UPL Limited, Unit-2, Ankleshwar

Mr. K V Suresh - Head - Energy Cell
Mr. Kishor Kumar - Energy Specialist
Mr. Jay Mehta - Sr.Energy Analyst

UPL FACTSHEET

PHILOSOPHY

Our vision is to be an icon for growth, technology and innovation.

Our mission is to Change the game – to make every single food product more sustainable.

[1]Only crop protection and includes products where sales >US$ 0.01 million

*UPL and its subsidiaries

^Based on Sustainalytics Report November 2021

#5 Agro chemicals company in the world

#1 BioSolutions company

#1 Agrochemical company among peers in ESG by Sustainalytics^

1,502 Patents granted

1,552 Product formulations[1]

138 Countries where we are present across 6 continents

13,000+ Employees*

42 Manufacturing facilities

13,464 Registrations as on March 31, 2022

80%+ Share of revenue from branded products

30 R&D facilities

Environment

23%
Power from renewable sources at two of the largest manufacturing plants in FY 2022 (19% in FY 2021)

29%
Revenue from differentiated and sustainable products (% of crop protection revenues)

11%
Reduction in per tonne water consumption FY 2022 vs. FY 2021

7%
Reduction in per tonne CO_2 emissions FY 2022 vs. FY 2021

17%
Reduction in per tonne waste disposal in FY 2022 vs. FY 2021

Social

₹ 27 crore
CSR spend

~1 million
CSR beneficiaries

13,000+
Employees*

30
R&D facilities

~3%
Annual revenue reinvested in R&D

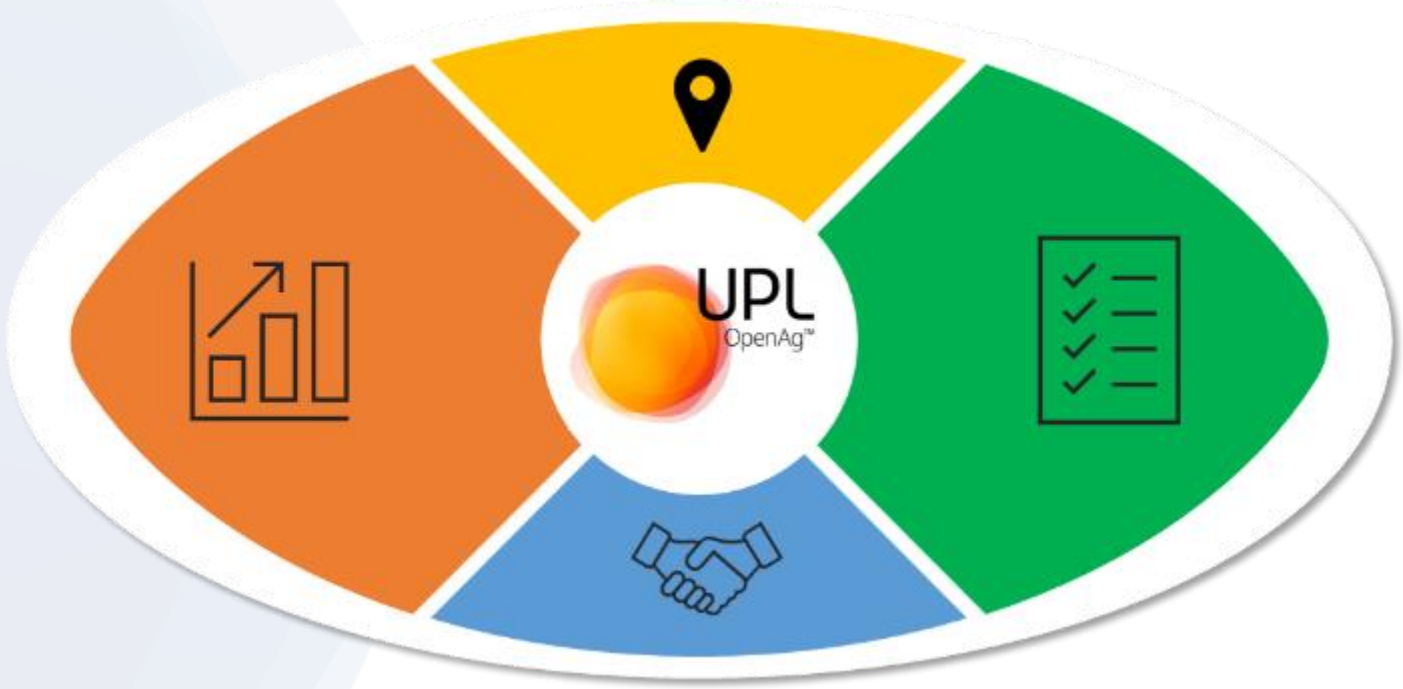
Brief Introduction to UPL Ltd. Unit-2, Ankleshwar

UPL Limited,

Unit-2, 3405/3406, GIDC, Ind. Estate, Ankleshwar,
Dist. Bharuch, Gujarat, INDIA – 393002
16000 Sq.m

FY-2021/22

Turnover – INR 2216 Cr
COGM – INR 1987 Cr
Energy Bill – INR 51 Cr
Employee – 500+



6 Plants
10 Products

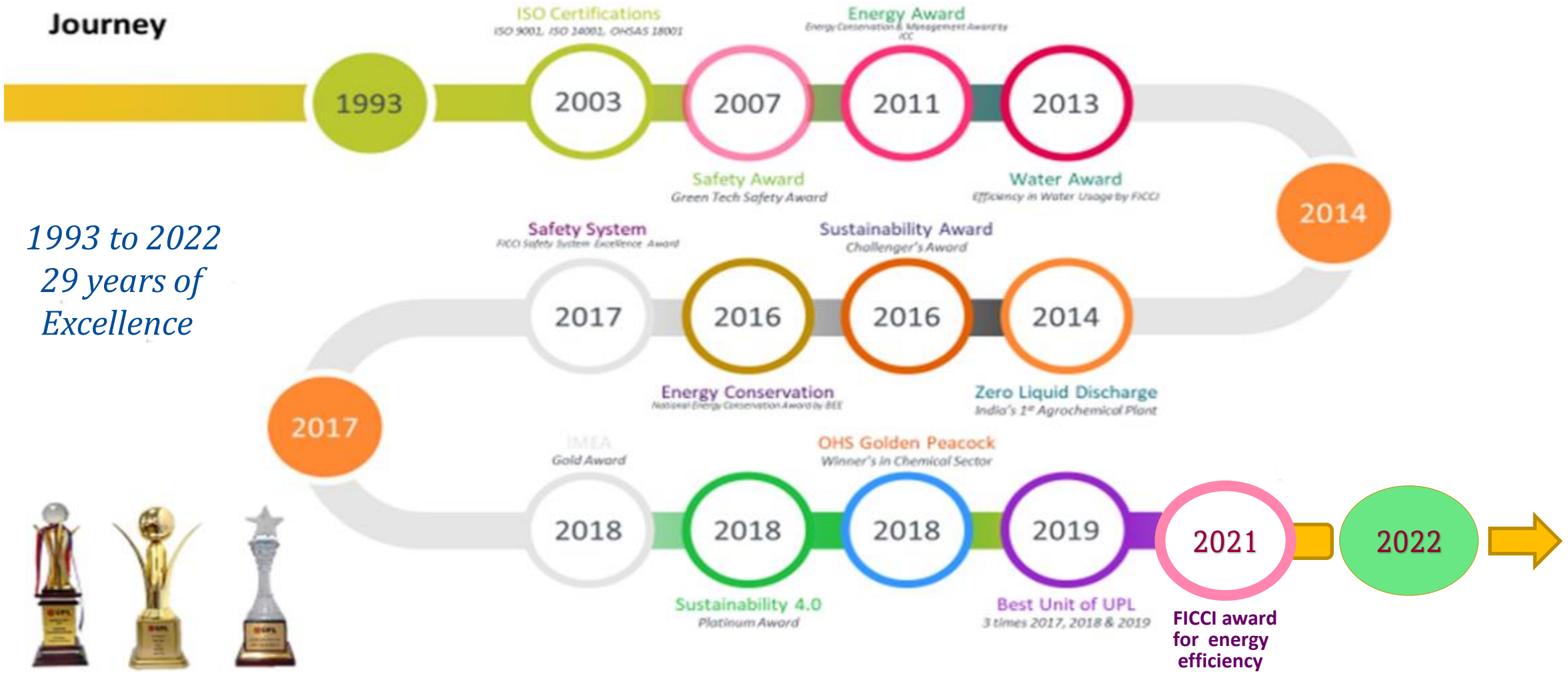
Insecticides, Herbicides,
Speciality Chemicals.
First ZLD in Agro Chemicals,
ISO 50001:2018 Company

Innovation & Technology

Maxpro, Maxpro+, *Energy Cell*, Green Cell,
ESG & Corrosion Prevention

Proprietary & Confidential

Journey



1993 to 2022
29 years of Excellence

Products

Insecticides

- Acephate
- *Terbufos*
- *Ethion*
- *Bifenthrin*

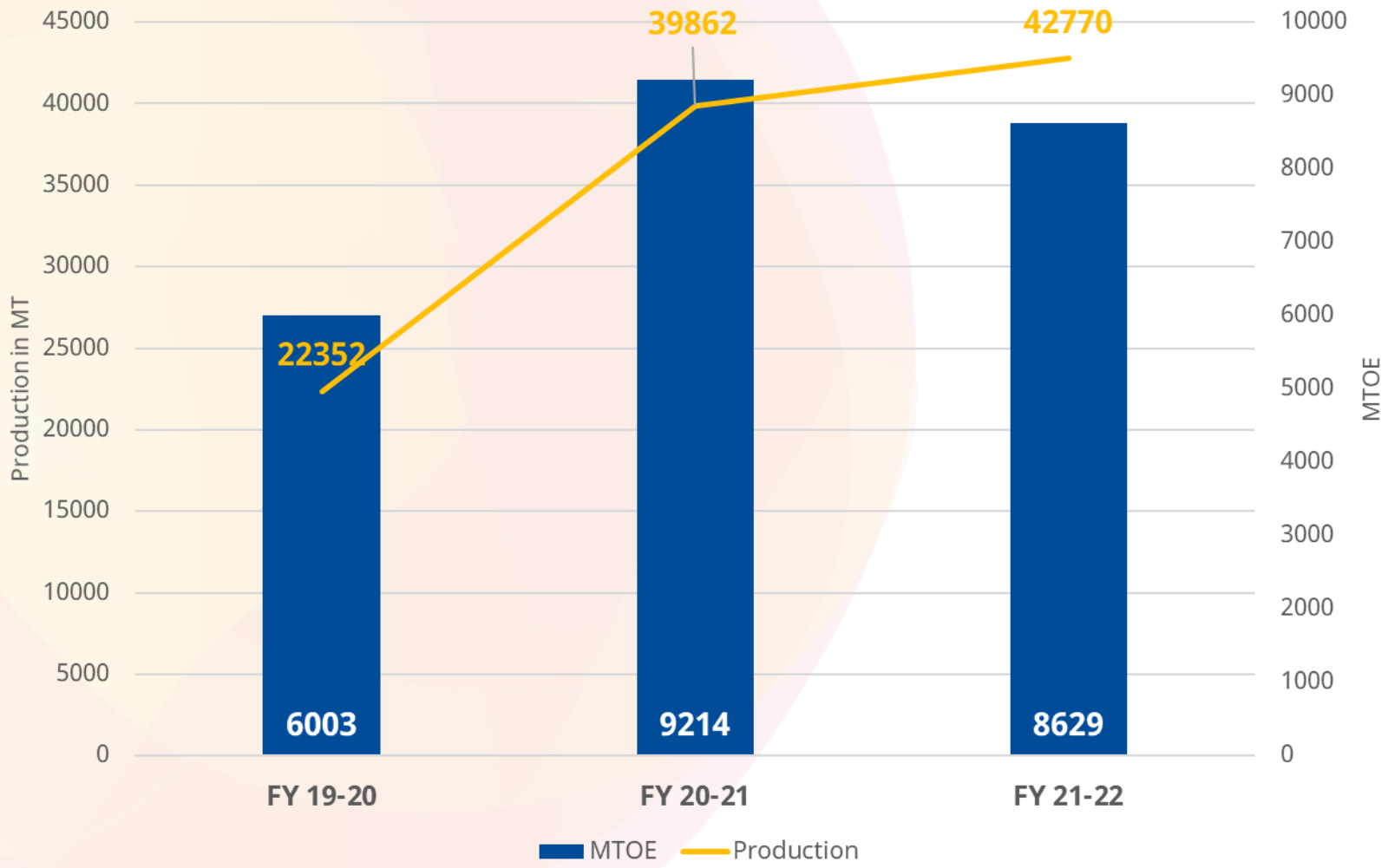
Herbicides

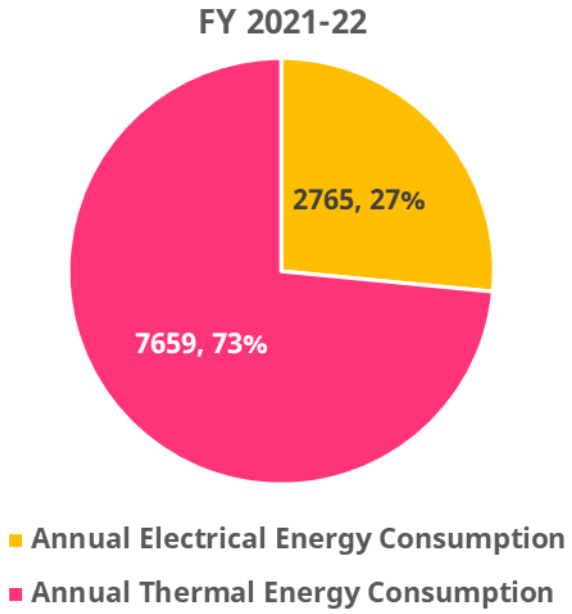
- Devrinol
- Clomazone
- *Asulam*
- *Etho*

