



25th National Award for Excellence in Energy Management -2024

UNIT - I



UNIT - II



LSFM



**WIND
FARM**



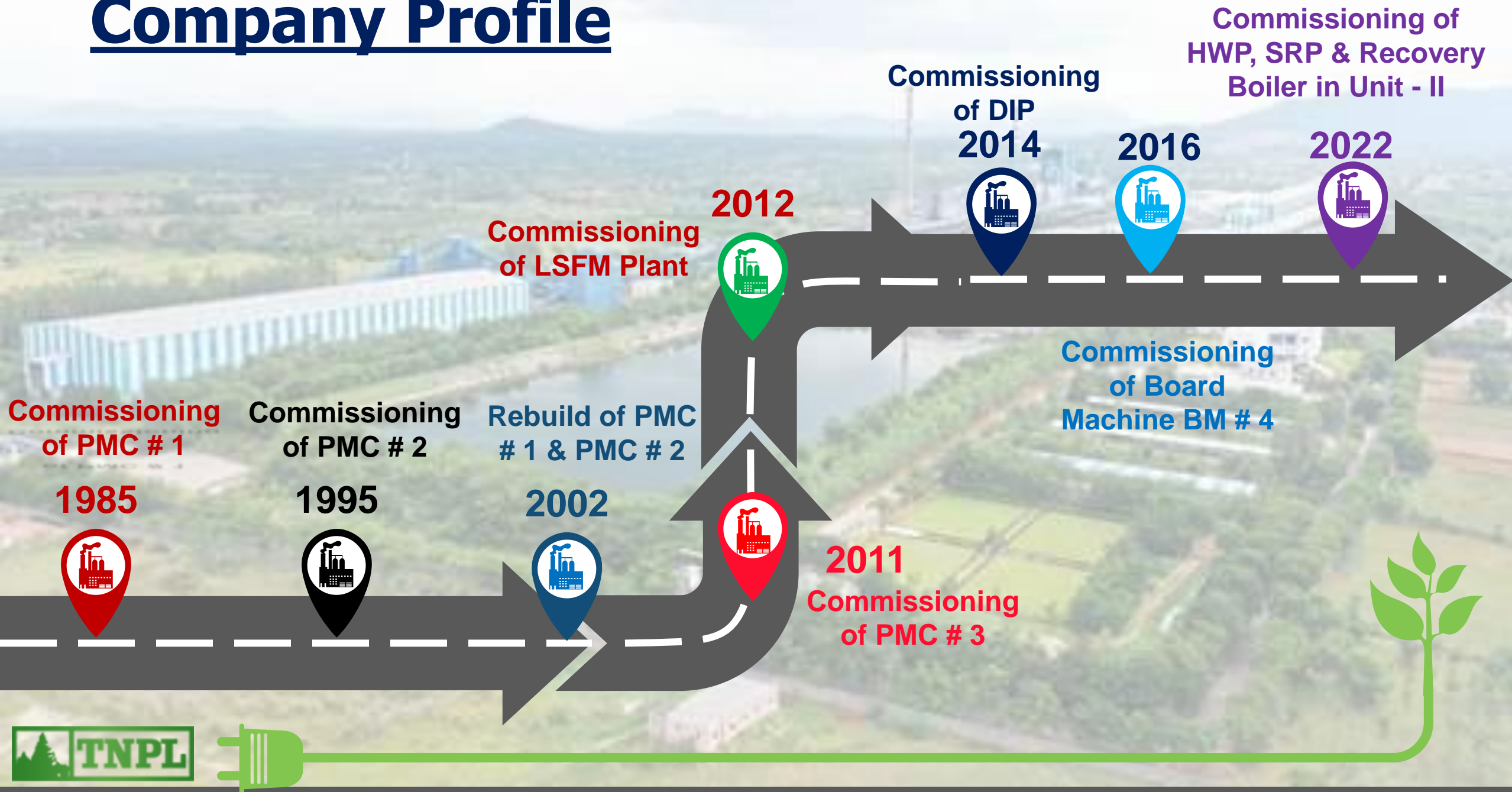
Presented by

C. SIVAKUMAR - CM (Energy)

M. SHIV KUMAR – SM (Paper)

R. SURESH KUMAR - M (Mech)

Company Profile



TNPL Profile

Production target enhanced from 4,00,000 MT/Annum to 4,45,000 MT/Annum of Writing & Printing Paper.

Largest exporter of PWP(Unit 1) and 2,00,000 MT of Multi layer board (Unit 2)

ISO 9001: 2015, ISO 14001:2015, ISO 50001 :2018 , ISO 27001:2013 FSC FM/COC , CW/COC Certified

World's largest bagasse based paper plant Promoted by Government of Tamil Nadu.

100% self sufficient in power.

103.62 MW power generated from captive power plant is derived through a fair mix of agro fuel as support to fossil fuels.

Installed Wind Power Capacity of 35.5 MW Solar Power Capacity of 6 KW reducing 45,000 tCO₂e GHG Emission.



TNPL Profile

Recycling lime sludge and fly ash to produce "TNPL CEMENT" first of its kind in pulp and paper industry.

2,33,775 acres of Pulp wood plantation since 2004 involving 45,738 farmers. Sequestered about 55.31 Lakh t CO2 Emission.

Utilizing the 1.53 Lakh MT of internally generated Bagasse Pith in Power Boiler reducing 106.672 Lakh tCO2e GHG Emission.

25,000 m3/day biogas generated from bagasse wash water and used in Lime kiln resulting of 15 KL of F.Oil saving.

110000 MT of flue gas from cement process is reused for the Production of Precipitated Calcium Carbonate.

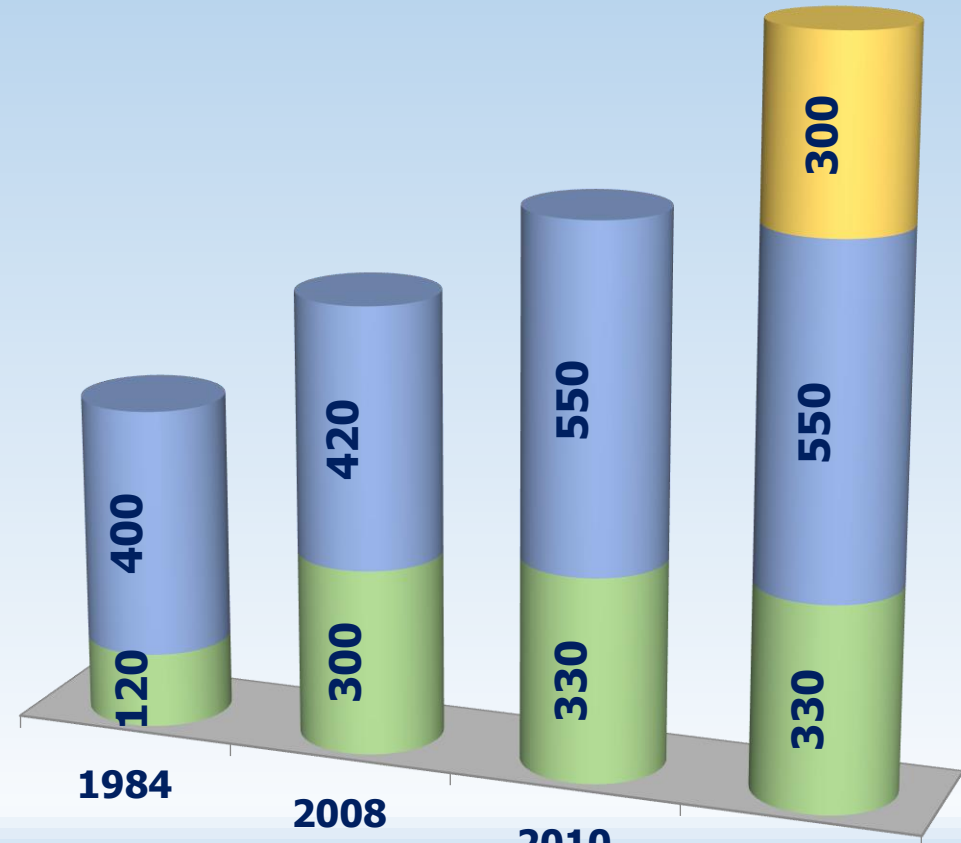
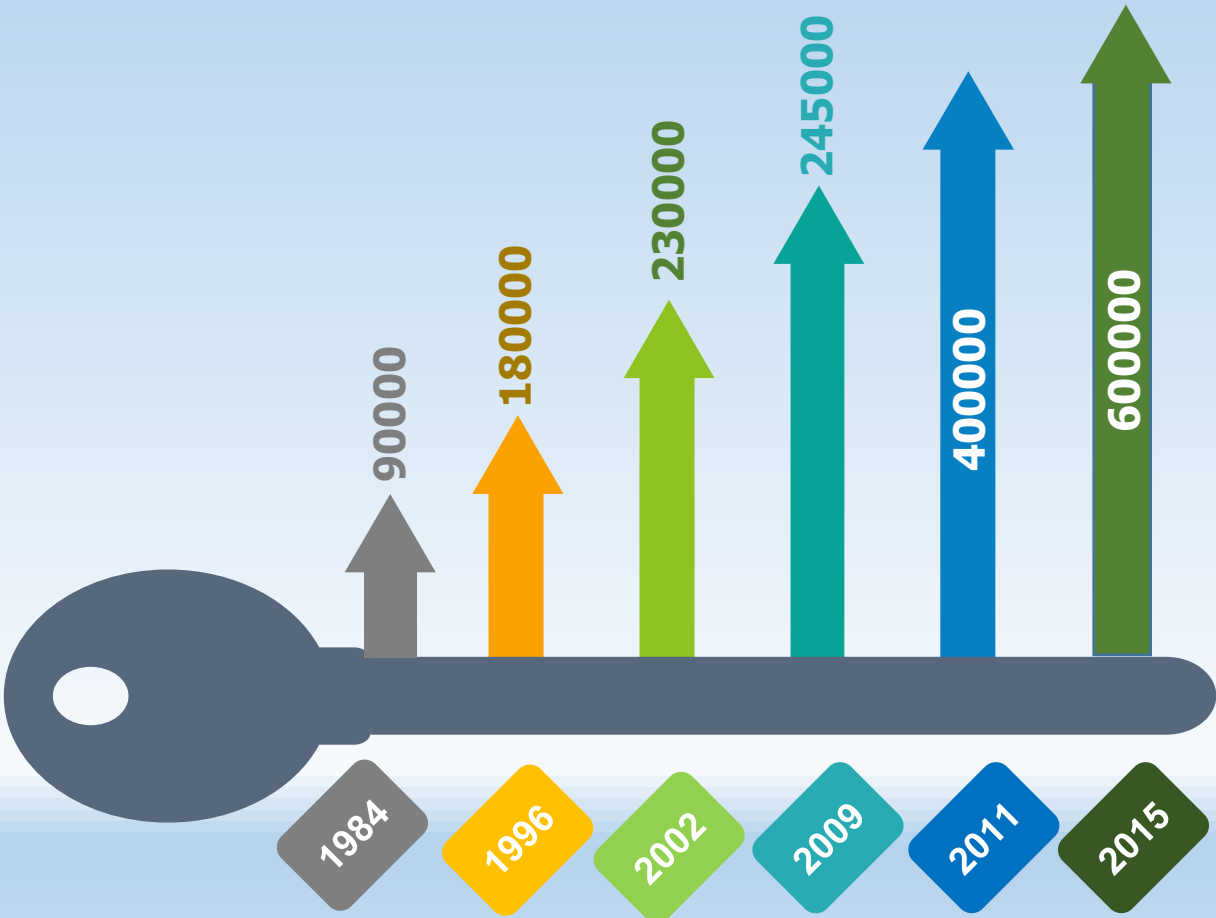
Treated wastewater is used to irrigate 1665 acres benefiting 466 farmers at Unit 1 & 575 acres company's own land in Unit 2.



