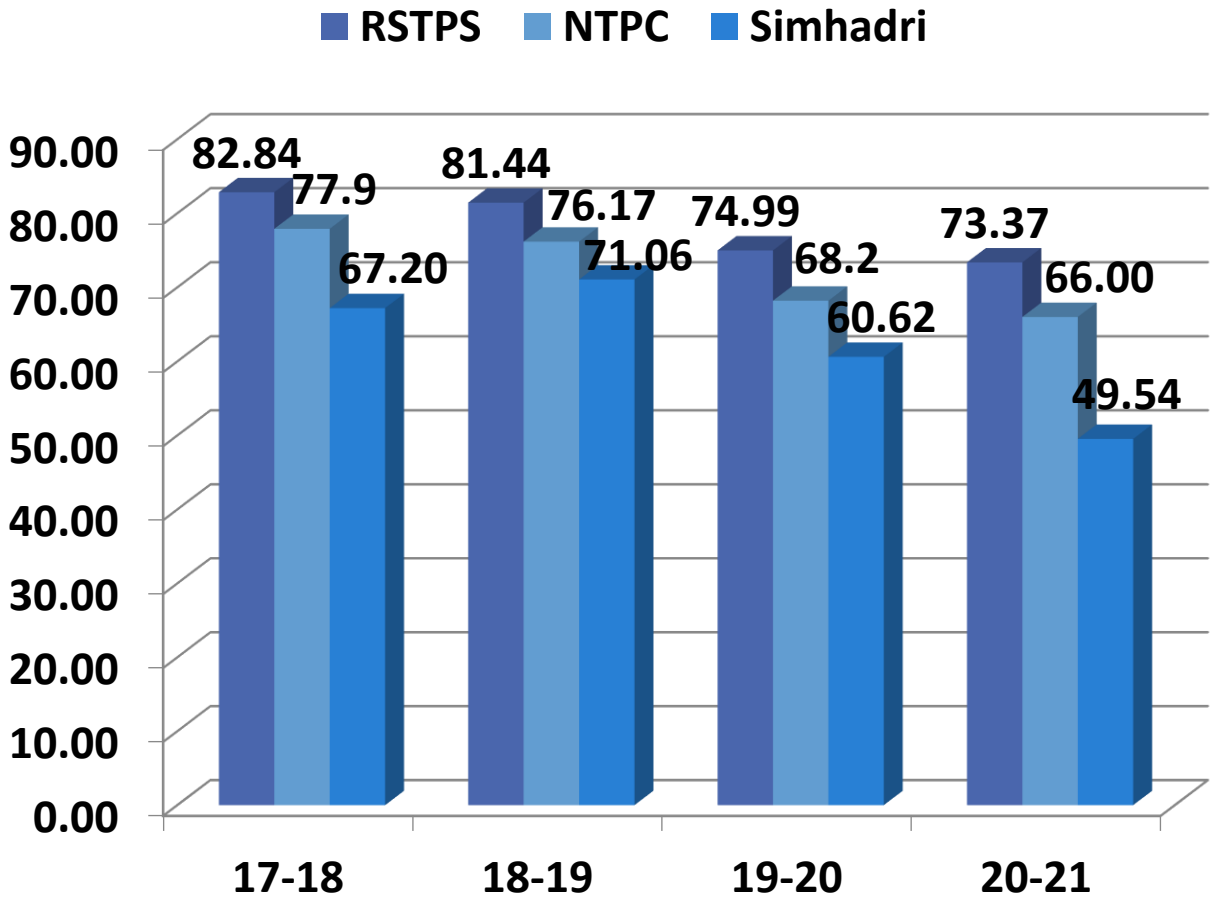
1. **High back-down during Q1 of Fin Year (BD increases to 20% from 10% Q-O-Q)**
2. **U7 extended outage of 68 days due to nationwide lockdown**

- **APC for the year was 6.72% having improvement from previous year of 6.89% in spite of high backing down and low PLF**

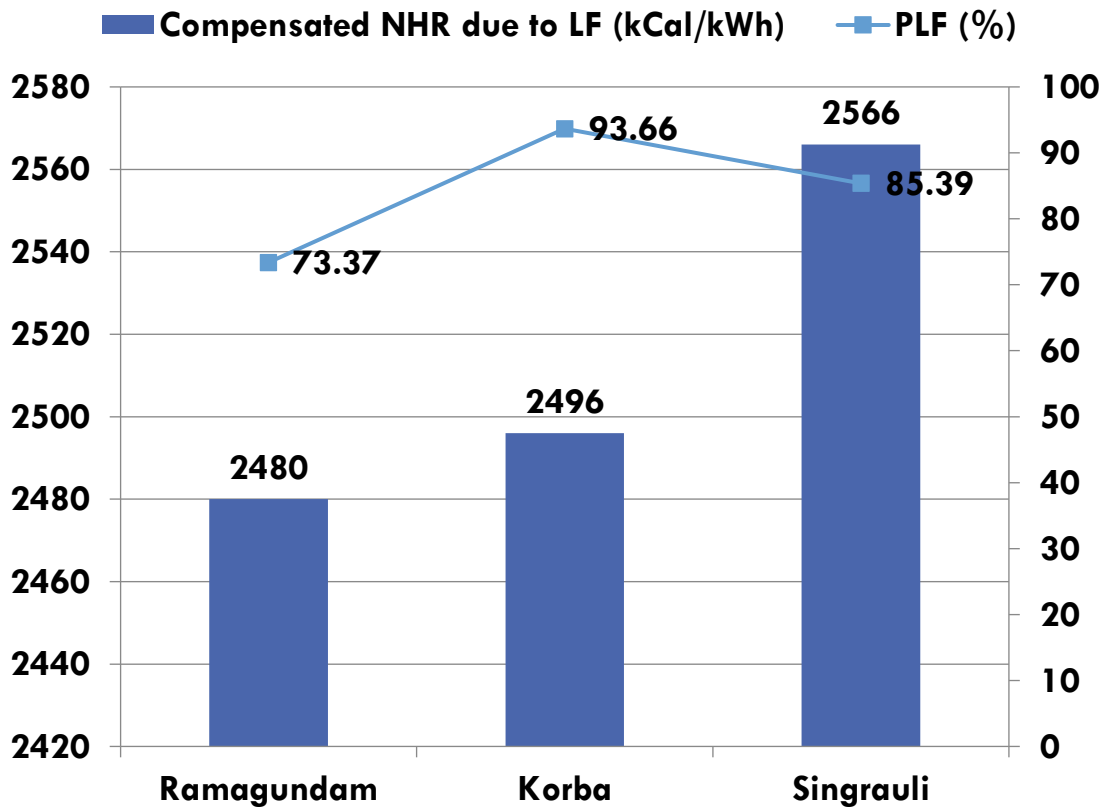
- **From above scatter diagram the APC expected at same PLF was 6.76%**

Information on Competitors, National & Global benchmark

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



PLF (%)



"Compensated Net Heat Rate (NHR)"
NTPC Ramagundam is better than all similar plants

