PRESENTATION ON 25th NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT

Panasonic

PANASONIC LIFE SOLUTIONS INDIA PVT LTD.

Unit-04, Daman

CONTENTS

Panasonic

Life Solutions India Pvt. Ltd.

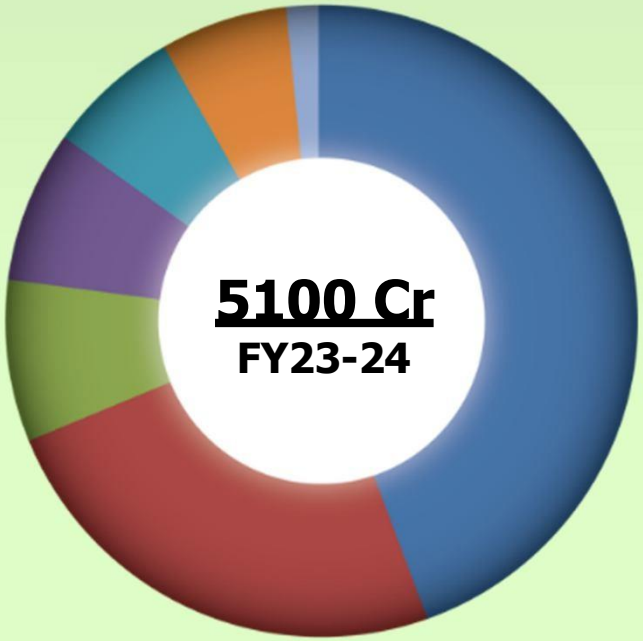
(Formerly known as)

Anchor Electricals Pvt Ltd.

A global enterprise that manufactures cutting edge electrical products

Not just a Switches Company !!

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

PEWIN FACTORIES OVERVIEW

Kutch Factory
Wire Cable

Daman Factory
Wiring Device, Wire Cable
IAQ

Unit-5 WD

Unit-4 WC

FACTORY

(4 AREAS 6 FACTORIES)

Haridwar Factory (Unit1)
Wiring Device, Switch Gear

Haridwar Factory (Unit2)
Wiring Device, Switch Gear

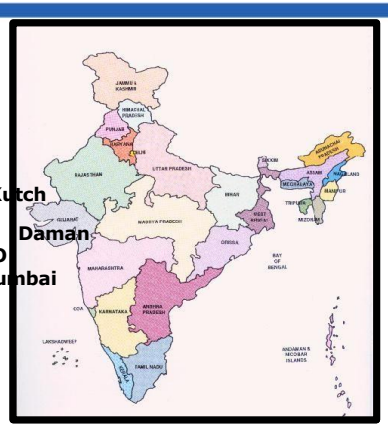
Sri City Factory
Wiring Device

Unit profile

COMPANY PROFILE

ANCHOR by Panasonic

Established in	: 1963
Head Quarter	: Mumbai (INDIA)
Factories	: 10 (6 regions)
No. of Employee	: 10000 (approx.)
No of Dealers	: 4000 (approx.)



POWER COMPONENT BU

WD | WC | SWG

Lighting & Luminary BU

IAQ BU

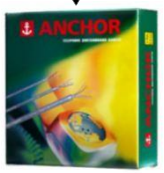
Solar BU

WC Product Portfolio


Advance FR (0.75 Sqmm to 35 Sqmm)


FR-LSH


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)


