PRESENTATION ON 24th NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT

PANASONIC LIFE SOLUTIONS INDIA PVT LTD.
WCT, Kutch

Mr. Susheel Dharmapurikar
Asst. General Manager

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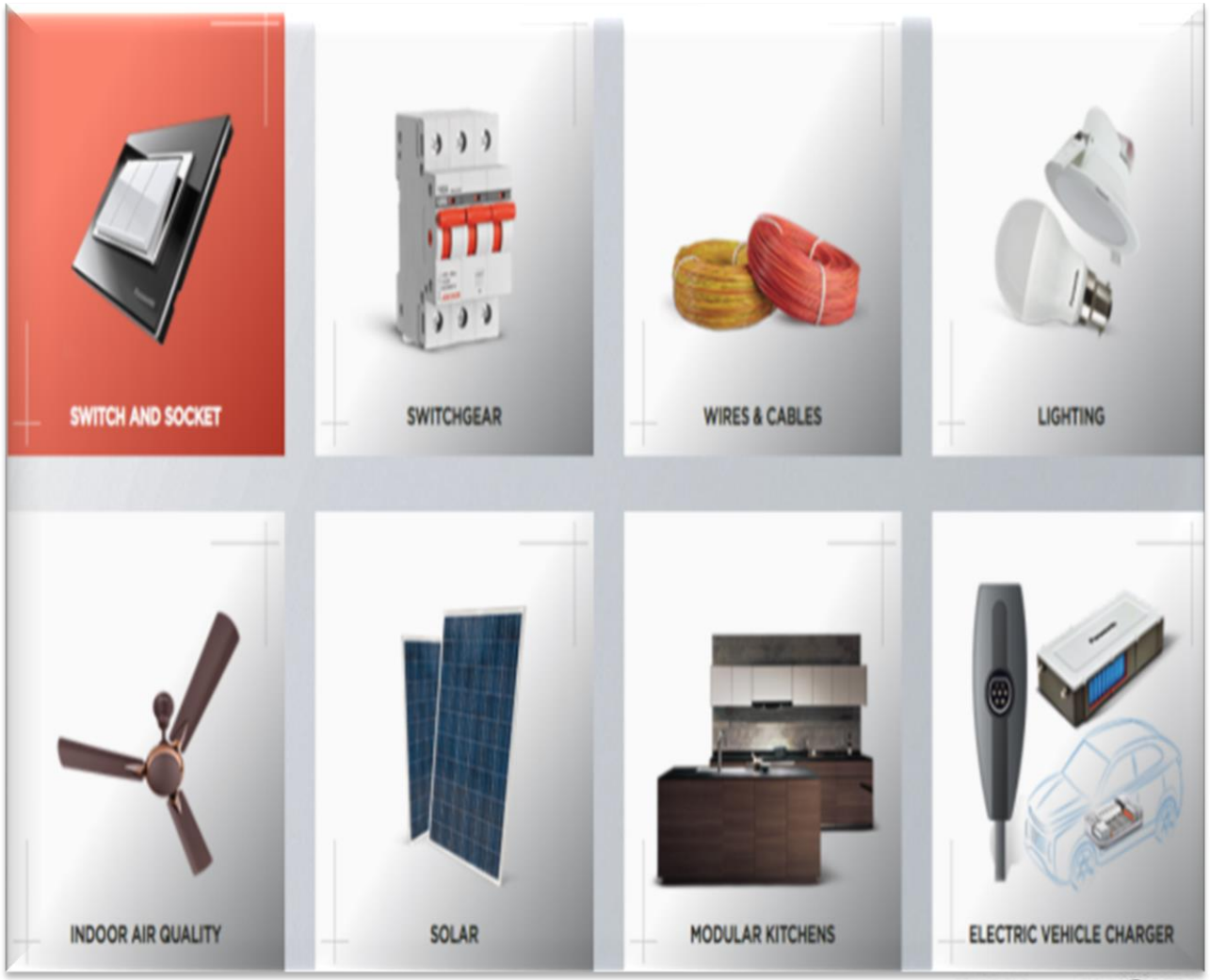
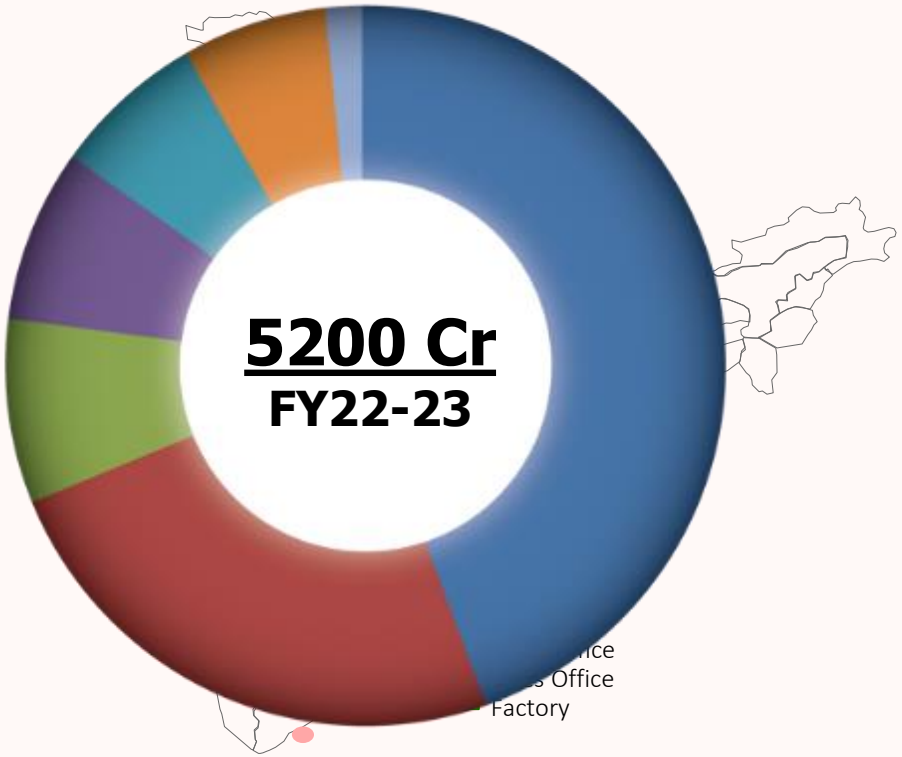


MANUFACTURING FACILITIES



COMPANY PROFILE AND PRODUCT RANGE

Product Portfolio

Advance FR

(0.75 Sqmm to 50 Sqmm)

FR-LSH

(1 Sqmm to 25 Sqmm)

Advance EFFR

(0.75 Sqmm to 6 Sqmm)

Telephone Cable

(1 pair to 10 pair in 0.4 & 0.5 mm)

Multi-core Cable

FR/FR, FR/FL (FR-LSH)

3 Core Flat Cable

(1.5 Sqmm to 16 Sqmm)

Twin Core

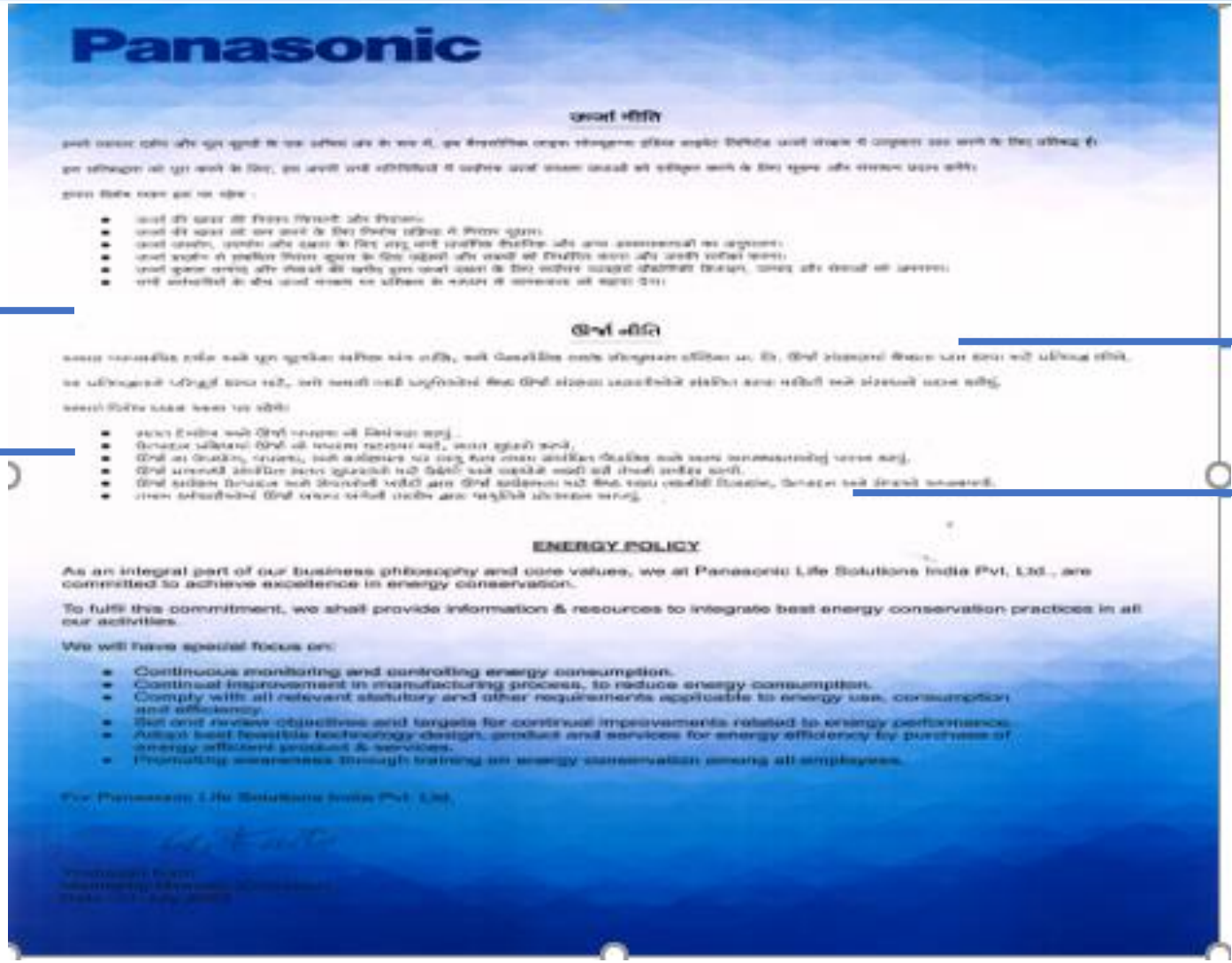
0.5 Sq mm & 0.75 Sq mm

TECHNOLOGY AND SOECIFICATION OF MAJOR SECTIONS

ENERGY POLICY

Continuous monitoring and controlling energy consumption.