Roadmap to achieve benchmark

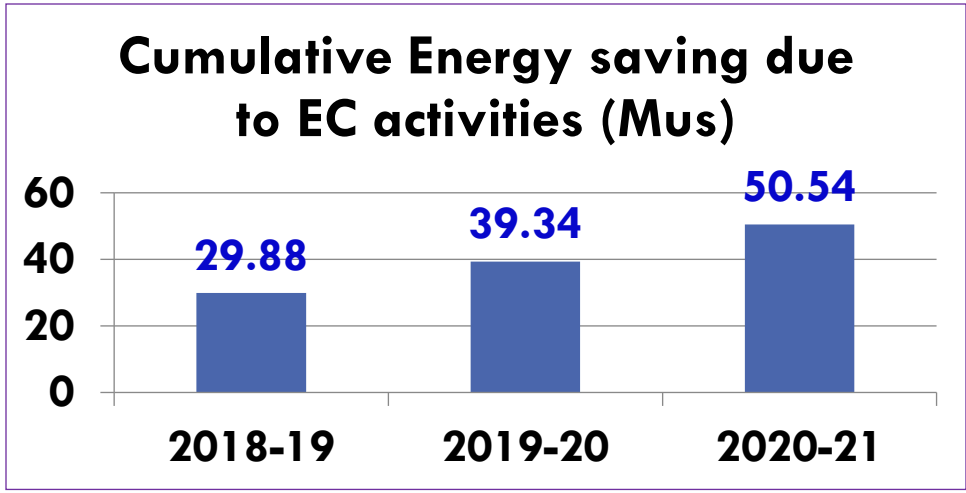
Action Plan Proposed	Expected UHR improvement (Kcal/Kwhr)	Station HR Improvement expected (Kcal/Kwhr)		Heat Rate Improvement Action plan Roadmap	
		2021-22	2022-23	2021-22	2022-23
U#3 Mega R&M (Turbine upgradn)	130	10		Turbine replacement with capacity of 210 MW (Aug'21)	
U#2 Mega R&M (Turbine upgradn)	50		3.8		Turbine replacement with capacity of 210 MW (Mar'22 to Jun'22)
U#1 Mega R&M, Blr OH & Chem cleaning	50	3.8		Turbine replacement with capacity of 210 MW (Oct'21 to Jan22)	
Augmentation of LP Economizer in Stage-I units. Expected Temp reduction by 15-20 deg C	15		1.15		Under SG R&M:package under approval.
Unit 7 BLR annual OH with NOX modification works	8	1.54		Jan-Feb'22	
Unit 4 Blr and LPT OH	15		2.88		Apr-22
Total HR Improvement	**268**	**15.34**	**4.0**		

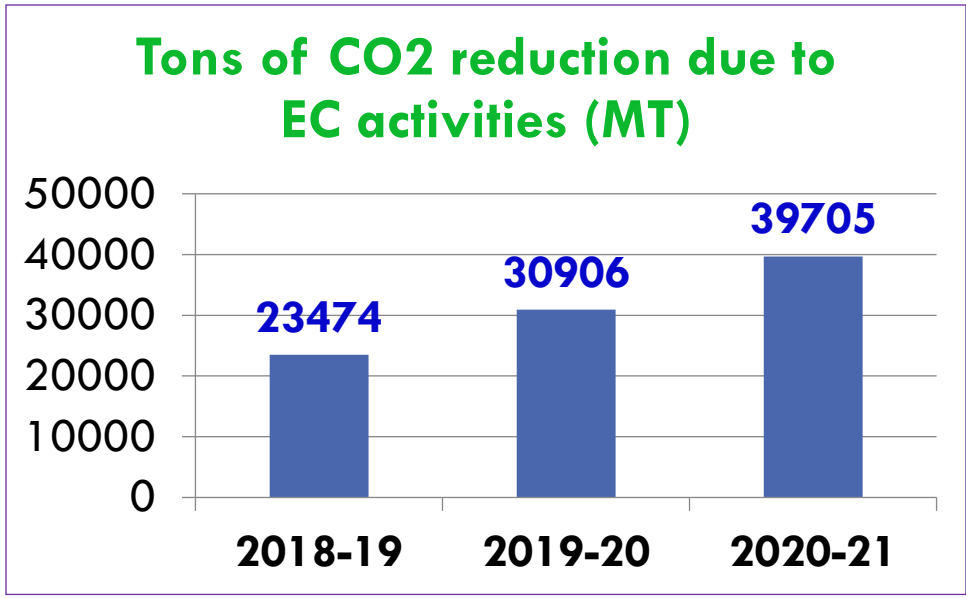
MAJOR ENCON PROJECT PLANNED IN 21-22

S.N	Particulars	Investment	Savings/ annum	Payback Prd (Yrs)	Target Date
1	Unit-1, 2 & 3 Turbine replacement	42500 Lakh	190 kCal 2830 Lakh	9	Jun-22
2	St – II (1*500 MW units) VFD for ID Fan motors	285 Lakh	1.73 Mus 129.6	2.2	Oct-21
3	Soft Starters for Stage-2 Bottom ash series pumps (8 PUMPS)	32.58 Lakh	0.73 Mus 19 Lakh	1.7	Mar-22
4	Soft starters for CT Fans (5 FANS)	10.2 Lakh	0.65 MUs 17 Lakh	0.6	Feb-22
5	Soft Starters for CW P/ps	20 Lakh	2 Mus 50 Lakh	0.4	Mar-22

Energy Saving projects implemented in last three years

FY	No. of Proposal	Investment (In Rs. Lakhs)	Electrical Savings (in Mus)	Thermal Savings (in kCal/kWh)	Savings (In Rs. Lakhs)	Payback Year
18-19	11	222	29.88	-	**282.75**	**0.78**
19-20	5	1310	9.46	16	**764.58**	**3.65**
20-21	8	585	11.2		**271.3**	**2.16**





Utilization of renewable energy sources

FY	Technology	Type of energy	Onsite/ offsite	IC (kw)	Gen. (MUs)	% of Electrical Energy used
18-19	PV Plates	Solar	Onsite	10135	15.06	1.29
19-20	PV Plates	Solar	Onsite	10135	14.06	1.18
20-21	PV Plates	Solar	Onsite	10135	14.3	1.27