Twin Core 0.5 Sq mm & 0.75 Sq mm


PVC Insulated Tape


LAN Cable


Flat Cable


RG6 Cable


CCTV Cable

Wire and Cables Process flow

Copper Rod

8 mm

RBD Machine
Niehoff,Germany

Rod Drawing

Solid Conductor

1.63 mm

MMH Machine
Niehoff,Germany

Wire Drawing

Parallel Conductor

0.2 to 0.3 mm

Bunching Machine
Niehoff,Germany

Bunching

Bunched Conductor

0.75 to 6.0 sq.mm

PVC Insulating

Coiling Machine
MDS India

Coiling in 90m & 180m

Insulated wire

0.75 to 6.0 sq.mm

Extrusion line
Nextrome,Switzerland

Bunched Conductor

0.75 to 6.0 sq.mm

Packing in Master box

Packing Machine
ITW India

Coil and Packing

FG

Finished Goods

ANCHOR

BREAKTHROUGH TO EXCELLENCE

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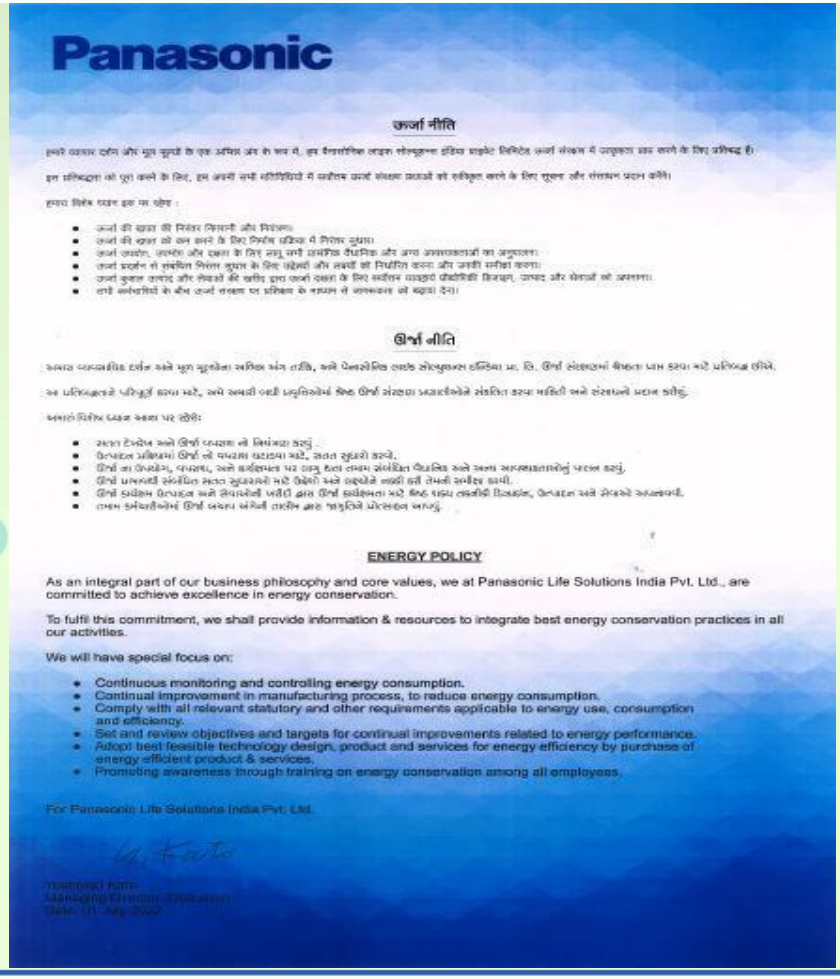
ENERGY POLICY

Continual improvement is process to reduce energy performance.

Continuous monitoring and controlling energy consumption.

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

Energy conservation awareness to all employees.



Panasonic

ऊर्जा नीति

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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.

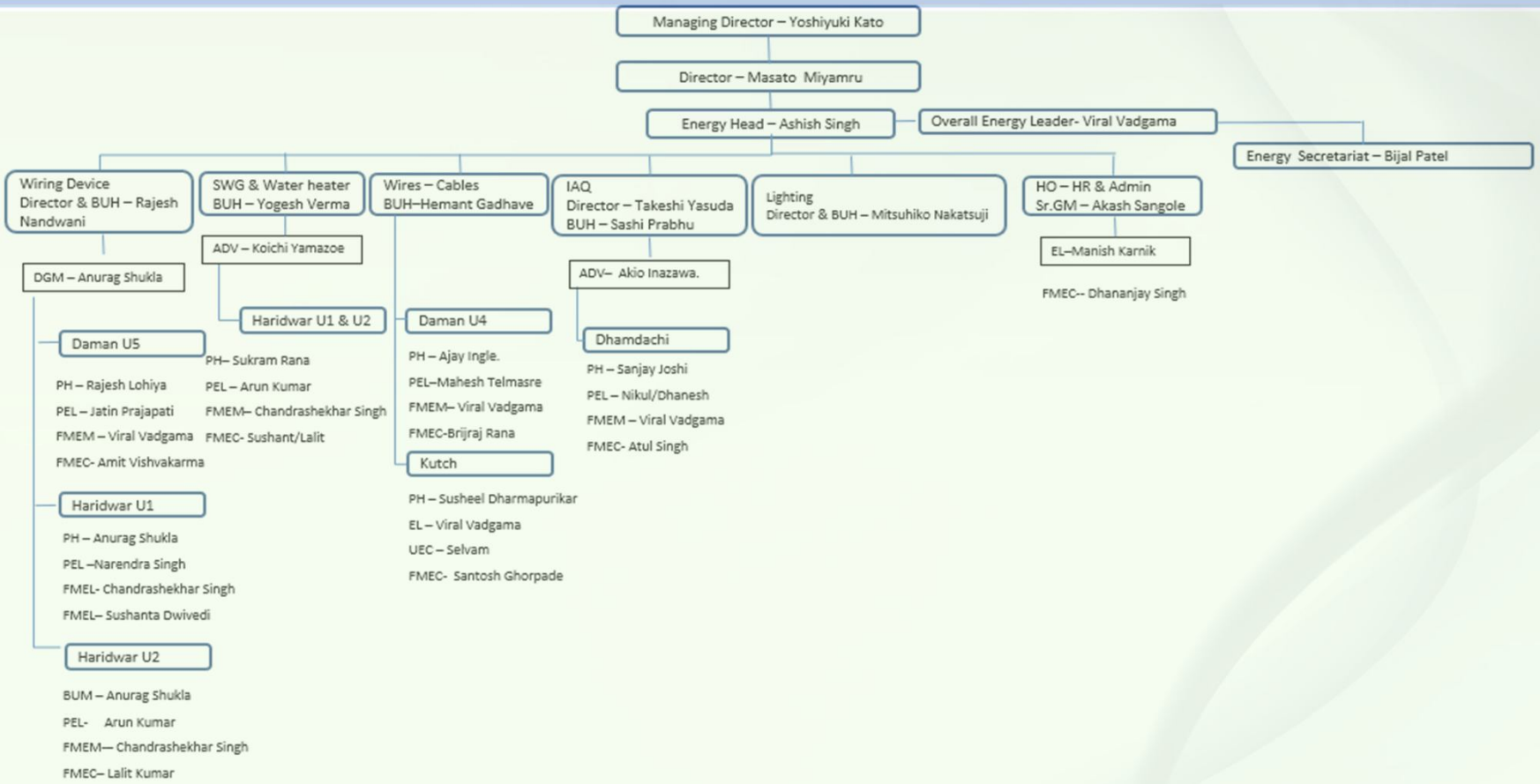
To fulfil this commitment, we shall provide information & resources to integrate best energy conservation practices in all our activities.