Speciality Chemicals

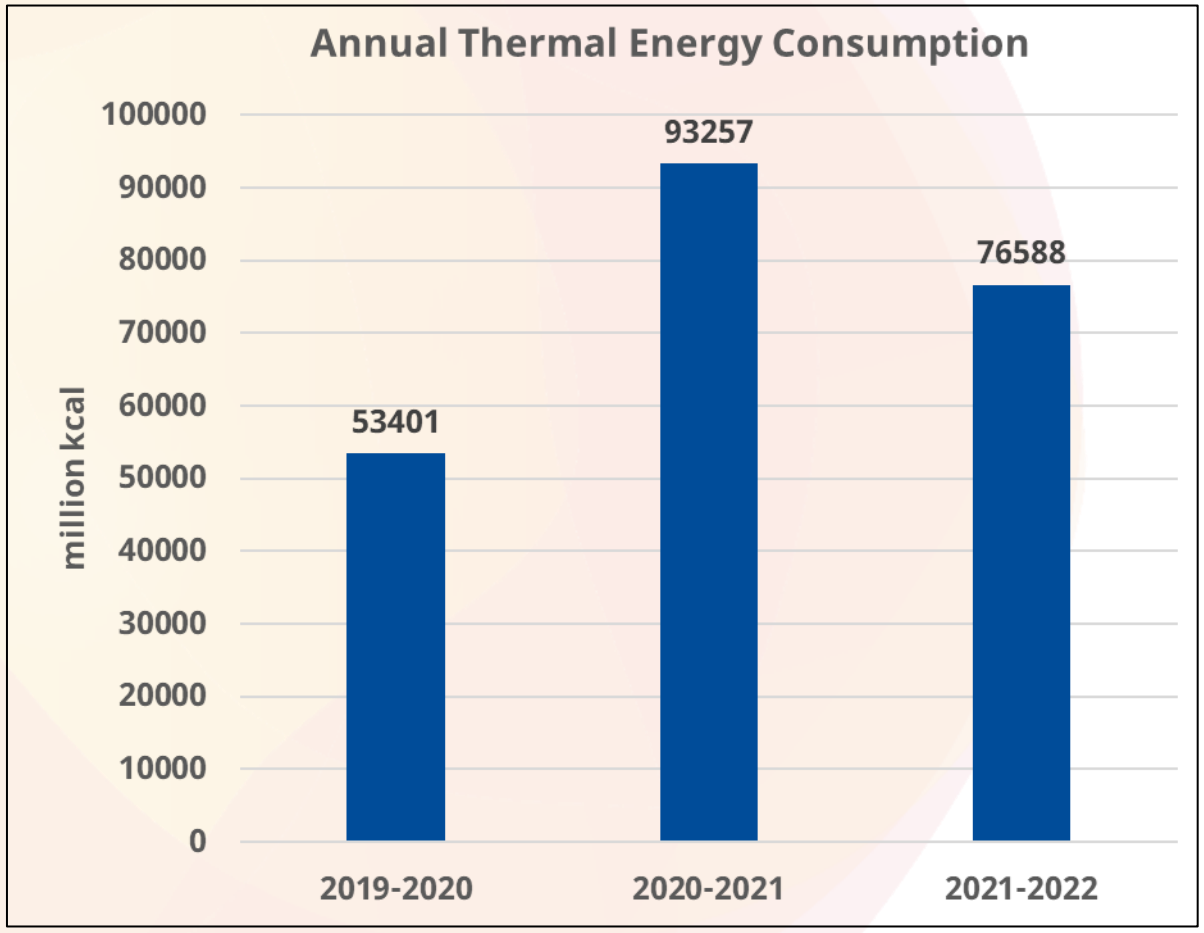
- *ZnDTP*
- *DETA*

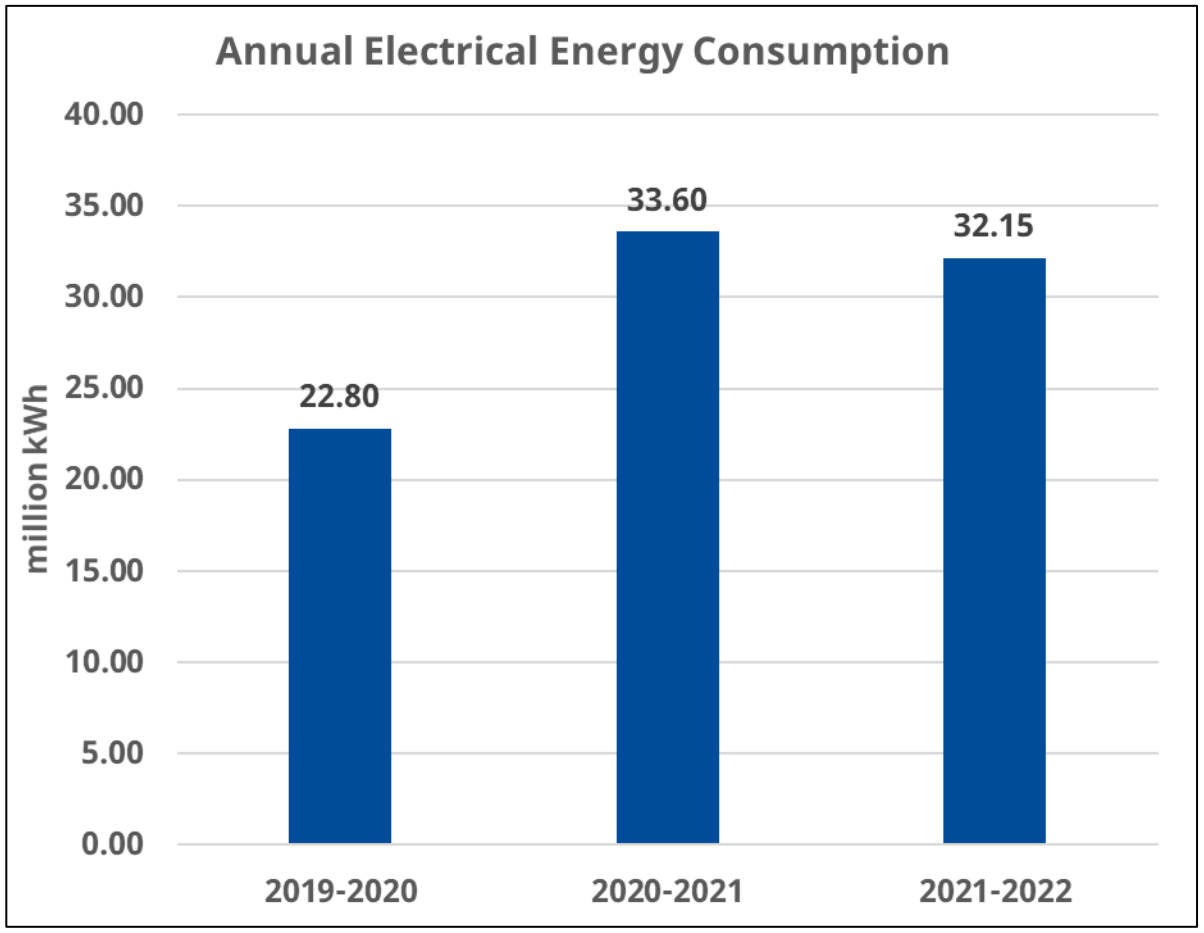
4. Energy Consumption – Overall Energy & Production