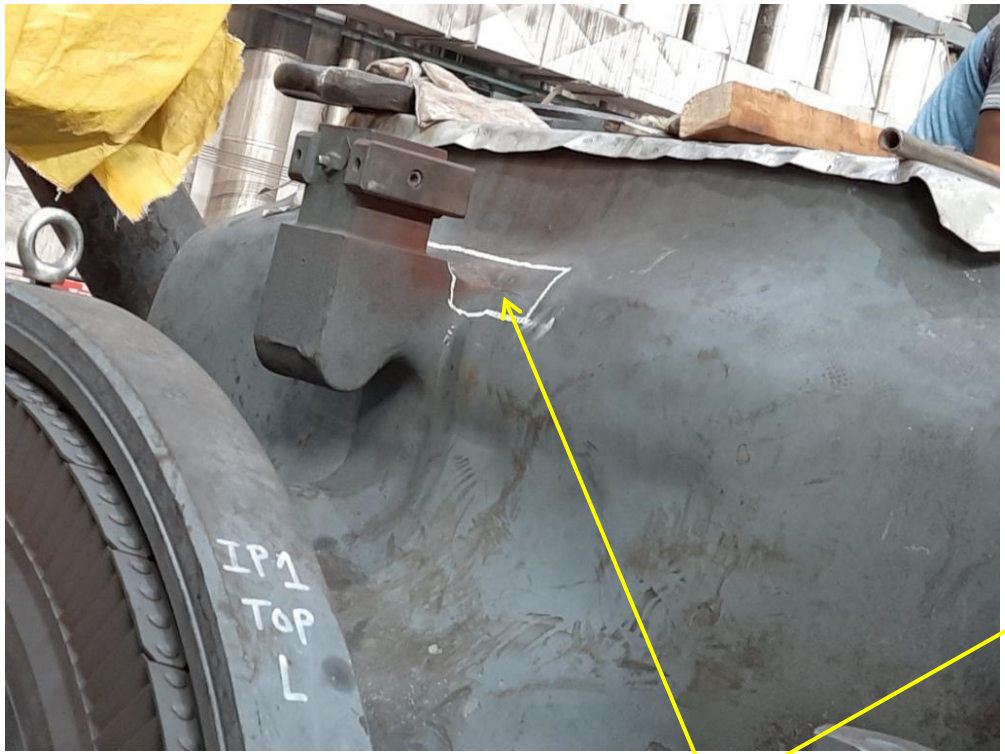


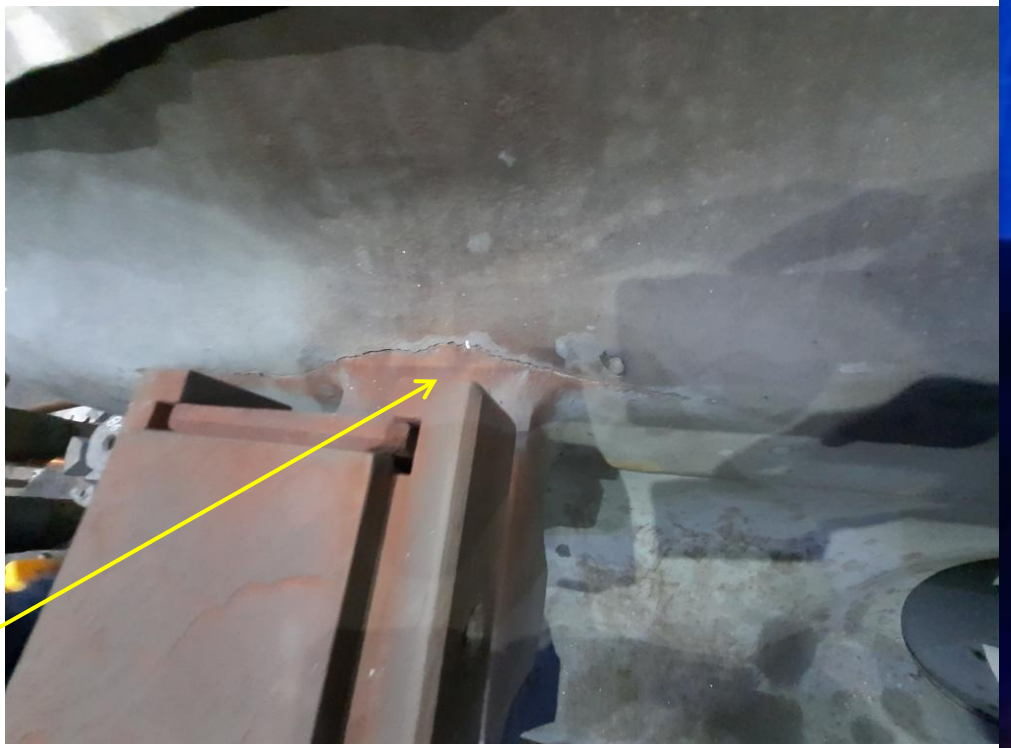



Upcoming Renewable Energy Projects			
Name of Project & Location	Project Capacity	Investment made (Rs Million)	Expected Power generation year
Floating Solar PV plant on water reservoir	100 MW	4830	2021-22
125 KW on CW CT outlet channel	125 Kw	6	2021-22

IN SITU REPAIR OF CRACKS IN RSTPS UNIT#2 HP TURBINE INNER CASING

INNOVATIVE PROJECT-1





VISIBLE CRACK WAS OBSERVED IN THE HP TURBINE INNER CASING

IN SITU REPAIR OF CRACKS IN RSTPS UNIT#2 HP TURBINE INNER CASING

1) Removal of crack by low heat input **air arc gouging** process for 75% thickness & balance 25% by grinding process
2) Preheating by induction coils – rate of heating 50^{o} c / hour. Root run welding & side wall cladding by ewactrode 670 special purpose electrode
3) Radiographic testing to check soundness of weld after 70% build up

Savings

S.No	Particulars	Values	Remarks
1	Saving of time/ revenue loss	Rs 9.42 Cr	The total repair work was completed within a period of 12 days at site, which either would have taken about 45 days if the same was carried out at any other agency manufacturing works.
2	Less cost of repair for carrying out at Station	Rs 0.92 Cr	The cost of repair at site is only Rs 0.2 Cr against the amount of Rs 1.12 Cr either charged for carrying out this work at any other agency manufacturing works.
	Total Savings	**Rs 10.34 Cr**	
*** In addition to the monetary savings, other intangible benefit such as **learning of our employees of handling such critical repair at site & confidence building** is invaluable*			