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.

ORGANOGRAM FOR THE ENERGY CELL



PH –Plant head
FMEM-FM Energy manager

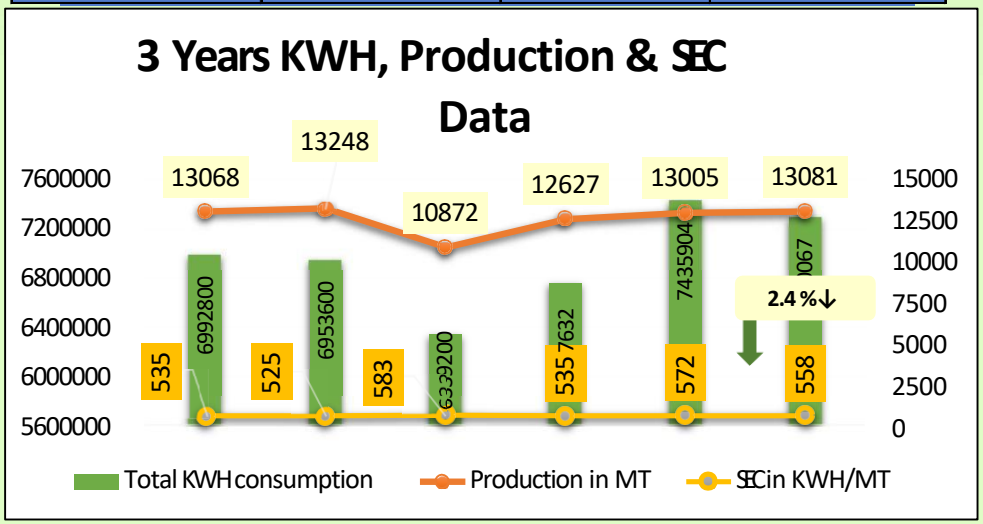
PEL – Plant Energy leader
BUH – BU Head.

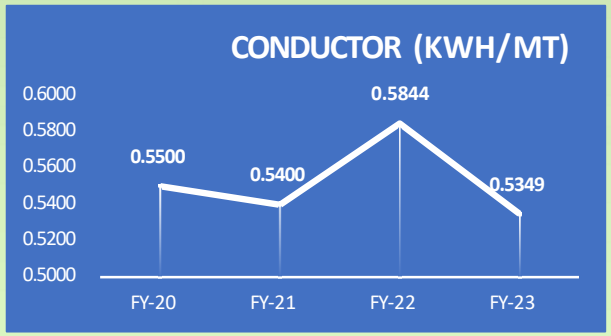
ADV – Advisor
FMEC- FM Energy Coordinator