Continual improvement is process to reduce energy performance.



Panasonic

ENERGY POLICY

As an integral part of our business philosophy and core values, we at Panasonic Life Solutions India Pvt. Ltd., are committed to achieve excellence in energy conservation.

To fulfil this commitment, we shall provide information & resources to integrate best energy conservation practices in all our activities.

We will have special focus on:

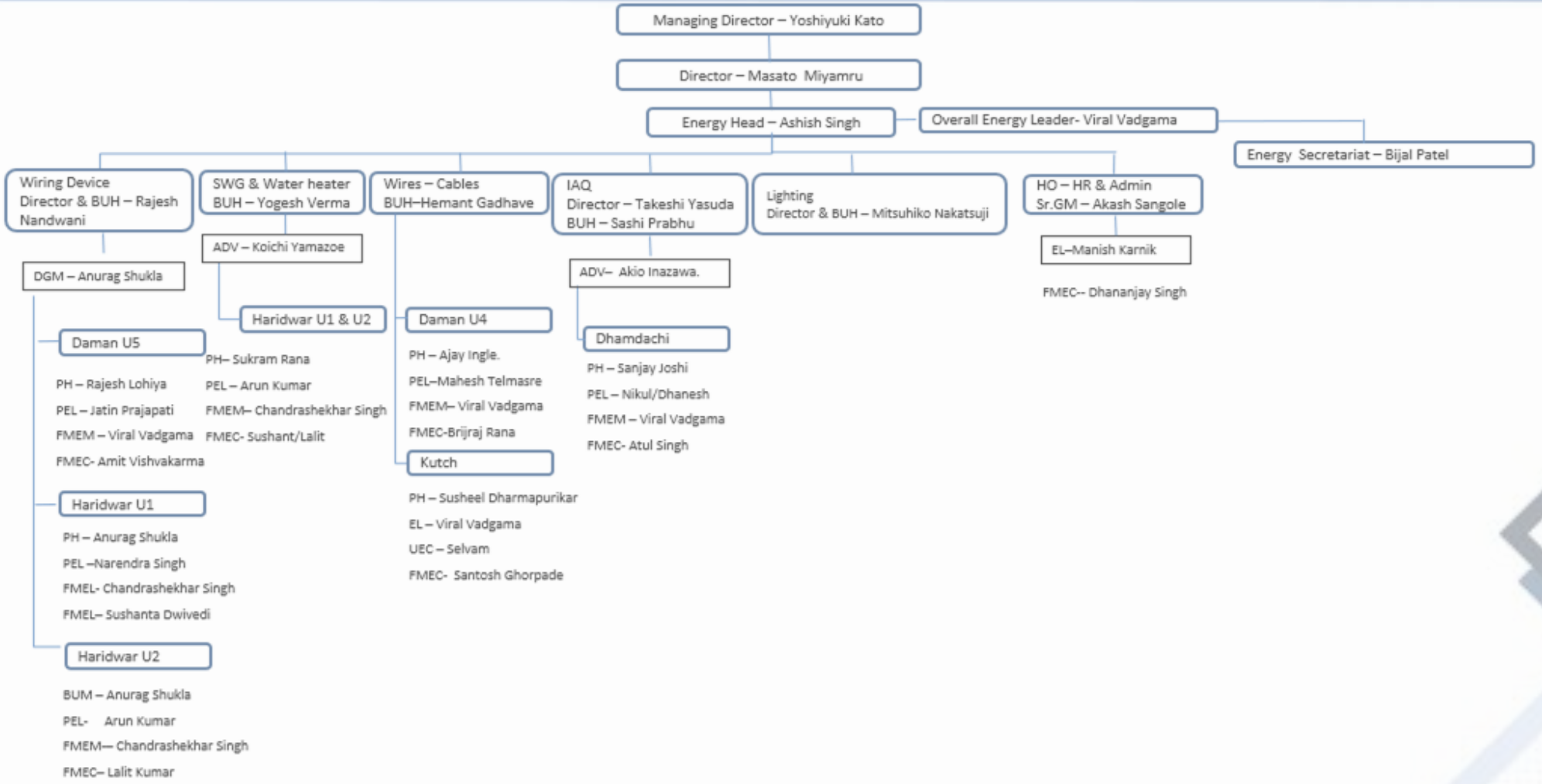
- Continuous monitoring and controlling energy consumption.
- Continual improvement in manufacturing process, to reduce energy consumption.
- Comply with all relevant statutory and other requirements applicable to energy use, consumption and efficiency.
- Set and review objectives and targets for continual improvements related to energy performance.
- Adopt best feasible technology design, product and services for energy efficiency by purchase of energy efficient product & services.
- Promoting awareness through training on energy conservation among all employees.

For Panasonic Life Solutions India Pvt. Ltd.

Management commitment for adopting energy efficient technology, product and design.

Energy conservation awareness to all employees.

ORGANOGRAM FOR THE ENERGY CELL



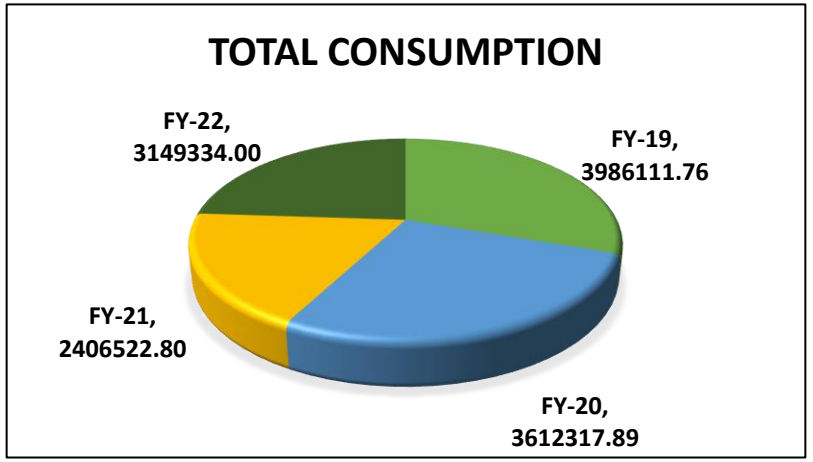
PH –Plant head
FMEM-FM Energy manager

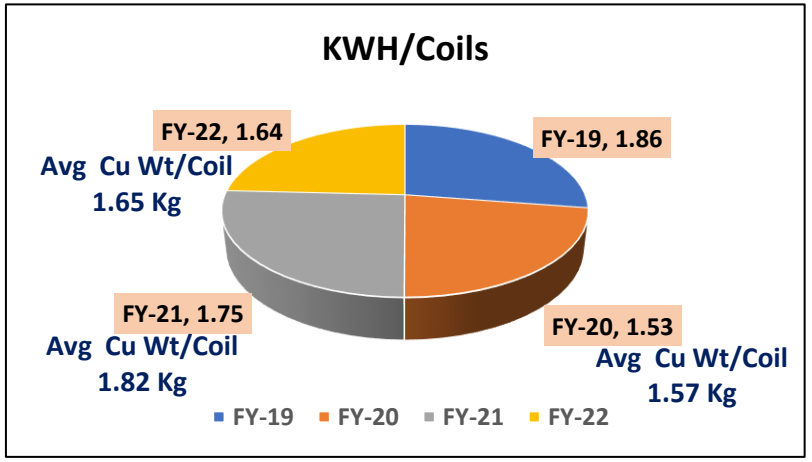
PEL – Plant Energy leader
BUH – BU Head.

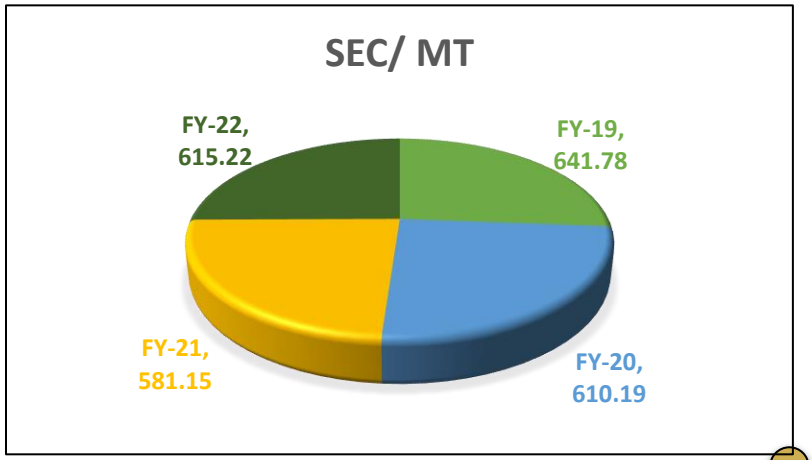
ADV – Advisor
FMEC- FM Energy Coordinator

HOEL- HO Energy leader

OVERALL PRODUCTION ,ENERGY AND SEC DATA - (FY 19-20 to FY 22-23)

