PRESENTATION ON 23rd NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT

Panasonic

PANASONIC LIFE SOLUTIONS INDIA PVT LTD.

WCT, Kutch

Mr. Ashish Singh
Pan India Head- Facility Management & EHS,
Factory Manager- Daman Unit-05
CII Certified Energy Efficiency professional

Mr. Viral Vadgama
Asst. General Manager-Facility Management
CII Certified Energy Efficiency professional

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Manager-Facility Management
(Certified Energy Auditor and Manager)
CII Certified Energy Efficiency professional

Mr. Brijrajsinh Rana
Executive Engineer – Facility Management

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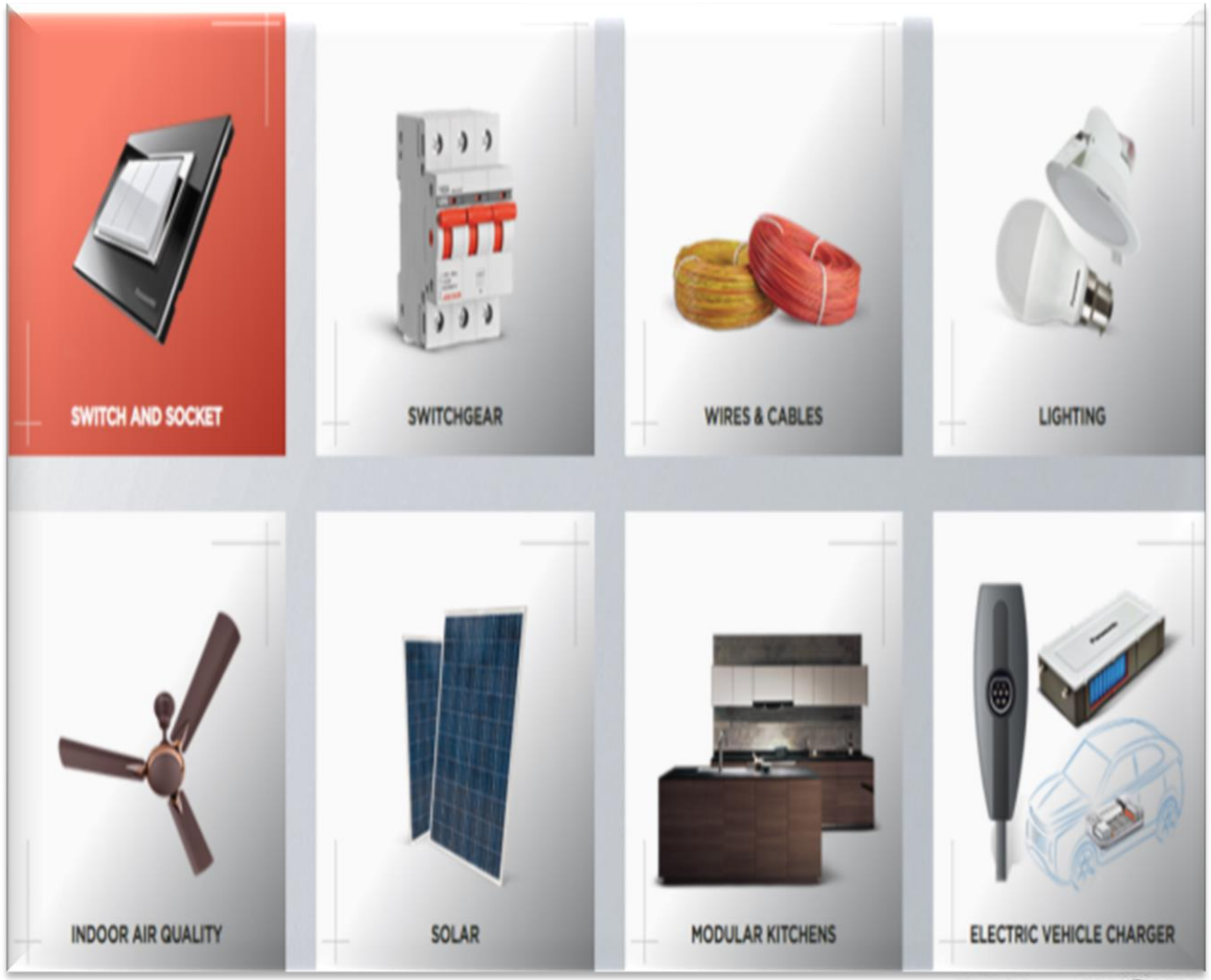


Panasonic

Life Solutions India Pvt. Ltd.

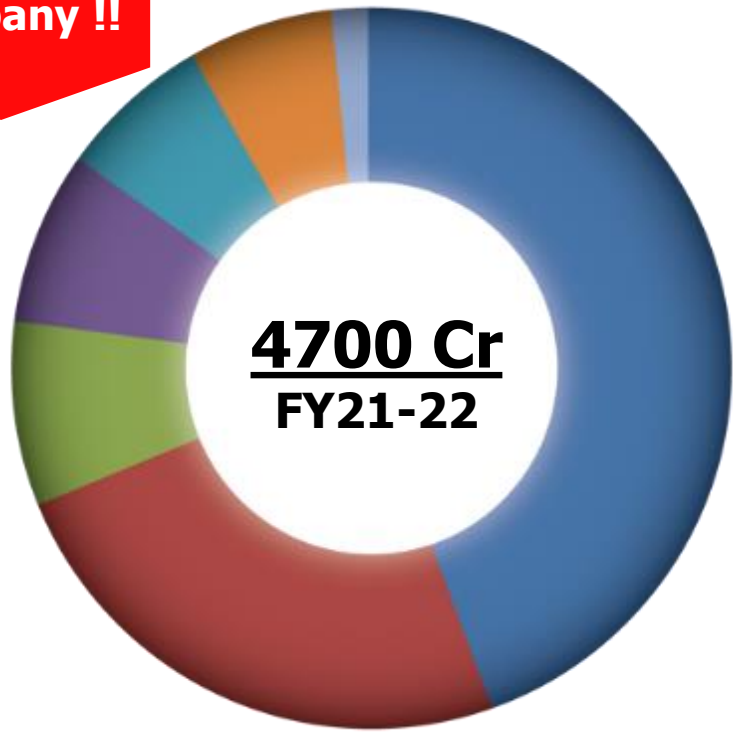
(Formerly known as)

Anchor Electricals Pvt Ltd.

Not just a Switches Company !!

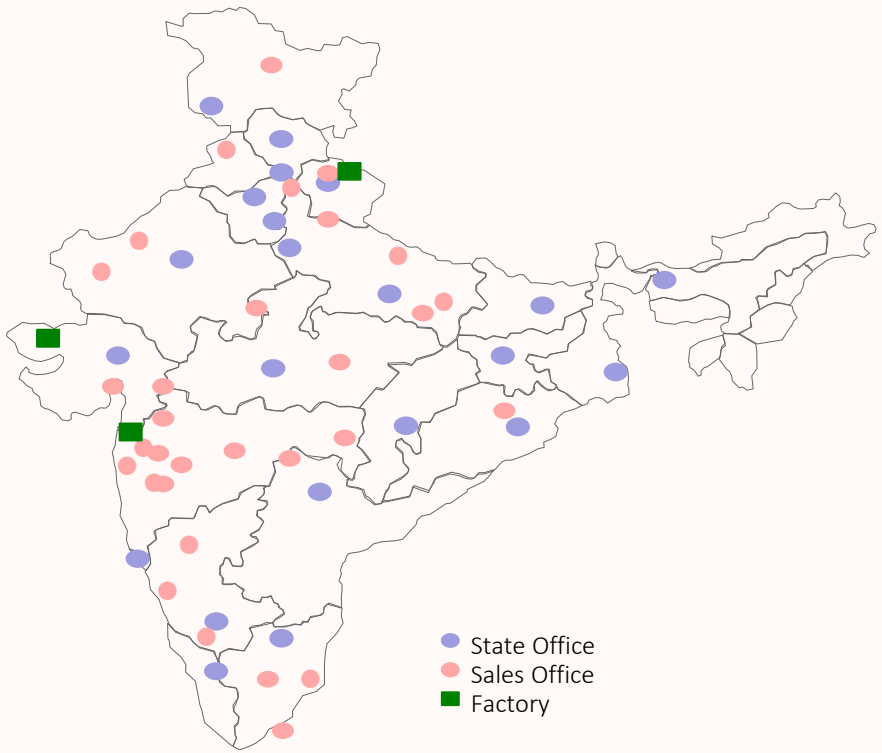
A global enterprise that manufactures cutting edge electrical products