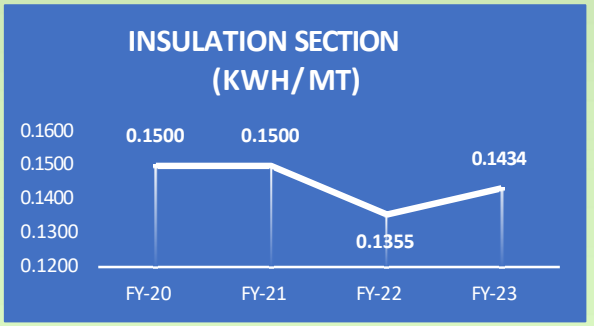
HOEL- HO Energy leader

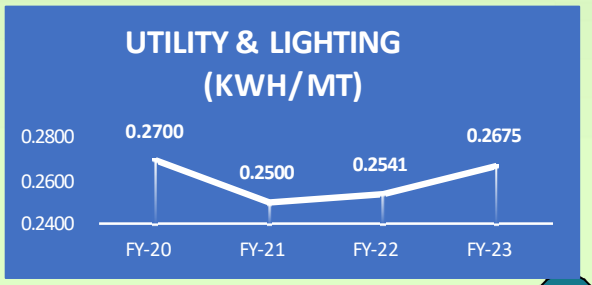
OVERALL PRODUCTION ,ENERGY AND SEC DATA - (FY 18-19 to 23-24)

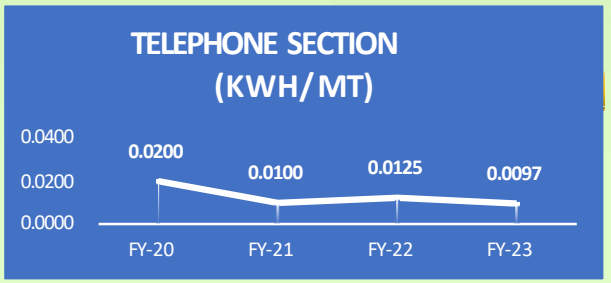
Year	Total KWH consumption	Production in MT	SEC in KWH/MT
FY'18-19	6992800	13068	535
FY'19-20	6953600	13248	525
FY'20-21	6339200	10872	583
FY'21-22	6757632	12627	535
FY'22-23	7435904	13005	572
FY'18-20	7300067	13081	558



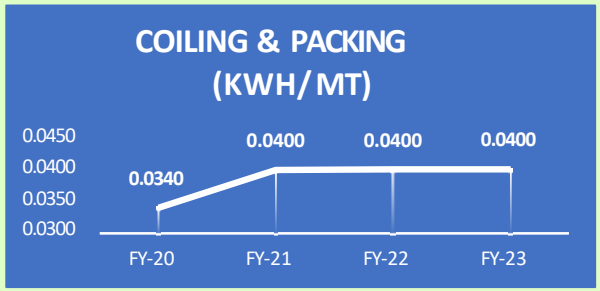






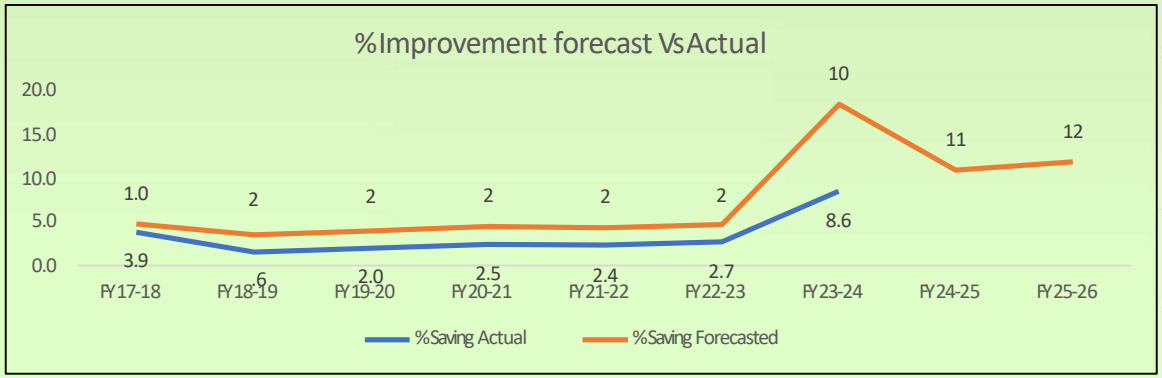


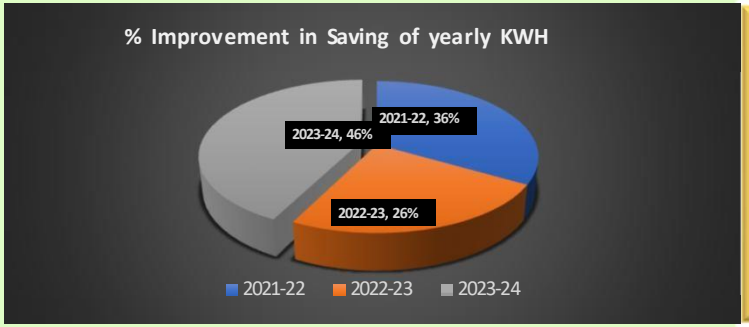
Overall SEC and Section wise sec improved except Utility section.