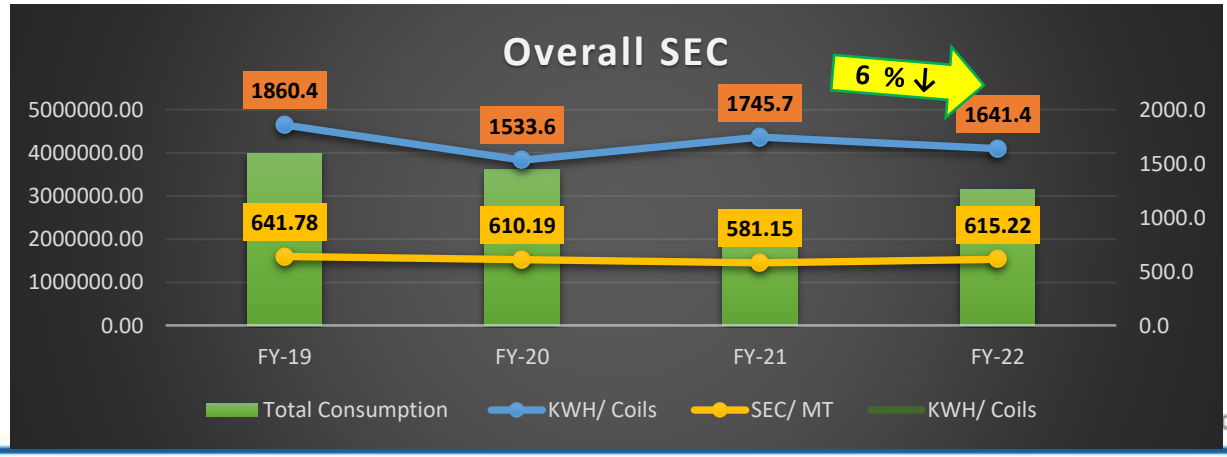




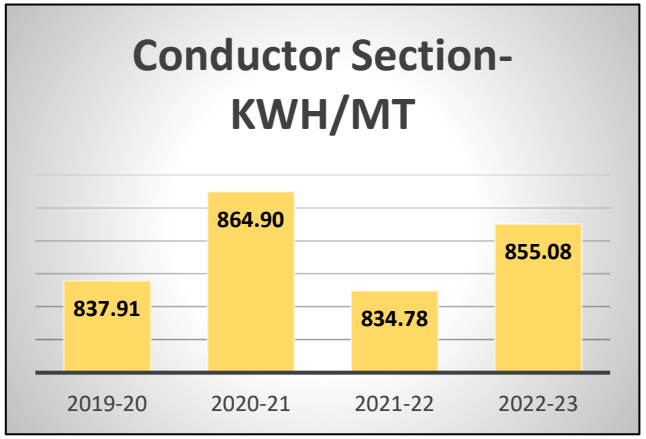


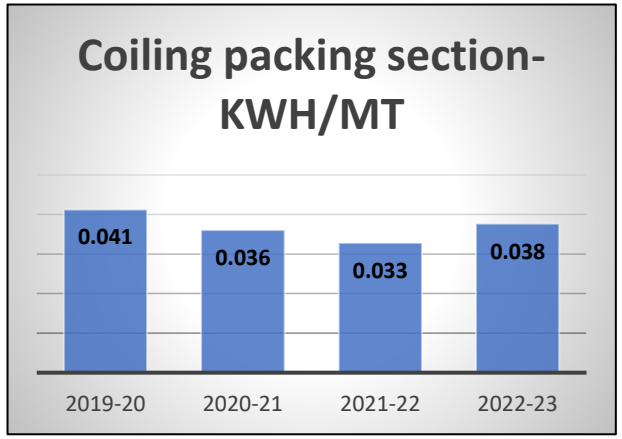
Overall SEC has been reduced by 6 % .Here , SEC in KWH/MT is showing slight high due to high volume item demand.

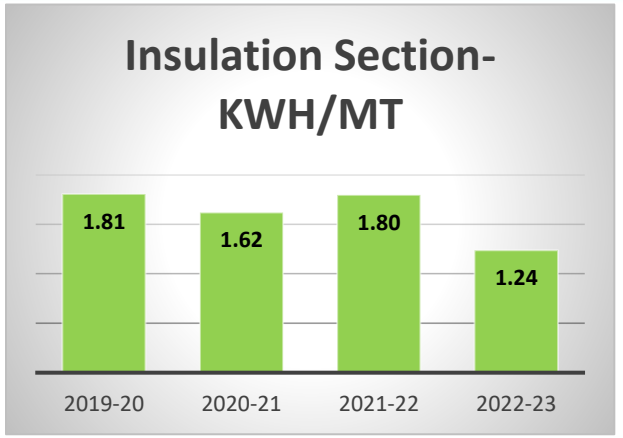
	Total Consumption	MT	SEC/ MT	KWh/Coil	Cu weight/Coil (Kg)
FY-19	3986111.76	6211	641.78	1.86	1.53
FY-20	3612317.89	5920	610.19	1.53	1.57
FY21	2406522.8	4141	581.15	1.75	1.82
FY22	3149334	5119	615.22	1.64	1.65

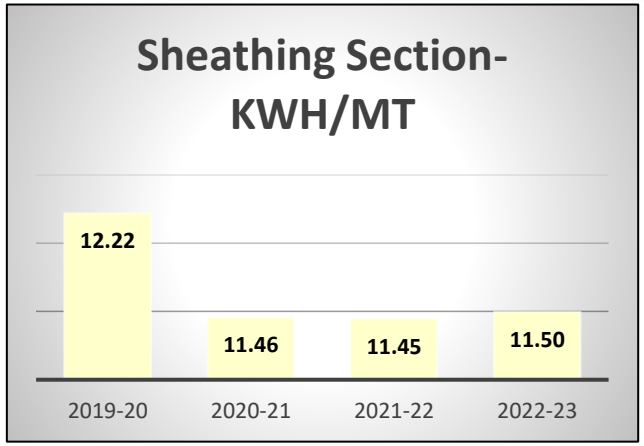


SECTION WISE SEC , % IMPROVEMENT (FY 19 to 22) & BENCHMARKING





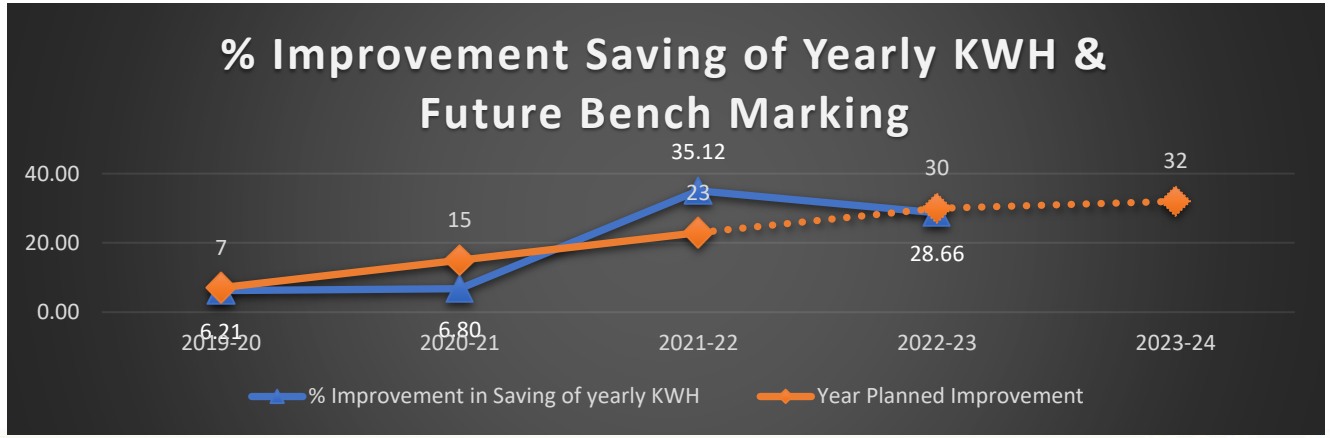




- **Section wise SEC almost consistent since last three year and within limit . Major Contribution area SEC has been reduced.**

Major reasons for the increase in the SEC of the conductor section is due to 0.2 mm Wire Consumption increased by 40% against reduction of 0.3 mm Wire

Sr.No.	Year	Yearly Electrical energy consumption (KWH)	Yearly Saving (KWH)	% Improvement in Saving of yearly KWH
1	2019-20	3986111.76	264000	6.21
2	2020-21	3612317.89	263510	6.80
3	2021-22	1616120.00	1302843	35.12
4	2022-23	3149334	1265419	28.66



ENERGY SAVING PROJECT FY 2022-23

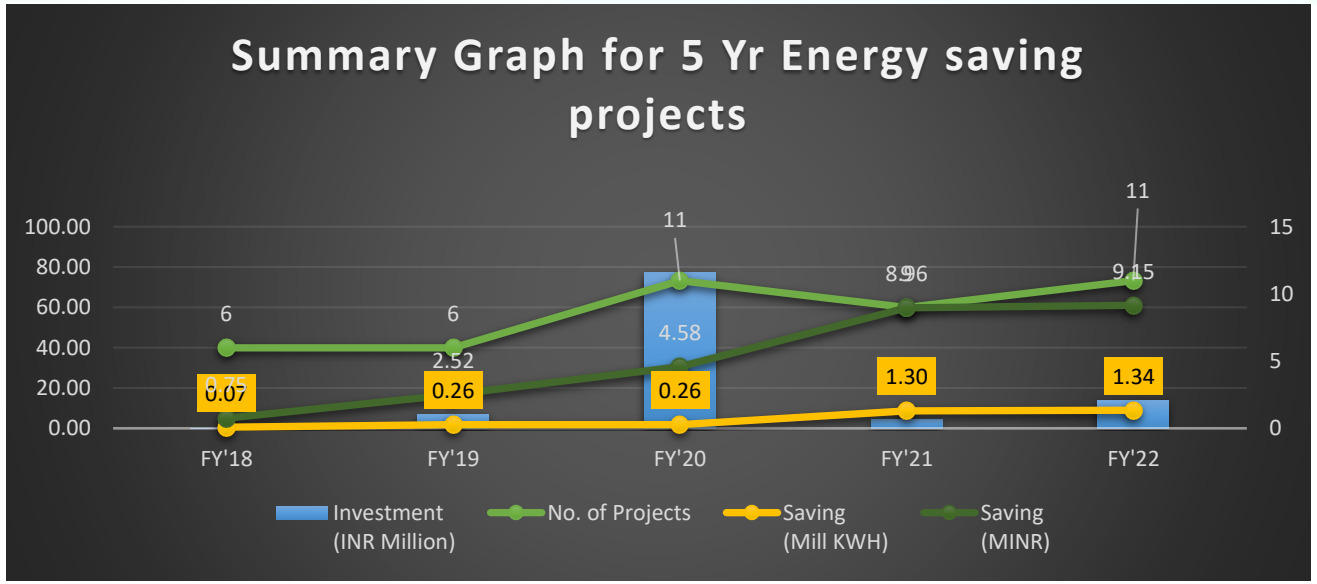
Sr. No	Year of implementation	Title of Activity	Criteria of activity	Cost saving in (MINR)	KWH Saving	Investment (MINR)
1	2022-23	Further improvement in performance at Power Saving by use of Solar power backup system	Energy saving project	6358292	1042343	0
2	2022-23	Further more Power saving in MMH-32 machine cooling tower by adopting VFD control	Energy saving project	148962	15616	0.034
3	2022-23	Further more Power saving at Cooling tower unit by adopting VFD	Energy saving project	1319130	143029	0.0344
4	2022-23	Furthermore, Power saving in MMH-16 machine by improving productivity	Machine efficiancy	242825	25661	No
5	2022-23	Furthermore, Power saving trough migration from DC technology to Ac technology at Extruder-2(38mm) Supermac insulation line-1 machine.	Technology upgradation	89295	9392	No
6	2022-23	Energy Saving at MCC (Multi core coiling) Section by modify and implement production process from offline coiling process to online coiling process.	Machine efficiancy	736107	75040	No
7	2022-23	Saving in power cost by modify m/c DC to AC Technology at Buncher no-2 .	Technology upgradation	30554	3234	0.0750
8	2022-23	Saving in power cost develop by DC to AC Technology at Redaelli skip stranding machine .	Technology upgradation	13049	226	0.03012
9	2022-23	Power saving through latest technology at simpack-2.	Technology upgradation	99464	12671	13.9
10	2022-23	Furthermore, Power saving trough migration from DC technology to Ac technology at Capstan motor at Supermac insulation line-1 machine.	Technology upgradation	19210	2025	No
11	2022-23	Power saving through migration from DC technology to Ac technology at 30kW Extruder-1 motor at Supermac insulation line-1 machine.	Technology upgradation	91631	8784	No
Total (Million)				9.15	1.34	14.05