Established	1963
Revenues Million	USD 501+
Organization Strength	9000+



- Wiring Devices
- Wires & Cables & Tapes
- Switchgear
- Lighting
- IAQ (Fans)
- Solar Energy
- Conduit Pipes
- Power Tools
- Homes & Living
- Water Heaters
- EV Charger

MANUFACTURING FACILITIES



SALES OFFICES
4 Regions & 27 Offices

MANUFACTURING
3 Areas & 7 Factories

HARIDWAR FACTORY
- Wiring Device
- Switchgear

DAMAN FACTORY
- Wiring Device
- Switchgear
- Ceiling Fan
- Wires & Cables & Tapes

KUTCH FACTORY
- Wires & Cables & Tapes
- Lighting

- NABL accredited laboratory
- ISO 5000 0: 2011 certified for energy Management
- RoHS Compliant products, QMS ,EMS and OHSAS Certified Units

Company Profile & 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 specifications of Major sections

ENERGY POLICY

Continuous monitoring and controlling energy consumption.

Continual improvement is process to reduce energy performance.

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.

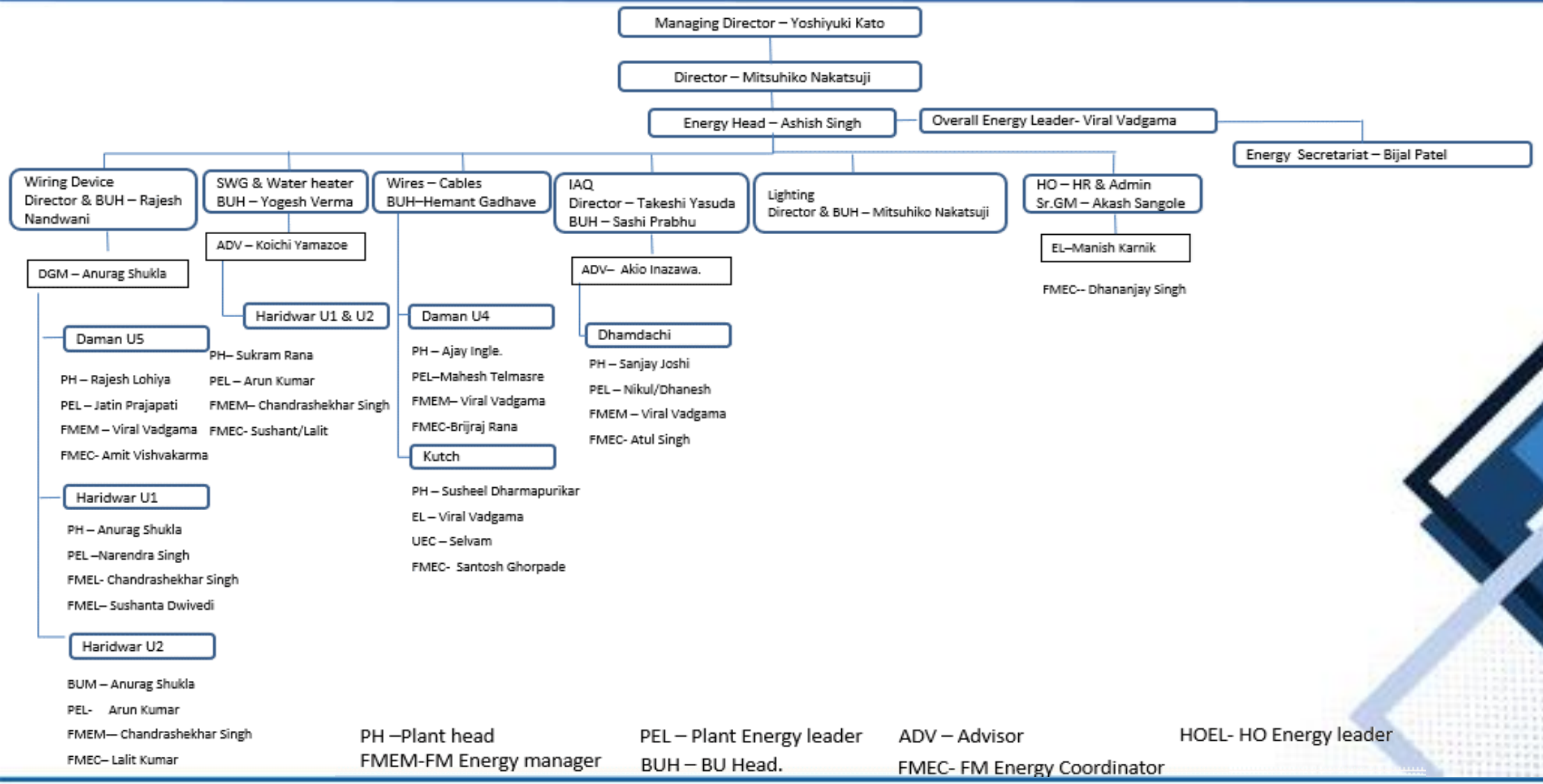
For Panasonic Life Solutions India Pvt. Ltd.

Kazuki Yao
Managing Director (Occupier)
Date: 01.05.2021

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

Energy conservation awareness to all employees.

ORGANOGRAM FOR THE ENERGY CELL



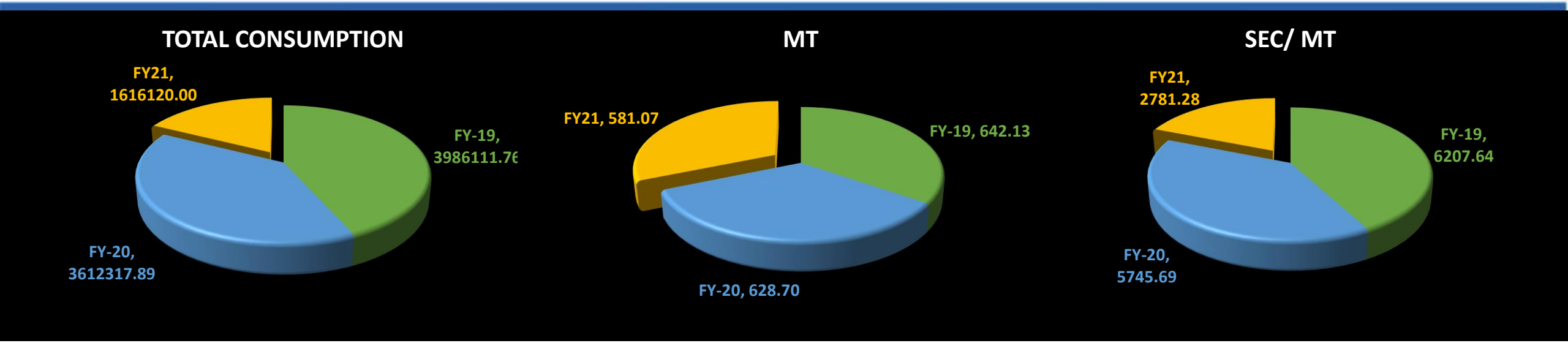
PH –Plant head
FMEM-FM Energy manager

PEL – Plant Energy leader
BUH – BU Head.