BENCHMARKING

Sr. NO.	Year	Yearly Electrical energy consumption (KWH)	Yearly Saving	%Improvement in Saving of yearly KWH
1	FY 19-20	6953600	141689	2.0
2	FY 20-21	6339200	158684	2.5
3	FY 21-22	6757632	159695	2.4
4	FY 22-23	7435904.2	203824	2.7
5	FY 23-24	7300067.2	626367	8.6





Note:- For Energy Saving Benchmarking we have plotted our internal Benchmarking Based upon Previous year data as the competitive data is not available

Area For Improvement

Area Already Improved

Sustainable Achievements			More Sustainable Competitors	Less Sustainable Competitors
Comparative Analysis	Global	National	Competitor - 1	Competitor - 1
Environmental Budget	3530 MINR	06 MINR	22 MINR	<12 MINR
Factory Waste Recycling Rates	Current 99 % 100% Vision	50 %	55 %	<10%
Renewable Energy Resources	32000 MW	10.3 %↑ (5.21 MW)	8.55%	<2 %
Comparative Analysis	Global	National	Competitor - 2	Competitor - 2
Green House Gases Emissions reduction	21.6 Mill Tons	25 %	55 %	< 5 %
Waste Water Discharge & Recycling	11.78 million M3	65 %	98 %	< 20 %
Waste Landfill Disposal	2.3 Thousand Tons	<2 %	<2 %	< 5 %

MAJOR E-CON PROJECTS FOR FY 2024-25

Sr. No.	Title of Project	Annual Electrical Saving (kWh)	Energy Cost Saving (MINR)	Investment (Rs in Million)	Payback (Years)	Comment
1	Technological upgradation of MMH-04 for DC to AC upgradation	36011	0.21534578	8.10	37.61	Technology upgradation.
2	Replacement of Old Buncher- 07 Machine by new machine for technological upgradation	7000	0.04186	7.00	167.22	Technology upgradation
3	Replacement of old steam generator by Smart ,Energy efficient , additional safety ,less maintenance steam generator for 2 machines	15522	0.09282156	1.00	10.77	Technology upgradation
4	Renewable Energy Generation	544555.8	3.256443684	-	-	In-House
5	Energy saving by 5 nos 24 W solar Street lighting	388.8	0.002325024	0.20	86.02	In-House
6	Energy saving by Heat recovery system in Air compressor (By - product Hot water will use in MMH Steam generator)	4665.6	0.027900288	1.00	35.84	Innovative Design
Total		6,08,143.20	3.64	17.3		

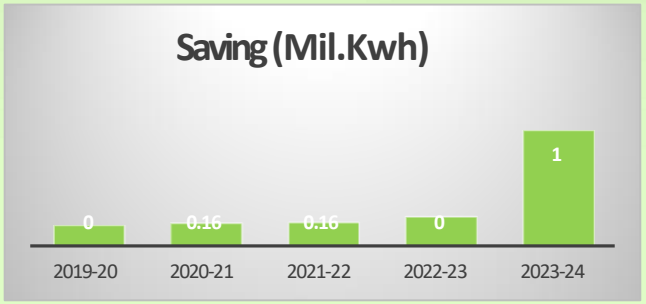
Overall Data with Major and Minor Projects

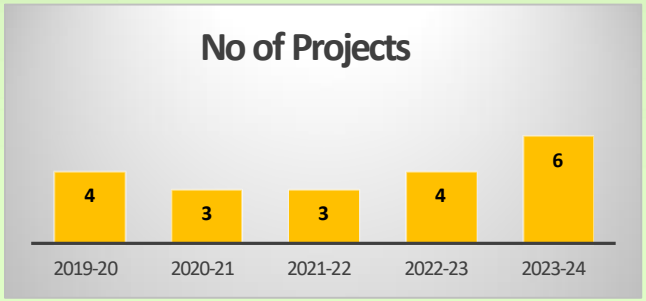
- **Technology Upgradation-5 nos,**
- **Kaizen- 1 nos**