Capacity Growth

Capacity Growth - Paper production (TPA)

Capacity Growth - Pulp (TPD)



■ DIP ■ CBP ■ HW

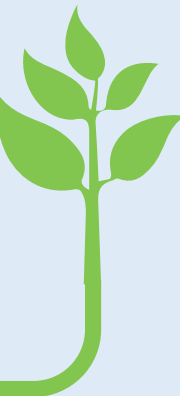
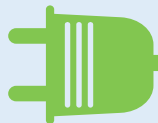
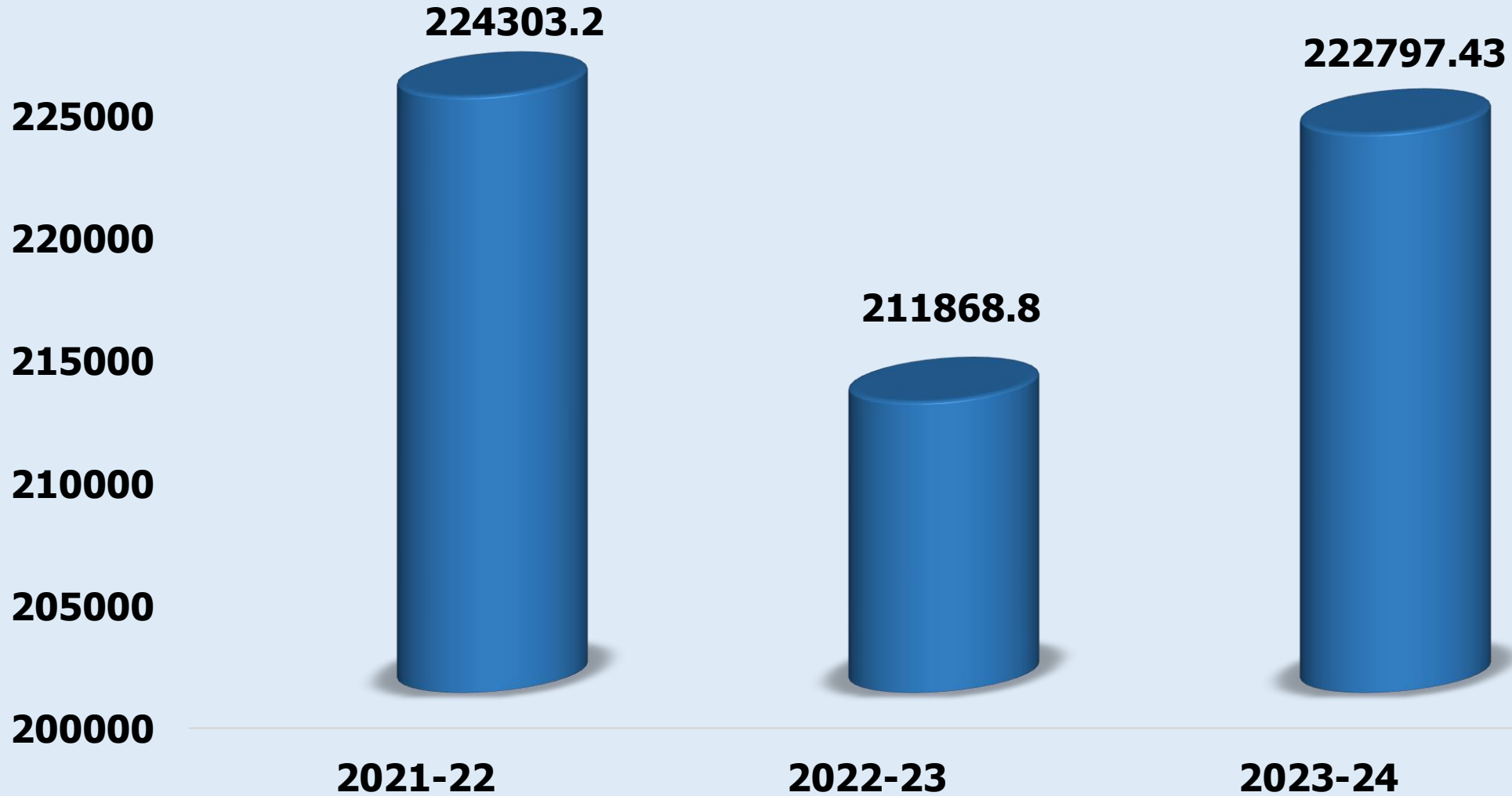
Energy Consumption

DESCRIPTION	UOM	2021-22	2022-23	2023-24
Total Thermal Energy consumption	Million Kcal	2339215.08	2050308.94	2152085.00
Total Electrical Energy Consumption	Million KWH	544.02	570.35	567.63
Paper production	MT	388880	420793	422742
Overall Energy Consumption	TOE	224303.2	211868.8	222797.43



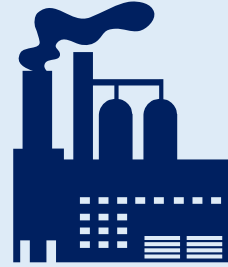
Energy Consumption

Overall Energy Consumption (TOE)

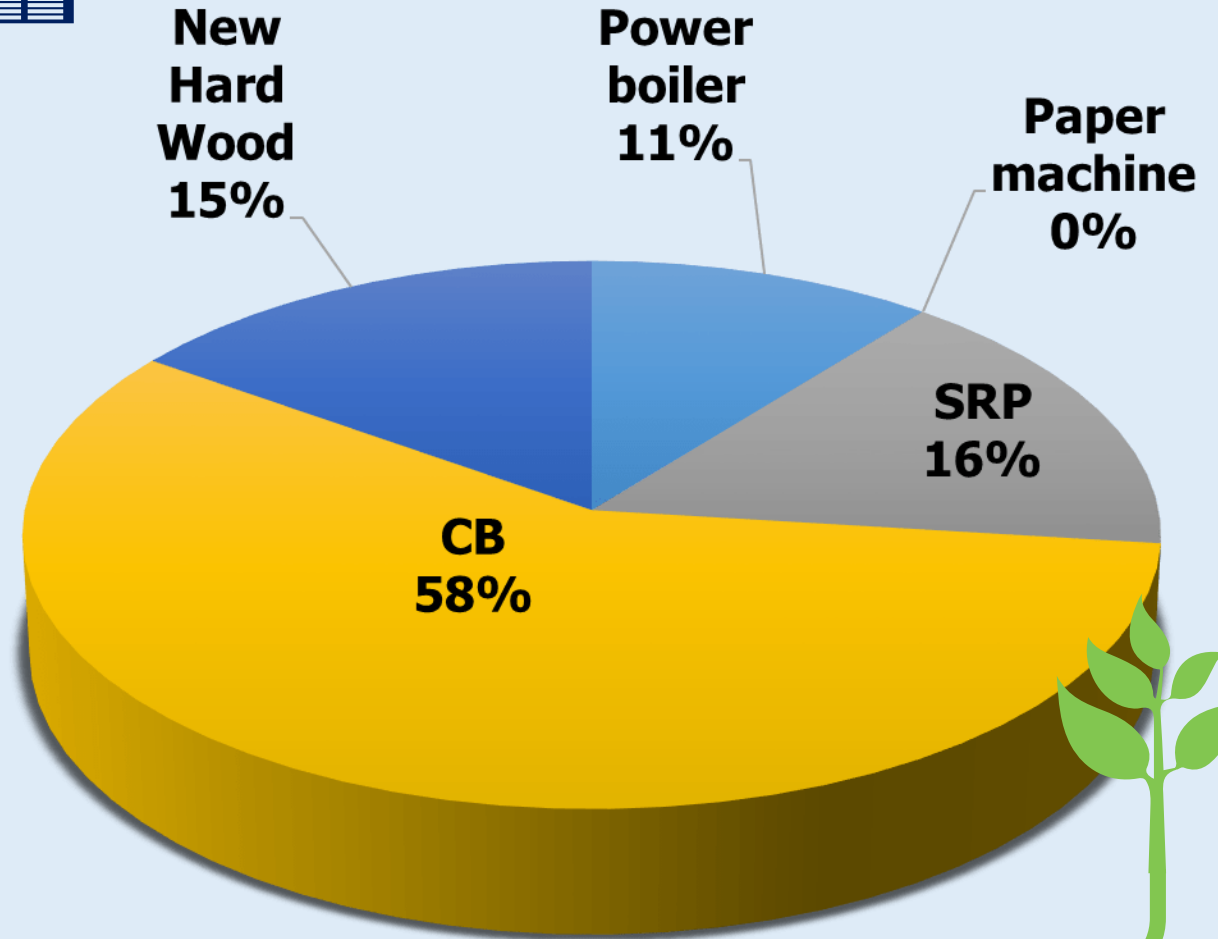
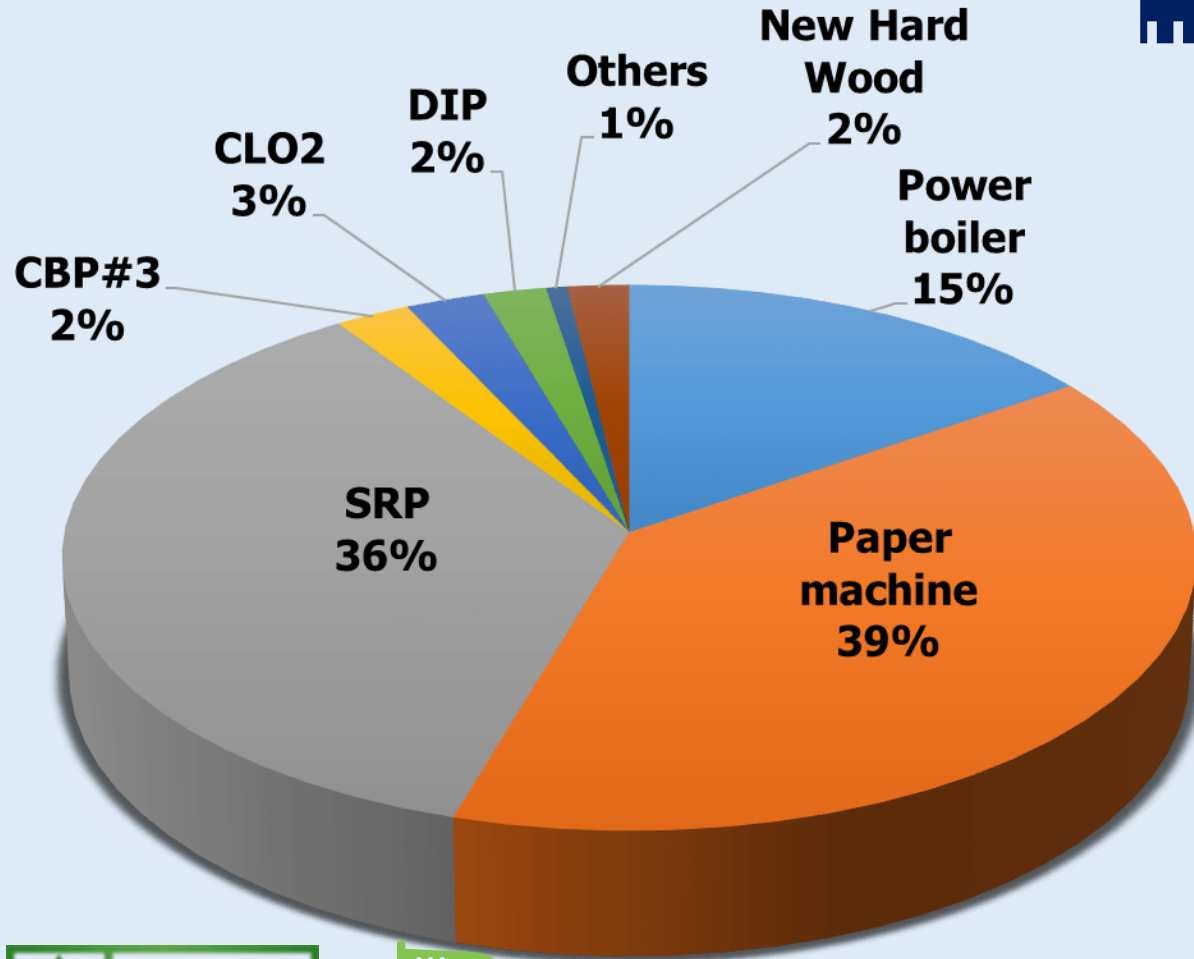