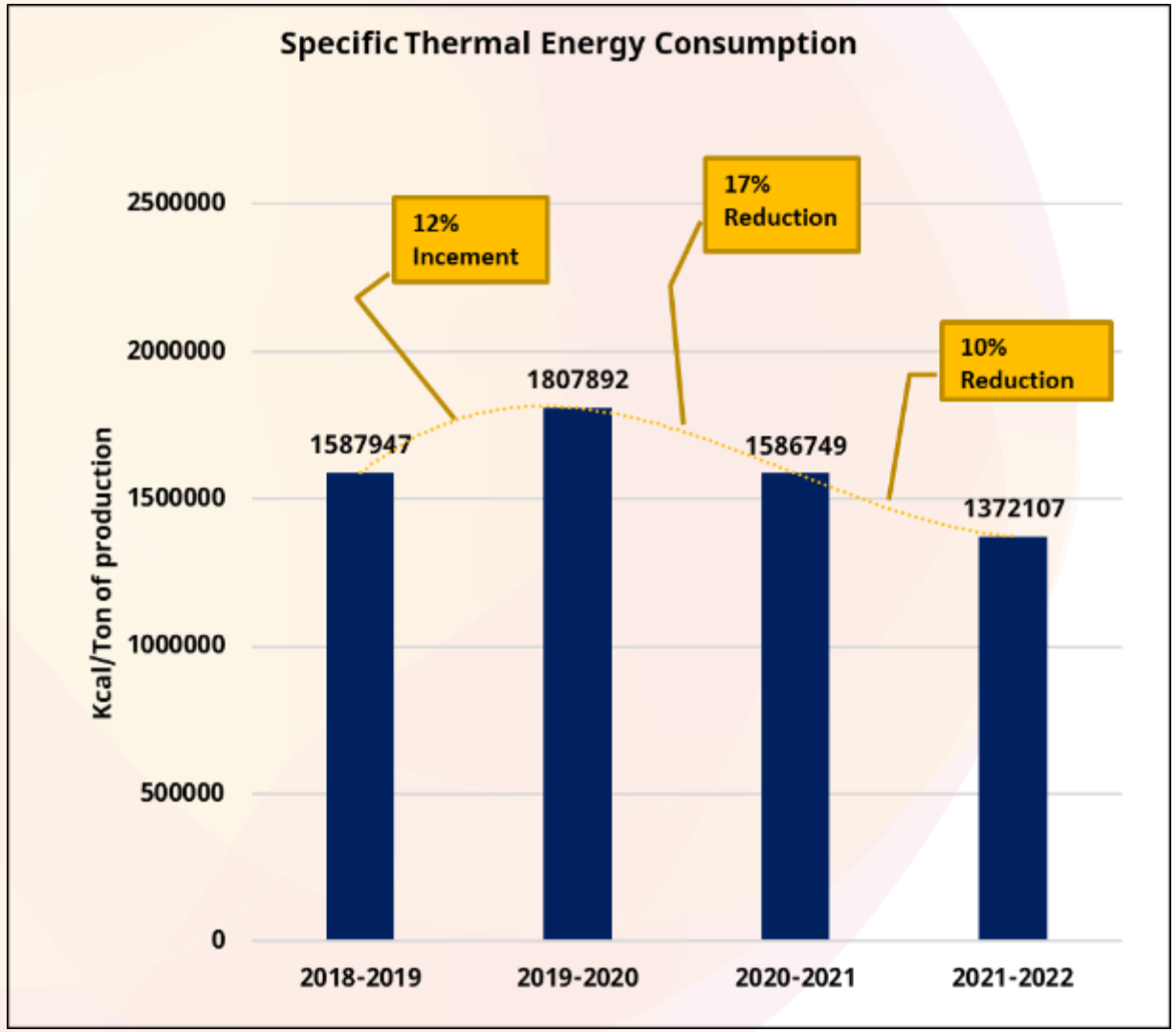


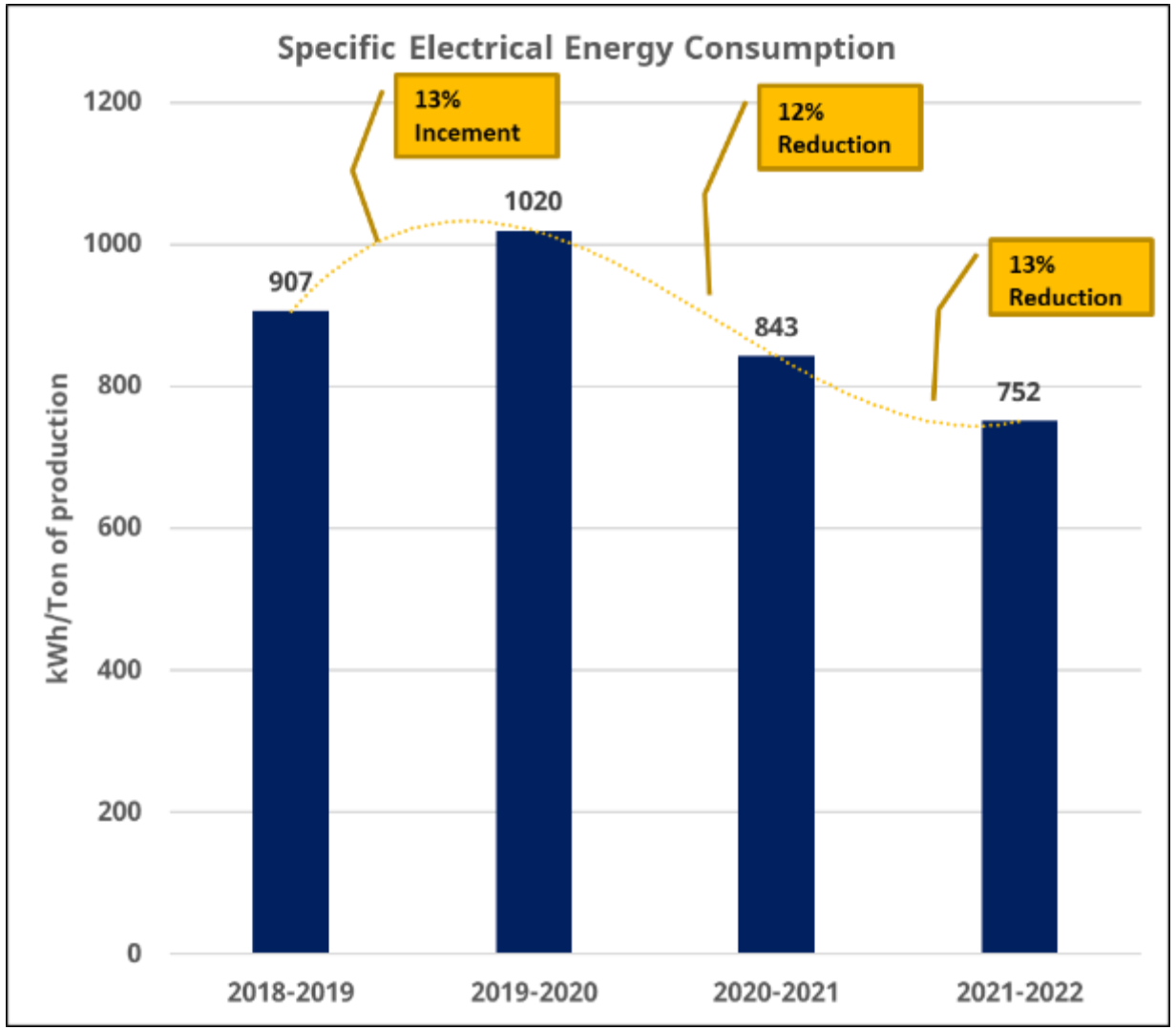
4. Energy Consumption



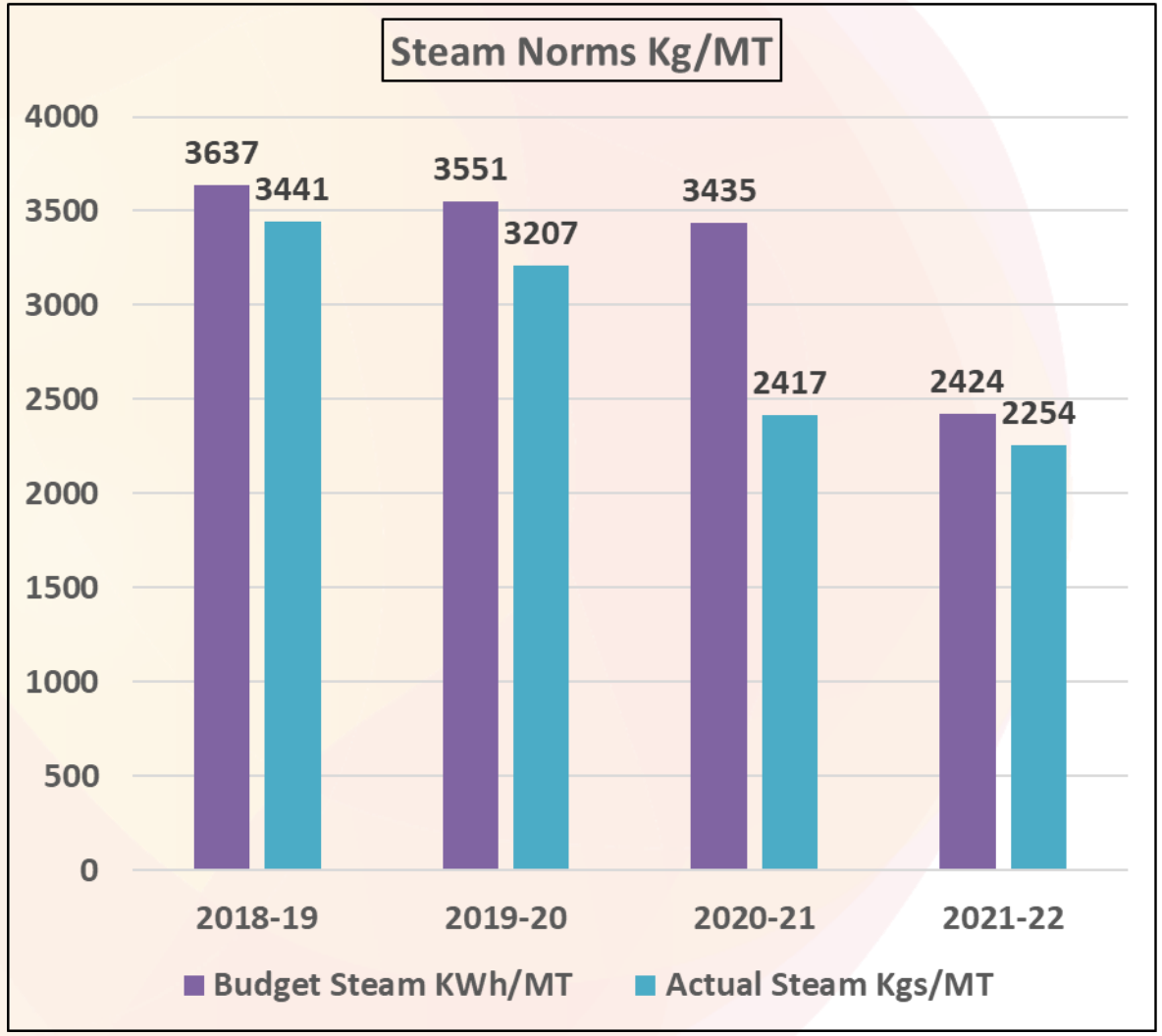


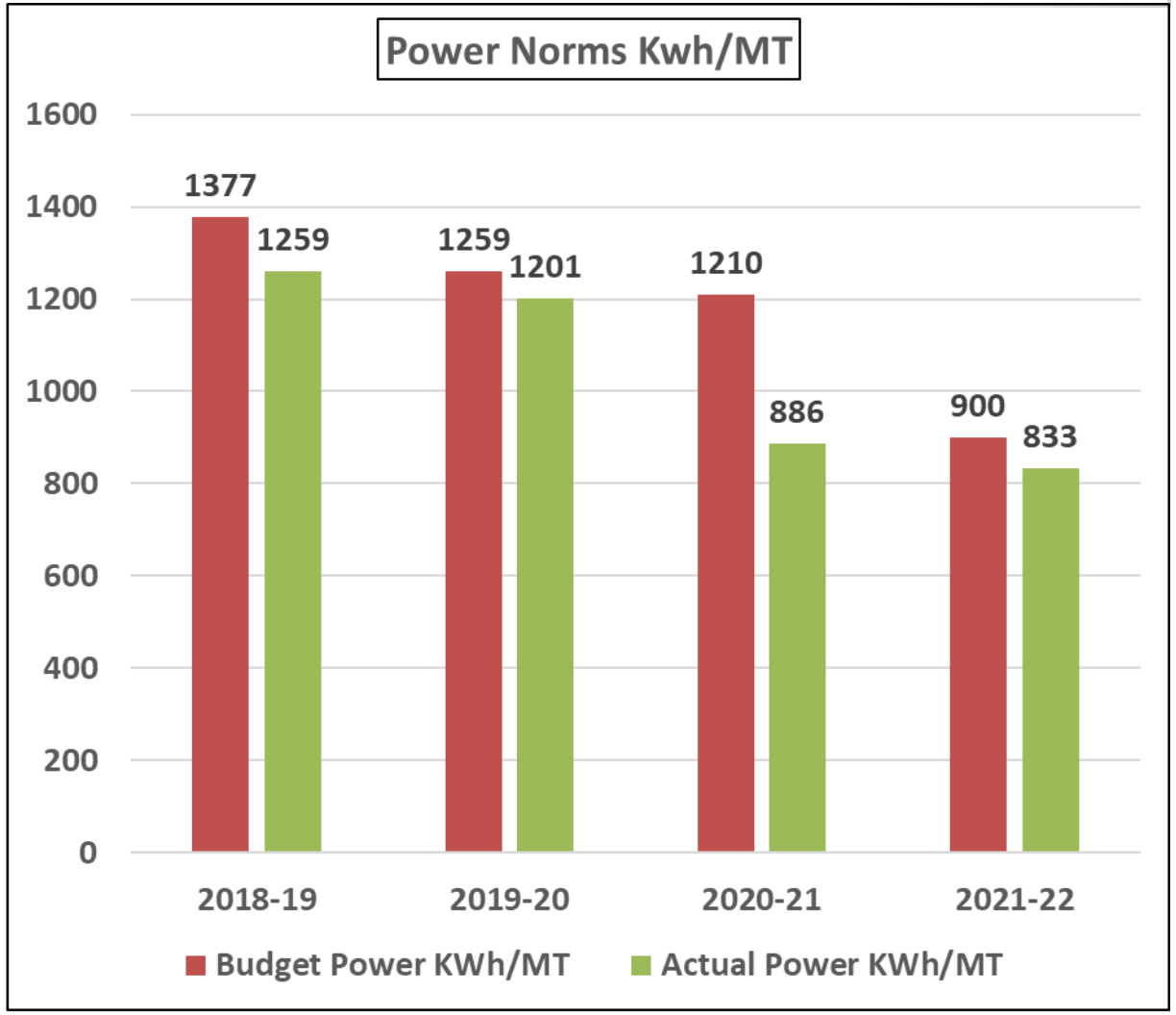
4. Energy Consumption - Specific Energy



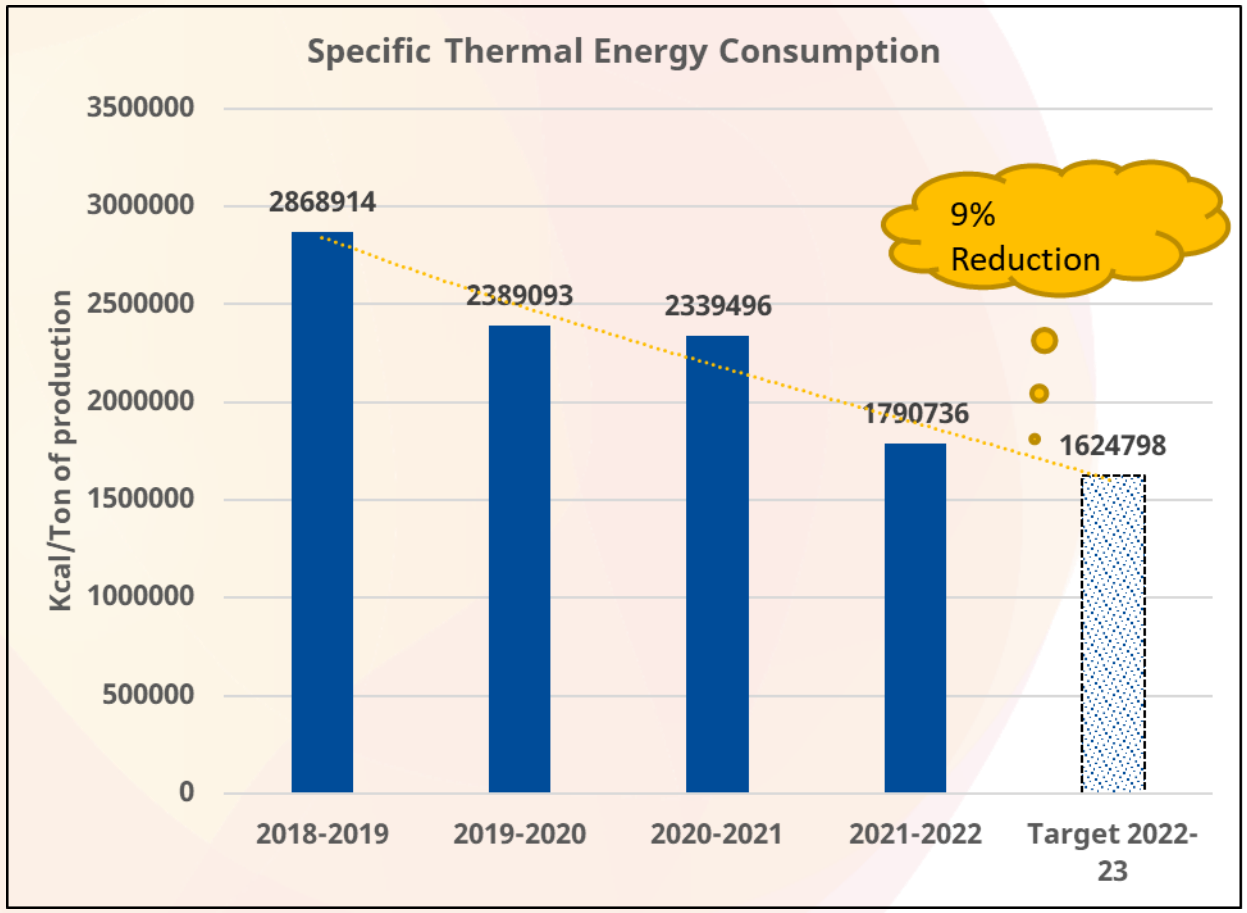


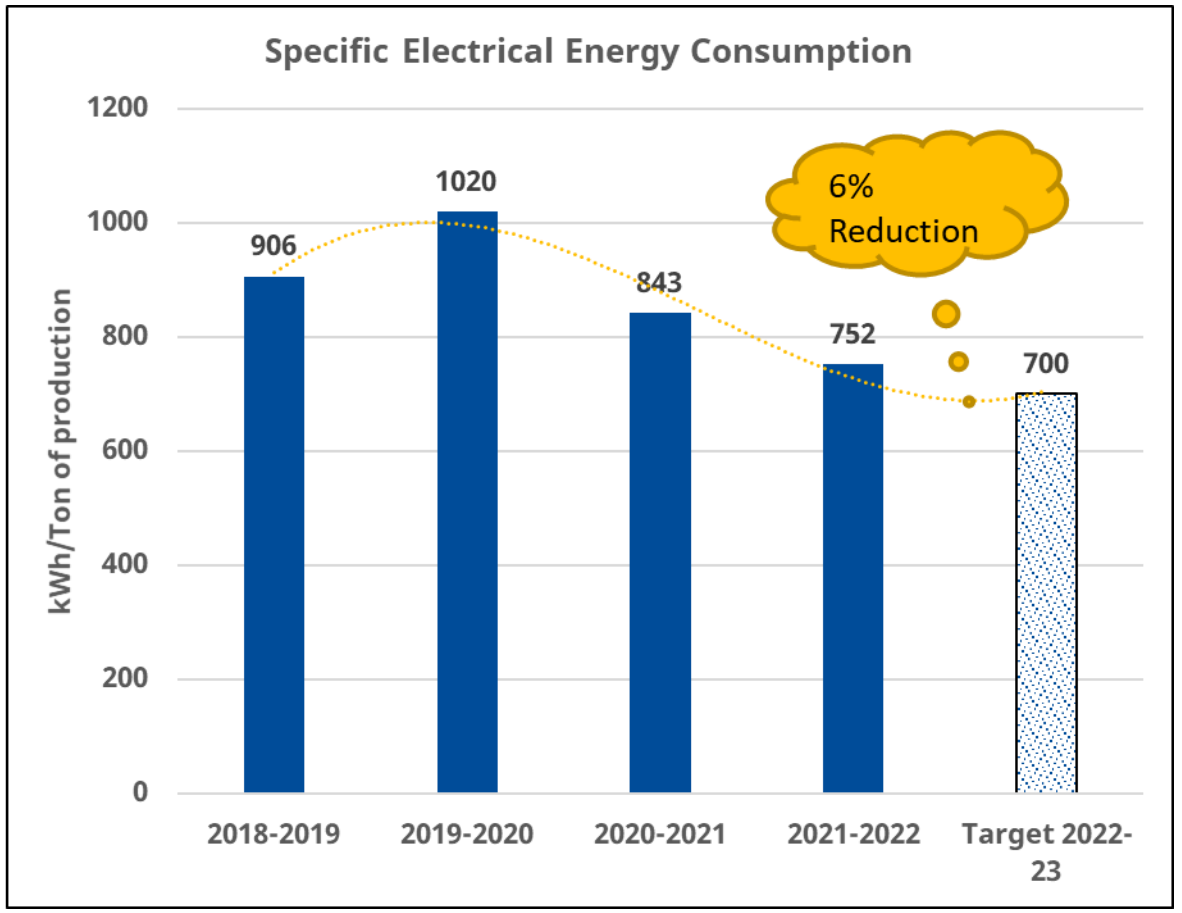
4. Internal Benchmarking - Specific Energy Product wise





5. Target SEC

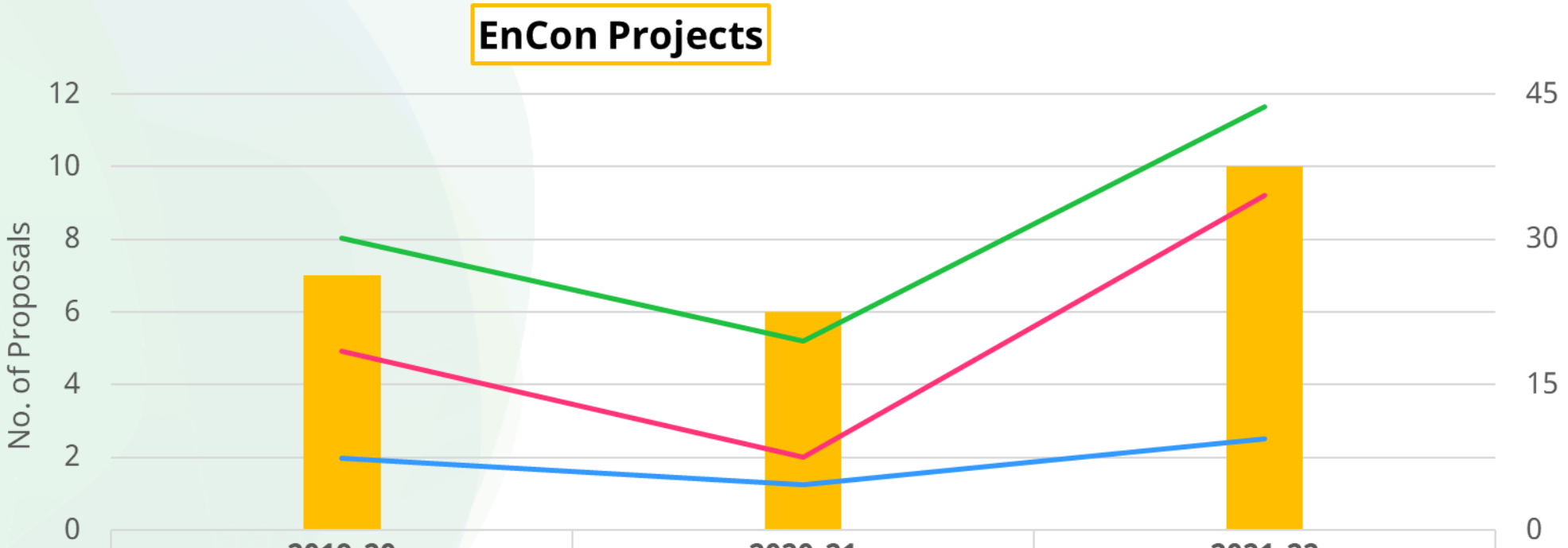

Specific Thermal Energy Consumption
Kcal/Ton of production
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
2868914
2389093
2339496
1790736
1624798
9% Reduction
2018-2019
2019-2020
2020-2021
2021-2022
Target 2022-23


Specific Electrical Energy Consumption
kWh/Ton of production
1200
1000
800
600
400
200
0
906
1020
843
752
700
6% Reduction
2018-2019
2019-2020
2020-2021
2021-2022
Target 2022-23

5. Major Encon project planned in 2022-23

Sr. No	Title of Project	Annual Electrical Saving (Million kWh)	Annual Thermal Saving (Million Kcal)	Investment (Rs in Million)
1	Compression type heat pump to utilize waste heat to reduce steam consumption of EA FFE.	0	2605	7.0
2	MDC recovery R 50015 recirculation preheating by condensate	0	453	2.5
3	Forced RO for CT blowdown to reduce steam consumption in evaporator.	1.77	2160	0.6
4	Energy efficient cooling tower fan	0.184	0	2.5
5	Turbine driven fan-based system for cooling tower	0.217	0	2.5
6	MeOH column feed preheating by waste heat	0	259	3.5
7	Solarpanel shed in carparking area	0.042	0	1.7
8	Occupational sensor for Admin office	0.0043	0	0.3
9	Variable area thermocompressor for flash steam recovery at clamozone plant	0	972	6.5
10	Incinerator revamping to generate steam from waste heat	0	648	5.0
Total		**2.21**	**7097**	**32.1**