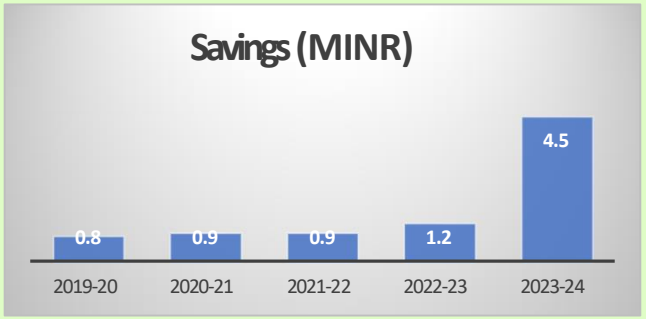
Total Energy Saving (KWH)	Total Investment (MINR)	Total Cost Saving(MINR)
6,08,143	17.3	3.64

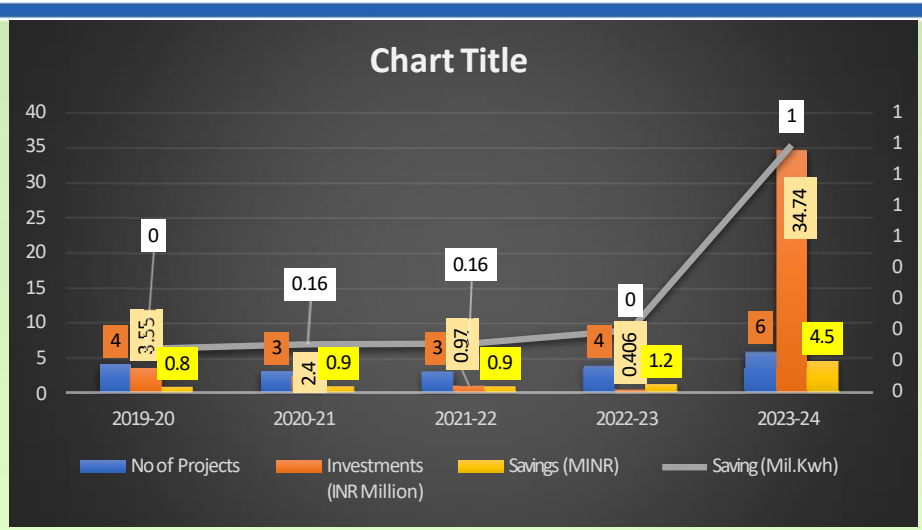
ENERGY SAVING PROJECTS IMPLEMENTED IN LAST 4 YEARS

Year	No of Projects	Investments (INR Million)	Saving (Mil.Kwh)	Savings (MINR)
2019-20	4	3.55	0	0.8
2020-21	3	2.4	0.16	0.9
2021-22	3	0.97	0.16	0.9
2022-23	4	0.406	0	1.2
2023-24	6	34.74	1	4.5









ENERGY Efficient

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MAJOR E-CON PROJECTS FOR FY 2023-24

Sr.No.	Title of Project	Annual Electrical Saving (kWh)	Investment (Rs in Million)	Payback (Months)	Cost saving (MINR)
1	Generation of Renewable Energy by Installation of the Solar Power plant at unit 4 .(526 KWp)	574824	3.26	9.20	3.26
2	Energy Conservation in RO & DM Plant by technical control.	4290	0.02	0.25	0.02
3	Energy Efficiency improvement in buncher section by technological improvement.	6514.24	0.04	101.50	0.04
4	Reduced Energy Consumption through changing the packing method	40739	0.23	-	0.23
5	Energy saving in Compressor by IFC installation.	170654	0.97	0.70	0.97
	Total	**797021**	**34.74**		**4.52**

Overall Data with Major and Minor Projects

- **Automation-1 nos,**
- **Technology Upgradation-3 nos,**
- **Kaizen- 1 nos**

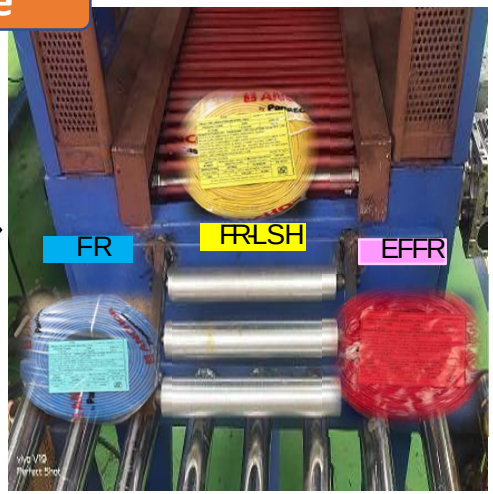
Total Energy Saving (KWH)	Total Investment (MINR)	Total Cost Saving(MINR)
7,97,021	34.74	4.52

INNOVATIVE PROJECT IMPLEMENTATION

Theme | **Reduction of Energy Consumption through changing the packing method**

Before

L-Type Shrink wrap 13 KW machine used for Project Packing



Out put of L-Type Shrink wrap Machine

After

Action Plan:

Uses of Polypouch instead of shrink wrap to eliminate the shrinking process which leads to saving in Energy consumption.