Thermal Energy Consumption (2023-24)

LP STEAM DISTRIBUTION



MP STEAM DISTRIBUTION



Electrical Energy Consumption (2023-24)



Power boiler
17%

DIP
6%

Cement
4%

WGCC,PCC
2%

Others
1%

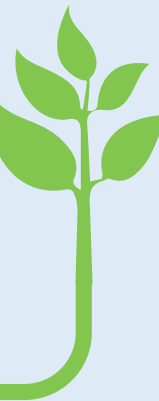
Paper machine
1,2&3
37%

SRP
9%

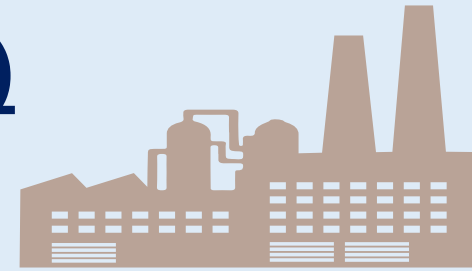
New Hard Wood
4%

Agro Pulp
11%

Clo2
9%

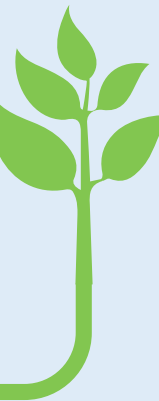
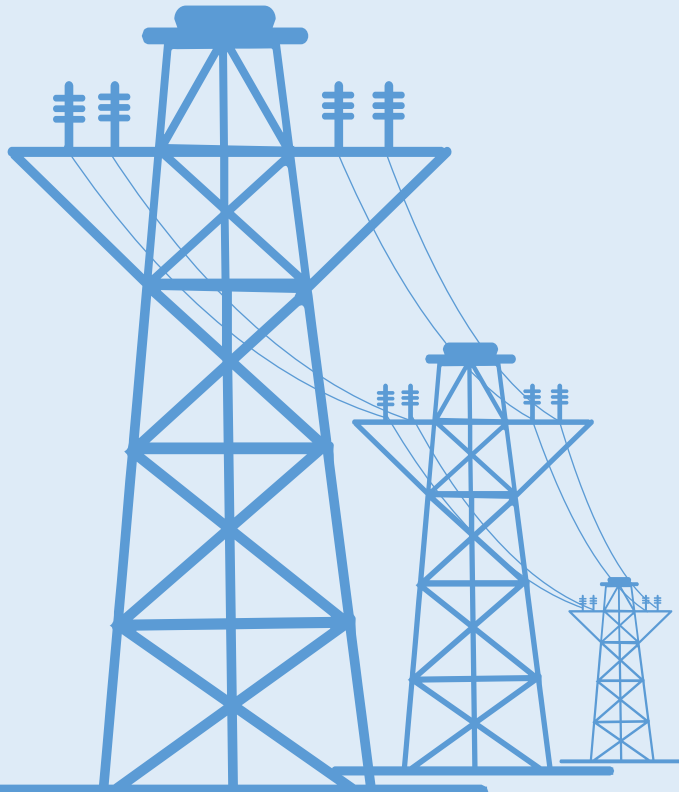
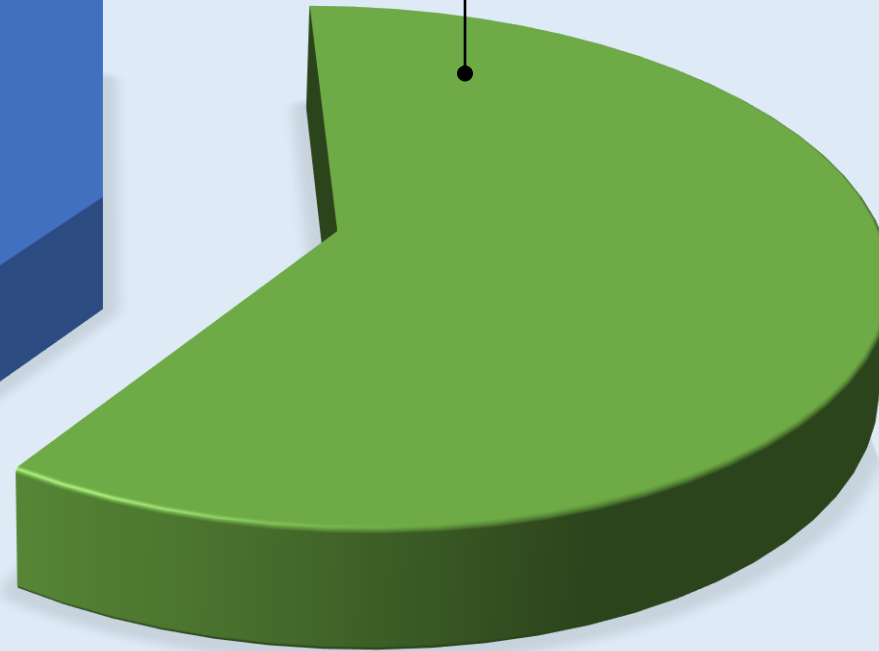
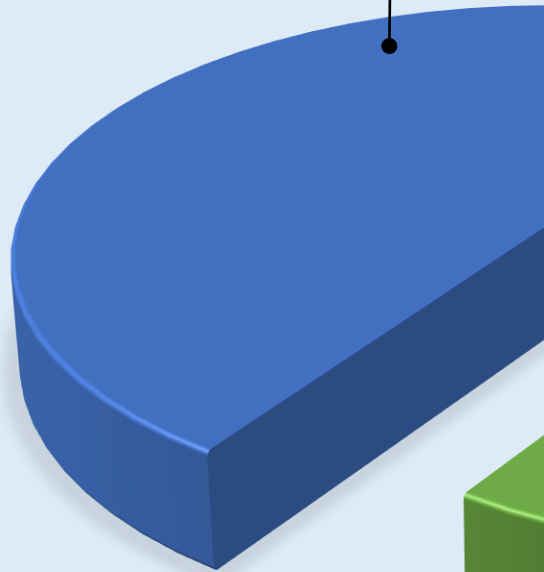


Overall Energy Consumption (2023-24)



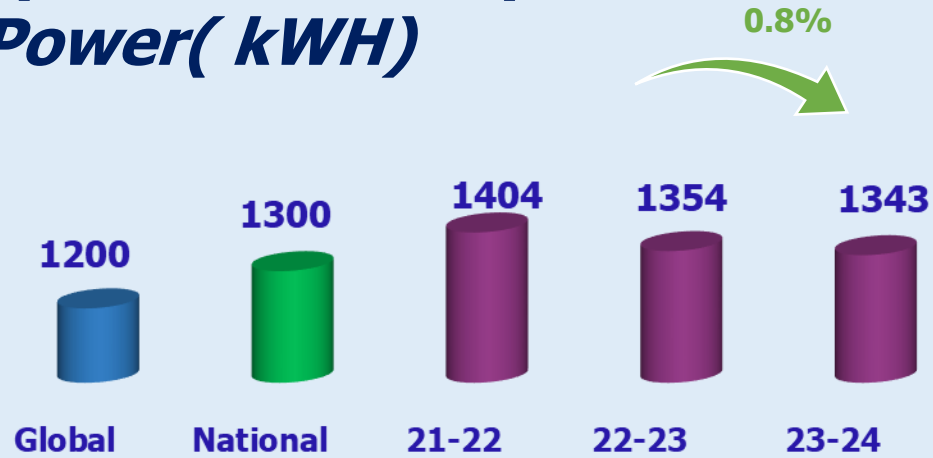
**Total Electrical Energy
Consumption 40%**

**Total Thermal Energy
consumption
60%**

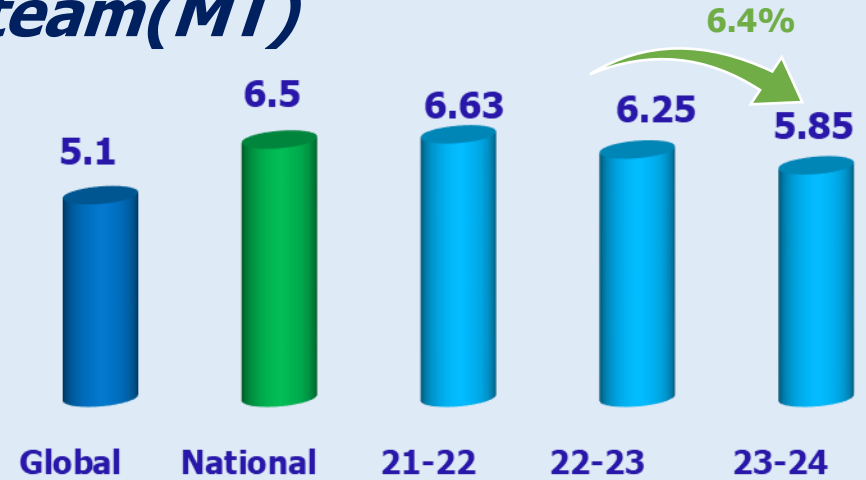


How Close to Global best in SEC

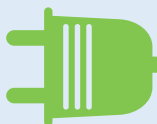
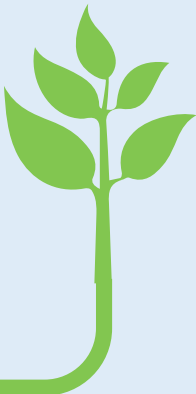
Specific Consumption of Power(kWh)