Optimization of operation of ETP/Ash water pumps by EPANET

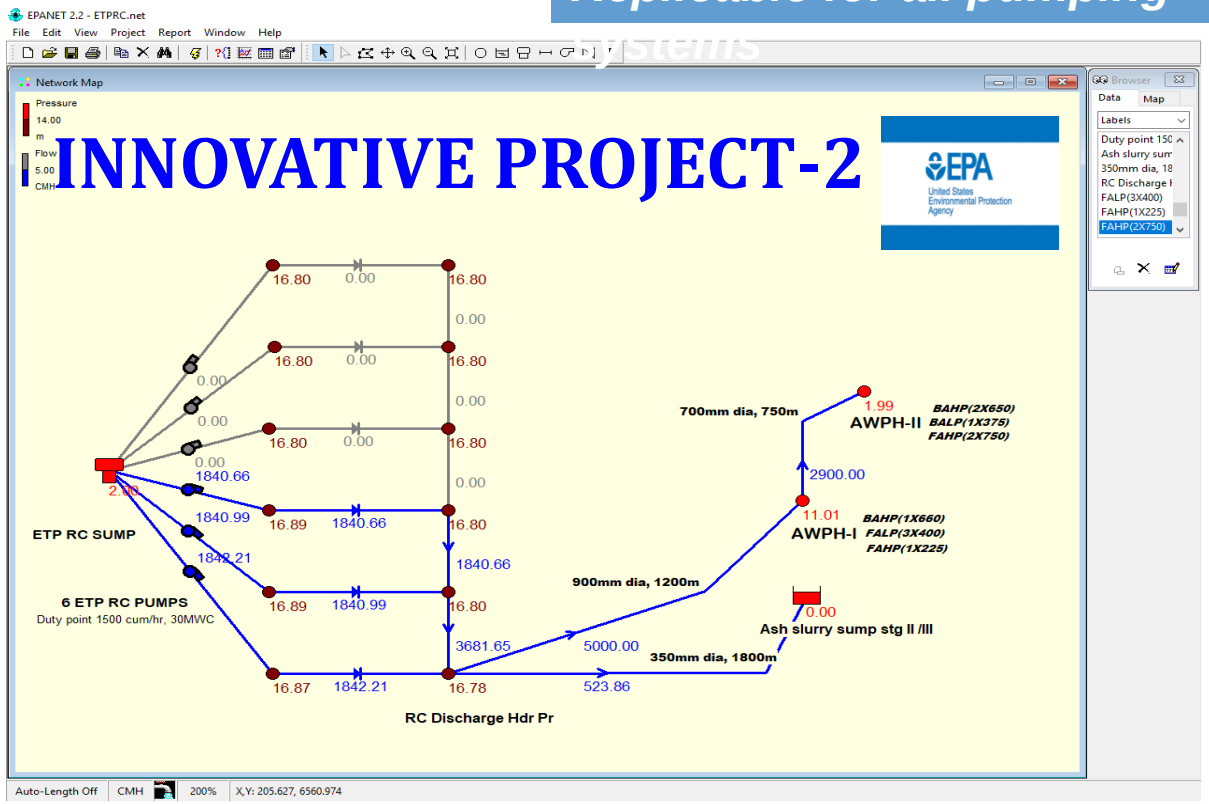
EPA is an independent executive agency of the United States federal government tasked with environmental protection matters

EPANET: software application by EPA to model water distribution piping systems since 1990

Replicable for all pumping systems

Advantages after using EPANET:

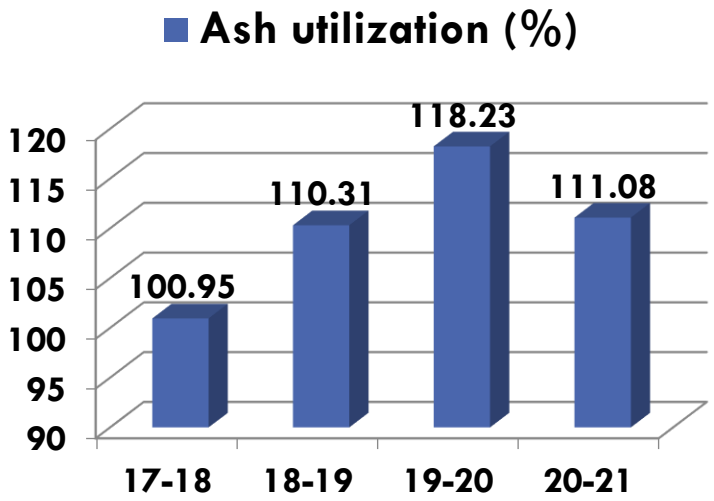
1. Optimize operation of 20 pumps in existing ETP/ Ash water pump circuit by obtaining various pressures & flows in various pump operation conditions
2. Reduced energy usage
3. Pressure transmitters with display at UCB-1,UCB-4 and ETP are installed & hooked to DCS / PI
4. Reduction of equipment breakdown by ensuring required Suction header Pressures of both AWPH-I and II are available
5. Staggered operation of high capacity BAHP & FAHP pumps



Annual Savings of Rs. 30 lakh On account of APC savings and Maintenance cost reduction

Environmental Management- Ash Utilization

- Use of Fine Fly Ash for Geo polymer concrete for road & building construction
- Bottom ash as replacement of sand in Mine Stowing, Ash Dyke Raising, Ash BricksUtilisation of
- National Highway construction
- Minevoid filling
- Ensuring Dry Ash system availability. Dry Ash Utilization has increased from 30% to 45%.
- Customer meets & Industry visits for increased customer base.



Best Practice of NTPC Ramagundam

Fly Ash Geo polymer road construction at RSTPS

Dry Ash supply Rake Loading System

Value added products (Aggregates) from fly ash at RSTPS)

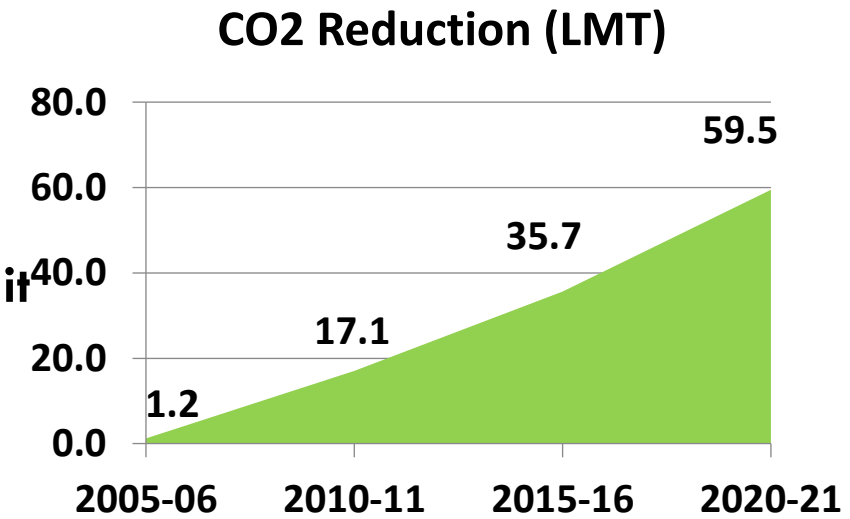
Environmental Management- Ash Utilization