Individual poly pouches (grade-wise) has been implemented considering the process requirement.

❖ Brainstorming session was conducted with members of the team

❖ Proposed to Management regarding new idea of changing packing method..

❖ Management Approved C hanging of Packing method...

0.3 Kw Sealing machine to seal Poly Pouches

Grade-wise Polypouch Packing

EFFR FR FRLSH

Motivation to start theme : Rising Energy cost by external agency leads to increasing processing cost.
Biggest Challenge : Finding alternate option with out affecting adverse impact of customer perception as well as quality of the product.
The solution : Implemented a solution that eliminated the energy consumption of shrinking process, by switching to Poly pouches instead of Shrink wrap.

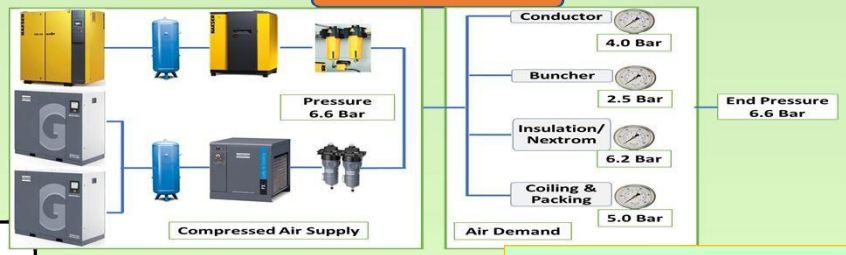
- Before Energy Consumption was **41,887 KWh/Yr**
- Total Energy cost= (KWh x unit cost) = 41,887 x 6.10= 2,55,510 INR **(0.255Mn)/Year**

- After Energy consumption = **1148 KWh/Yr**
- Energy Saving= (41,887KWh-1148KWh) = 40,739 KWH/Yr.
- Total cost saving = (KWh x Unit cost) 1148 x 6.10= **₹ 7,002 (0.007 Mn/Year)** (₹ 2,55,510 - ₹ 7,002) = 2,48,507 INR/Year **(0.248 Mn)/Year**
- Reduced Carbon Footprint = **29.5 Tone/Year**

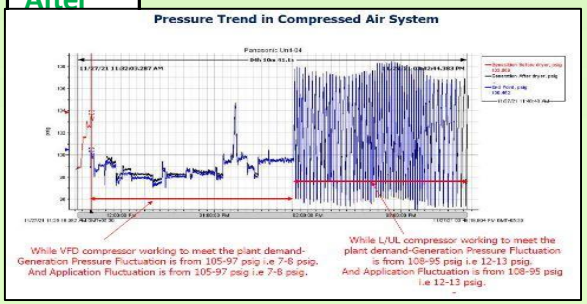
INNOVATIVE PROJECT IMPLEMENTATION

Theme | Energy Saving In Compressed Air System By Intelligent Flow Controller (IFC)

Before

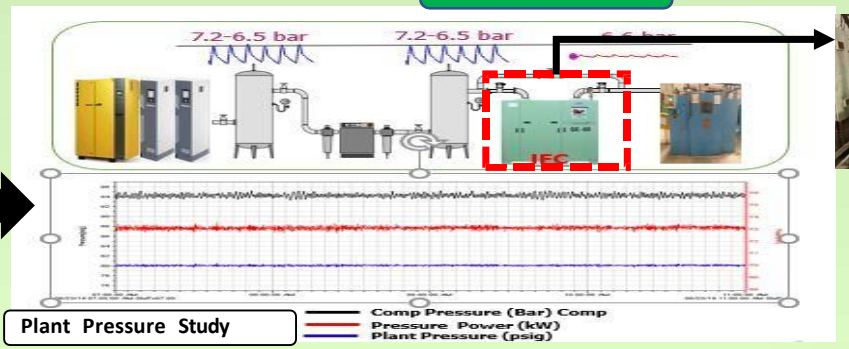


After



- Due to big pressure band , difficult to set optimum pressure.
- High energy consumption
- Variation in pressure leads interruption in machine operation

After



- Pressure optimization possible.
- Reduced fluctuation of system.
- Energy consumption reduced.
- Data monitoring possible

Motivation to start theme :Energy conservation by innovative and advance technology.
Biggest Challenge and Solution :To Reduce artificial air demand ,system fluctuation and Energy consumption reduction by use of single system.