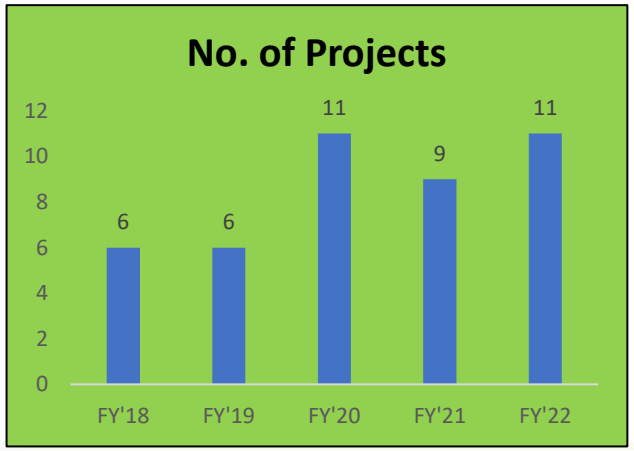
MAJOR ECON ROJECT FOR FY 2023-24

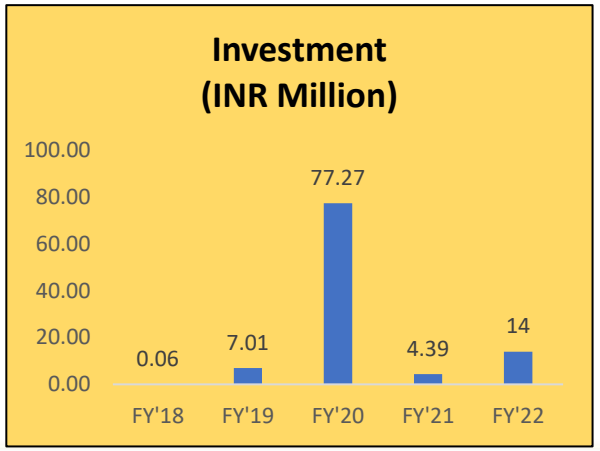
Sr.No	Year of implementation	Title of Activity	Criteria of activity	Estimated Cost saving in (INR)	Estimated KWH Saving	Investment
1	2023-24	Further improvement in performance at Power Saving by use of Solar power backup system	Energy saving project	67,76,000	11,00,000	Not Required
2	2023-24	MMH-16 Coolant pump power consumption reduction by installing VFD Drive	Energy saving project	47,596	4,884	34,400
3	2023-24	MMH-32 Coolant pump power consumption reduction by installing VFD Drive	Energy saving project	3,67,553	37,716	34,400
4	2023-24	Supermac-1 accumulator motor power consumption reduction by replace with Servo motor	Technology upgradation	94,841	9,732	1,02,252
5	2023-24	Reduction lighting power by installation of voltage controlling stabilizer	Energy saving project	1,06,707	10,950	95,000
6	2023-24	Reduction power consumption at air generation by introducing vsd compressor	Technology upgradation	2,18,185	22,389	19,90,000
7	2023-24	Reduction in power consumption at Buncher-3 by conversion main motor from DC to AC technology	Technology upgradation	33,960	3,485	1,63,000
8	2023-24	Reduction in power consumption at Buncher-4 by conversion main motor from DC to AC technology	Technology upgradation	44,419	4,558	1,63,000
9	2023-24	Reduction power consumption at Sheathing ling-1 by technology migration from DC to AC.	Technology upgradation	2,07,495	21,292	25,00,000
10	2023-24	Reduction in power consumption by installation of Control Air IFC system	Energy saving project	4,74,322	48,672	5,60,000
Total In Million				8.37	1.26	5.64

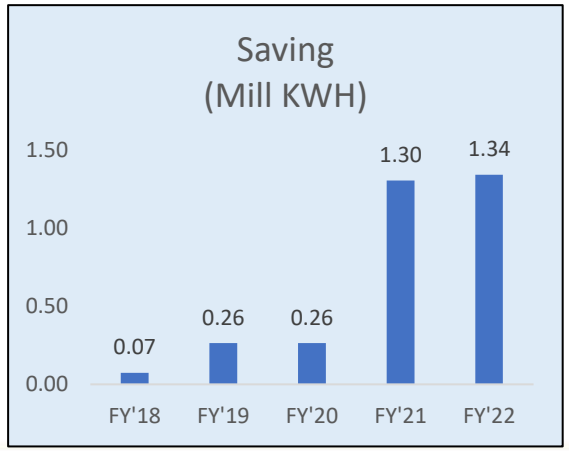
ENERGY SAVING PROJECTS IMPLEMENTATION IN LAST 4 YEARS

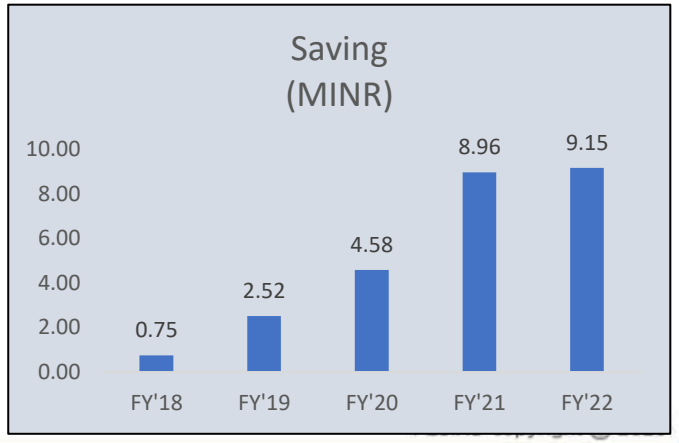
Year	No. of Projects	Investment (INR Million)	Saving (Mill KWH)	Saving (MINR)
FY'18	6	0.055	0.075	0.750
FY'19	6	7.008	0.264	2.516
FY'20	11	77.271	0.264	4.580
FY'21	9	4.389	1.303	8.957
FY'22	11	14	1.34	9.15











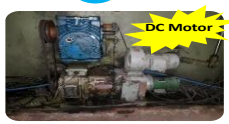
INNOVATIVE THEME

Reduction in Power consumption by technology upgradation DC to AC

Before improvement

Power savings activities at supermac-1 by replacing DC motor with spare AC motor of Extruder and capston

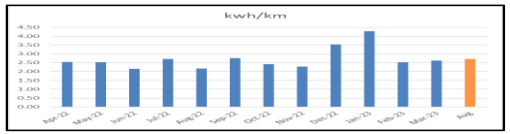
DC Motor
5.5 kW
Blower 0.25kW
Field 0.5kW
Amp: 2.1



DC Motor
2.5 kW
Blower 0.18kW
Field 0.5kW
Amp:17

DC Motor
30 kW
Blower 0.25 kW
Field 0.5kW
Amp 19.50

DC motor and Drive has frequent breakdown and high power



Power savings activities at Raedalli by replacing DC takeup & capston PIV gear with Spare AC takeup and AC motor

Main DC motor 30kW
PIV gear box at capston has operate with main motor via central shaft also PIV gear frequent breakdown and high power consumption

Traverse Unit
AC Motor 0.18kW

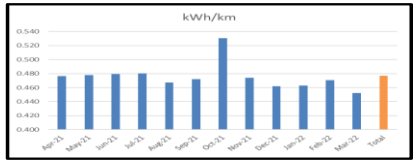
DC Motor
11 kW
Blower 0.25 kW
Field 1.8kW
Fixed Load 0.68kW

DC motor
Field and Blower fan fixed load

Power savings activities at Buncher-1 by replacing DC takeup motor with AC motor

Both DC Drive for Rotor and Spooler at Buncher

DC Motor
19 kW
Blower 0.25 kW
Field 0.5kW
Amp 10-12

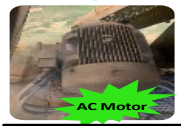


After improvement

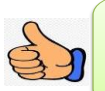
Replaced DC motors to AC mtors at supermac-1 Extruder 1, Extruder 2 and Capstan

AC Motor
7.5 kW
Blower 0 kW
Field 0 kW
Amp: 0.83

AC Motor
2.2 kW
Blower 0 kW
Field 0.5kW
Amp: 14

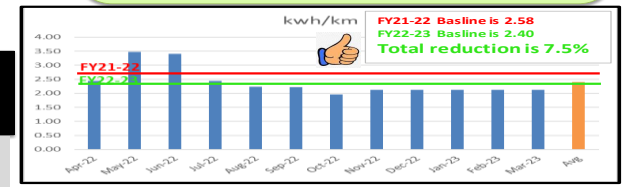


AC Motor
30 kW
Blower 0 kW
Field 0 kW
Amp 8.80



Reduce fixed power consuption of DC Motor
(1) Extruder-2 2.5kWW
(2) Cpastan 1.5kW
(3) Extruder-1 3.2kW

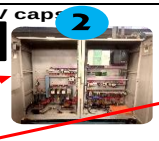
Total reduction in Power is 7.2kW



Zero Investment in all 3 AC Motors (Reuse of 3 Motors) AC Motor Retrived from Machine Modifications done by In-