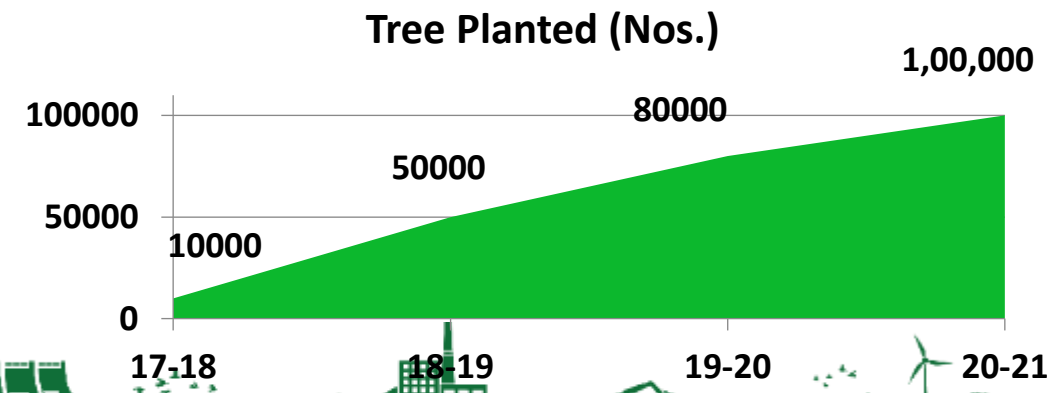
Particulars	UOM	18-19	19-20	20-21
Ash Generated	Tons	4275189	3816293	3857530
Ash Utilization	%	110.31	118.23	111.08
Ash Utilized in manufacturing of cement/concrete – other similar products	%	14.22	22.8	19.6
Ash Utilized in Fly Ash Bricks	%	40	35	59.4
Ash Utilized in Mine filling	%	18	21	15
Ash Utilized for Roads pavements	%	5	6.9	6
Ash Utilization in Other Areas – Please mention below	%	5.31	6.03	5.801
(1) Agriculture Use		5.22	6	0
(2) Cenospheres		0.09	0.03	0.001
(3) Ash dyke construction		0	0	5.8
Expenditure on Ash Utilization (annual)	**INR**	**0**	**0**	**0**

Ash Handling done through various methods	
Ash Handled (Wet Method) %	20
Ash Handled (Dry Method) %	80
Ash Handled (semi wet) %	NA

Environmental Management-Emission

- Ash Utilization > 100% for 4th consecutive year
- Mass Tree Plantation ~ 1 Lakh nos plantation done in FY 20-21
- CO2 emission reduction in last 15 years is approx 59.5 LMT
- Solid Waste Mgt: Bio Methanation Plant and Vermi composting unit
- Geo Tagging of all trees in plant and township
- Mini forest development using Miyawaki method
- SOx reduction: FGD St-I & II, Awarded – Under implementation
- Nox reduction: Combustion modification system St-III; 3.5 MLD STP under construction





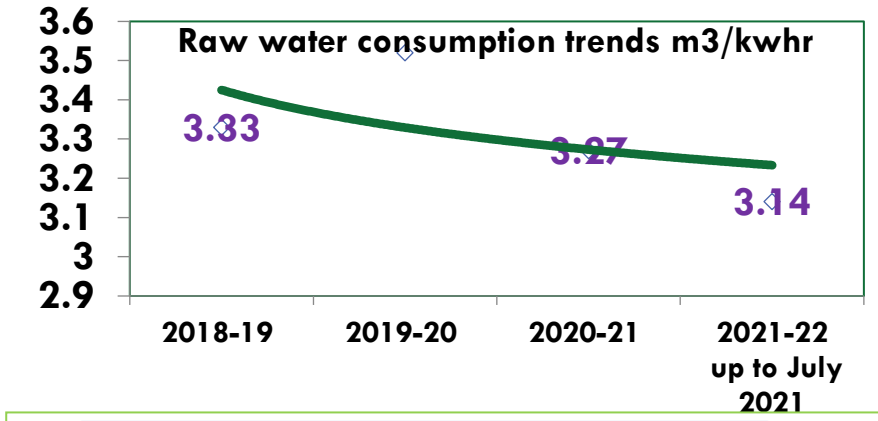
Environmental Management-Emission

Absolute Emissions and Emission Intensities				
Particulars	**UOM**	**18-19**	**19-20**	**20-21**
Total CO2 Emissions Per kW of Generation	Ton/kW	0.00078	0.00077	0.000766
Current SOx Emissions at Full Load*	mg/Nm3	1686	1625	1393
Current NOx Emissions at Full Load*	mg/Nm3	374	394	440
Particulate Matter *	mg/Nm3	94	87	73
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 (ppm)	655	1273	S/D	1184	1121	1171	552
NOX (ppm)	588	575	S/D	363	443	372	512
Opacity mg/Nm3)	73	80	S/D	68	80	80	37

Environmental Management- Water

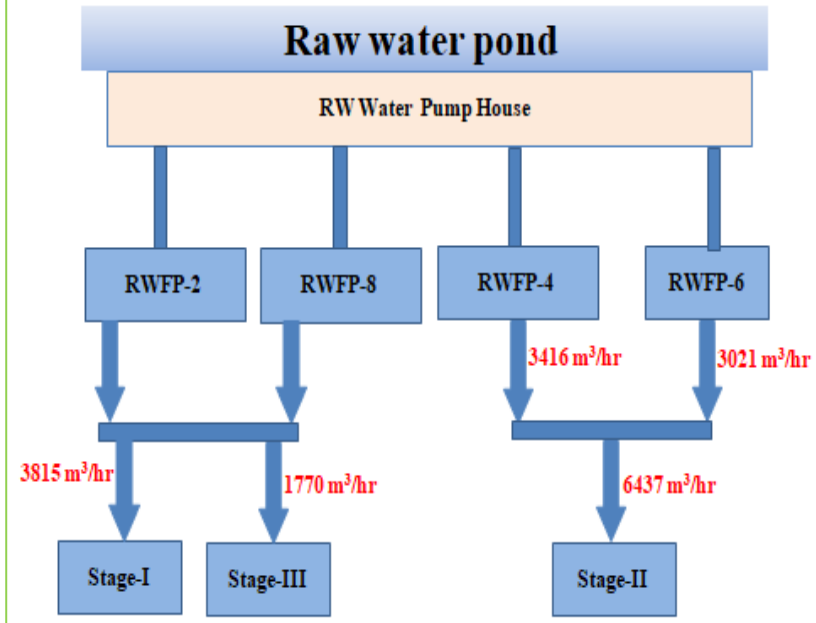
DM water consumption (%)			Raw water consumption m3/mwhr		
18-19	19-20	20-21	18-19	19-20	20-21
0.82	0.72	0.82	3.33	3.52	3.27



Plant has implemented Zero Liquid Discharge

BEST PRACTICES IN WATER MANAGEMENT:

- IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD)
- INSTALLED ASH WATER RECIRCULATION SYSTEM TO RECOVER 1500 M3/HR WATER FROM ASH POND.
- INSTALLATION OF FLOW METERS AT ALL NODES OF WATER (FEW MORE NODES ARE UNDER PROCUREMENT) & INTEGRATION WITH PI SERVER FOR SYSTEM WISE CONSUMPTION MONITORING
- USE OF MUNICIPAL SEWAGE WATER THROUGH STP
- TOWNSHIP RAIN WATER HARVESTING (IN USE)
- THIRD PARTY WATER BALANCE AUDIT OF PLANT EVERY 3RD YEAR (LAST DONE IN JANUARY 2020)



Raw Water System

Flexibilisation, Maintenance & Reliability, Digitization

Flexibilization:

1. Units are being operated with Flexibilization with 1% Ramp Rate up to 55% PLF.
2. Trial Operation of 500MW Unit up to 40% are being done
3. Unit control system tuning completed. State variable control is incorporated in place of conventional PID
4. 100 MW floating solar power will be used for bundling in place of U7 thermal power

Maintenance & Reliability:

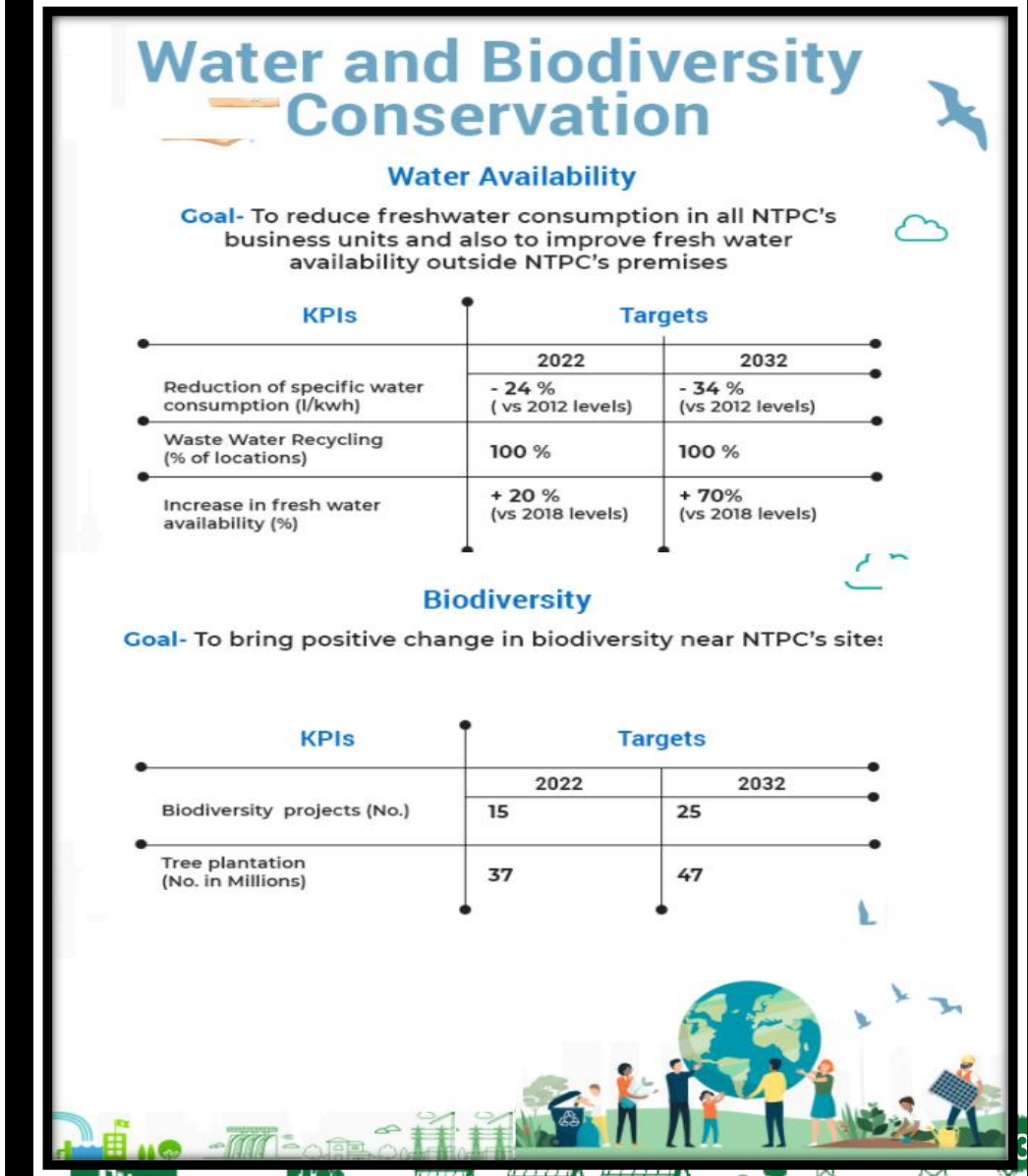
1. 100% compliance of PM, PdM analysis of critical equipment,
2. WDA of identified critical equipment & validation with NETRA
3. Infra-red thermograph and dissolved gas analysis periodically
4. PM check compliance is achieved through Daily Schedule Meetings
5. 100% OPI Score before start of OH
6. Condition monitoring tools & Techniques

Monitory saving due to PdM activities:

Equipment	Description of activity	Benefits	Saving (₹Lakh)
SAPH-4A	Resilience plate was damaged.	Timely detection and diagnosis prevented 24 hrs of outage of SAPH-4A	166.89
SAPH-7A	Damage to seals identified	Timely detection and diagnosis prevented 24 hrs of outage of SAPH-4A	167.49
St 1 PA Fans	Balancing of all PA Fans during PM checks	Break down and non-availability of Stage I PA Fans were avoided.	84.20

Best Practices in Plant

Activities	Status of Implementation	Benefits achieved
Digitization	Implemented. 1. NTPC Ramagundam is smoothly working paperless 2. Implementation of CLIMS	Approx 13 lakh A4 sheets saving yearly Trees Saved : 157 assuming one tree yields 16.5 reams of A4 sheet.
Bio diversity	Eco park inside township Variety of plantations of more than 1000 varieties	Presence of large no of birds species inside
Afforest ration	More than 2 lakh sapling planted in 2020-21 in spite of COVID pandemic	On continuous afforest ration environment temp is 2 deg C less than surrounding
Research	Use of fly ash in making value added products like concrete and tiles	Model building using the same is under construction in township shopping complex



New Initiatives

Safety

- Application developed for Medical and Safety Training Clearance for Agency Worker's health and safety training data
- Suraksha APP Developed For NTPC Ramagundam. Started 100% Reporting of UA/UC / Near Miss Through App Only
- Implementation of Contract Labour Management System (CLIMS). 100% attendance through CLIMS

Other New Initiatives at NTPC Ramagundam

- Battery Energy Storage System (BESS) of 40 MWHr through upcoming 100 MW floating solar under approval
- Demonstration building construction using geo Polymer aggregates and tiles in shopping complex
- Installation of 3TPD capacity waste to energy based on Torre faction technology for charcoal production
- Business performance monitoring through BE live model.
- Pump performance testing using Thermodynamic method (calculation of loss across pump).