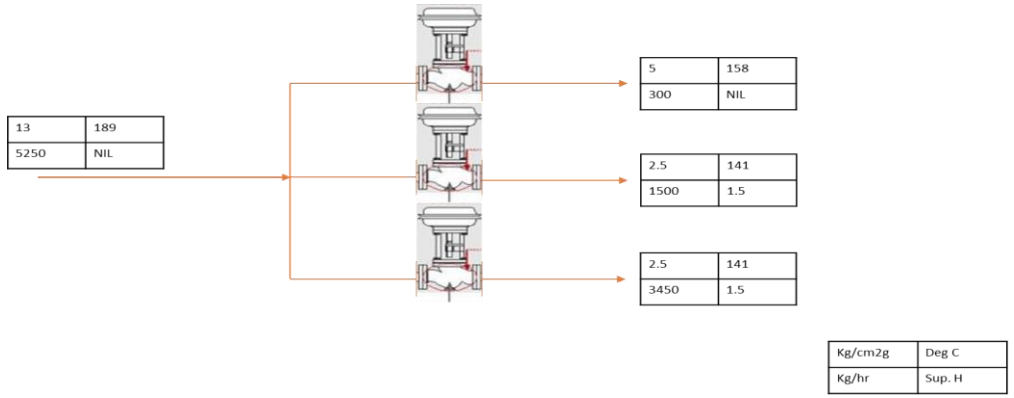
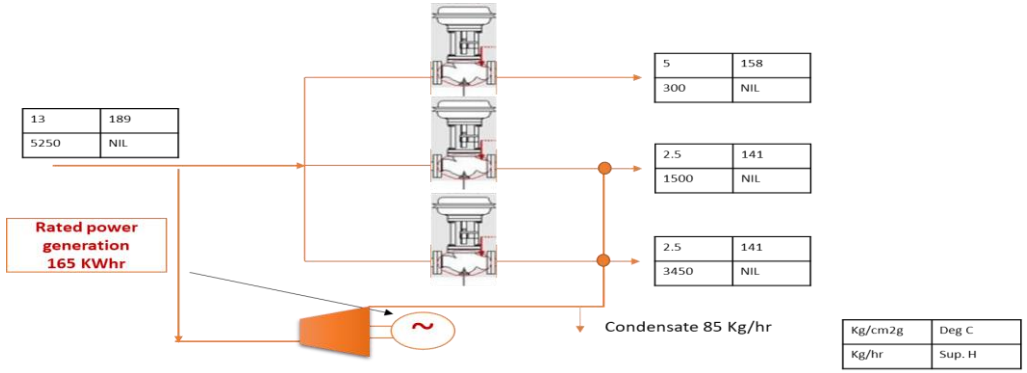
6. Energy Saving projects implemented in last three years



	2019-20	2020-21	2021-22
No. of Proposals	7	6	10
Invetments (Rs million)	19	8	35
Savings (Rs million)	30	20	44
Payback Months	7	5	9

6. Energy Saving projects implemented in last three years – Key Projects

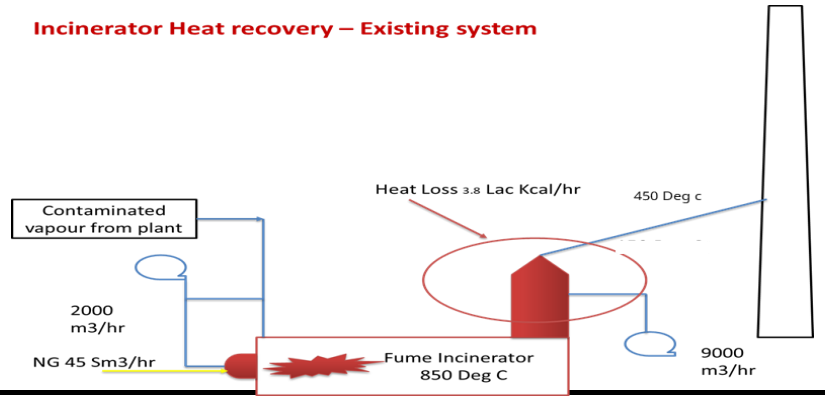
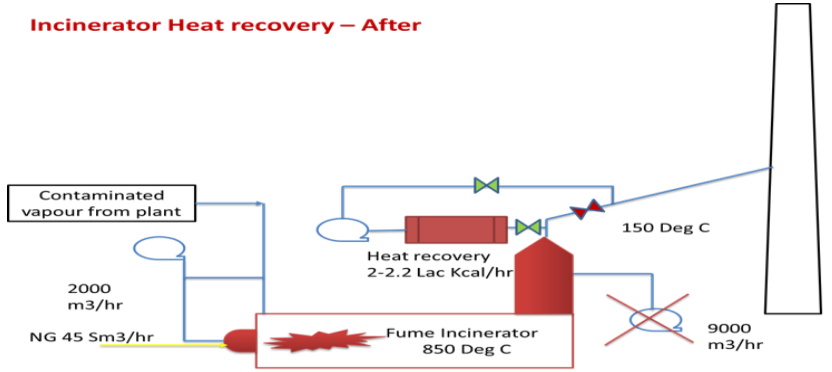
Description of conservation program:	Back Pressure Turbine for Acephate

Picture before modification (if available)	Picture after modification
	

Technical Evaluation	Electricity KWh	Steam KG	Others UOM
A. Annual Consumption of Energy prior to the proposal	31680000	0	0
B. Annual Consumption of Energy after implementation	30341520	0	0
C. Energy saving (A-B) Per annum		1338480	
D. Energy saving (A-B) Per hour		169	
E. Energy cost saving (Rs/year)	107		
F. Other cost saving (Rs/Year)	0.0		
G. Total Cost saving (D+E) (Rs/year)	107		
H. Proposed investment (Rs.)	81		
I. Payback period (Month)	9.1		

6. Energy Saving projects implemented in last three years – Key Projects

Description of conservation program:	Incinerator waste heat recovery

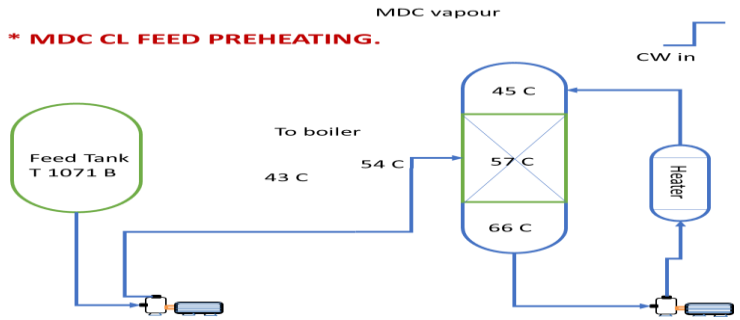
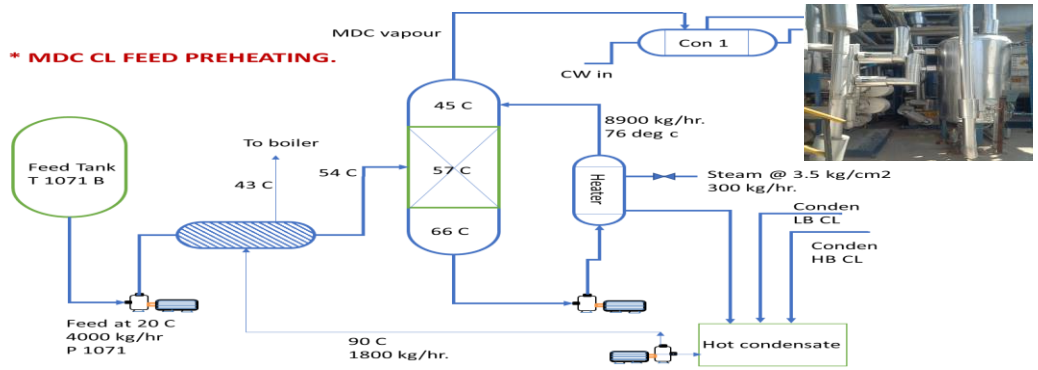
Picture before modification	Picture after modification
	

Technical Evaluation	Electricity	Steam	Others
	KWh	KG	UOM
A. Annual Consumption of Energy prior to the proposal	0	9504000	0
B. Annual Consumption of Energy after implementation	0	6660720	0
C. Energy saving (A-B) Per annum		2843280	
D. Energy saving (A-B) Per hour		359	
E. Energy cost saving (Rs/year)	57		
F. Other cost saving (Rs/Year)	2		
G. Total Cost saving (D+E) (Rs/year)	59		
H. Proposed investment (Rs.)	50		
I. Payback period (Month)	10.2		

Proprietary & Confidential

6. Energy Saving projects implemented in last three years – Key Projects

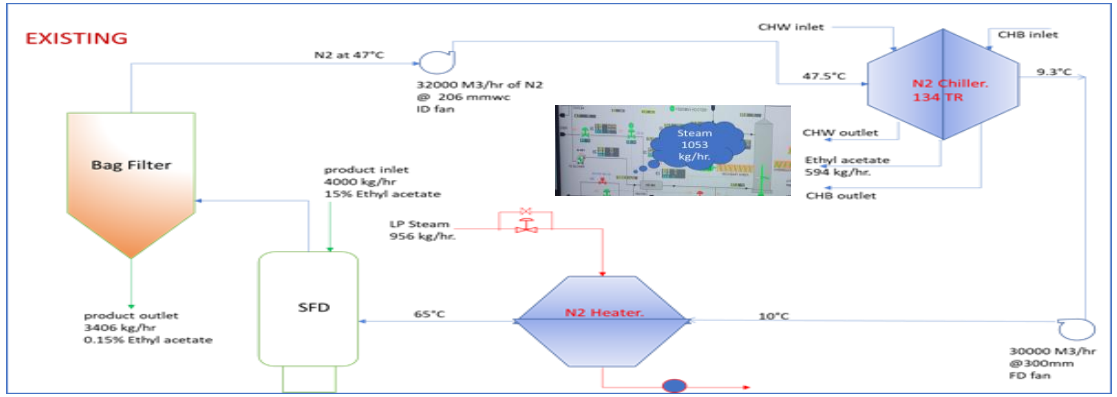
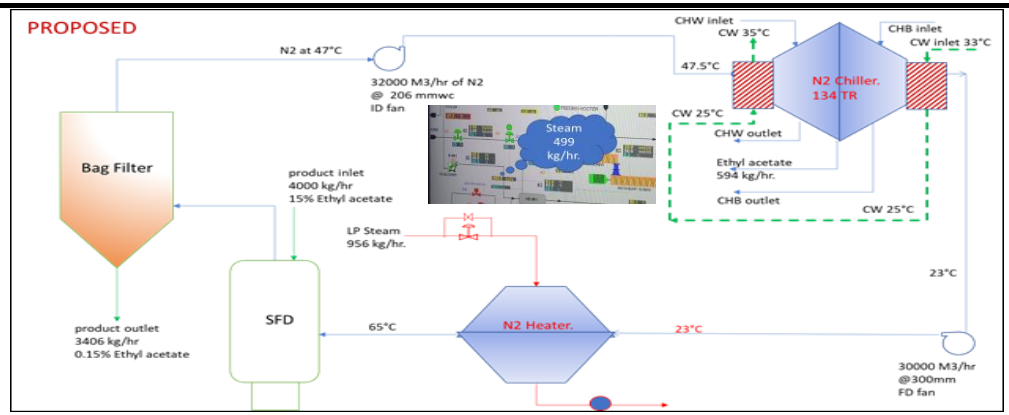
Description of conservation program:	MDC CL feed preheating by condensate

Picture before modification (if available)	Picture after modification
	

Technical Evaluation (If Applicable)	Electricity	Steam	Others
	KWh	KG	UOM
A. Annual Consumption of Energy prior to the proposal	0	3960000	0
B. Annual Consumption of Energy after implementation	0	2574000	0
C. Energy saving (A-B) Per annum		1386000	
D. Energy saving (A-B) Per hour	0	175	
E. Energy cost saving (Rs/year)	25		
F. Other cost saving (Rs/Year)	0.8		
G. Total Cost saving (D+E) (Rs/year)	26		
H. Proposed investment (Rs.)	20		
I. Payback period (Month)	9.4		

6. Energy Saving projects implemented in last three years – Key Projects

Description of conservation program:	Steam norm reduction at Acephate by SFD heat integration

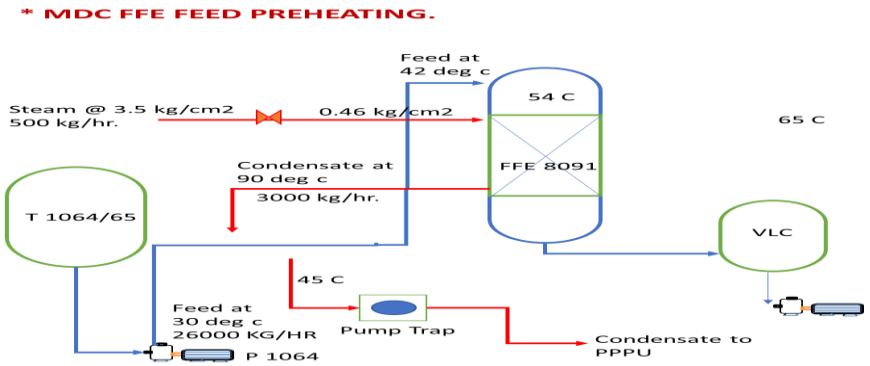
Picture before modification (if available)	Picture after modification
	