Replaced DC motor to AC at Raedalli machine takeup and PIV caps

VFD Drive Fixed at Panel



AC Motor
7.5 kW
Blower 0.25 kW
Field 1.8kW
Fixed Power 0 kW

Main DC motor 30kW
Seprate motor instlled to Cpastan wheen reduce 2.5% load from mail motor

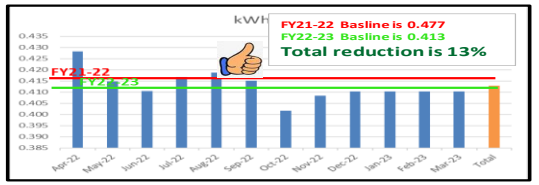
Redaelli motor replacement					
Description	DC Motor	Watt	AC Motor	Watt	0.686 Unit save/hours
Blower Fan	0.18kW	180	0	0	
Field	1.5 Amp	506	0	0	
	Total	686	Total	0	686

After Replacing DC motor to AC at Buncher-1 machine takeup

VFD Installed at Rotor motor

AC Motor
19 kW
Blower 0.25 kW
Field 0.5kW
Amp 7-9

Consuming Kw /hours by AC motor



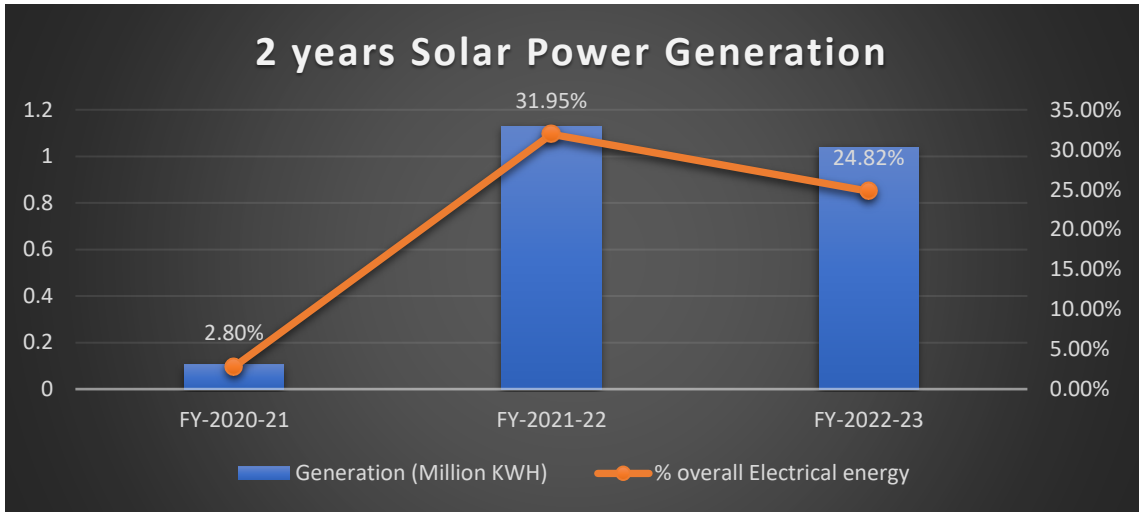
Total power saving of the whole theme is 21,506 kWh/yr & the total cost of saving power at the average rate of Rs.9.59/kWh will be 2,06,330/- INR i.e 0.206 MINR per year and CO2 emission reduction of 15.5 Ton/year

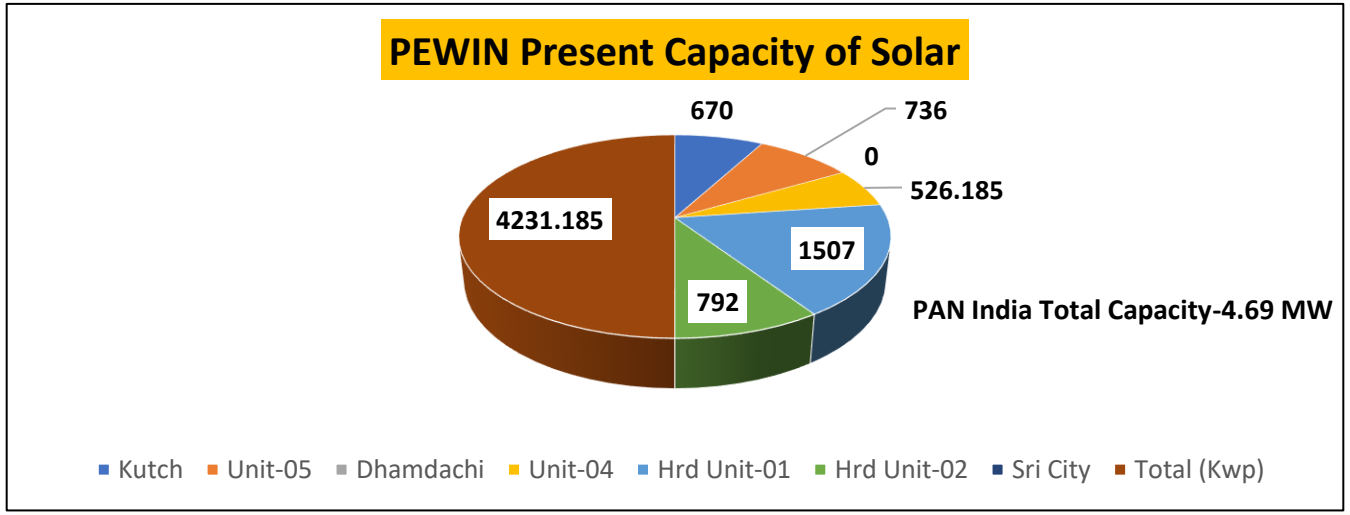
UTILIZATION OF RENEWABLE ENERGY RESOURCE

Solar Power generation system- 670 KWp

Type	Solar Power	Capacity	670 KWp	Onsite
Investment	35 MINR	Make-Panasonic		

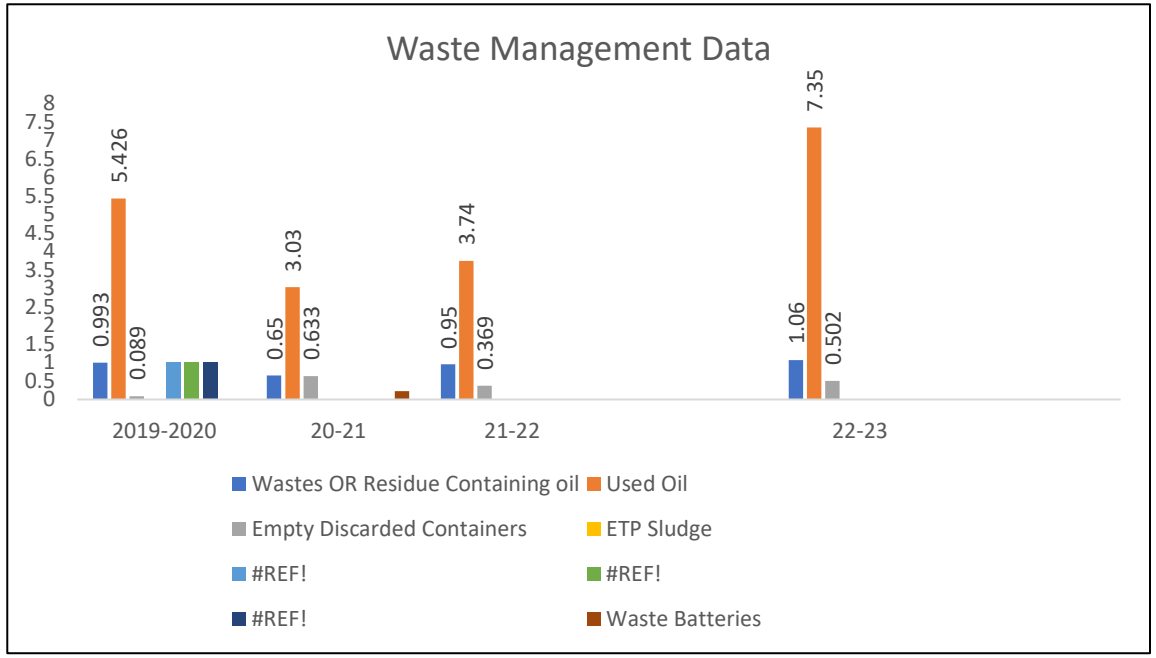
Year	Technology	Type of energy	Onsite / Offsite	Installed Capacity	Generation (Million KWH)	% overall Electrical energy
FY-2020-21	Solar Power Plant	Solar	Onsite	736 KWp	0.104	3
FY-2021-22	Solar Power Plant	Solar	Onsite	736 KWp	1.13	47
FY-2022-23	Solar Power Plant	Solar	Onsite	736 KWp	1.04	24.82





WASTE UTILIZATION AND MANAGEMENT

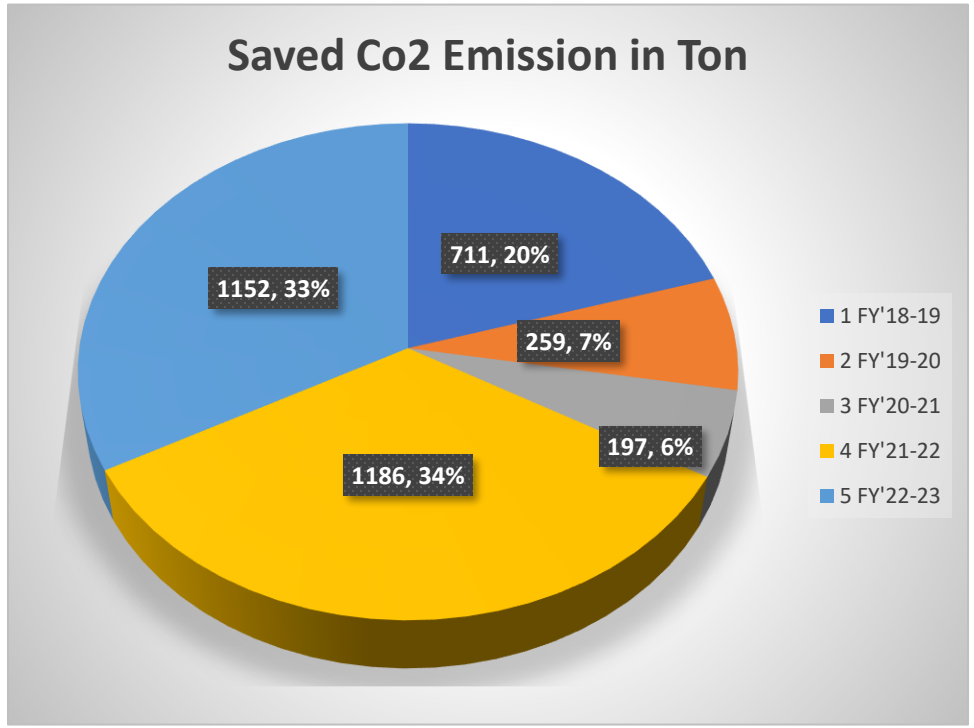
WASTE MANAGEMENT DATA					
	Type of waste generated	2019-2020	20-21	21-22	22-23
Sr.No	Year	Quantity of waste generated (MT/year)	Quantity of waste generated	Quantity of waste generated	Quantity of waste generated
1	Wastes OR Residue Containi	0.993	0.65	0.95	1.06
2	Used Oil	5.426	3.03	3.74	7.35
3	Empty Discarded Containers	0.089	0.633	0.369	0.502
4	ETP Sludge	0	0	0	0
8	Waste Batteries	0.006	0.225	0	0



Waste Generation in FY'22 has increased as compared to FY'21 for used oil due to 2 nos conductor machines lubricant changes.