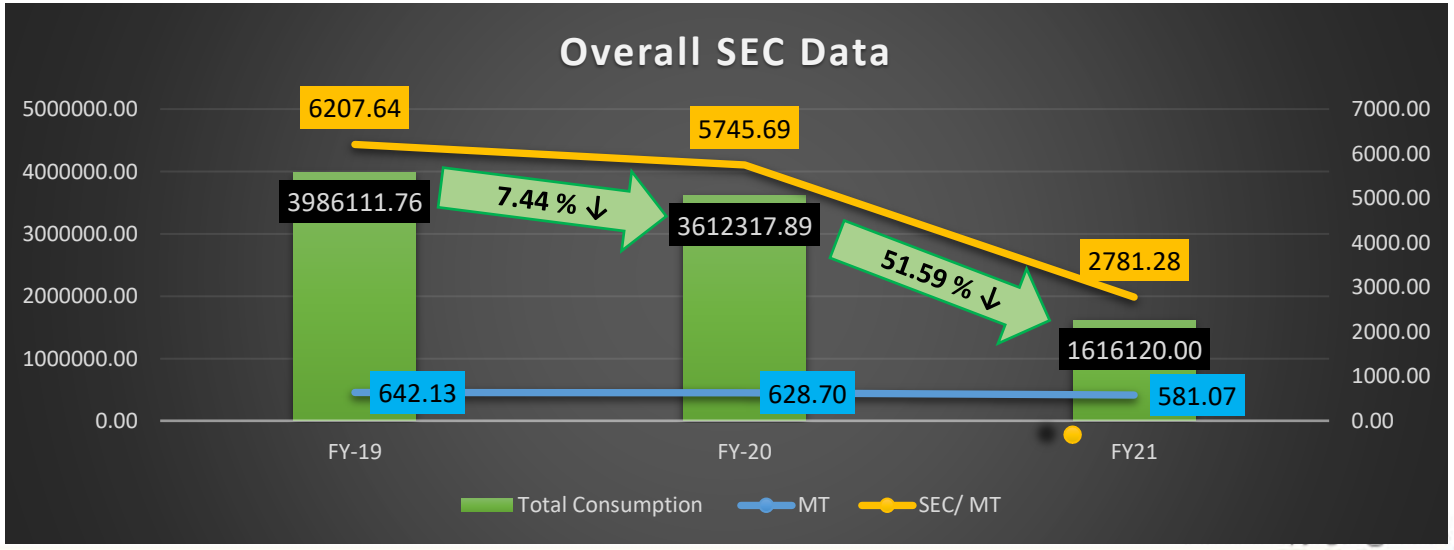
ADV – Advisor
FMEC- FM Energy Coordinator

HOEL- HO Energy leader

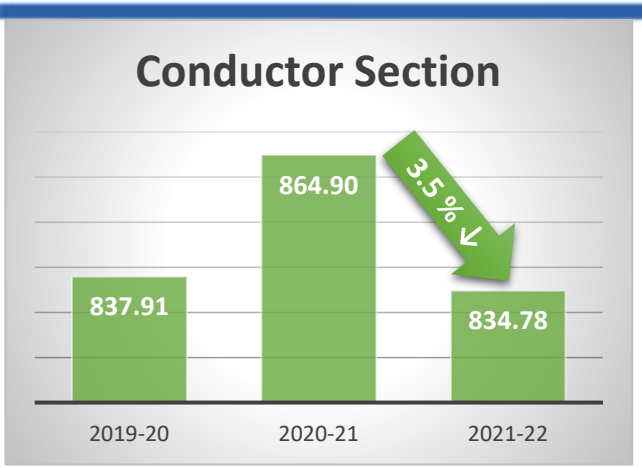
OVERALL PRODUCTION ,ENERGY AND SEC DATA - (FY 19-20 to FY 21-22)

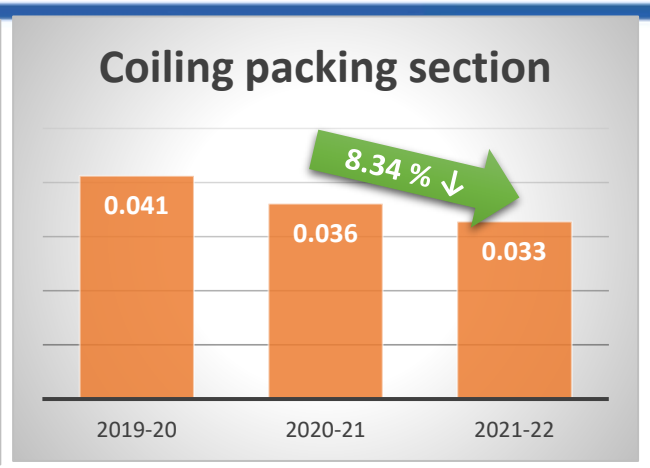


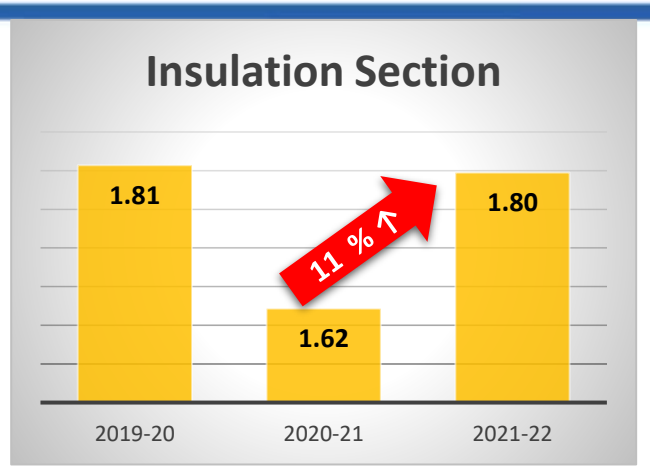
	Total Consumption	MT	SEC/ MT
FY-19	3986111.76	642.13	6207.64
FY-20	3612317.89	628.7	5745.694
FY21	1616120	581.07	2781.283

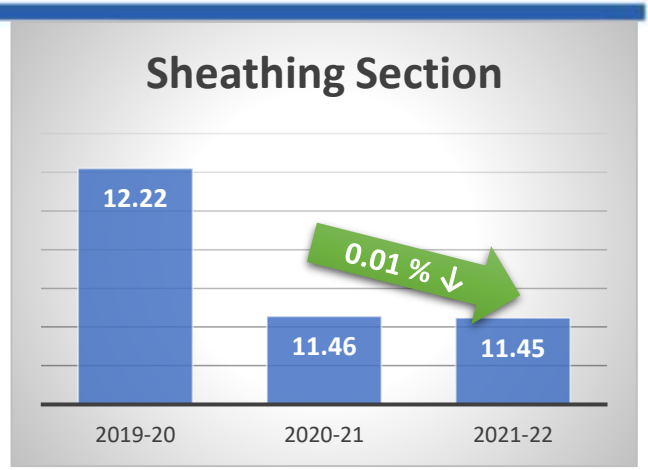


SECTION WISE SEC , % IMPROVEMENT (FY 17-18 to 19-20) & BENCHMARKING









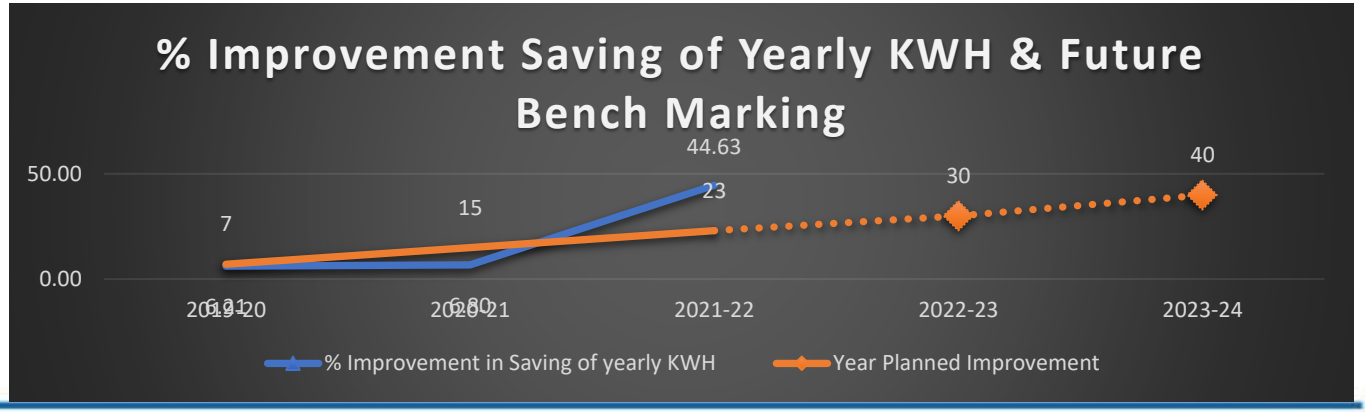
- ***Section wise SEC almost consistent since last three year and within limit . Major Contribution area SEC has been reduced.***