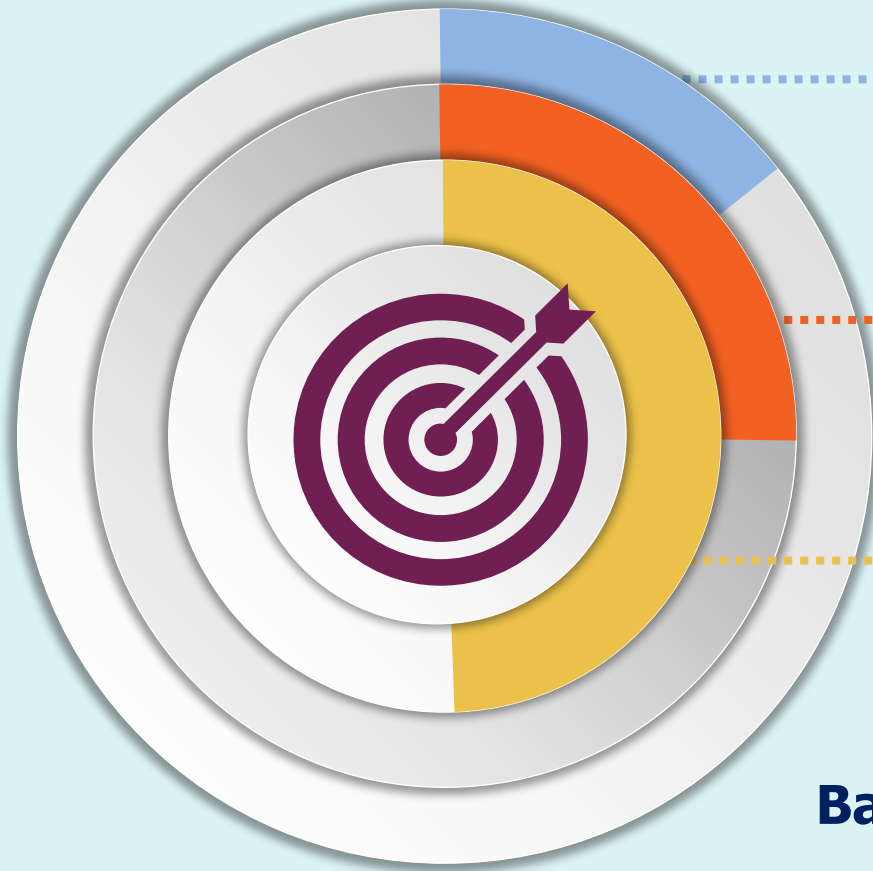
Specific Consumption of Steam(MT)



Specific Consumption of Water(m3)



Targets

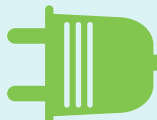
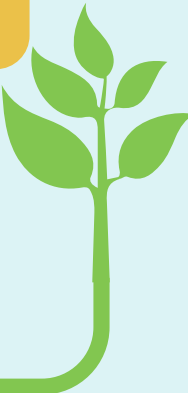


**SEC Reduction planned for Short term
(2023-24) : 2%**

**SEC Reduction planned for Medium term
(2024-25) : 4%**

**SEC Reduction planned for Long term
(2025-26) : 6%**

**Based on the future expansion we have
planned for 6% reduction in SEC for long term**



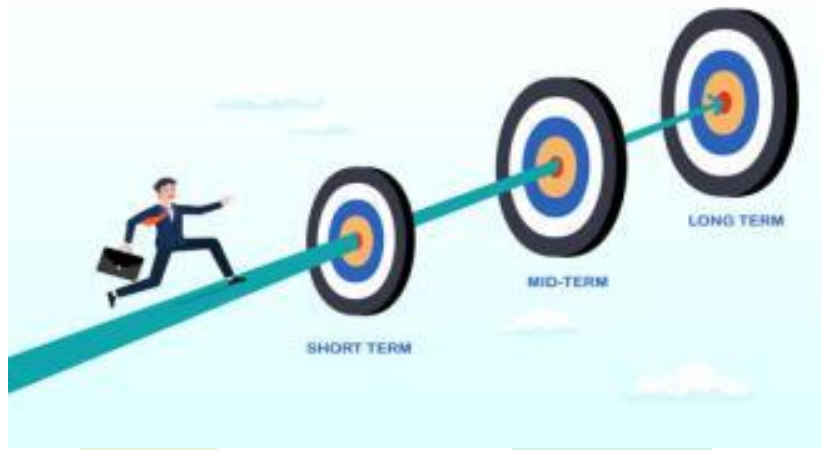
Short Term Projects (2023-24)



ELECTRICAL ENERGY SAVINGS	0.769 Million KWH
THERMAL ENERGY SAVINGS	6459.16 Million Kcal
TOTAL COST SAVING	Rs. 155.84 Lakhs

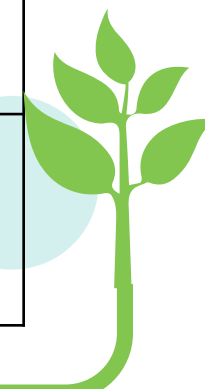
S.NO	PROJECT NAME	ENERGY SAVING / Year	COST SAVING (Rs. in Lakhs)
1	Stopping of 6.0 bar pump by providing interconnection between WTP water supply line and 6 bar delivery line to conserve power in PM #3 resulted in annual power saving of 198000 units and cost saving of Rs.12.00 Lakhs	1.98 lakhs Kwh	12.0
2	Downsizing of SCBL Agitator Motor (4 Nos) Power from 15KW to 7.5KW at Evaporator#1 Plant resulted in power saving of 158400 units and cost saving of Rs.9.60 Lakhs	1.58 lakhs Kwh	9.60
3	Optimizing the operation of PDS Pulper agitator during broke feeding in Paper Machine#3 resulted in annual power saving of 2,37,600 Units and cost saving of Rs.14.40 Lakhs.	2.38 lakhs Kwh	14.40
4	Installation of additional De-super heating in Boiler#6 PSH 1C inlet resulted in annual imported coal saving of 1562.45MT and cost saving is 109.22 Lakhs	1562.45 MT of Imp.Coal	109.22
5	Downsizing of Soft water transfer pump from 55 KW to 30 KW resulted in annual power saving of 1,75,200 Units and cost saving of Rs.10.62	1.75 lakhs Kwh	10.62

Medium Term Projects (2024-25)



ELECTRICAL ENERGY SAVINGS	0.079 Million KWH
THERMAL ENERGY SAVINGS	15327 Million Kcal
TOTAL COST SAVING	Rs. 264.9 Lakhs

S.NO	PROJECT NAME	ENERGY SAVING / Year	COST SAVING (Rs. in Lakhs)
1	Replacement of High Power consumption MH fittings by LED Fittings	0.79 lakhs Kwh	4.73
2	Hardwood Hot water heat recovery by diversion from WTP Plant to CBP Plant	1205 MT of Imported coal	95.32
3	Installation of Bio-gas firing system in Power Boiler # 7	1272 MT of Imported coal	83.8
4	Hardwood Hot water heat recovery by diversion from WTP Plant to CBP Plant	1230 MT of Imported coal	81.05



Long Term Projects (2025-26)

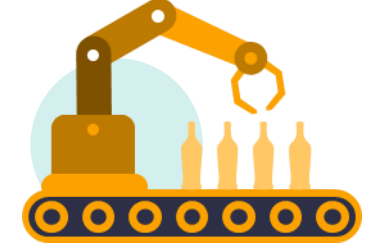


ELECTRICAL ENERGY SAVINGS	2.976 Million KWH
THERMAL ENERGY SAVINGS	57727 Million Kcal
TOTAL COST SAVING	Rs. 1628.53 Lakhs

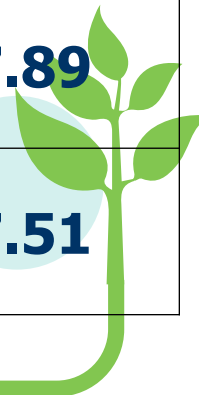
S.NO	PROJECT NAME	ENERGY SAVING / Year	COST SAVING (Rs. in Lakhs)
1	Installation of new high pressure boilers replacing the old low pressure boilers	9285 MT of Imported coal	677.71
2	Installation of new high capacity Steam Turbine replacing the old low capacity steam turbines	19.47 lakhs Kwh	102.25
3	Installation of pith drier for Power Boiler # 6	4679 MT of Imported coal	308.35
4	Replacing of Liquid ring vacuum pump into turbo air blower in Paper machine # 1	10.29 lakhs Kwh	540.22



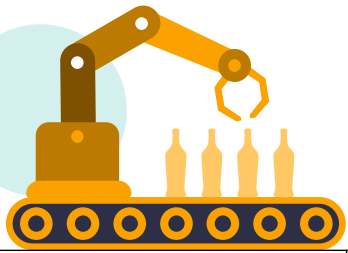
Energy Saving Projects in last three years



Year	Total Encon Projects	Annual Electrical Energy savings Achieved		Annual Thermal Energy Savings			Total Annual savings	Investment made
	Nos.	Lakh Units	Rs. Lakhs	Imp.Coal in MT	Furnace Oil in KL	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
2021-22	27	40.45	212.36	306	5073	1979.49	2191.85	82.13
2022-23	25	26.05	181.80	3030	5089	2423.96	2605.77	67.89
2023-24	27	23.16	140.32	2442	4464	2248.83	2389.15	47.51



Energy Saving Projects with Zero cost investment



Year	Total Encon Projects	Total No. of Zero Investment projects	Total savings from zero investment projects in Rs. Lakhs
2021-22	27	16	2100.70
2022-23	25	20	2347.57
2023-24	27	12	2311.18





Encon Projects for FY 2023-24 *(Electrical energy savings)*

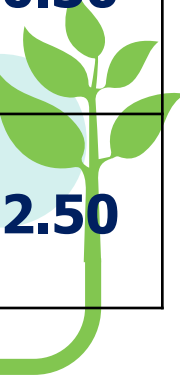
S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
1	Introduction of VFD in Water pump to Warm water in PM#2 resulted in power saving of 97800 units and cost saving of Rs.5.93 Lakhs	0.98	5.93	5.93	1.75
2	Introduction of VFD for CB chest Pump in PM#2 resulted in power saving of 142080 units and cost saving of Rs.8.61 Lakhs	1.42	8.61	8.61	4.00
3	Stopping of warm water make up pump by diverting 6.0 bar recirculation line to warm water tank in PM #3 resulted in annual power saving of 118800 units and cost saving of Rs.7.20 Lakhs	1.19	7.20	7.20	5.00



Encon Projects for FY 2023-24

(Electrical energy savings)