GHG INVENTARISATION – Monthly Energy results are being submitted on Panasonic Global portal

Sr.No	Year	Saved Co2 Emission in Ton
1	FY'18-19	711
2	FY'19-20	259
3	FY'20-21	197
4	FY'21-22	1186
5	FY'22-23	1152
	Total =	**3505 Ton**



Last year four year % wise PLSIND Contribution for CO_2 emission reduction

GREEN SUPPLY CHAIN MANAGEMENT SYSTEM

Green Supply Chain mechanism action plan with current status

Sr.No	Activity	Plan/Status	2020	2021	2022	2023	2024	2025
1	Proposed for green building supply chain mechanism implementation with few small implementation ideas	Plan						
		Status						
2	Communication to suppliers and made process flow	Plan						
		Status						
3	Material inspection started as per green supply chain mechanism check sheet	Plan						
		Status						
4	Proper policy drafting	Plan						
		Status						
5	Policy sharing to All vendors	Plan						
		Status						
6	50 % implementation for inspection at vendor's premises	Plan						
		Status						
7	50 % implementation for inspection at vendor's premises	Plan						
		Status						
8	Continual improvement	Plan						
		Status						

ed by eco friendly gas water coolers as a nization.

GREEN SUPPLY CHAIN POLICY

Air-conditioners replaced with eco-friendly gas.

ent p s are being procured in factory as a energy efficient factory.

rder ,it is co nicated to vendors to supply only energy efficient product ,enviro tally friendly and safe products.

by vendor , with and License ,vendor vehicles are not allowed in plant area.

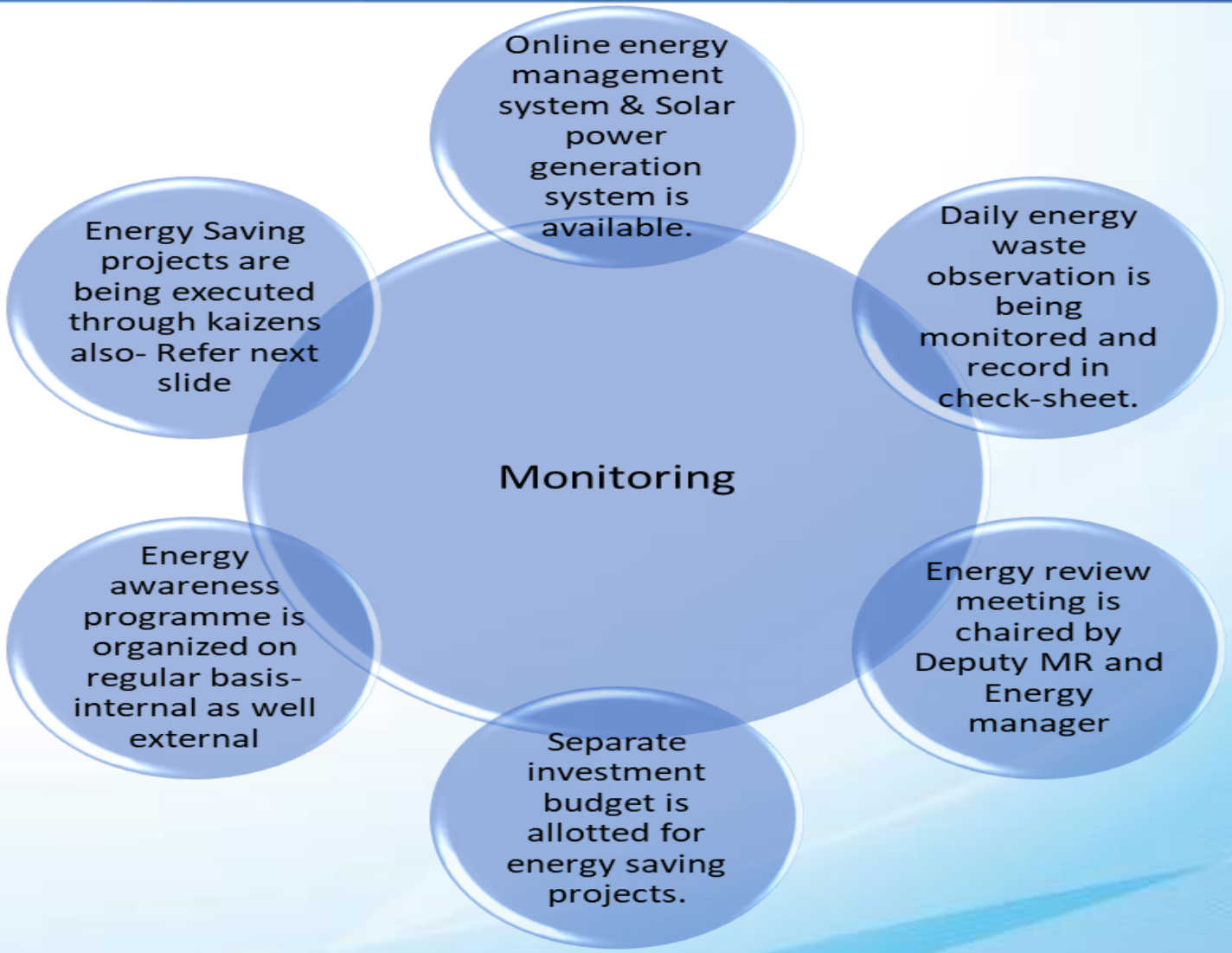
Zero single use plastic goal for Fy'20

o plastic allowed having less than 50 micron thickness.

TEAMWORK AND EMPLOYEE INVOLVEMENT

- *Yearly 3R and Energy contest competitions at Global level*
- *Paryavaran Sahyogi award scheme for continual environmental improvement*
- *Cost buster and cost reduction competitions at Unit level ,BU level & Panasonic Global level for all employees*
- *Monthly Kaizen Competition at factory level*
- *Yearly QC circle and WIT group competitions at Unit level ,BU level & Panasonic Global level for all employees*
- *Safety thanks award and Safety performer award scheme for continual safety improvement.*
- *Celebration of yearly events (Energy conservation day , Env. Day, Safety day etc)*

MONITORING, TEAM-WORK AND EMPLOYEE ENAGAMENT



Energy Saving projects are being executed through kaizens also- Refer next slide

Before improvement

The main Pump house was having less efficiency (65%) monoblock pump with fixed speed running by a Star Delta starter. So there was no pressure control at water pumping and the **excess pressure water was releasing by a pressure relief valve i.e. wastage of power consumption.**

Mainpump House

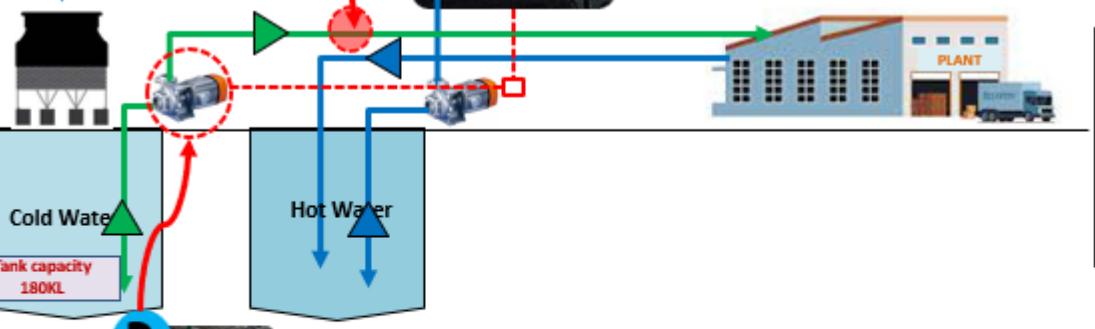
Improvement-01

No VFD Drive
Motor Operate full speed at all time 2800RPM
No Pressure control varying 1.8-3 Bar
At 2 kg pressure current is 17.83A
At 2.5 kg pressure current is 22.80A

No Pressure monitoring Device on pipe line

Star/Delta

Pump motor run at full RPM if water pressure requirement is less
No Speed Control option



Monobloc pump
with fix speed and less efficency **65%**

After improvement

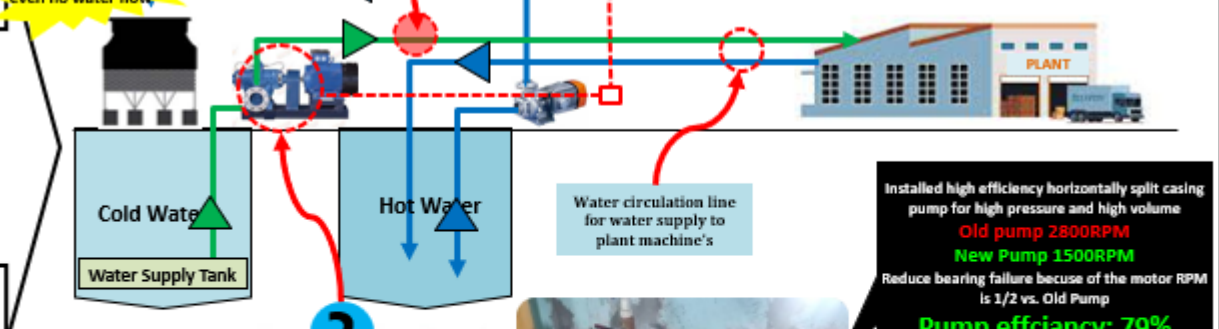
[**Action-1** VFD Drive installed at the pump house. **Action-2** New high-efficiency pump set installed for batter efficiency **Action-3** Pressure trans