Major reasons for the increase in the SEC of the insulation section is due to following reason

1. Shifted from 3 shift operation at 20-21 to 2 shift (21-22). so that there will heating losses at daily start up.

2. At 20-21 PVC kg/ coil was 0.95 and 21-22 1.22 kg/ coil. 29% increased due to more contributions of higher size cables production

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	1302843.56	44.63



ENERGY SAVING PROJECT FY 2021-22

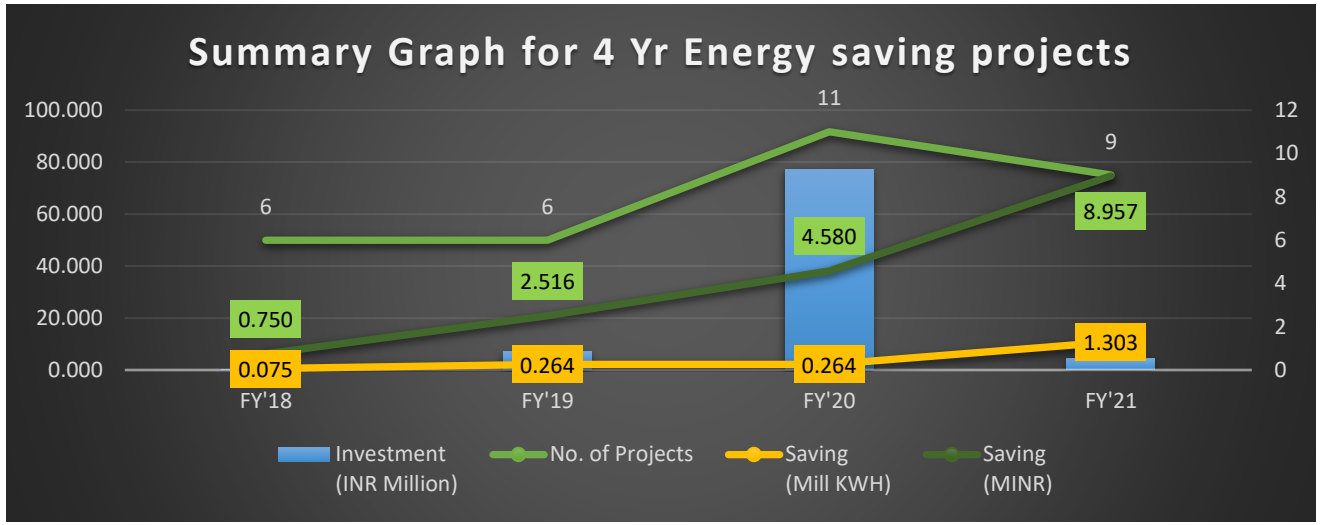
Sr.NO	Year of implementation	Title of Activity	Cost saving in (MINR)	KWH Saving	Investment (MINR)
1	2021-22	Generation of Renewable electrical energy	6.89	1128961	0
2	2021-22	Energy saving in MMH-32 machine cooling tower	0.10	15965.8731	0
3	2021-22	Energy saving at Cooling tower unit	0.17	27049.4956	0
4	2021-22	Reduction in fuel consumption charges by utilizing electrical fork-lift	0.02	3397.68	4.3
5	2021-22	Energy saving in MMH-32 machine by improving productivity	0.12	19232.7421	0
6	2021-22	Energy saving in Packing Line by modification and heating chamber area reduction.	0.03	4940.7006	0
7	2021-22	Energy saving in MMH-16 machine by improving productivity	0.16	26512.3344	0
8	2021-22	Energy saving trough migration from DC technology to Ac technology at Extruder-2(38mm) Supermac insulation line-1 machine.	0.02	3725	0
9	2021-22	Energy Saving at MCC (Multi core coiling) Section by modify and implement production process from offline coiling process to online coiling process.	0.45	73058.7372	0
Total			7.95	1302843.56	4.30

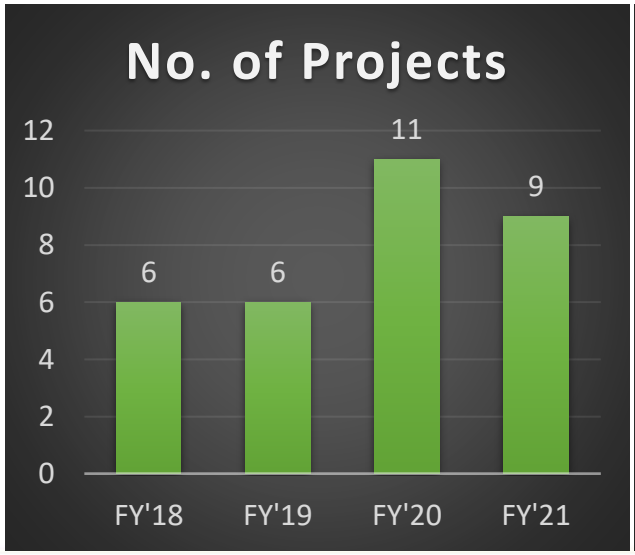
MAJOR ECON ROJECT FOR FY 2022-23

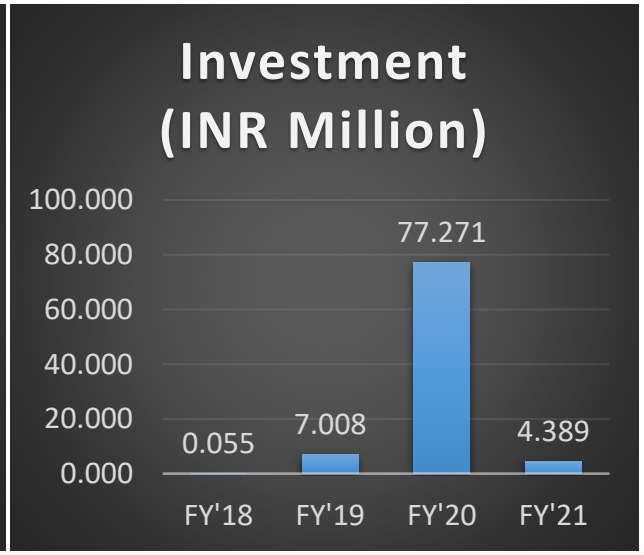
Sr.No	Title of Activity	Estimated Cost saving in (INR)	Estimated KWH Saving	Investment
1	Further improvement in performance at Power Saving by use of Solar power backup system	6,29,231	1,02,148	Not Required
2	Further Power saving in MMH-32 machine cooling tower by adopting VFD control	13,487	1,316	34,400
3	Further Power saving at Cooling tower unit by adopting VFD	46,498	4,536	34,400
4	Furthermore, Power saving in MMH-16 machine by improving productivity	2,71,769	26,512	Not Required
5	Furthermore, Power saving trough migration from DC technology to Ac technology at Extruder-2(38mm) Supermac insulation line-1 machine.	75,282	7,344	Not Required
6	Saving in power cost develop by DC to AC Technology at Supermac 1 Insulation Line Main motor	53,878	5,256	Not Required
7	Energy Saving at MCC (Multi core coiling) Section by modify and implement production process from offline coiling process to online coiling process.	11,13,483	1,08,624	Not Required
8	Saving in power cost by modify m/c DC to AC Technology at Buncher no-2 .	18,318	1,787	75,000
9	Saving in power cost develop by DC to AC Technology at Redaelli skip strading machine .	2,705	264	30,129
10	Power saving through Installing latest technology machine (Simpack-2) at Coiling section	1,70,953	16,677	1,38,72,070
11	Power saving through Installing latest technology machine (Supermac 3) at Insulation section	2,58,498	25,217	2,17,41,575
Total In Million		2.65	0.30	35.79 MINR