S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
4	Stopping of 6.0 bar pump by providing interconnection between WTP water supply line and 6 bar delivery line to conserve power in PM #3 resulted in annual power saving of 198000 units and cost saving of Rs.12.00 Lakhs	1.98	12.00	12.00	0.20
5	Introduction of VFD for CLO2 transfer pump and downsizing the motor capacity from 18.5 KW to 15KW resulted in power saving of 14520 units and cost saving of Rs.0.88 Lakhs	0.15	0.88	0.88	0.30
6	Introduction of VFD for PV Fan # 1(100F007A) in PM#1 resulted in power saving of 141130 units and cost saving of Rs.8.55 Lakhs	1.41	8.55	8.55	2.50



Encon Projects for FY 2023-24

(Electrical energy savings)

S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
7	Introduction of VFD for PV Fan # 2 (100F007B) in PM#1 resulted in power saving of 73778 units and cost saving of Rs.4.47 Lakhs	0.74	4.47	4.47	2.50
8	Provision of VFD for White Liquor supply pump 1&2 motor in causticizer plant resulted in power saving of 95616 units and cost saving of Rs 5.79 Lakhs	0.96	5.79	5.79	5.00
9	Downsizing of SCBL Agitator Motor (4 Nos) Power from 15KW to 7.5KW at Evaporator#1 Plant resulted in power saving of 158400 units and cost saving of Rs.9.60 Lakhs	1.58	9.60	9.60	1.50





Encon Projects for FY 2023-24 (Electrical energy savings)

S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
10	Provision of VFD for WBL feed pump in evaporator#1 plant resulted in power saving of 65040 units and cost saving of Rs.3.94 Lakhs	0.65	3.94	3.94	5.00
11	Replacement of High Power consumption MH fittings with LED fittings in SRP resulted in power saving of 40077 units and cost saving of Rs.2.43 Lakhs	0.40	2.43	2.43	5.00
12	Replacement of 562 Nos. of 36 W fluorescent lamps with 18 W LED lamps in Energy Electrical area resulted in annual power saving of 27313 Units and cost savings of Rs.1.66 Lakhs.	0.27	1.66	1.66	1.01



Encon Projects for FY 2023-24 (Electrical energy savings)

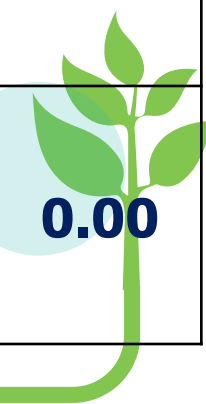
S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
13	Replacement of 190 Nos. of 150 W MH Lamps with 40 W LED lamps in Energy Electrical area resulted in annual power saving of 56482 Units and cost saving of Rs.3.42 Lakhs.	0.56	3.42	3.42	1.75
14	Replacement of 127 Nos. of 400 W MH Lamps with 250 W LED lamps in Energy Electrical area resulted in annual power saving of 47592 Units and cost saving of Rs.2.88 Lakhs.	0.48	2.88	2.88	6.93
15	Replacement of 90 Nos. of 400 W MH Lamps with 250 W LED lamps at Colony Play Ground areas and resulted in power saving of 10,090 Units and cost saving of Rs.0.61 Lakhs	0.10	0.61	0.61	5.07



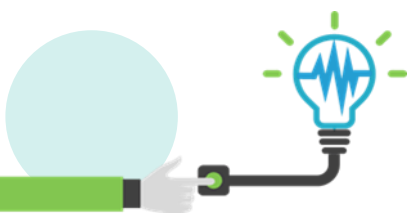


Encon Projects for FY 2023-24 (Electrical energy savings)

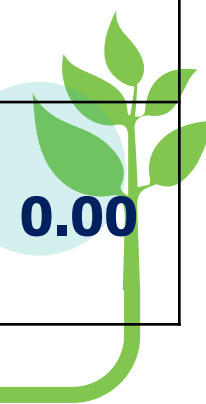
S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
16	Optimizing the operation of Reel Pulper agitator during broke feeding in Paper Machine#3 resulted in annual power saving of 2,37,600 Units and cost saving of Rs.14.40 Lakhs.	2.38	14.40	14.40	0.00
17	Optimizing the operation of PDS Pulper agitator during broke feeding in Paper Machine#3 resulted in annual power saving of 2,37,600 Units and cost saving of Rs.14.40 Lakhs.	2.38	14.40	14.40	0.00
18	Downsizing of Turbo Air compressor cooling water pump from 90 KW to 55 KW resulted in annual power saving of 93,307 Units and cost saving of Rs.5.65 Lakhs.	0.93	5.65	5.65	0.00



Encon Projects for FY 2023-24 (Electrical energy savings)



S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
19	Optomising the air drier operation, based on demand pattern of Instrument air, resulted in annual power saving of 1,18,933 Units and the cost saving of Rs.7.21 Lakhs.	1.19	7.21	7.21	0.00
20	Optimization of Co-Gen Cooling Tower fan operation by utilizing seasonal effects resulted in annual power saving of 1,04,717 Units and cost saving of Rs.6.35 Lakhs.	1.05	6.35	6.35	0.00
21	Optimization of Paltech Cooling Tower fan operation by utilizing seasonal effects resulted in annual power saving of 8,910 Units and cost saving of Rs.0.54 Lakh.	0.09	0.54	0.54	0.00





Encon Projects for FY 2023-24 (Electrical energy savings)

S.No	Description	Electrical savings		Total Savings	Investment
		Lakh kwh	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
22	Downsizing of Soft water transfer pump from 55 KW to 30 KW resulted in annual power saving of 1,75,200 Units and cost saving of Rs.10.62 Lakhs.	1.75	10.62	10.62	0.00
23	Downsizing of Evaporator#1 SCBL tank agitator in SRP from 15 KW to 7.5 KW resulted in annual power saving of 52560 Units and cost saving of Rs.3.19 Lakhs.	0.53	3.19	3.19	0.00





Encon Projects for FY 2023-24 (Thermal energy savings)

S.No	Description	Thermal savings		Total Savings	Investment
		MT of IMP.coal	KL of Furnace oil	Rs. Lakhs	Rs. Lakhs
1	Installation of additional De-super heating in Boiler#6 PSH 1C inlet resulted in annual imported coal saving of 1562.45MT and cost saving is 109.22 Lakhs	1562.45	--	109.22	0.00
2	275 MT of Wood Dust consumption in Power Boilers resulted in saving of 173 MT of Imported Coal and the cost saving of Rs.12.09 Lakhs.	173	--	12.09	0.00
3	3,96,039 M3 of Bio Gas consumption in Power Boilers resulted in saving of 707 MT of Imported Coal and the cost saving of Rs. 49.42 Lakhs.	707	--	49.42	0.00
4	74,40,402 M3 of Bio Gas consumption in Lime Kiln resulted in annual saving of 4464.24 KL of Furnace oil and the cost saving of Rs. 2,078.10 Lakhs.	--	4464.2	2078.10	0.00