Technical Evaluation (If Applicable)	Electricity	Steam	Others
	KWh	KG	UOM
A. Annual Consumption of Energy prior to the proposal	689832	8078400	0
B. Annual Consumption of Energy after implementation	530244	3928320	0
C. Energy saving (A-B) Per annum	159588	4150080	0
D. Energy saving (A-B) Per hour	20.2	524	0
E. Energy cost saving (Rs/year)	96		
F. Other cost saving (Rs/Year)	2.5		
G. Total Cost saving (D+E) (Rs/year)	98		
H. Proposed investment (Rs.)	70		
I. Payback period (Month)	8.5		

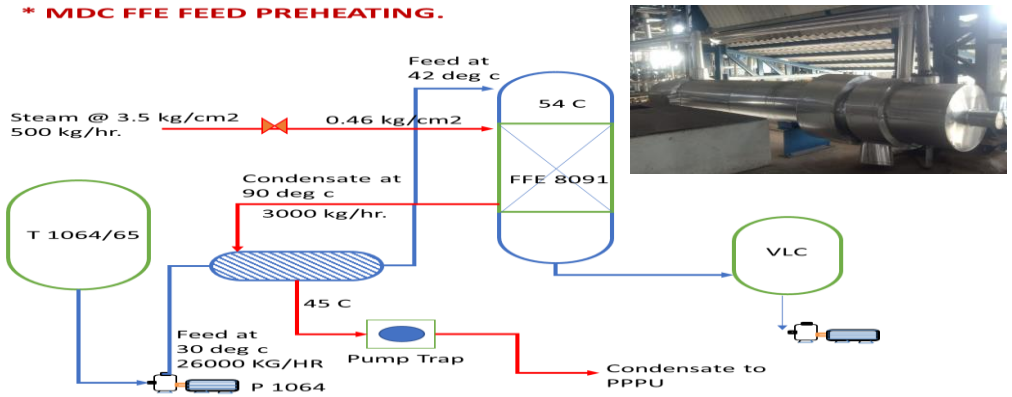
6. Energy Saving projects implemented in last three years – Key Projects

Description of conservation program:	MDC FFE feed preheating by condensate

Picture before modification (if available)



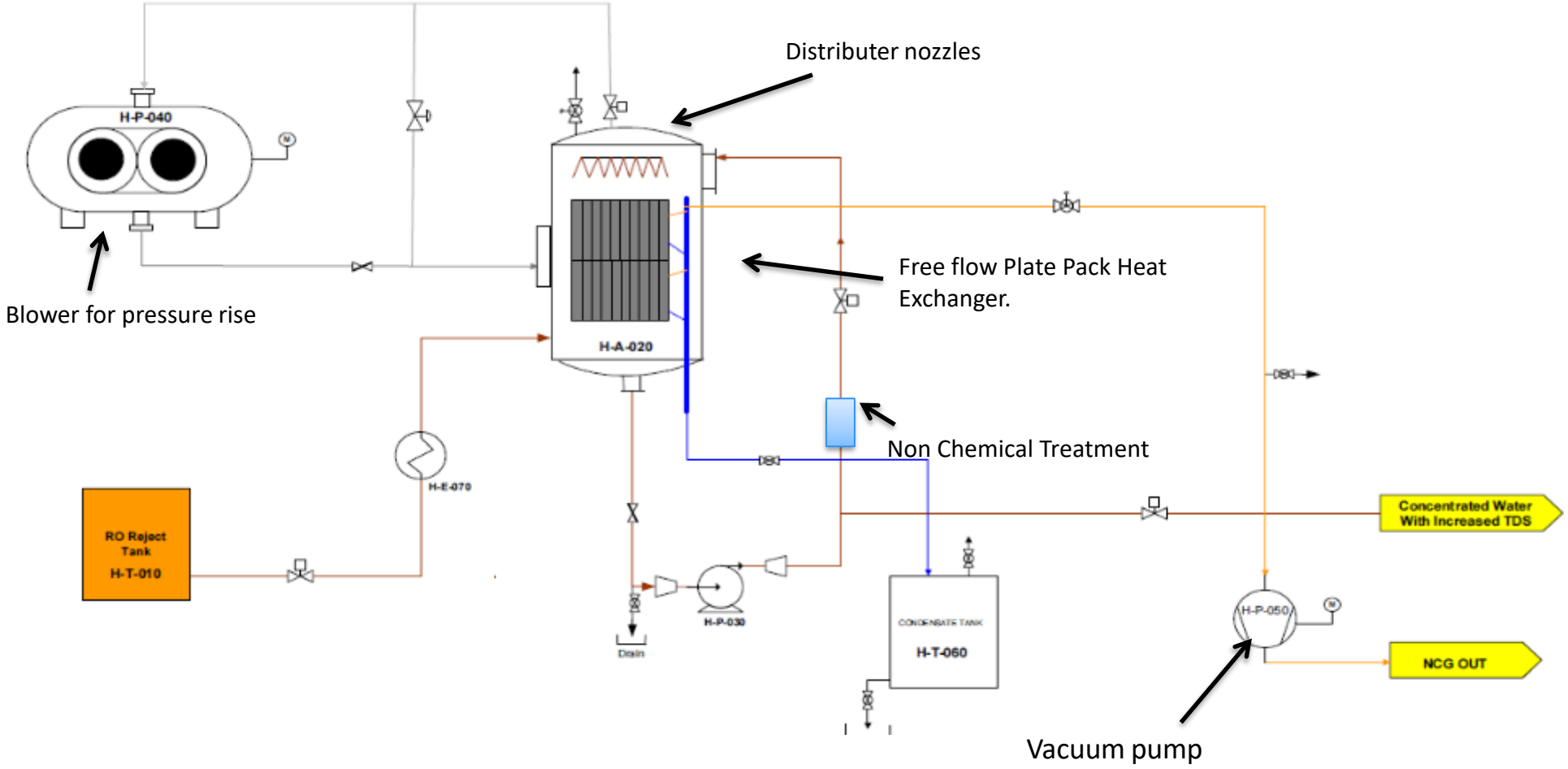
Picture after modification



Technical Evaluation (If Applicable)	Electricity KWh	Steam KG	Others UOM
A. Annual Consumption of Energy prior to the proposal	0	23760000	0
B. Annual Consumption of Energy after implementation	0	21954240	0
C. Energy saving (A-B) Per annum	0	1805760	0
D. Energy saving (A-B) Per hour	0	228	
E. Energy cost saving (Rs/year)	36		
F. Other cost saving (Rs/Year)	1.1		
G. Total Cost saving (D+E) (Rs/year)	37		
H. Proposed investment (Rs.)	30		
I. Payback period (Month)	9.7		

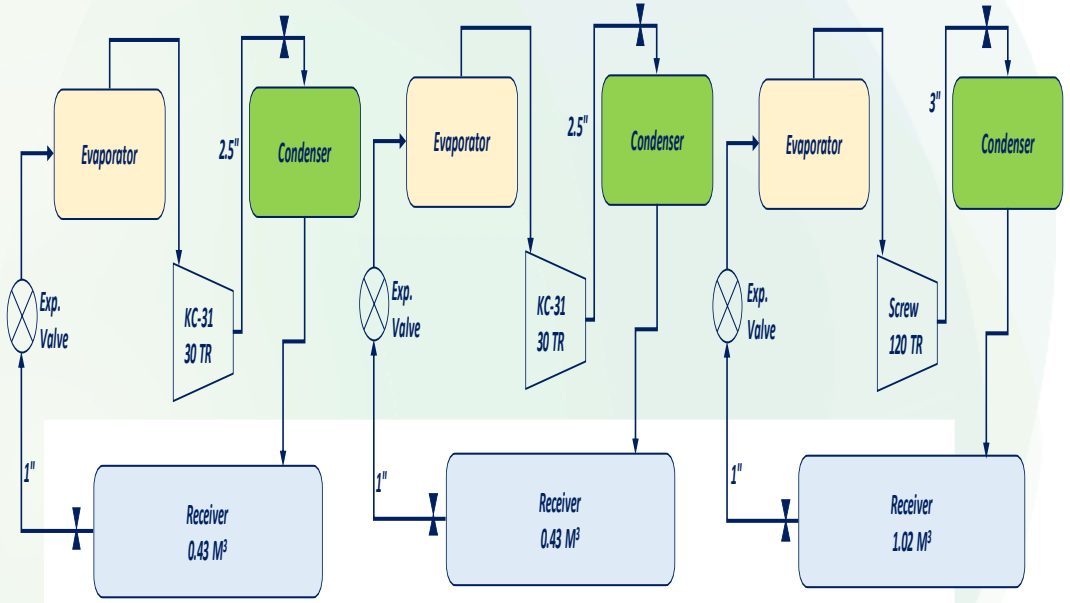
7 . Innovative Projects implemented – 2019-20