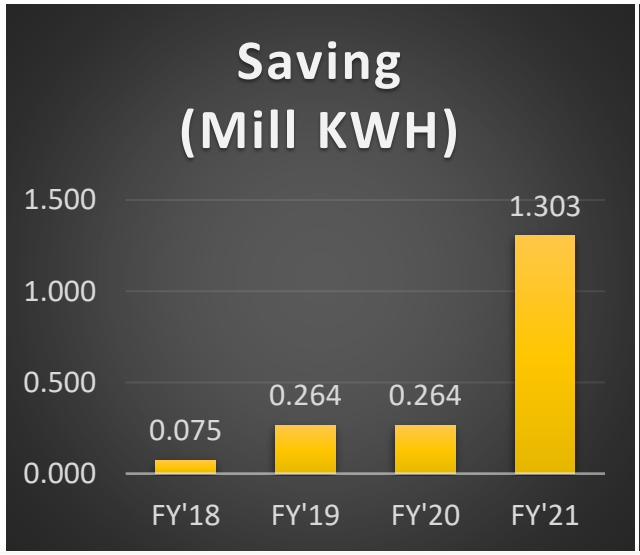
ENERGY SAVING PROJECTS IMPLEMENTATION IN LAST 4 YEARS

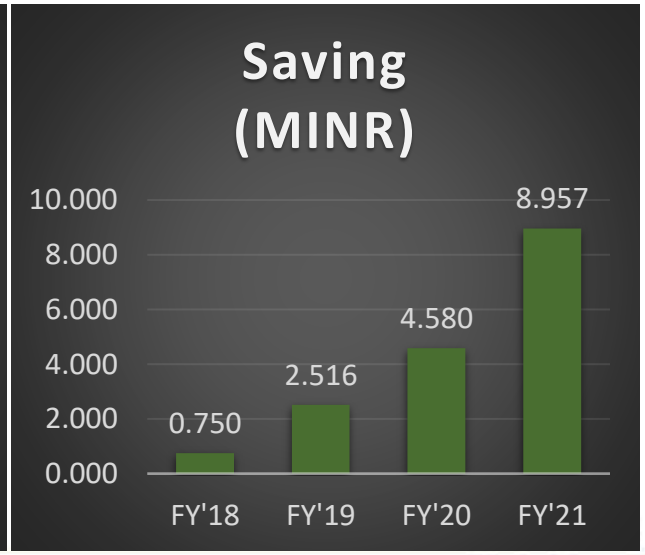
Year	No. of Projects	Investment (INR Million)	Saving (Mill KWH)	Saving (MINR)
FY'18	6	0.055	0.075	0.750
FY'19	6	7.008	0.264	2.516
FY'20	11	77.271	0.264	4.580
FY'21	9	4.389	1.303	8.957









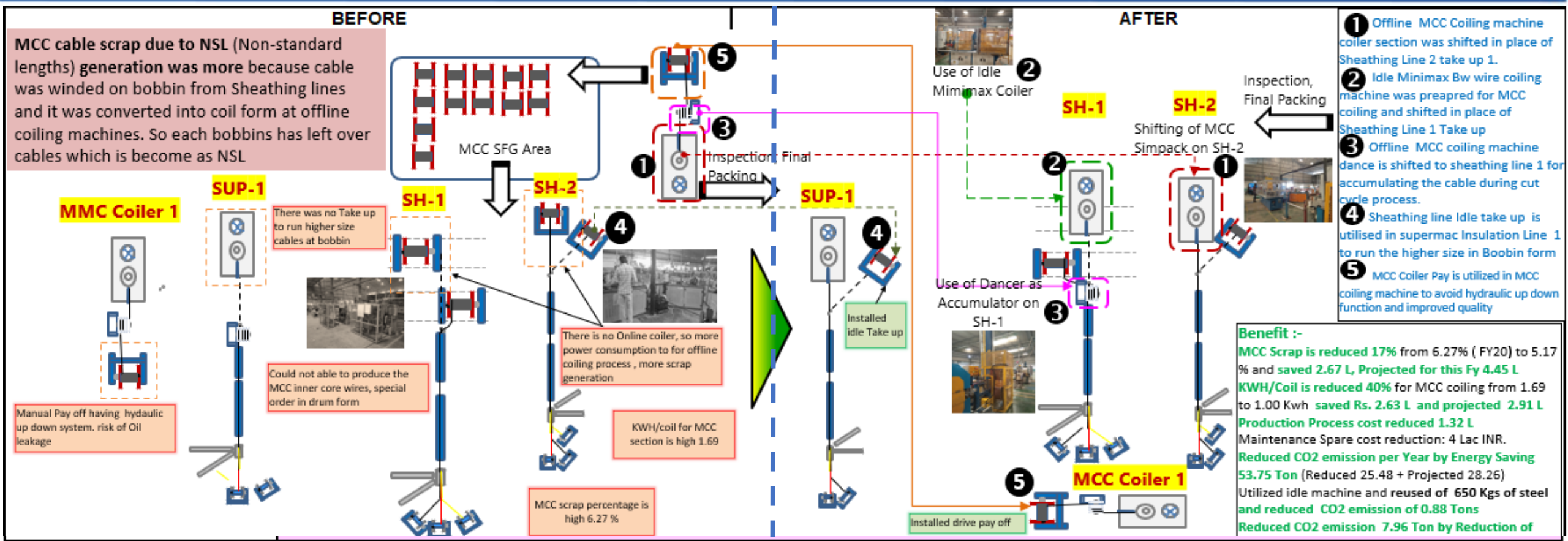


Innovative Project implemented -1

Theme: Reuse of idle Coiling machine & its parts in MCC Sheathing line & other insulation lines

BEFORE

MCC cable scrap due to NSL (Non-standard lengths) **generation was more** because cable was winded on bobbin from Sheathing lines and it was converted into coil form at offline coiling machines. So each bobbins has left over cables which is become as NSL



1. Offline MCC Coiling machine coiler section was shifted in place of Sheathing Line 2 take up 1.
2. Idle Minimax Bw wire coiling machine was preapred for MCC coiling and shifted in place of Sheathing Line 1 Take up
3. Offline MCC coiling machine dance is shifted to sheathing line 1 for accumulating the cable during cut cycle process.
4. Sheathing line Idle take up is utilised in supermac Insulation Line 1 to run the higher size in Boobin form
5. MCC Coiler Pay is utilized in MCC coiling machine to avoid hydraulic up down function and improved quality

Benefit :-

MCC Scrap is reduced 17% from 6.27% (FY20) to 5.17 % and **saved 2.67 L, Projected for this Fy 4.45 L**

KWH/Coil is reduced 40% for MCC coiling from 1.69 to 1.00 Kwh **saved Rs. 2.63 L and projected 2.91 L**

Production Process cost reduced 1.32 L

Maintenance Spare cost reduction: 4 Lac INR.