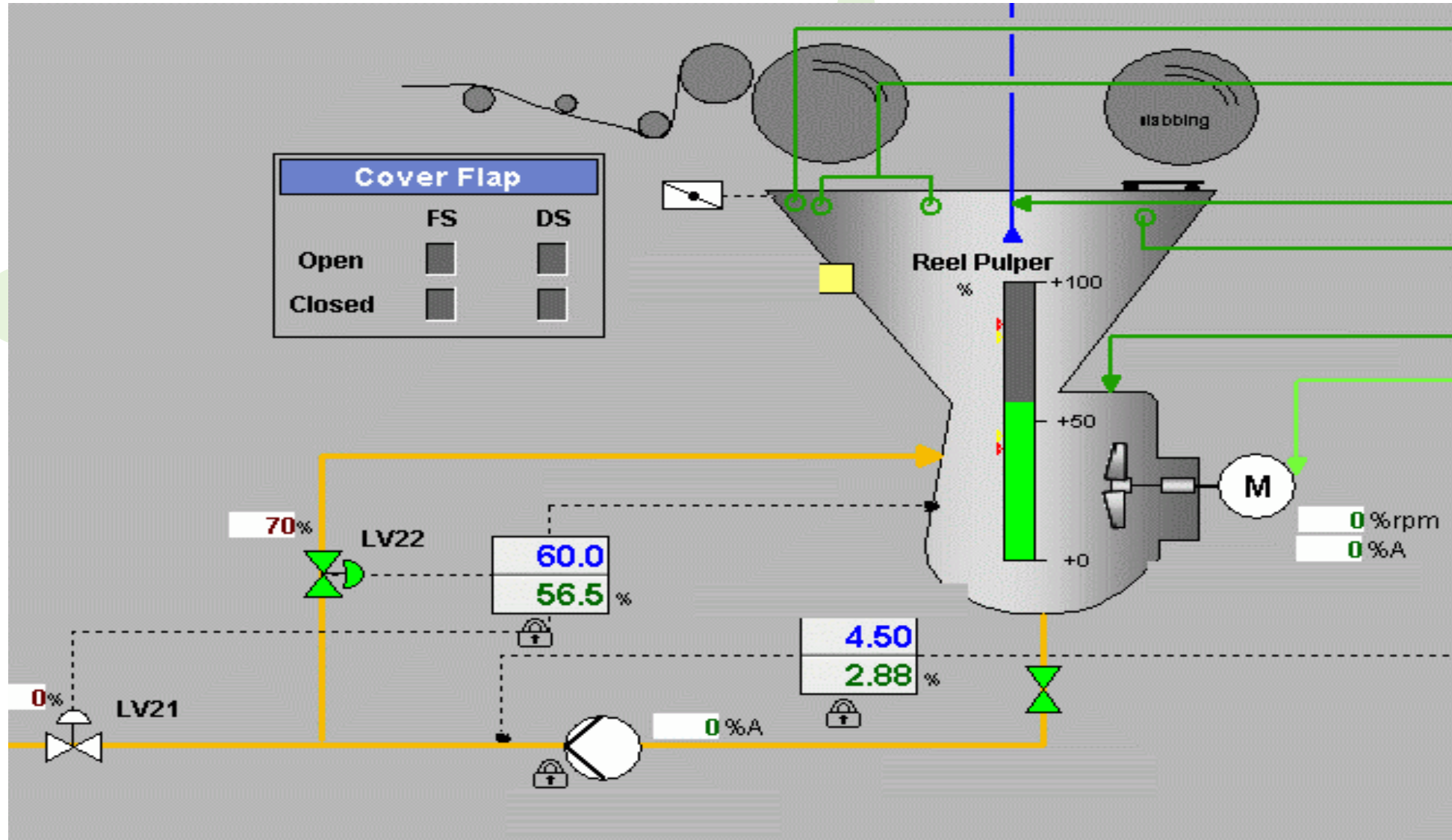


Innovative Project

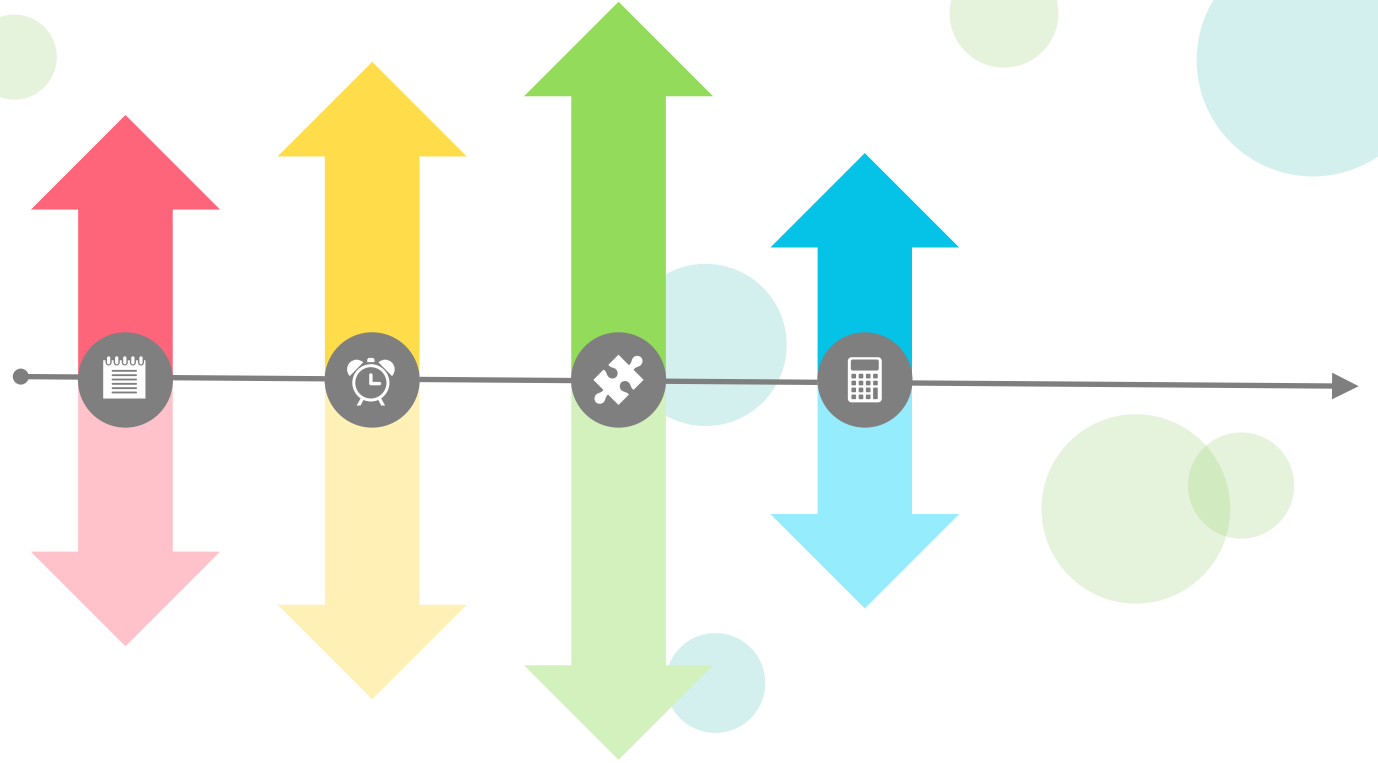
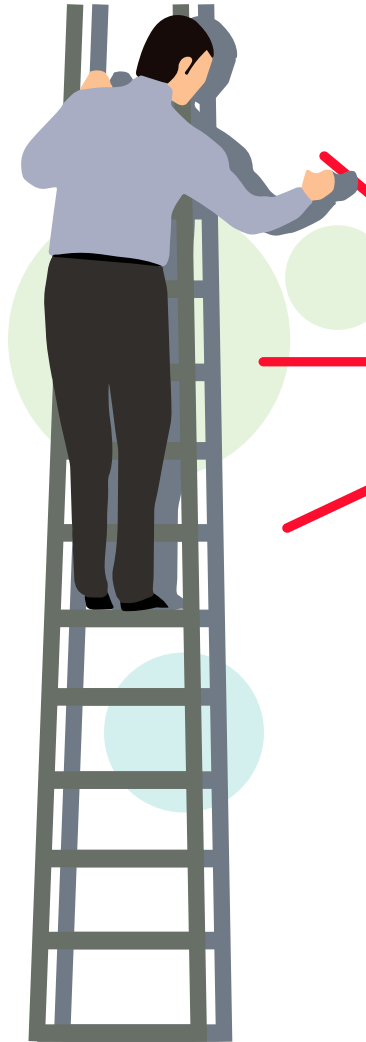
Energy saving by modifying the logic in Pulper operations in Paper Machine



Pulper operation



Logic modification



Agitation time reduced from 600 seconds to 400 seconds by modifying the logic in operation sequence



Average running time of pulper agitator got reduced from 12hrs/day to 9hrs/day



Energy cost benefits

TABLE 2. PULPER AGITATOR OPERATION OPTIMIZATION IN PM#3

Description	UOM	Reel Pulper	PDS Pulper
		Parameters	Parameters
Pulper agitator motor capacity	KW	315	315
Agitator full load current	Amp	318	318
Agitator normal running current	Amp	250	250
Agitator Running Power	KW	240	240
Pulper agitator running time as per existing logic	Sec	600	600
Modified Pulper agitator running time	Sec	400	400
Time saved as per new logic	Sec	200	200
Average running time of Pulper agitator	Hrs/day	12	7
Average running time after logic change of Pulper agitator	Hrs/day	9	4
Total Time saved due to logic change	Hrs/day	3	3
Total Power saved due to logic change	Unit/day	720	720
Power Cost	Rs/Unit	6.0	6.0
Total Cost saving by modifying the logic of pulper agitator operation	Rs/day	4320	4320
Saving per Annum (Assuming 330 days operation)	Lakhs/Annum	14.25	14.25
TOTAL SAVINGS (REEL & PDS PULPER), SAY		28.5	

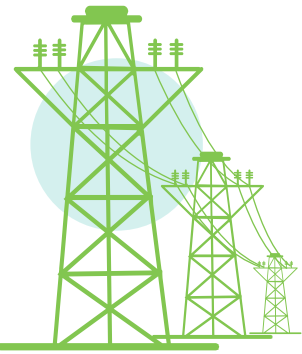
Results




With the efforts to save power, we incurred cost savings of around 28.5 lakhs per annum, without investing additional cost.




Utilisation of Renewable Energy Sources






Wind



Solar

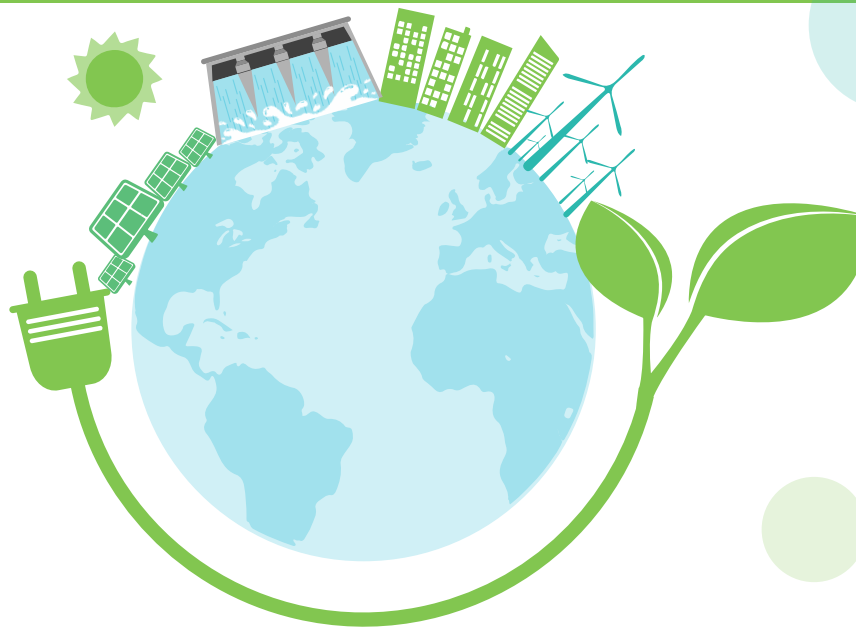


BL Solids

Types of ReSources	2021-22		2022-23		2023-24	
	Energy Generated (Lakh kwh)	Annual savings Rs. Million	Energy Generated (Lakh kwh)	Annual savings Rs. Million	Energy Generated (Lakh kwh)	Annual savings Rs. Million
Wind	407.31	213.84	394.51	270.63	375.47	227.53
Solar	0.0594	0.0311	0.0364	0.0249	0.0472	0.0286
BL Solids	1422.85	746.99	1436.08	985.15	1108.27	671.61



Utilisation of Renewable Energy Sources



Type of material used

Renewable fuel as a percentage of total energy (%)

2021-22

2022-23

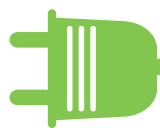
2023-24

Black liquor solids

31.9

34.4

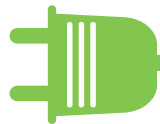
30.9



Utilisation of Waste material as fuel



Type of waste material used	Quantity of waste material used			Equivalent qty. of conventional energy of fuel used (tons or KL of fuel)		
	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
Bio mass (MT)	169267	169663	153309	69045	87238	50251
Bio gas- '000m3	8638	8725	7836	5183 KL	5235 KL	4464 KL

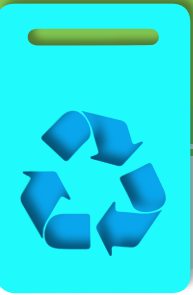


Utilisation of Waste material as fuel



Type of waste material used	Annual savings Rs. (Million)			Waste fuel as a percentage of total energy		
	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
Bio mass	505.1	851.4	351.25	6.3	8.0	7.7
Bio gas- '000m3	220.4	264.6	184.46	1.4	1.5	1.4
TOTAL	725.5	1116	535.71	7.7	9.5	9.1



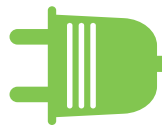


Waste Utilisation and Management

Fly ash utilisation

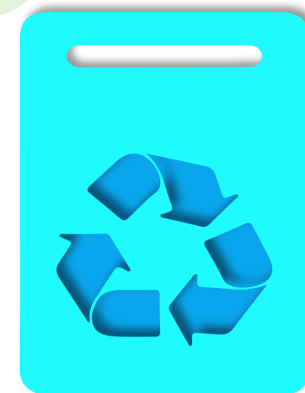
- **TNPL is the first in paper industry to install cement plant as a circular economy.**
- **The lime sludge from SRP and fly ash generated from power boilers are entirely used in our cement plant.**