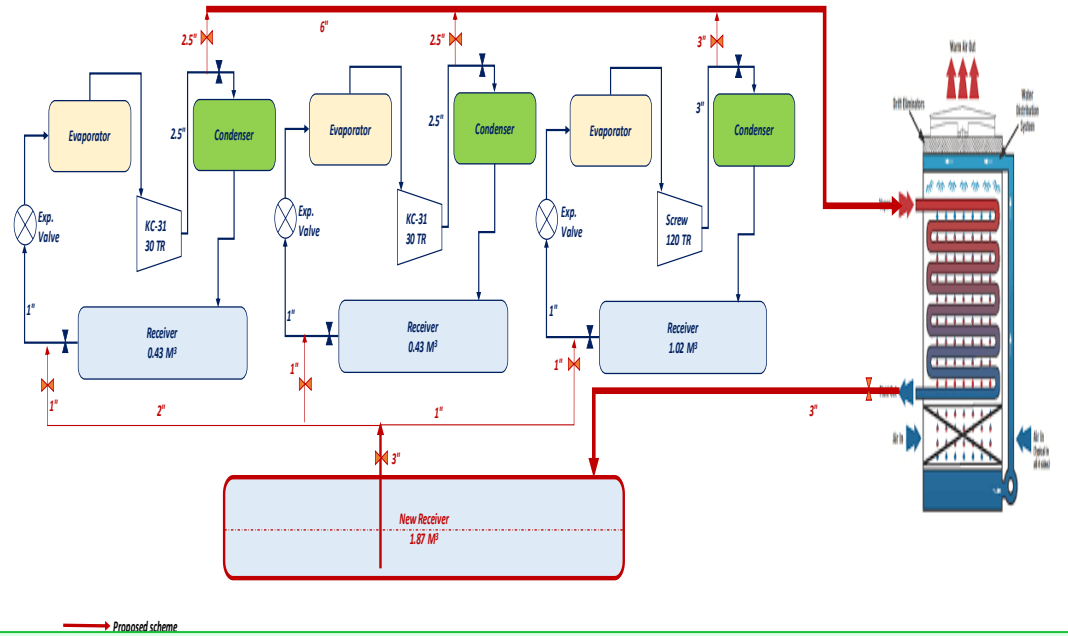
Mechanical Vapor Recompressor



7. Innovative Projects implemented - 2020-21

Cascading Evaporative Condenser



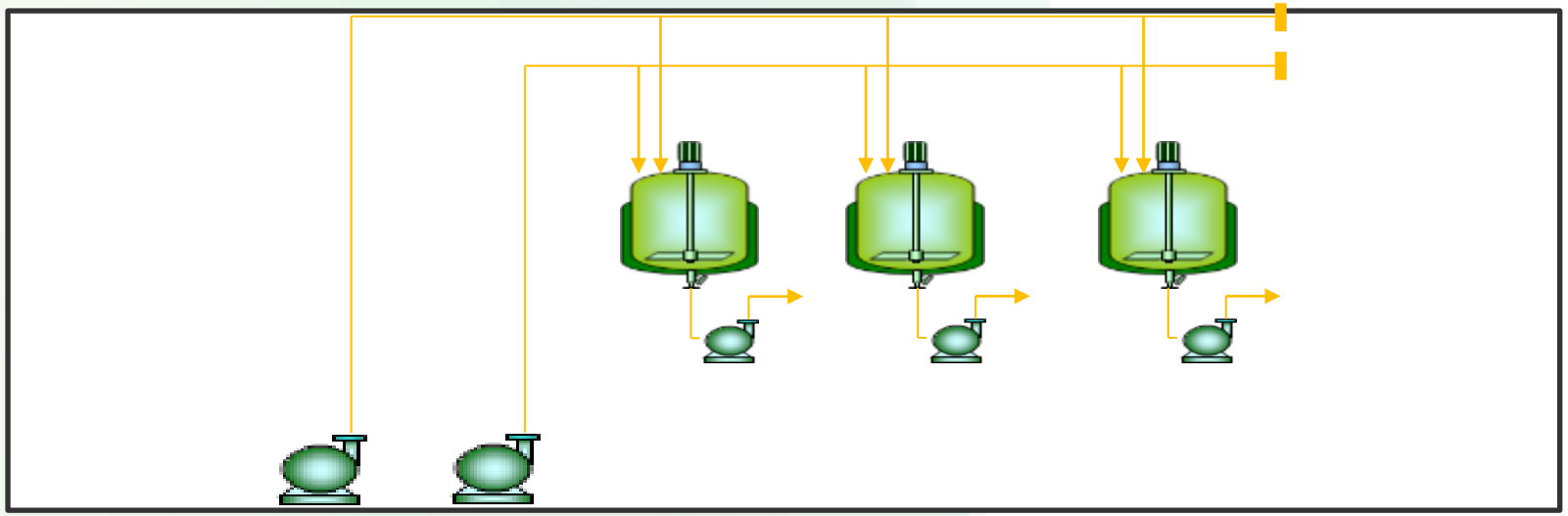


- Cascading evaporative condenser for chillers.120 TR , KC 31, KC 32 Brine chiller condensers are combined.
- In place of 3 condensers one no of evaporative condenser was installed.
- Condensing temperature of refrigerant was reduced to 34 deg c. and Lower Carbon Footprint
- Cost Saving Rs. 43 Rs Lacs/Year, Total investments Rs. 36 Lacs
- Is the process/ technology adopted by you unique as compared to industry? Yes First time in UPL.
- What is the challenge/ situation your adopted process/ technology is trying to address? Eliminating Cooling tower and pumping system and utilizing vapor pressure

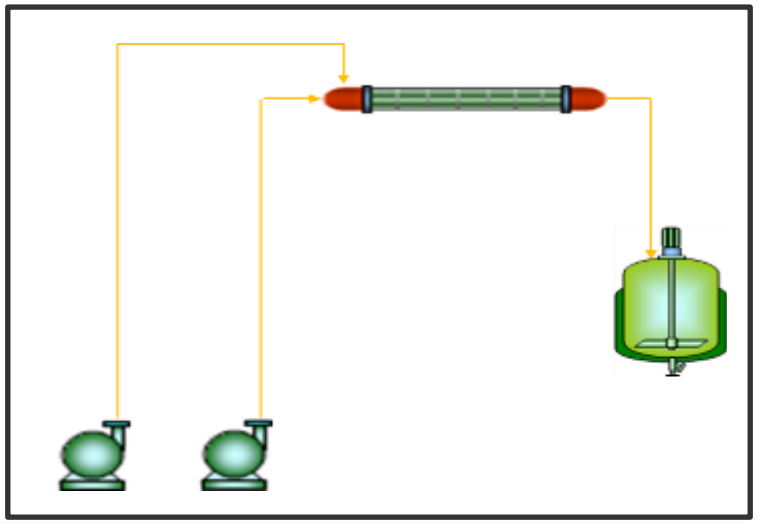
7 . Innovative Projects implemented – 2021-22

Continuous Acetylation Process (Acephate Plant)

Batch Process



Continuous Process



*Figures for representation only.

- Three reactors reduced to one reactor, Area reduced from 60.75 sqm area to 20.25 sqm
- Power consumption reduced, **61.5 kW/hr** savings
- Chilled water replaced with cooling water **(~ Rs 33 lakh/annum saving)**
- Is the process/ technology adopted by you unique as compared to industry? Yes
- What is the challenge/ situation your adopted process/ technology is trying to address? Secondary cooling system introduced due to criticality of process.

8. Utilization of Renewable Energy sources

S. No	Renewable Power Purchase - 3.5 MW	Renewable KWHR / YR.	Grid power KWHR/YR.	Total Power consumption KWHR/YR.	% consumption of renewable power
1	2018-19	0	23936000	23936000	0.0%
2	2019-20	1242610	21603438	22846048	5.4%
3	2020-21	4048790	29593453	33641342	12.0%
4	2021-22	4110979	28025641	32146620	12.7%
5	2022-23 YTD JUN 22	1736157	10206783	11942940	14.5%

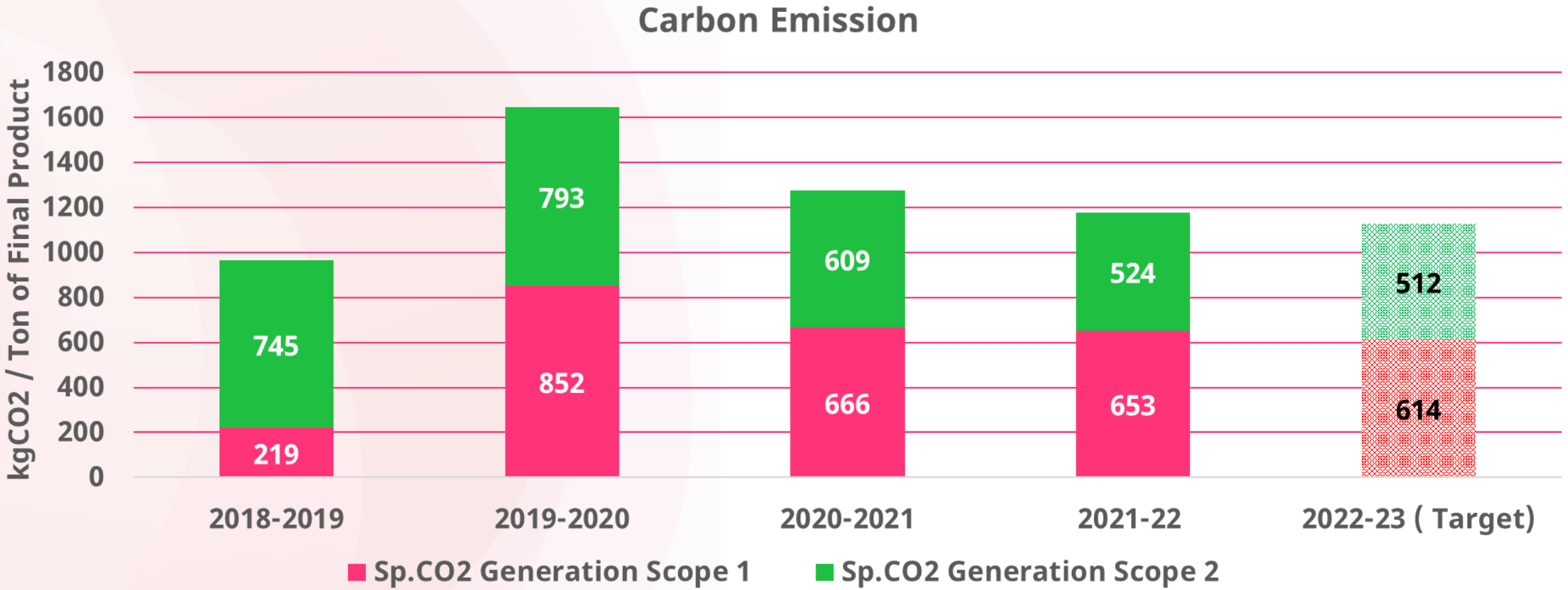
- **Renewable power purchase agreement was increased from 2.5 MW to 3.5 MW for FY 2022-23.**

9.Waste utilization and management

Type of waste generated	2019-2020		2020-2021		2021-2022	
	Quantity of waste generated (MT/year)	Disposal method	Quantity of waste generated (MT/year)	Disposal method	Quantity of waste generated (MT/year)	Disposal method
Ammonium Acetate waste	29340	Making Acetic acid	32387	Co-Processing	36483	Co-Processing
Organic waste	4980	Incineration	5831	Co-Processing	6718.2	Co-Processing
Organic Solid Waste	320	Incineration	355	Co-Processing	373.88	Co-Processing

- We have common hazardous waste treatment facility called as BEIL, Bharuch . BEIL promoted by Industries in Bharuch District with major shareholding by Tatva Global Environment Private Limited (known as 'Tatva' group), the Company promoted by the Directors of UPL Limited.