Reduced CO2 emission per Year by Energy Saving 53.75 Ton (Reduced 25.48 + Projected 28.26)

Utilized idle machine and **reused of 650 Kgs of steel and reduced CO2 emission of 0.88 Tons**

Reduced CO2 emission 7.96 Ton by Reduction of

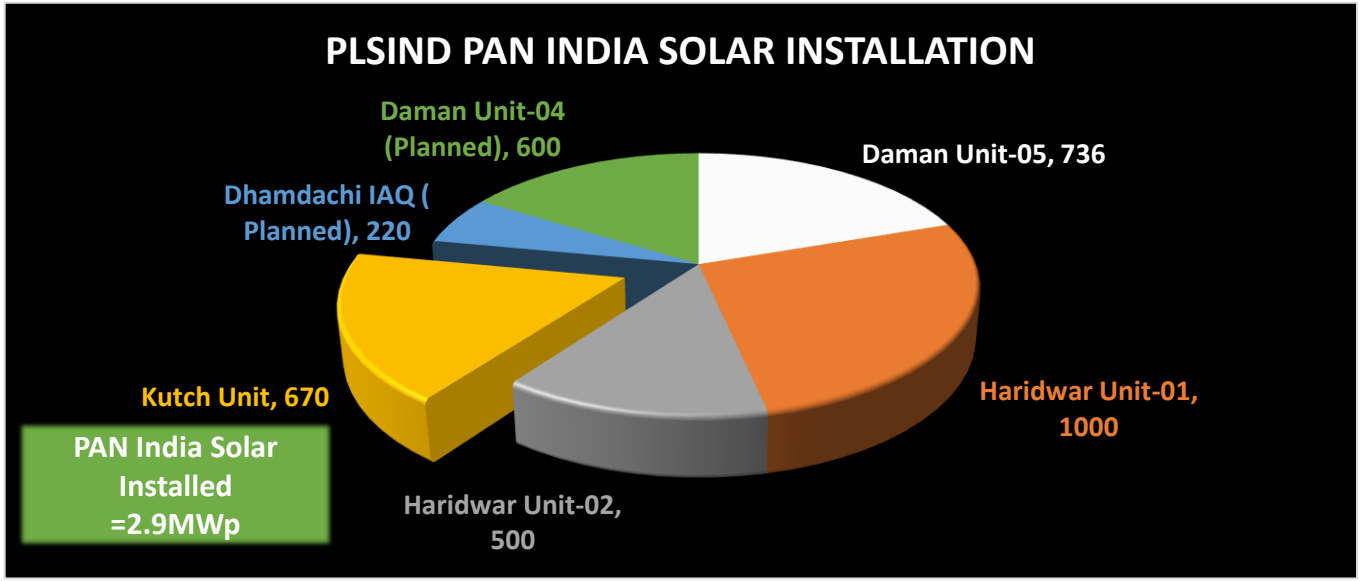
Saving Explanation of Electrical Energy and Natural resource and Enviromental	1. KWH/Coil is reduced 40% for MCC coiling from 1.69 to 1.00 Kwh/Coil and **Total Electricity save on 73,059 KWH** **2. Reused of 650 Kgs of steel** **3. Reduced CO2 Emission by 60 MT/Year** 4.MCC **Scrap is reduced 17%** **5. The cost of new online coiling machine was INR 79,04,000.00 which was eliminated by utilising spare coiler available & directly saving Rs.79,04,000.00**

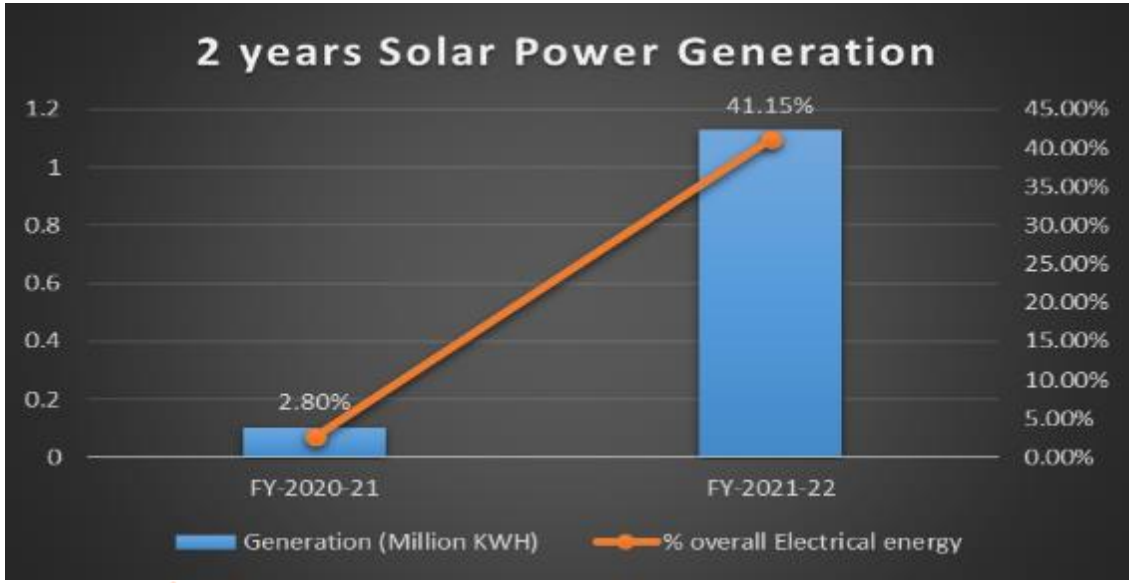
UTILIZATION OF RENEWABLE ENERGY RESOURCE

Solar Power generation system- 736 KWp

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

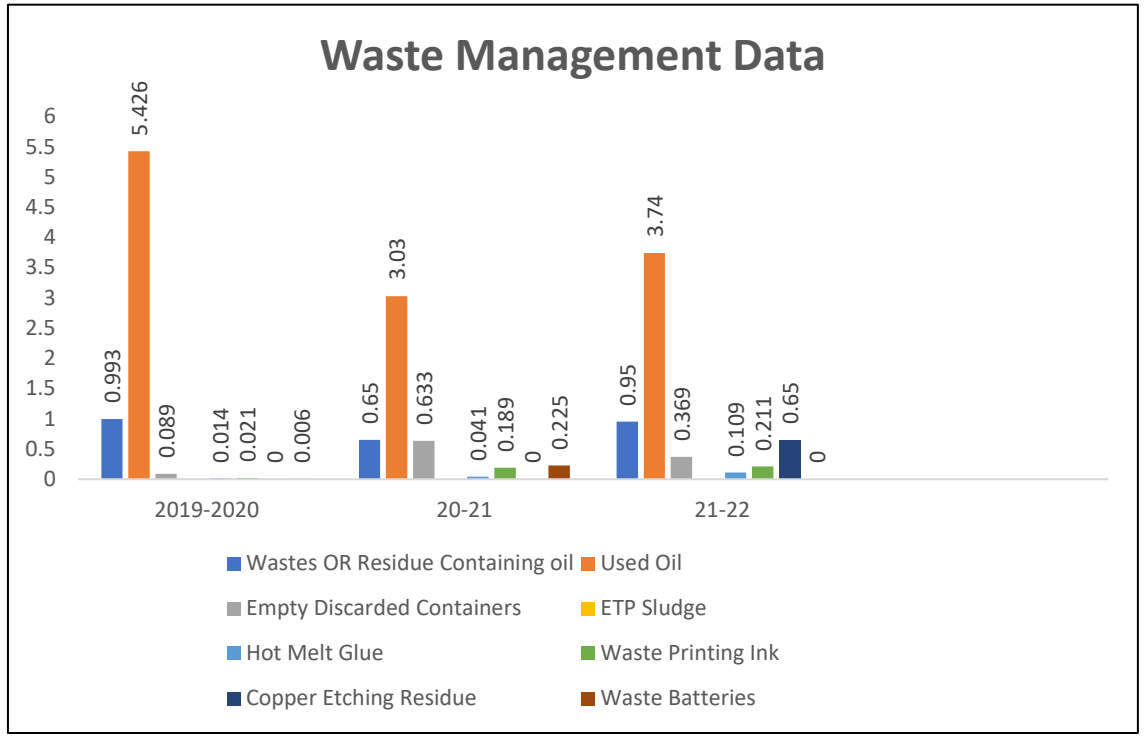
Year	Technology	Type of energy	Onsite / Offsite	Installed Capacity	Generation (Million KWH)	% overall Electrical energy
FY-2020-21	Solar Power Plant	Solar	Onsite	736 KWp	0.104	3
FY-2020-21	Solar Power Plant	Solar	Onsite	736 KWp	1.13	47