YEAR	2021-22	2022-23	2023-24
QTY.OF FLY ASH DESPATCHED TO TNPL CEMENT	32326	33765	34094

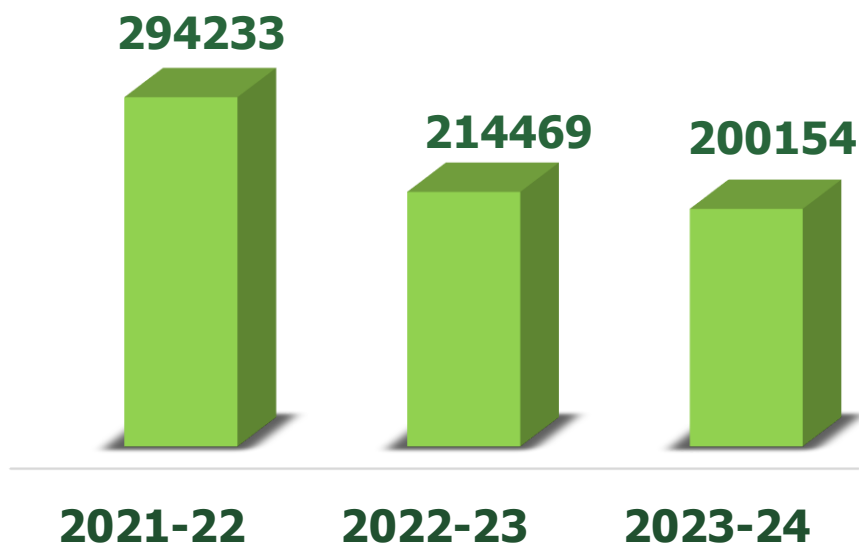


Waste Utilisation and Management

Solid waste (MT)	2021-22	2022-23	2023-24
Lime sludge	53225	59892	54127
Fly ash	32326	33765	34094
De inking plant sludge	5944	768	9259
Lime grits & sludge from Paper Machine Coating	7754	3741	4098



Cement Production (MT)

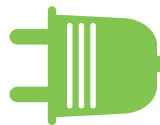


GHG Inventorisation

Sources of GHG Emission in TNPL

Scope 1	Sources
Stationary Fuel Combustion using fossil fuels	Seven Power Boilers, two Lime Kilns and two recovery boilers
Emission from Makeup Carbonates	Lime Kiln Process
Automobile Fuel Combustion	Automobiles owned by TNPL in factory
Emission from Waste water Treatment	Anaerobic Lagoon

Scope 2	Sources
Purchased energy	Electricity imported



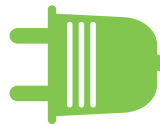
GHG Inventorisation

Sources of GHG Emission in TNPL

Scope 3	Sources
Fossil fuel usage	Employees Travel
Emission from Raw Material Transport	Wood, Bagasse , Coal and Waste Paper
Emission from product Transport	Product transport

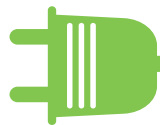
Carbon Neutral	Sources
Stationary Fuel Combustion using biomass fuels	Seven Power Boilers, two Lime Kilns and two recovery boilers

Carbon Sequestration	Sources
Carbon offset due to Plantation Activities	Plantation Activities



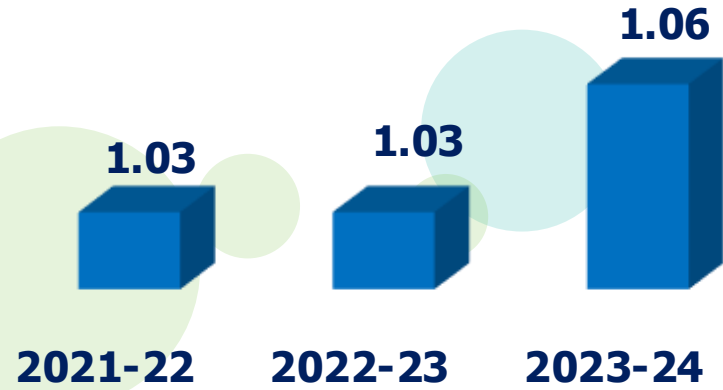
GHG Emission Intensity Reduction

Sl.No	Description	2021-22	2022-23	2023-24
1	Carbon Sequestration by TNPL Plantation (tCO2e)	523080	559285	613760
2	Avoided Emission due to exported electricity in Wind Farms (tCO2e)	36776	36737	34956
3	Total Emission under Scope 1 and Scope 2 (3)	1116134	1047293	933166
4	CO2 Offset by Plantation & Windfarms (1 + 2) (4)	559856	596022	648716
5	Net Emission (3) - (4)	556277	451271	284450
6	Paper production in MT	388942	422232	430295
7	Net Emission per MT of paper production (tCO2e)	1.43	1.07	0.62

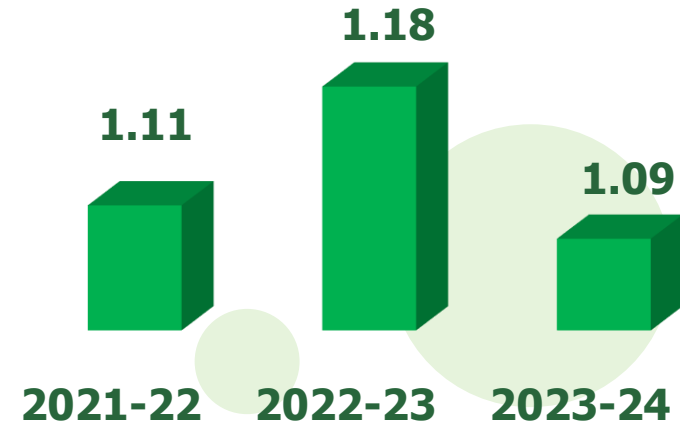


GHG Emission Reduction

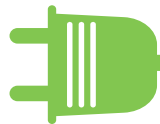
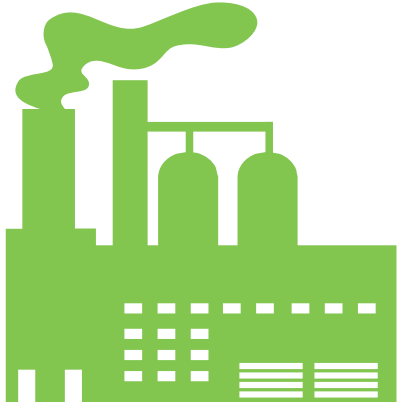
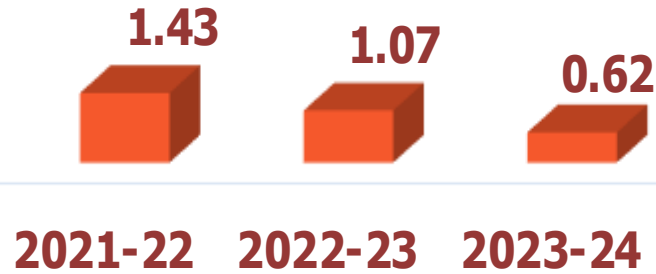
Use of Agro fuels in Steam Generation (Lakh Tonnes of CO2 emission per Annum)



Bio-Methanation of Bagasse Waste Water (Lakh Tonnes of CO2 emission per Annum)



Net Emission per MT of paper production (tCO2e)



Developing action plan for achieving the CO2 Emission targets

- **Energy Efficiency improvement in all the possible areas of mill**
- **Increase Renewable energy fuel sources**
- **Decrease distance of transportation for raw materials, products, byproducts and in-process wastes like sludge, wood dust, etc.**
- **Installation of solar electricity panel**
- **Installation of solar lights in colony streets**
- **Increase carbon sequestration through pulp wood plantations by TNPL captive plantation and farm forestry schemes.**
- **With all the above efforts, TNPL will progress towards carbon neutrality**



Green Supply Chain Management

Green Supply Chain Policy

- **The Company is manufacturing paper from eco-friendly raw material bagasse**
- **Stimulate rational usage of Water, Energy and other natural resources through technological improvements and behavioural aspects**
- **Minimise waste and Maximise reuse / recycling (Deinking Pulp)**
- **Adopting Manufacturing Excellence Model**
- **Ensuring Environmental regulatory compliance**
- **Ensuring that the drivers carrying TREM (Transport Emergency) card with all relevant details**
- **Ensuring the transportation of Hazardous chemicals as per Motor vehicle act 1988 & Moto vehicles rules 1989.**



Green Supply Chain Management

Projects Implemented:-

- **Carrying out activities under Extended Producer Responsibility (EPR) in line with Plastic Waste Management Rules, 2016.**
- **Investment Made – Rs.1.60 Million**

Benefits Achieved:-

- **Ensuring disposal of different types of plastic wastes in an environmentally safe manner**
- **Reducing burden of waste disposal on municipalities.**
- **Improved solid waste management.**



Green Supply Chain Management

Description:

TNPL sells its products viz., Paper, Boards and Cement along with plastic packing (rigid/flexible/multilayered plastics) across India. TNPL engages a service provider/an external agency for disposal of equivalent plastic wastes through Plastic Waste Processing Units. TNPL ensures 100% disposal of plastic wastes in an environmentally safe manner.

Action Plan

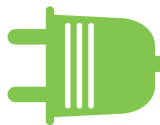
TNPL plans to increase the quantity of procurement of indigenous waste paper to 1,10,000 MT per year especially post consumed waste papers. In the last financial year TNPL procured 84777 MT of Indigenous waste paper, which is about 83% of the total waste paper consumption of 101741 MT for DIP pulp production.

Currently, we are procuring 8000 MT/month (around 96,000 MT/annum) of waste paper from waste paper dealers of Tamil Nadu, Maharashtra, Kerala, Karnataka and Educational institutions & Government departments.