Installed Pressure transducer
for Detection the line pressure

Installed VFD Drive to
Operate according the pressure requirement
Pressure range: 1.8-2.1 Bar
Currently on 2.1 kg pressure : 14A

Speed control as per requirement

Fan operate continues even no water flow



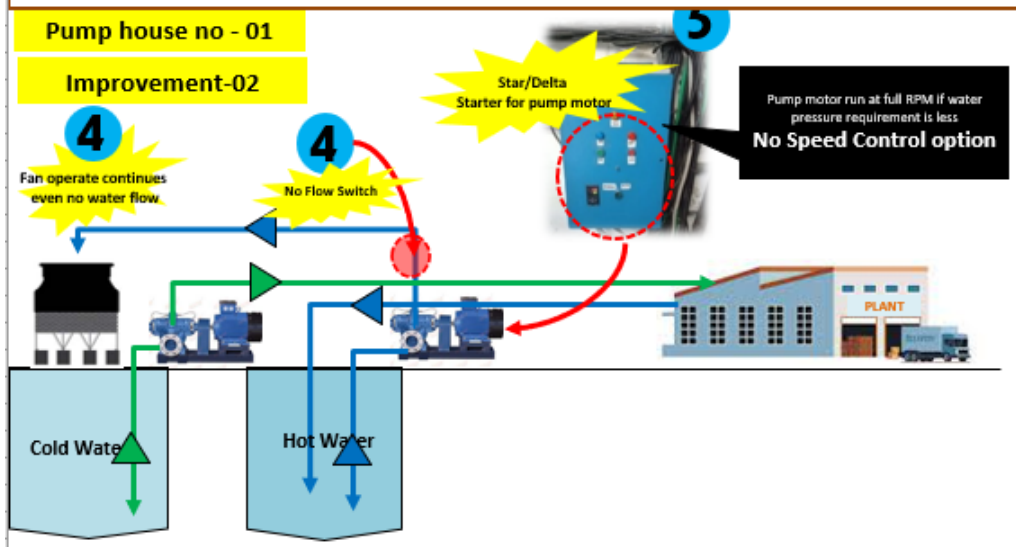
Water circulation line for water supply to plant machine's

Installed high efficiency horizontally split casing pump for high pressure and high volume
Old pump 2800RPM
New Pump 1500RPM
Reduce bearing failure becuse of the motor RPM is 1/2 vs. Old Pump
Pump effciancy: 79%

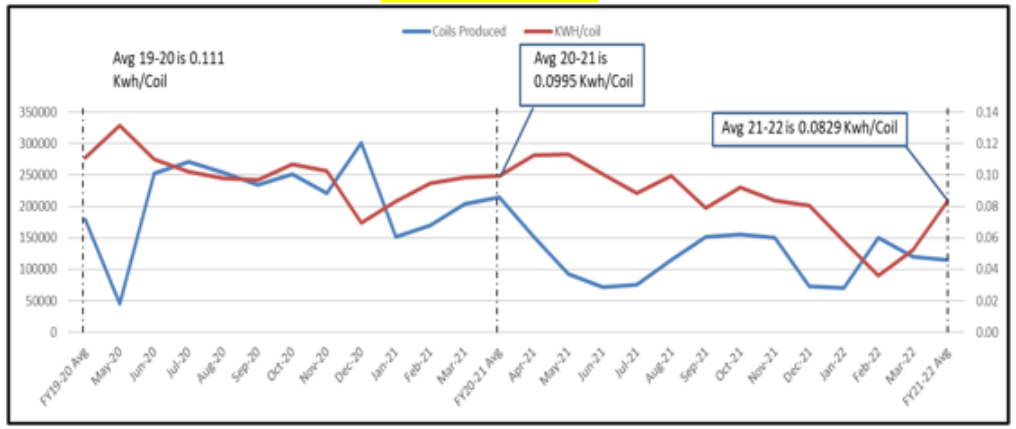
The cooling tower was running continuously even though there was not water flow at the cooling tower

Pump house no - 01

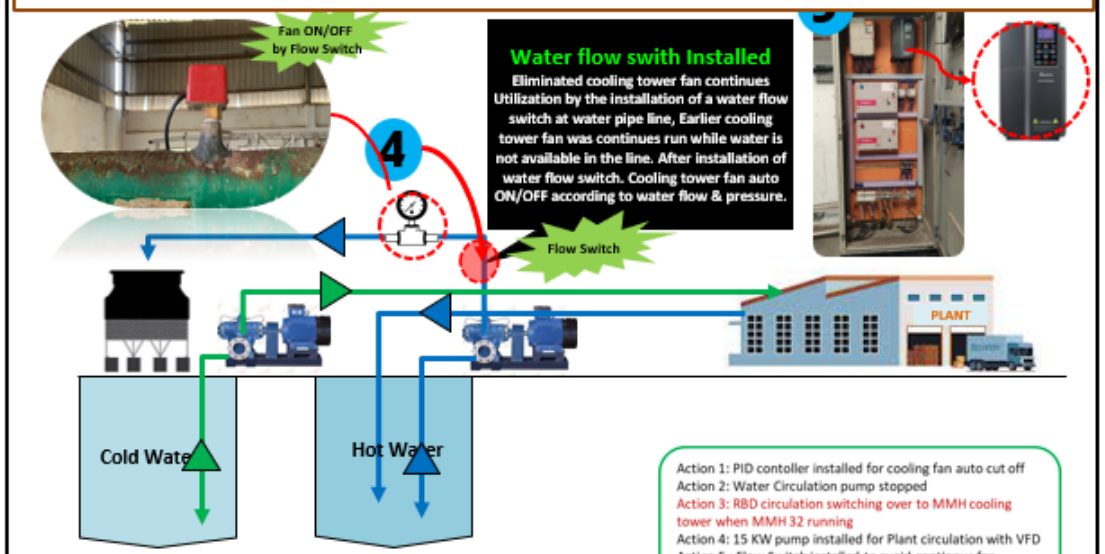
Improvement-02



FY 2021-22 Trand

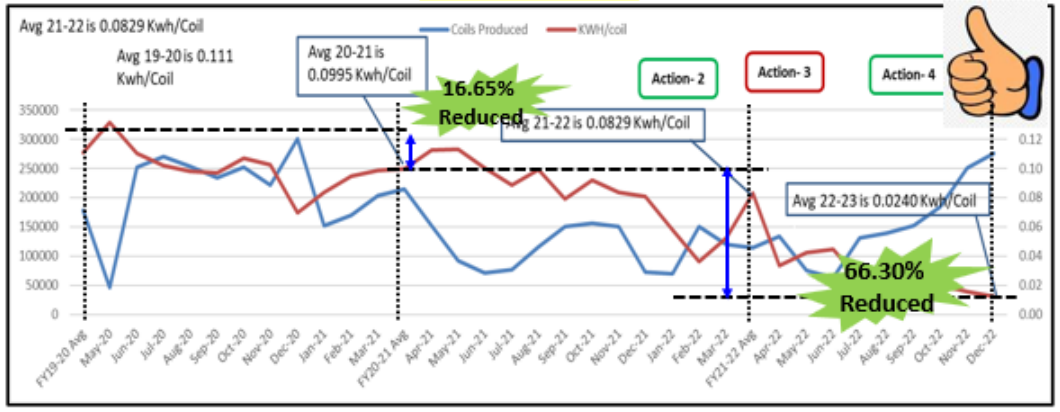


[Water flow switch control the cooling tower fan operation if no water the fan power is cutoff If flow detect in the pipeline then after three minutes detection fan will operate]



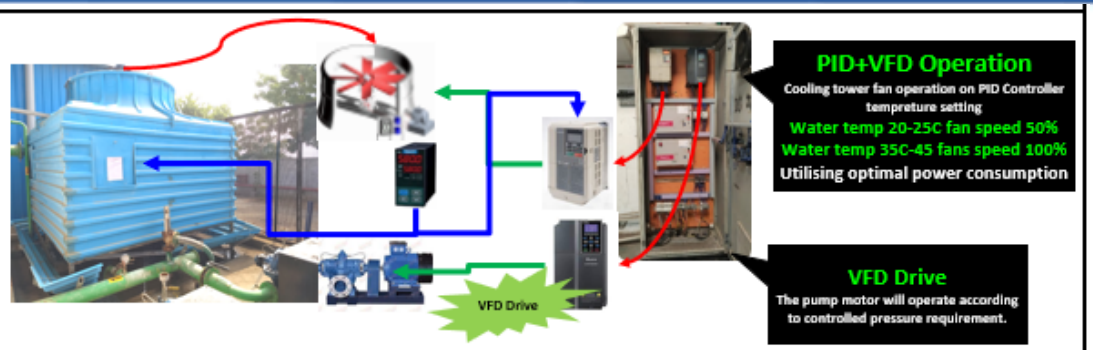
Action 1: PID contoller installed for cooling fan auto cut off
Action 2: Water Circulation pump stopped
Action 3: RBD circulation switching over to MMH cooling tower when MMH 32 running
Action 4: 15 KW pump installed for Plant circulation with VFD
Action 5 : Flow Switch installed to avoid continous fan running