WASTE UTILIZATION AND MANAGEMENT

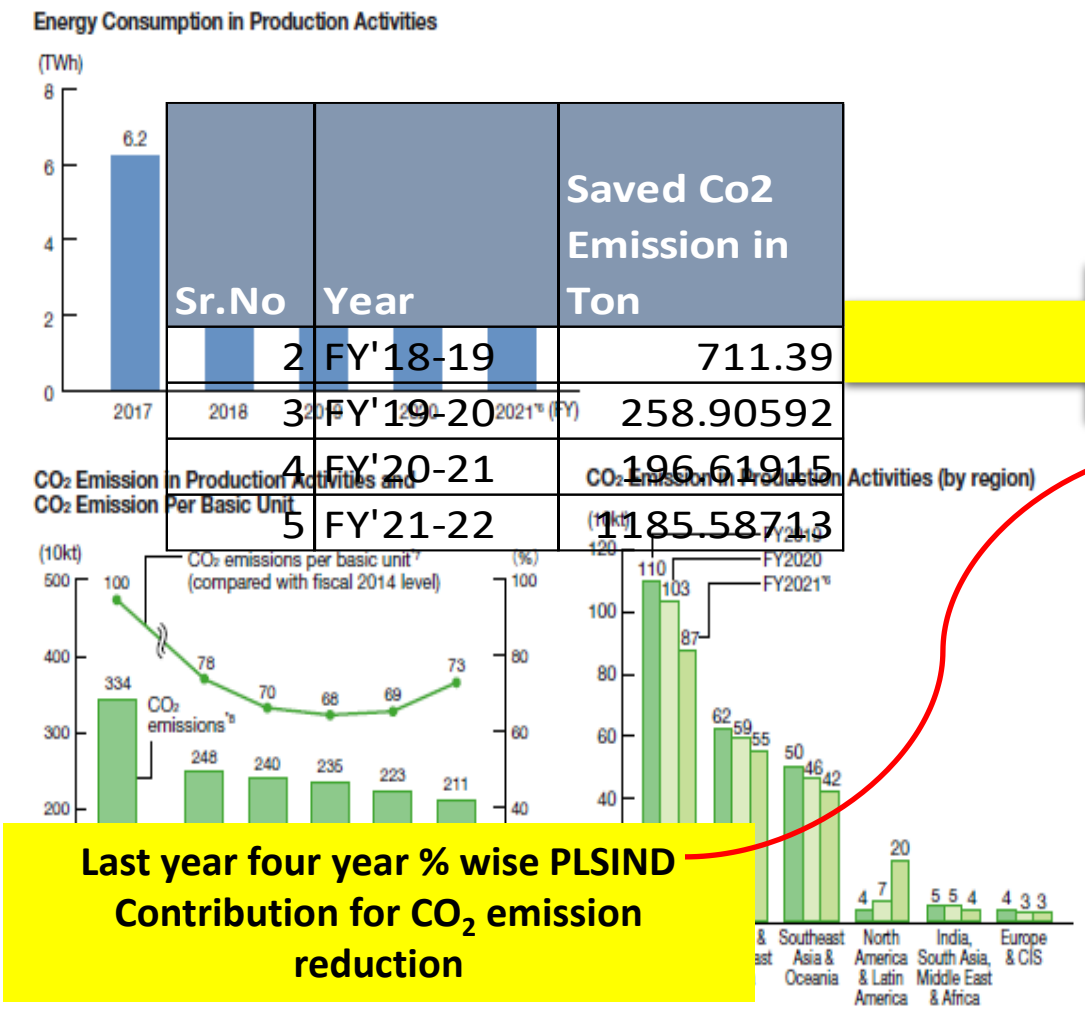
Sr.No	Type of waste generated / Year	2019-2020 Quantity of waste generated (MT/year)	20-21 Quantity of waste generated	21-22 Quantity of waste generated
1	Wastes OR Residue Containi	0.993	0.65	0.95
2	Used Oil	5.426	3.03	3.74
3	Empty Discarded Containers	0.089	0.633	0.369
4	ETP Sludge	0	0	0
5	Hot Melt Glue	0.014	0.041	0.109
6	Waste Printing Ink	0.021	0.189	0.211
7	Copper Etching Residue	0	0	0.65
8	Waste Batteries	0.006	0.225	0



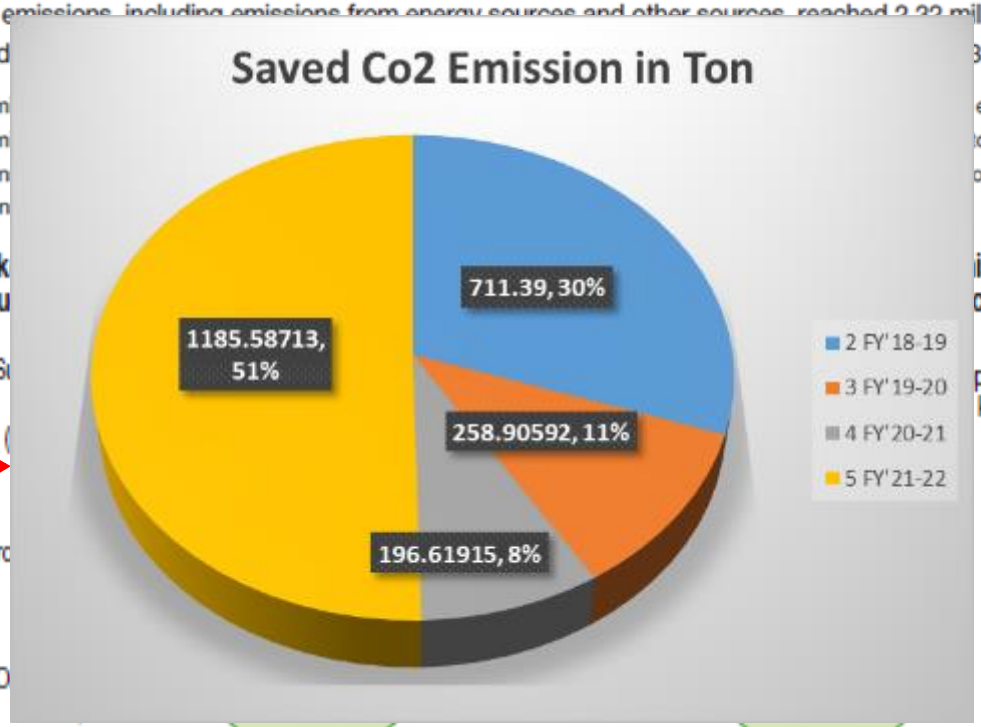
Waste Generation in FY'21 has increased as compared to FY'20 due to COVID but has ben reduced as compared to FY'19.