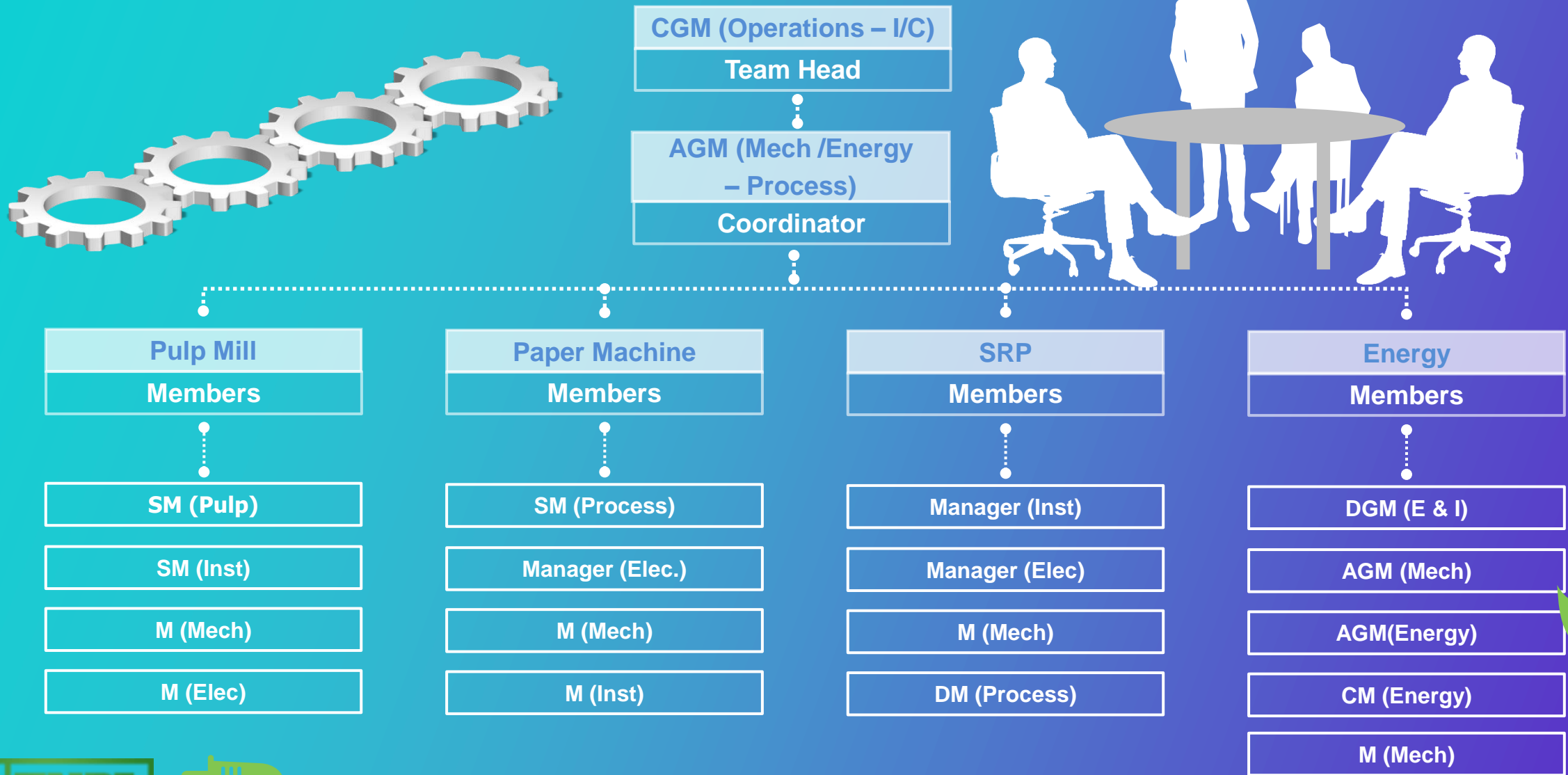


GSC : Logistics

- **Precipitated Calcium Carbonate (PCC) and Wet Ground Calcium Carbonate (WGCC) are used as fillers.**
- **Initially, it was procured in powder form in 50 kg bags and later in jumbo bags.**
- **TNPL entered into an agreement with M/s OMYA to set up PCC & WGCC plant on BOO basis at a site near to TNPL LSFM Plant.**
- **OMYA is supplying PCC & WGCC in liquid form since 2014. This has resulted in reduction of Transportation.**
- **In Future, TNPL is planning to expand the procurement of "Green certified products" especially for high spend materials. Through this, procurement can be emphasized on low-impact materials through the low-impact manufacturing process by environmentally conscious suppliers.**



Energy conservation team



Encon Teamwork, Employee Involvement & Monitoring

- **Daily monitoring system is available for Electrical & Thermal Energy.**
- **Daily Production and Energy Review meeting is chaired by CGM(Operations – I/C)**
- **Separate budget of 100 Lakhs/annum is allotted for Implementing Energy Conservation measures.**
- **Energy efficiency/awareness training program is conducted for Executives & Workers level.**
- **Projects implemented through Manufacturing Excellence (ME) (Workers and Supervisor level) are awarded**



Online Electrical energy monitoring system

Transform Total Load: 11243 / Generator Total Load: 57306 / Plant Total Load: 68549 / Feeder Total Load: 68662 / 110 KV INCOMER: 11298.6

TG1:4945 / TG2:6888 / TG3:0 / TG4:9546 / TG5:16440 / TG6:19487

Current Date & Time: 09/08/2024 14:34:32

Pulp Mill		Boiler		Others		Paper Machine		SRP	
CBP-2:	1522	BOILER (3.4+3.6):	3171	LE 2:	653	Pm/c-1:	7472	SRP-2:	664
CBP-3 (DBB#3):	2711	CO.GEN:	960	WATER INTAKE:	537	Pm/c-2:	8252	SRB-3(DBB#3)	2807
CBP-3 (DBB#4):	0	BOILER -6:	1830	ETP & LE-1:	59	Pm/c-3:	9607	SRB-3(DBB#4)	0
ECF:	3404	BOILER -7:	3016	ETP-2:	1998		25331	SRP FWPP(1&2):	735
NHW(DBB #1):	0	CT:	3325	CEMENT(DBB#3):	2581				
NHW(DBB #3):	2608	RO PLANT:	662	CEMENT:(TG-6)	1048				4206
BWC:	670	VAM:	526	WGCC:	942				
CLO2(DBB#3):	5707	COMPRESSOR(4):	551	MBP:	402				
CLO2(DBB#1):	0	COMPRESSOR(5):	0	SPARE:	0				
DIP (COGEN):	0								
DIP (TG-6):	242								
	16864		14041		8220				

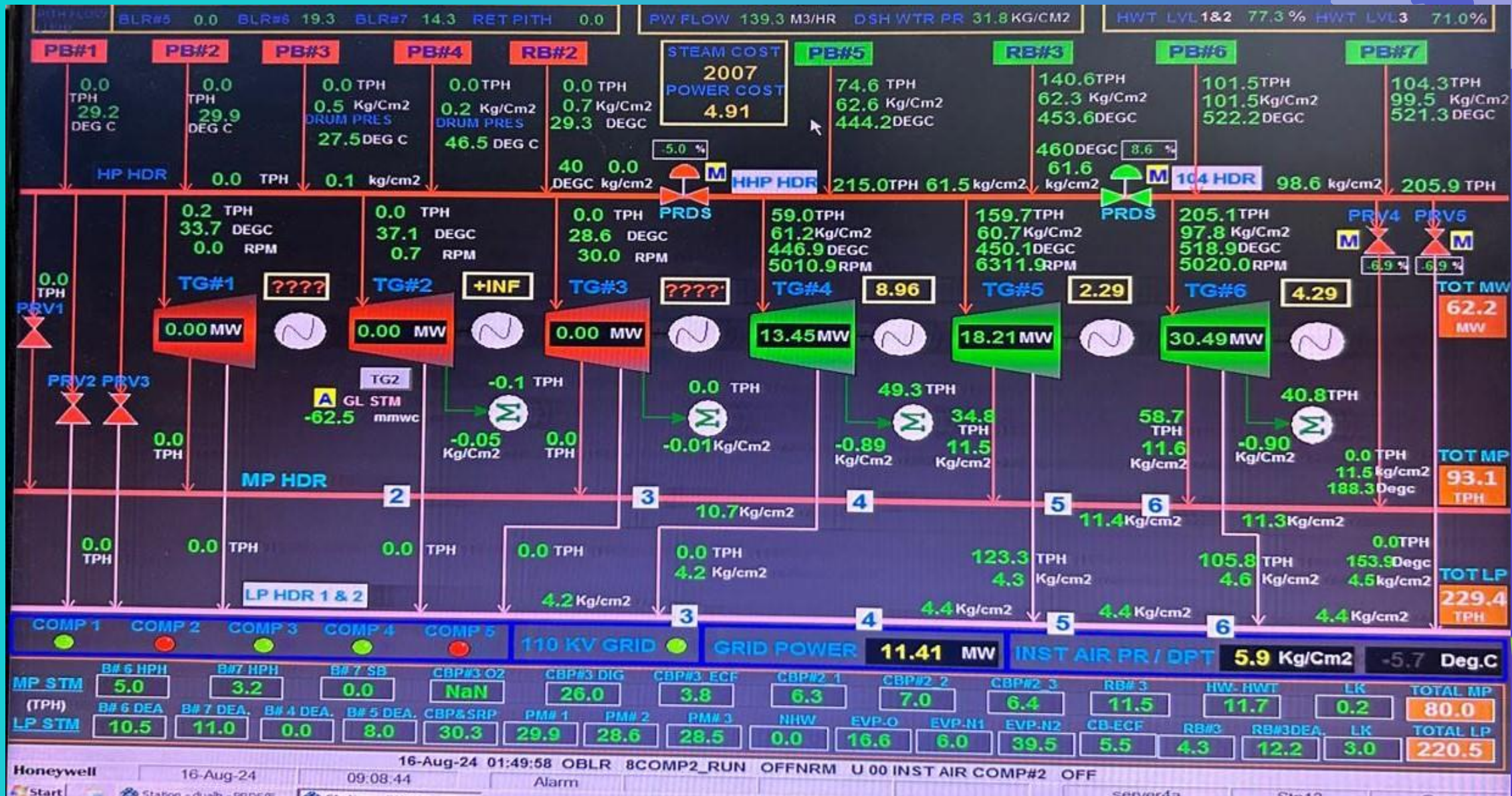
Power1: 15205 / Power2: 12988

Power3: 18829 / Power4: 21527

Total Feeder Load:: 68662



Online Thermal energy monitoring system



Merit Award 2023-24



ISO CERTIFICATES



ISO 9001

ISO 14001

ISO 50000

FSC-FM-COC

FSC-COC



Learning for CII & other award programs

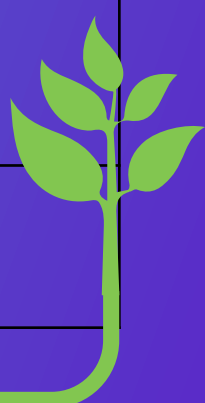
- *Imparts opportunity to shine and to be known nationally & internationally for our products & services.*
- *Gaining technical knowledge to set ourselves apart from the competitors.*
- *Benchmarking the organization among the other innovative companies.*
- *Learning about innovation best practices of various companies.*



Awards & Accolades



S.No.	Description of Awards	Year	Given by
1	Energy Efficient Unit Award	2023	CII
2	1st Sustainable Industrial Practice Award	2023	FICCI
3	Great Manufacturing Practice Award	2023	WMC
4	11 th Golden Globe Tiger Award 2023- "Best Corporate Social Responsibility Practices"	2023	TGGT
5	10 th Annual Greentech HR Award 2023 for Outstanding Achievements in " Employee Engagement"	2023	GF
6	Greentech Quality and innovation award	2023	GF



Energy Efficient Unit Award



Confederation of Indian Industry

24th National Award for Excellence in Energy Management 2023

This is to certify that

Tamilnadu Newsprint and Papers Limited, Karur

has been recognized as

"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 GRC

Ravichandran Purushothaman
Chairman, Energy Efficiency Council
CII - Godrej GRC



Confederation of Indian Industry

24th National Award for Excellence in Energy Management 2023

This is to certify that the presentation made by

Tamilnadu Newsprint and Papers Limited, Karur

has been recognized as

"Most Useful Presentation"

*This acknowledgement is based on the feedback from the participants at the
"National Award for Excellence in Energy Management" held during 13 - 15 Sep 2023, Hyderabad*

K S Venkatagiri
Executive Director
CII - Godrej GRC

Ravichandran Purushothaman
Chairman, Energy Efficiency Council
CII - Godrej GRC



Awards & Accolades



11th Golden Globe Tigers Award 2023 – “Best Corporate Social Responsibility Practices”



Golden peacock business excellence award 2024 to TNPL for outstanding achievements in business excellence



Greentech Quality and Innovation Award 2023



23rd Green Tech Environment Award 2023



Most Sustainable & Innovative Manufacturing Practices Award-2024



8th Annual Ohssai Hse Excellence & Esg Global Award 2023 To Tnpl For Outstanding Achievements In Safety Excellence



THANK YOU