NTPC Ramagundam (ISO 50001:2018 Certified)

IRCLASS SYSTEMS AND SOLUTIONS PRIVATE LIMITED

CERTIFICATE OF APPROVAL

Issued by Indian Register Quality Systems
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Energy Management Systems of

Organisation: NTPC Ramagundam

Address: PO Jyothinagar, District Peddapalli, Telangana State - 505215

has been assessed and found conforming to the following requirement

Standard: ISO 50001:2018

Scope: Electricity Generation

Certificate No.: IRQS/201000633

Original Certification Date: 19/10/2020

Current Date of Granting: 19/10/2020

Expiry Date: 18/10/2023

Indian Register Quality Systems NABCB EnM 001

Shashi Nath Mishra
Head IRQS

This approval is subject to continued satisfactory maintenance of the Energy Management Systems of the organization to the

एनटीपीसी NTPC	Energy Management System ENERGY AND EFFICIENCY MANAGEMENT GROUP	Ramagundam

Section No: 4	TITLE	Revision No: 01
Page: 17 of 51	Energy Management System Policy	Rev. Date: 22.07.20
		ISO Ref: Clause 5.2

ENERGY MANAGEMENT SYSTEM POLICY OF NTPC RAMAGUNDAM

NTPC Ramagundam is committed to the Generation and Delivery of Quality, Reliable & Cheaper Power to the satisfaction of Customers and other Stakeholders, through Systems and Processes, in line with our Vision, Mission and Core Values.

EnCon Project budget allocation-% FY 20-21	Amount
Total Turnover of the Plant (in Rs Million)	51968.41
Amount invested in EnCon Project (in Rs Million)	42.8
Investment (%)	**0.09**

Daily Monitoring System

Energy Efficiency Performance Monitoring Tools:

1. Online Performance Monitoring using PI tools/TLA/SEED
2. Offline Equipment Performance monitoring based on periodical tastings
3. Performance Improvement through recommendation of different Performance Optimizations Group (POG)

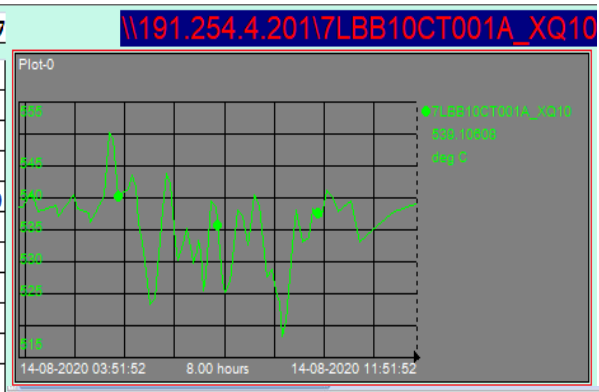
1. Online Performance Monitoring using PI tools/TLA/SEED:

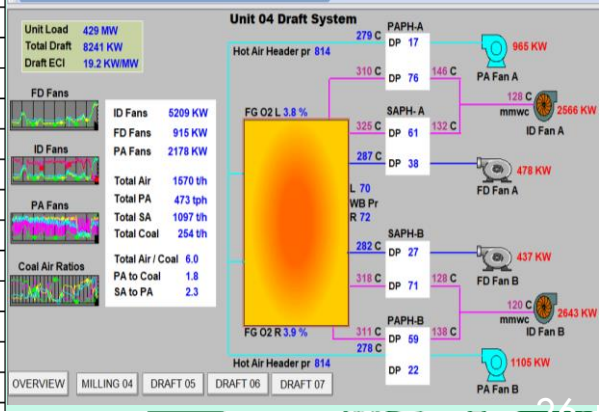
RAMAGUNDAM SUPER THERMAL POWER STATION
ENERGY AND EFFICIENCY MANAGEMENT GROUP
HEATRATE DEVIATION BASED ON DAILY AVERAGES
UNIT-5

DATE: 23-Jun-20

S No	Parameter	Unit	Design	Avg Value Daily	HR Dev (Kcal/kWh) Daily	HR Dev (Kcal/kWh) Cumulative
1	Load	MW	500	399.1	53.8	86.3
2	Main steam Temp before ESV	° C	537	535.8	1.0	0.6
3	Hot Reheat Temp before IV	° C	537	534.9	1.3	1.0
4	Superheat Attemperation	t/hr	0	111.4	6.2	5.4
5	Reheat Attemperation	t/hr	0	32.7	15.1	8.6
6	Condenser Vacuum	mm Hg	76.0	77.1		
	Cond Vac (Corrected for CW I/L ten	mm Hg	76.0	73.4	-6.0	-18.3
7	CW inlet temperature	° C	32.2	33.1	8.8	-2.0
8	Makeup Water *	t/hr	0	16.17	27.2	22.0
9	FW temperature at HPH O/L	° C	253.7	245.6	-2.2	-1.4
10	Dry Flue Gas loss (DFG)					
	1) Oxygen at Eco Outlet	%	3.50	4.17	7.2	16.5
	2) APH Exit temperature	° C	133	141.5		
	APH Exit temperature (Correct	° C	133	138.4	7.2	2.6
11	Combustibles in Bottom ash	%	2.00	1.49	-1.9	-1.7
12	Combustibles in Fly ash	%	1.00	0.78	-2.9	-3.8
14	BOILER OL MS_LHS	° C		539.9		
15	BOILER OL MS_R	° C		538.6		
16	BOILER OL HRH_L	° C		536.8		
17	BOILER OL HRH_R	° C		535.7		

Parameter	Unit # 1	Unit # 2	Unit # 3	Unit # 4	Unit # 5	Unit # 6	Unit # 7
UNIT LOAD	116	114	148	266	00	262	281
COND VAC	-705	-704	-698	52	131	47	53
TOTAL COAL	78	81	104	185	00	187	190
TOT AIR FL	563	531	562	1110	94	1093	1050
O2 LEFT	8.62	7.15	5.33	5.63		6.66	6.90
O2 RIGHT	8.30	7.82	4.94	5.07		7.97	5.94
1ST STG PR	71	71	96	80	00	80	89
THROT PR	124	122	121	151	00	152	154
MS TEMP L	541	539	522	537	423	542	541
MS TEMP R	540	540	522	539	413	537	541
HRH TEMP L	515	541	518	539	403	542	539
HRH TEMP R	531	525	515	531	352	531	
SH ATTEMP	24	30	34	119	0	129	75
	8	0	15				
RH ATTEMP	0	2	3	23	0	35	13
CO ID-A O/L	I/O Timeout	I/O Timeout	I/O Timeout	Bad	Bad	428	12
CW I/L TEMP	31	31	32	30	29	30	31
CW O/L TEMP	37	37	39	36	42	36	37
ID-A DISC TEMP	136	133	154	113	82	125	112
ID-B DISC TEMP	139	134	142	113	68	116	105