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

Sr.No	Year	Saved Co2 Emission in Ton
2	FY'18-19	711.39
3	FY'19-20	258.90592
4	FY'20-21	196.61915
5	FY'21-22	1185.58713



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



GREEN SUPPLY CHAIN MANAGEMENT SYSTEM

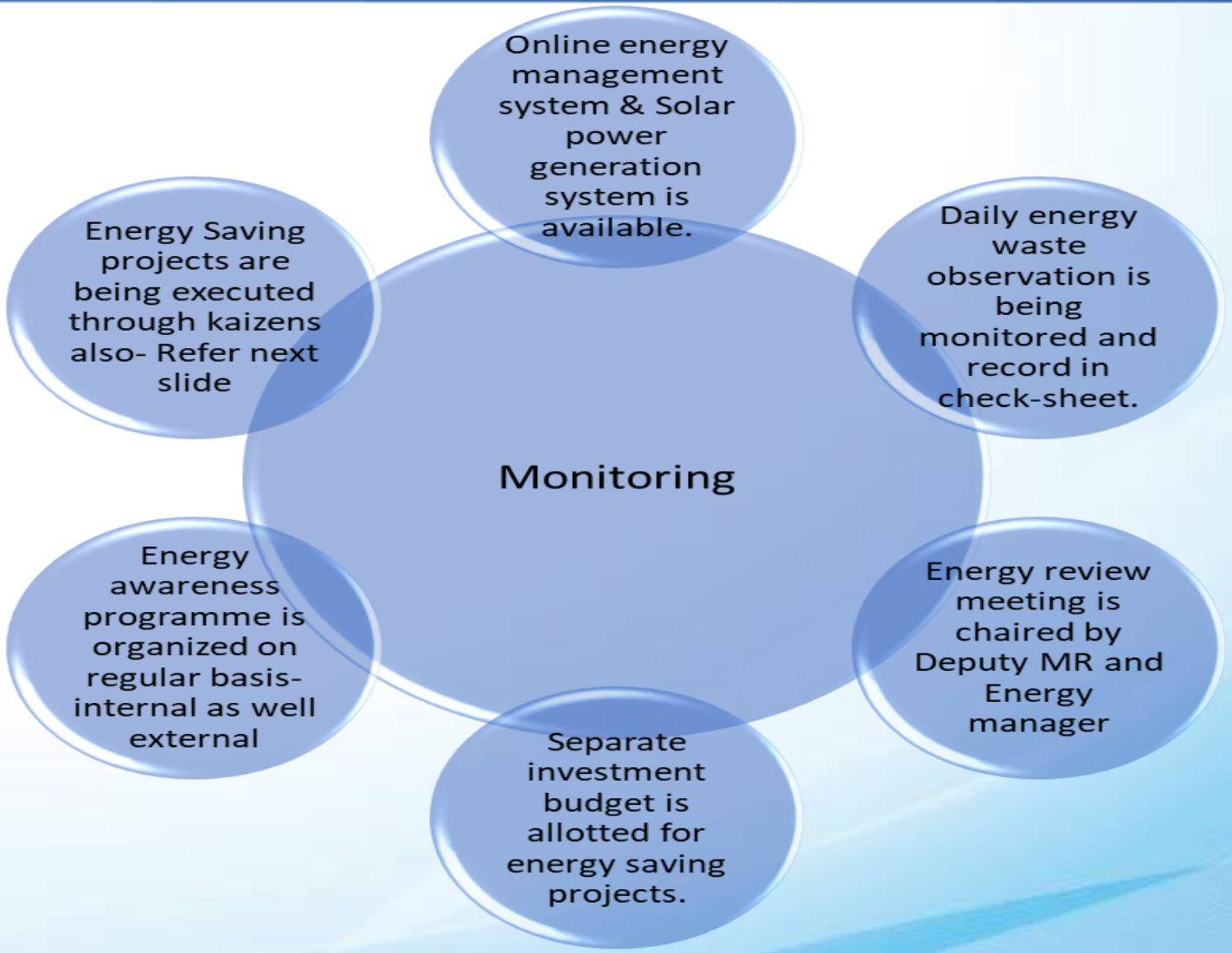
Green Supply Chain mechanism action plan with current status

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						

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

Innovative Project implemented - 2

Theme: Reduction IN Water Consumption, Fuel & Electricity by installing roof for the Fire Hydrant Water Tank

Fire Hydrant Water storage Tank is in open condition (Water is exposed to the Environment). Due to this there is **frequent Algae formation inside the water tank**. This results into the Blockage of pipe line & whole Fire Hydrant System will not work. Incase of Fire Emergency this may lead to Unsafe conditions & cause serious damage. Also Continuously Small amount of water will be Evapourated to environment.

Open Fire Hydrant Tank

Tank capacity:- 180KL | **Tank Cleaning 4 times/Yr**

2 Evapouration Loss Due to Exposure to Sun Light

Total water required for cleaning 720 KL/Year

*Please fill in "✓" in the parenthesis of the corresponded items

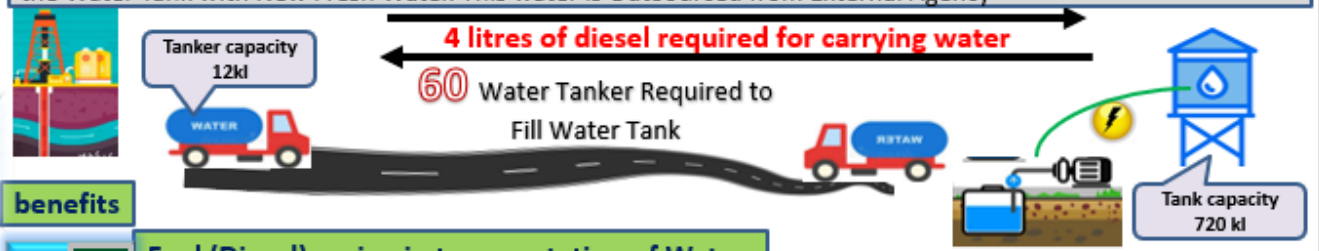
Category of 3R: (✓)Reduce (✓)Reuse (use again) ( )Recycle (use for other use)

Fire Hydrant Water storage Tank is Covered with Sheet (Water is not exposed to the Environment). With this Tank Cover, **Algae formation inside the water tank is Eliminated**. This results into the up-keeping of Fire Hydrant System all the time. ZERO risk Incase of Fire Emergency. Also **Eliminated the Evaporation of Small amount of**

1. Work started from utilize available MS rods, angles from plant and make support pillar of roof
2. Taken available tin roof sheets for covering the tank
3. Prepared Tank Cover by **In-house Team with Available In-House Steel Materials (0.6 MT)**

Eliminated Algae and dust formation by Roof Cover, so No need to Clean the Tank and No Evaporation Loss. Ground water saved : 781 KL.

Reduction in Diesel cunsumption for ground water transportation. As after Cleaning the Tank we need to Refill the Water Tank with New Fresh Water. This water is OutSourced from External Agency



benefits

Fuel (Diesel) saving in transportation of Water

4 × 60 = 240L Save

Total Water Saving

Saving Explanation of Electrical Energy and Natural resource and Enviromental

1) Saving in Water cost:- **INR 0.073/lire X 7,81,000 Litres = INR 57,013.00**
2) Saving in electricity used by 7.5kW Pump (for transfering water from underground tank to fire hydrant tank):-
37.5kWh X Avg unit cost INR 9.70 X 4times per year = INR 1,455.00
3) Saving in fabrication cost (Material as well as Labour) by developing it in-house instead of 3rd party:- **INR 6.52,365.00**

Total cost saving from the project is INR 7,10,833.00 & saving in CO2 emission is 1884 kg/Yr

CO_2 Reduction Achieved (Ton/Yr)	
By Diesel	662.4
By Power	136.5
By Steel	1062
By Water saving	23.43
Total CO_2 Reduction	1884.33

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 products 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.

TÜV NORD CERT GmbH Langemarckstrasse 20 45141 Essen

IAF DAkkS

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

ACHIEVEMENTS

FY19

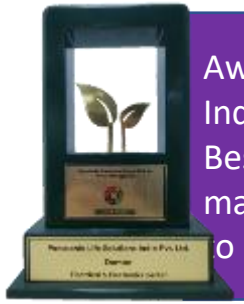
GHKC (Green House-Keeping Contest)-2019 Award winner by Baroda Productivity Council.

National Safe tech award 2019

BEE NECA-2019 Award winner Under Consumer Goods Category.

FY20

Awarded by CII for Energy Efficient Unit for Daman Unit-5



Awarded by Apex India Foundation –For Best waste management practice o Daman U5

Awarded by Apex India Foundation –For Best Water management practice Haridwar U2.

WCT Daman Unit-04 Declared as winner for Golden Peacock Environment management Award-2020

FY21

Awarded by CII for Energy efficient unit for Daman Unit-5

Awarded by CII for Energy efficient unit for Haridwar Unit-1

National Award for Environment Best Practice-2021 by CII

WCT Kutch Unit Declared as winner for Golden Peacock Energy Efficiency Award-2021

Thank You

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