10. GHG Inventorisation

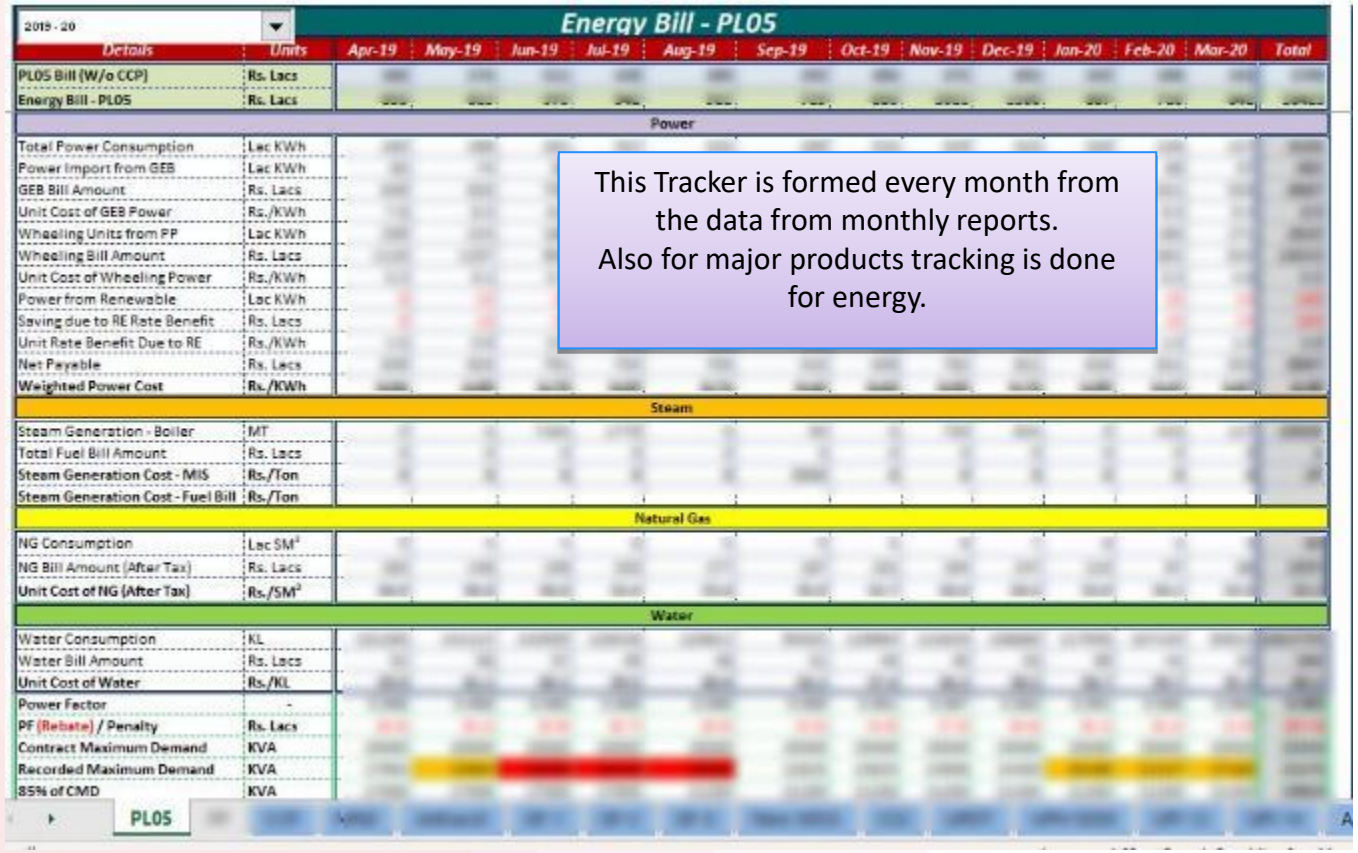


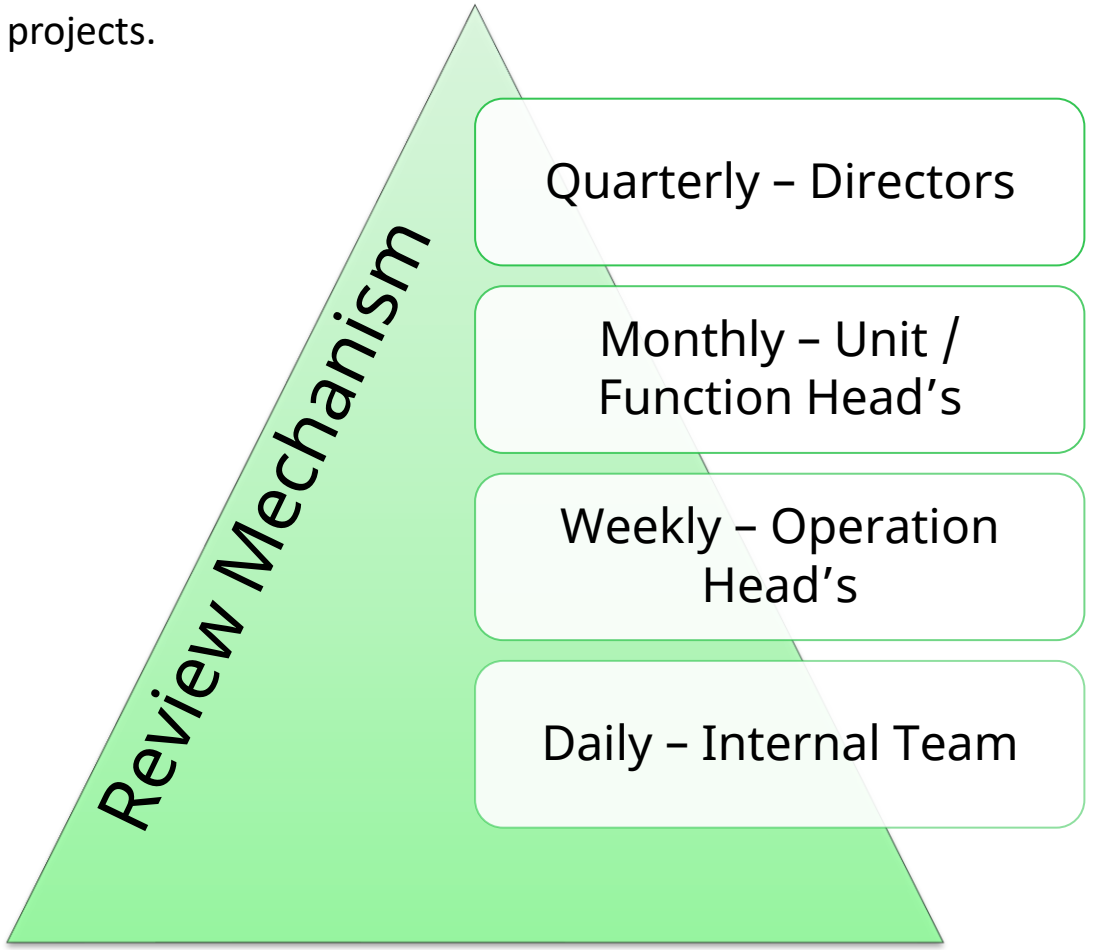
UPL Committed to reduce its carbon emissions 25 % by 2025

**** UPL is the First Indian company to get sustainability linked loans for Carbon Mitigation***

12. Teamwork, Employee Involvement & Monitoring

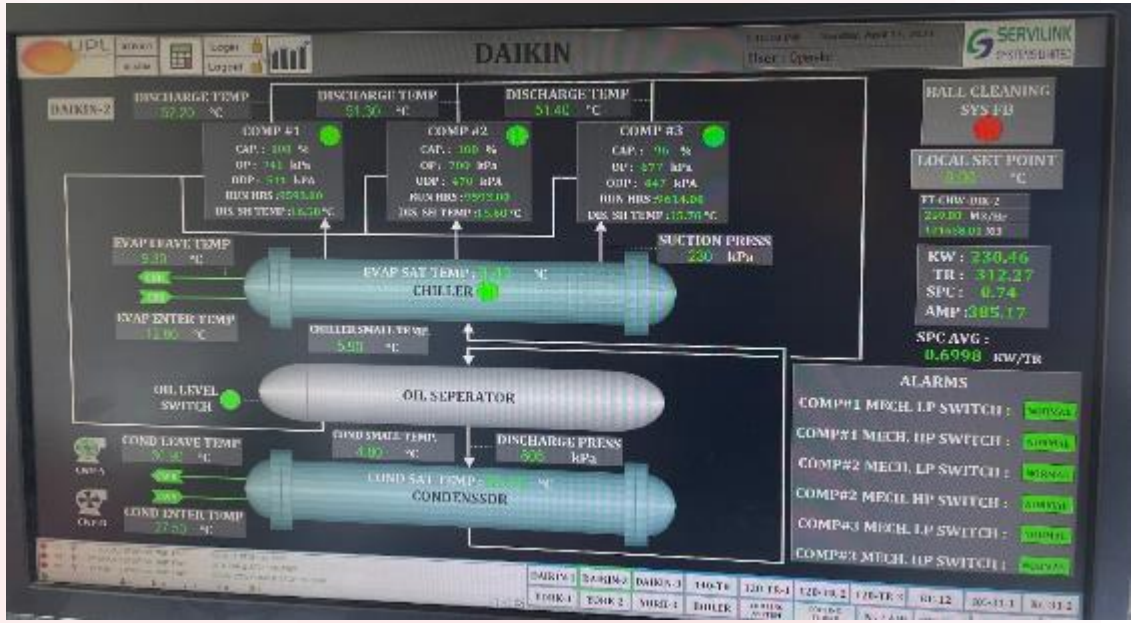
1. Daily Monitoring system: Utility Report, Power distribution report, Energy Tracker (monthly).
2. Review Meeting
3. Separate Capex approval mechanism is allotted to energy conservation projects.

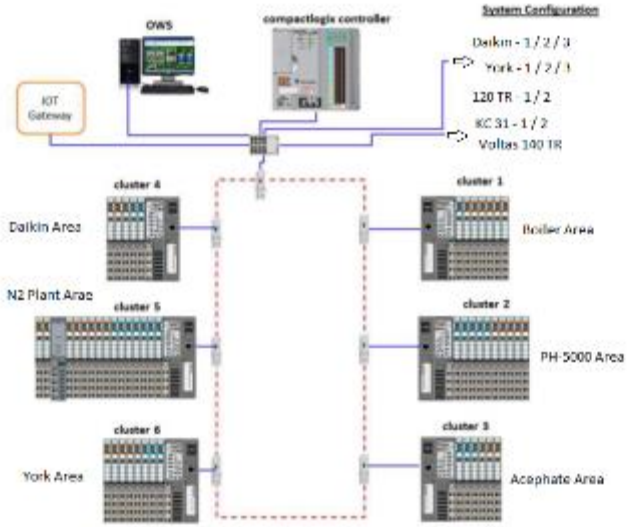




12. Teamwork, Employee Involvement & Monitoring

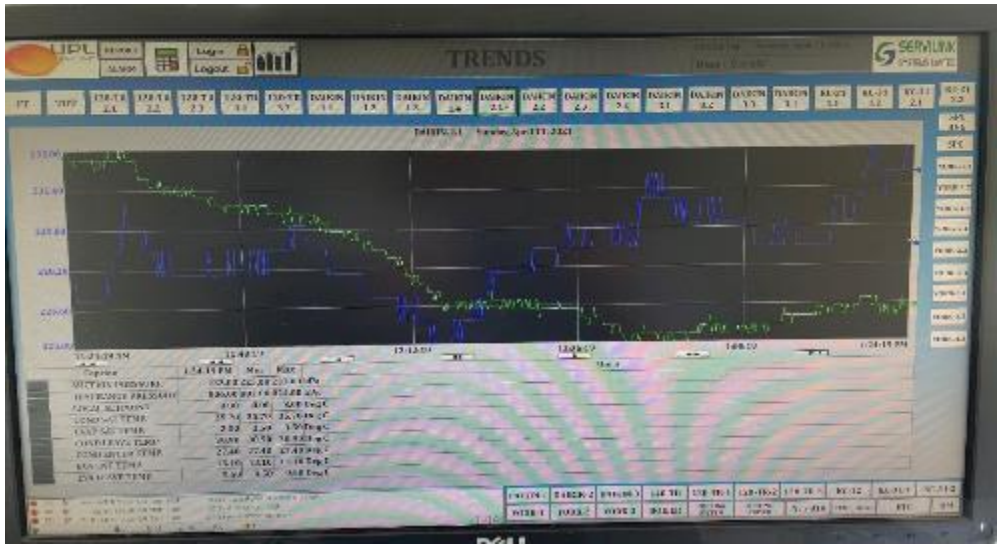
SCADA SYSTEM (CENTRAL UTILITY MONITORING SYSTEM)





KAIZEN | POKA YOKE – Online Portal

Reward for best 10 Kaizens per Month



Proprietary & Confidential

12. Teamwork, Employee Involvement & Monitoring









13. Implementation of ISO 50001/Green Co/IGBC rating

UPL PL 02 IS ISO 50001 : 2018 CERTIFIED UNIT

Bureau Veritas Certification

UPL LIMITED
(UNIT-2)

3405/3406, GIDC-ANKLESHWAR, DIST. BHARUCH – 390 002, GUJARAT, INDIA.

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System standard detailed below.

Standard

ISO 50001:2018

Scope of certification

MANUFACTURE & DISPATCH OF INDUSTRIAL CHEMICALS, TECHNICAL GRADE PESTICIDES AND THEIR FORMULATIONS

Original cycle start date:	**14 February 2018**
Expiry date of previous cycle:	**13 February 2021**
Recertification Audit date:	**29 December 2020**
Recertification cycle start date:	**10 February 2021**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **13 February 2024**

Certificate No. **IND.21.5406/EN/U** Version : **1** Revision date: **10 February 2021**

Signed on behalf of BVCH SAS – UK Branch
Jagdheesh N. MANIAN
Head – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

UKAS 0008

Certification body address: 8th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom.

Local office: Bureau Veritas (India) Private Limited (Certification Business), 72 Business Park, Mierl Industrial Area, MIDC Cross Road "C", Andheri (East), Mumbai – 400 093, India.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call: +91 22 6274 2000.

Milestones & Achievements

24. CII 20th National Award for Excellence in Energy Management 2019 For PL05
- Excellent Energy Efficient Unit
- Innovative Project

21.ISO 50001:2011, Energy Management System - First Unit in Agrochemical Sector to be certified

13. UPL Excellence Award
14. Steam Tech Award – PL02
*** F&S Mfg. Excellence – 15. PL01 (Challengers)**
16. PL02 (Challengers)
IGMC Silver Award 2015 by IRIM

5. UPL Mfg. Excellence Award – PPA
*** F&S Mfg. Excellence for 6. PL01**
7. PL02
8. PL05
9. FICCI Award – PL02

25. CII 21st National Award for Excellence in Energy Management 2020 for PL05 - Excellent Energy Efficient Unit

26. Excellence in Energy usage by FICCI

22. Future of Energy management submit & awar 2018

23. ISO 50001 surveillance au Completion at PL02

17. FICCI award for energy efficiency PL02
18. QCFI award for PL05
19. BEE First prize for PL02
20. BEE COM for PL01

2020
2019
2018
2017
2016
2015
2014
2013
2012
2011
2010
2009

EC cell formed

2. UPL Mfg. Excellence Award - Savings

1. National Energy conservation award – PL00

3. UPL Mfg. Excellence Award – Savings
4. ICC Award – PL02

10. UPL Mfg. Excellence Award - PPA
*** F&S Mfg. Excellence for 11. PL01 (Challengers)**
12. PL02 (Challengers)

Proprietary & Confidential

Awards & Recognitions

GOVERNMENT OF INDIA
MINISTRY OF POWER

ENERGY IS LIFE
CONSERVE IT
BUREAU OF ENERGY EFFICIENCY
Government of India, Ministry of Power

THANK YOU

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