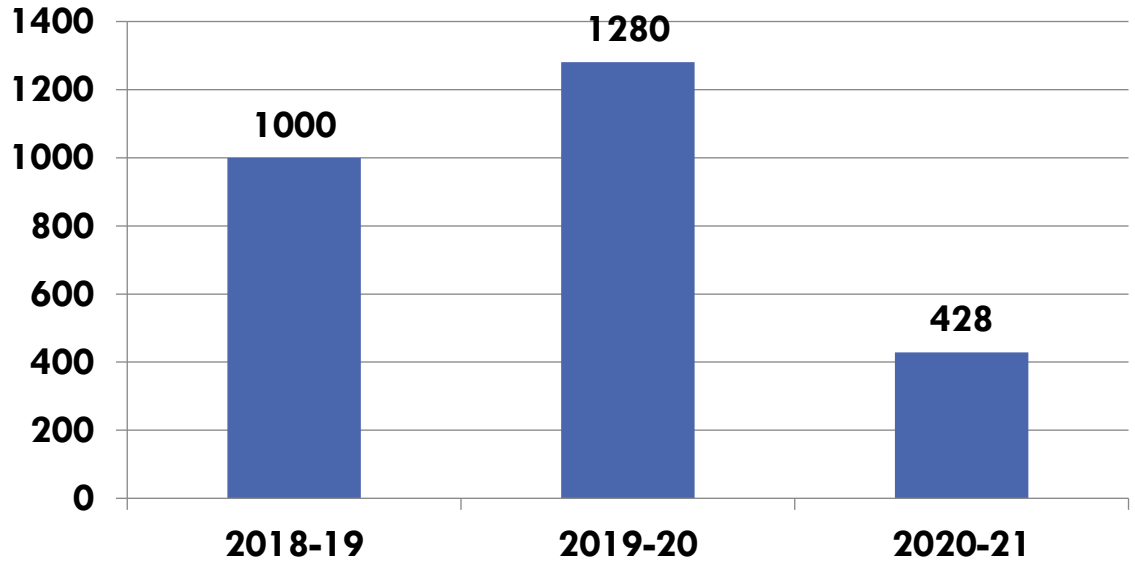
Teamwork & Employee Involvement

Energy Efficiency/conservation through Team Work:

Involvement of Multifunctional department:

a. VFD in ID Fans implementation by **EMD**
b. LED implementation by **EMD**
c. IE3 Motors replacement by **EMD**
d. TAC Replacement by **AHM**
e. BFP cartridge replacement & PAC replacement by **TMD**
f. Solar PV implementation by **EEMG**
g. Offline performance deviations Monitoring by **EEMG**
h. CT towers & channels maintenance: **Offsite**

Separate Capital Budget for EnCon Project (Rs Lakh)



Energy Efficiency Performance Monitoring System

Energy Efficiency Performance Monitoring System			
Meetings	**When**	**Headed By**	**Corrective actions generated from monitoring & review meetings implemented in Operational and Maintenance Practices**
Planning Meeting	Daily	O&M Head	
Operational Review Team Meeting	Monthly	Plant Head	
Regional Operational Performance Review	Half Yearly	D(O)	

RSTPS: Energy efficiency / Awareness training program

- Training on commercial impacts of Efficiency improvement to all executives
- Two days Commercial workshop is organized at RSTPS
- Awareness through Posters on Efficiency improvement tips

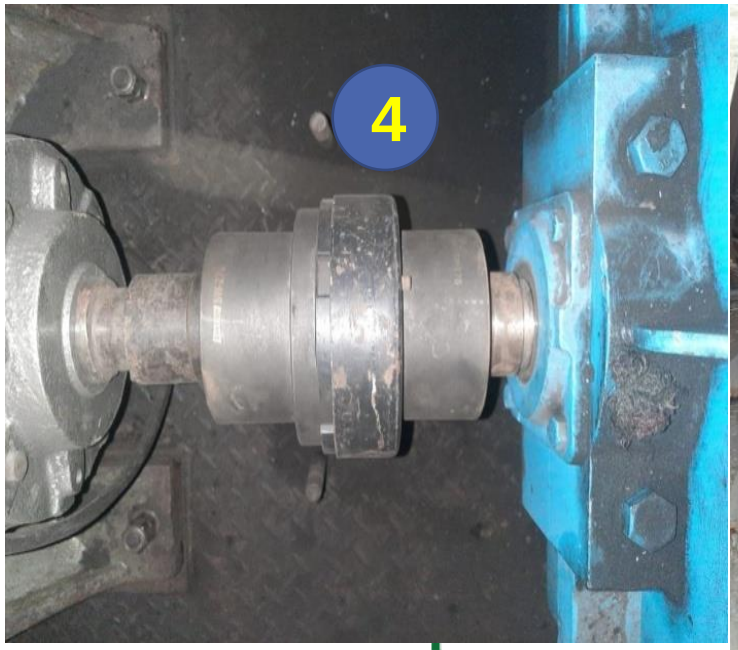
Energy Performance Awareness Statistics

Type of Staff	No.	% Awareness
O&M Executives	320	100
Service dept executives	120	90
O&M Non executive	395	100
Service department Non executive	150	40

S. No.	Type of auditors	Nos. trained
1	Energy Auditor	30
2	Energy Manager	5
3	ISO 50001 Internal Auditor	21

Major Kaizen Projects during 2020-21

1. PROVIDING SERVICE WATER LINE FOR ALL THE STACKERS
2. CONVEYOR 22A/B TO CONVEYOR 3B CHUTE MODIFICATION
3. PADDLE FEEDER BLADES GET DAMAGED REGULARLY IN STAGE – 1
4. ADDRESSED THE ISSUE OF FREQUENT COUPLING DAMAGED



Learning from CII Energy Award 2020

S.N	Particulars	Area of benefits	Implementation Status	Savings/ annum
1	Soft Starters for Stage-2 Bottom ash series pumps (8 PUMPS)	Frequent start/stop of motors as per requirements during part load operation	Under procurement	0.73 Mus 19 Lakh
2	Soft starters for CT Fans (5 FANS)	Frequent start/stop of motors as per requirements during part load operation	Under procurement	0.65 MUs 17 Lakh
3	Soft Starters for CW P/ps	Frequent start/stop of motors as per requirements during part load operation	Under approval	2 Mus 50 Lakh

Confederation of Indian Industry
125 Years - Since 1895

Awards & Accolades

Confederation of Indian Industry
125 Years - Since 1895

21st National Award for Excellence in Energy Management 2020

This is to certify that

NTPC Limited, Ramagundam

has been recognized as

"National Energy Leader"

for their consistent and progressive performance in energy management.
This acknowledgment is based on the evaluation by panel of judges at the "National Award for Excellence in Energy Management" held during 25 - 28 August 2020.

K S Venkatagiri
Executive Director
CII - Godrej GBC

Ravichandran Purushothaman
Chairman, Energy Efficiency Council
CII - Godrej GBC

Confederation of Indian Industry
125 Years - Since 1895

21st National Award for Excellence in Energy Management 2020

This is to certify that

NTPC Limited, Ramagundam

has been recognized as

"Excellent Energy Efficient Unit"

This acknowledgement is based on the evaluation by panel of judges at the "National Award for Excellence in Energy Management" held during 25 - 28 August 2020.

K S Venkatagiri
Executive Director
CII - Godrej GBC

Ravichandran Purushothaman
Chairman, Energy Efficiency Council
CII - Godrej GBC

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

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

State level National Energy Conservation Award 2020 by

Confederation of Indian Industry
125 Years - Since 1895

22nd National Award for Excellence in Energy Management 2021
25 - 27 August 2021

एनटीपीसी NTPC



Thank you

NTPC Ramagundam

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