FY 2022-23 Trand

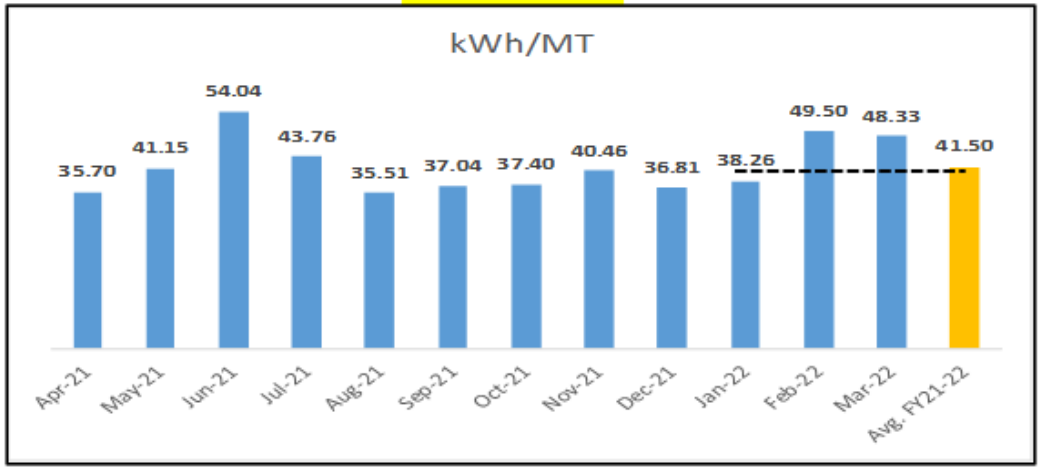


Innovative Project implemented -1

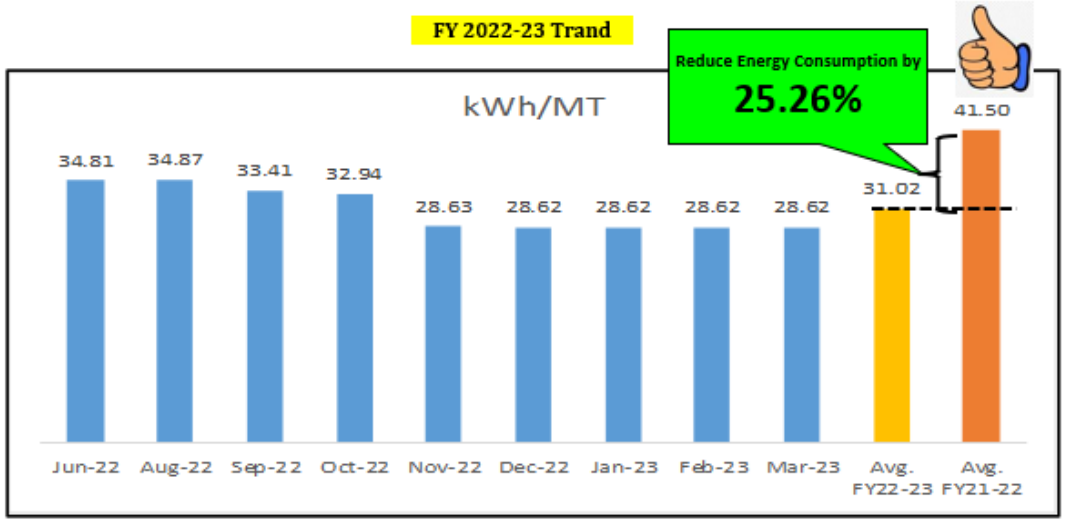
Theme: Further more Power saving at Cooling tower unit by adopting VFD



FY 2021-22 Trand



FY 2022-23 Trand



Calculation base of reduction quantity (Priority to measured value)	**Before:** 1) Earlier the energy consumption of pump house-1 was 209654 kWh for 2228616 coil production, hence the specific energy consumption being 0.0941 kWh/Coil 2) Earlier the energy consumption of pump house-2 was 97499.2 kWh for 2440.2 MT production, hence the specific energy consumption being 40.93 kWh/MT **After :** 1) Now the specific energy consumption of the pump house-1 was reduced to 0.0194 kWh/Coil, thereby saving 0.0741kWh/Coil so for 2288616 coil production the total saving in electricity at the Pump house-1 is (**166306 kWh Saved)** 2) Now the specific energy consumption of pump house-2 was reduced to 40.94 kWh/MT, thereby saving 30.12 kWh/MT so for 2031 MT production the total saving in electricity at the Pump house-2 is (**21973 kWh Saved)**
Calculation base for saving amount	**Before:** The total energy consumed by pump house-1 & pump house-2 combined is 292822 kWh so the total cost for operating both utility pump houses = 292822 (kwh) X 9.59(INR/kWh) = INR 2809300 **After:-** After carrying out the improvement activities, the total energy consumed by both utility pump houses is 104543 kWh, thereby the total cost for operating= 104543(kWh) X 9.59 (INR/kWh) = INR 1002974 & thereby total saving of the project being INR 1809626 & total CO2 avoidance 169.60 tones

LONG TERM VISION ON EE

Panasonic

Panasonic Corporation
http://www.panasonic.com/global

Panasonic Announces Environment Vision toward 2050

Osaka, Japan-Panasonic Corporation today announced its new, long-term environment vision called "Panasonic Environment Vision 2050" that guides the Panasonic Group to practice environmentally sustainable management toward 2050.

Ever since its founding in 1918, Panasonic has been implementing business activities based on its corporate philosophy of contributing to better lives of people around the world and to the development of the society through business activities. In striving toward this ideal, the environment has been one of the important elements defining the group's activities. Panasonic is working in line with the current environmental action plan, Green Plan 2018 (GP2018) formulated in 2010, that was designed mainly to reduce CO_2 emissions from production activities and product use.

With the goals set in GP2018 already within reach, Panasonic has set a clearer direction for environmental management toward 2050. The new vision also reflects the company's more diversified business, including consumer electronics, housing, automotive and B2B, which entails expanded environmental efforts toward a sustainable society while providing a better life for each individual customer under its slogan "A Better Life, A Better World."

Many of Panasonic's products consume energy such as electricity for the life of the product. Under the new environment vision, Panasonic will strive not only to reduce the amount of energy consumption of its products but also enhance its energy creation and storage businesses and reduce the impact on the global environment by contributing to increasing opportunities for utilizing clean energy in various situations in society. Furthermore, Panasonic, as a global corporate citizen, aims to provide a benefit to the environment by creating more energy than it uses.

To realize this vision, Panasonic will also work on enhancing development of related technologies.
The outline of the Panasonic Environment Vision 2050 is as follows.

Panasonic Environment Vision 2050

To achieve "a better life" and "a sustainable global environment," Panasonic will work towards creation and more efficient utilization of energy which exceeds the amount of energy used, aiming for a society with clean energy and a more comfortable lifestyle.

- Activities for achieving the vision

1. Panasonic will create a safe and secure society with clean energy

[Efforts]

(1) Provide eco-conscious and smart living space

"Panasonic will realize a living space with electricity created by clean energy and batteries storing such electricity, without causing impacts on the global environment."

< Related technology >
- Energy creation: Next-generation solar cell technology, fuel cell technology, etc.
- Energy storage: Next-generation storage battery technology, hydrogen storage technology, etc.
- Energy saving: Next-generation power device technology, thermal insulation and waste heat-related technology, etc.
- Energy management: Small-scale distributed power technology, smart house-related technology, etc.

1/2

(2) Contribute to eco-conscious and smart travel and transport

"Panasonic will contribute to achieving smooth travel and transport through a storage battery system and IT solutions."

< Related technology >
- Next-generation storage battery technology for eco-cars, next-generation logistics- and transport-related technology, etc.

2. Panasonic will promote businesses aiming for a sustainable society

[Efforts]

(1) Promote effective utilization of resources

"Panasonic will aim for sustainable use of resources through the reuse of parts and materials and product recycling."

< Related technology >
Recycling technology, etc.

(2) Promote creation of factories with zero CO_2 emissions

"Panasonic will utilize its own environmental technologies and products and reduce CO_2 emissions from its factories."

- Shift to LED lightings (To be completed by the end of March 2019 for LED-ready locations)
- Install photovoltaic power generation systems (To be completed by the end of March 2021 for PV-ready locations)

< Related technology >
- Smart manufacturing, energy-saving technologies, FEMS technology, etc.

IMPLEMENTATION OF ISO 50001 :2018

TÜV NORD

CERTIFICATE

Management System as per
ISO 50001 : 2018

PANASONIC LIFE SOLUTIONS INDIA PVT. LTD.
WIRE AND CABLE DIVISION
Unit IV, 41/3, Silver Industrial Estate, Patalia Road,
Dhimpore, Nani Daman - 396 210, Daman & Diu
KUTCH UNIT : Survey No.- 234, 235, 236,
Village - Lakhond, Bhuj - Dhachau Road,
Bhuj, Kutch - 370 105, Gujarat,
India

Panasonic

Manufacture of Insulated Wires & Cables.

PLSIND Kutch is EnMS Certified Since Jan-15 & it is upgraded in to EnMS:2018 in Jan-20

EnMP are being taken and implemented on regular basis by each department.

Regular Energy review and monitoring is being done.

Energy awareness programmes are being planned on regular basis.

More Emphasis given for procuring energy efficient products.

Compliance related to EnMS is being strictly maintained

Awards and Appreciations

From internal

Appreciation from Panasonic Group World wide Energy Competition

Panasonic

Certificate of Commendation

Gold Prize

The Category of 3R

Panasonic Life Solutions India Pvt Ltd,
Kutch
Production

Theme : Reduce Copper Scrap by 24.854 MT

We award you the Gold Prize for streamlining operations based on 3R activities, and achieving successful results. The screening committee of the 44th Energy Saving and 3R Contest has judged these activities as outstanding.
In appreciation of your achievements, we hereby present you this award and commend your excellent accomplishments.

March 31, 2023

Eiji Maruyama
Executive Vice President
EW Environmental Conservation Officer
Electric Works Company
Panasonic Corporation

Panasonic

Certificate of Commendation

Silver Prize

The Category of Energy Saving

Panasonic Life Solutions India Pvt Ltd,
Kutch
Maintenance

Theme : Reduction in Power Consumption in Utility Cooling Tower & Pumps

We award you the Silver prize for streamlining operations based on energy conservation activities, and achieving successful results. The screening committee of the 44th Energy Saving and 3R Contest has judged these activities as outstanding.
In appreciation of your achievements, we hereby present you this award and commend your excellent accomplishments.

March 31, 2023

Eiji Maruyama
Executive Vice President
EW Environmental Conservation Officer
Electric Works Company
Panasonic Corporation

From External

Golden Peacock Awards

Golden Peacock Awards®

CERTIFICATE

This is to certify that

Panasonic Life Solutions India Private Limited
Kutch

was adjudged the

WINNER

of

GOLDEN PEACOCK AWARD FOR ENERGY EFFICIENCY 2021

given under the seal of Institute of Directors, India

Justice M. N. Venkatachaliah

CII national award for excellence in energy management

CII

Confederation of Indian Industry

23rd National Award for Excellence in Energy Management 2022

This is to certify that

Panasonic Life Solutions India Pvt Limited, Kutch

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 23 - 25 August 2022

K S Venkatagiri

Ravichandran Purushotham

Thank You

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Mobille no:-9328530914