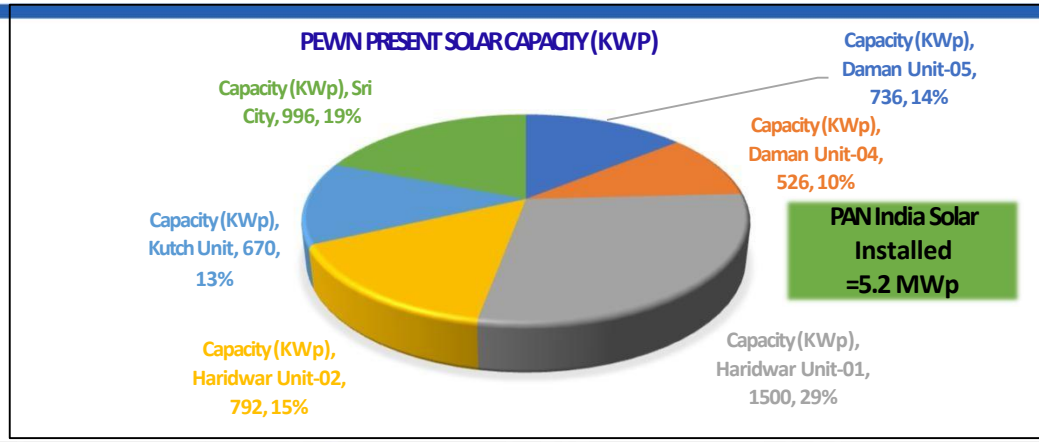
- Before Energy Consumption was 1350096 KWh/Yr
- Total Energy cost= 0.875 MINR/INR

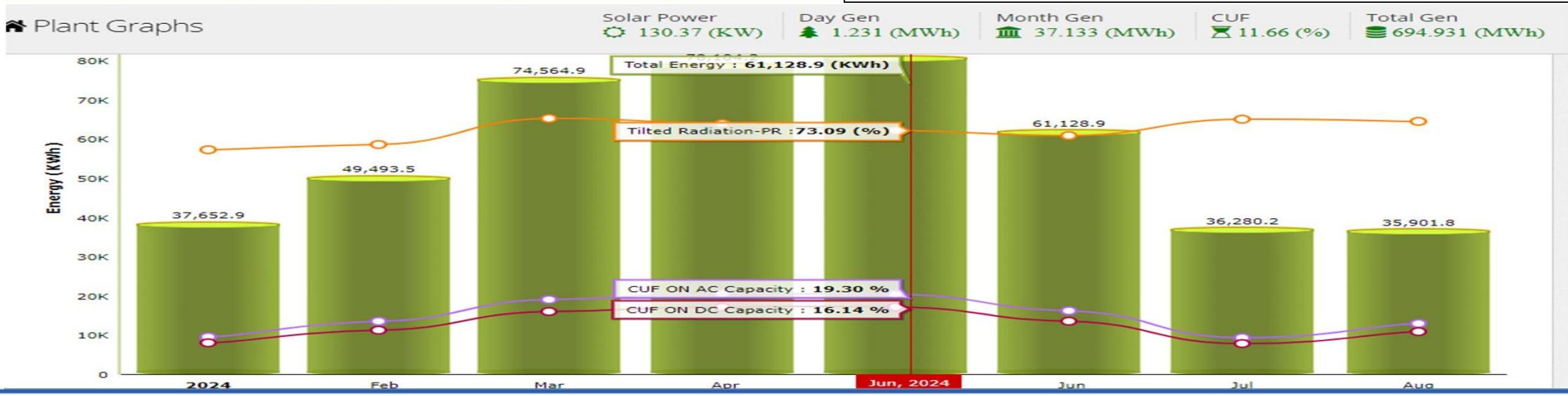
- After Energy Consumption = 1174584 KWh/Yr
- Energy Saving= 1350096-1174584 =175512 KWH/Yr.
- Total cost saving = 1.14 MINR
- Reduced Carbon Footprint = 126.9 Tone/Year

UTILIZATION OF RENEWABLE ENERGY RESOURCE

Type	Solar Power	Capacity	526 KWp	Onsite
Investment	30 MINR	Make-Panasonic		

Year	Technology	Type of energy	Onsite / Offsite	Installed Capacity	Generation (Million KWH)	% overall Electrical energy
FY-2022-23	Solar Power Plant	Solar	Onsite	736 KWp	1.000291	10.4287





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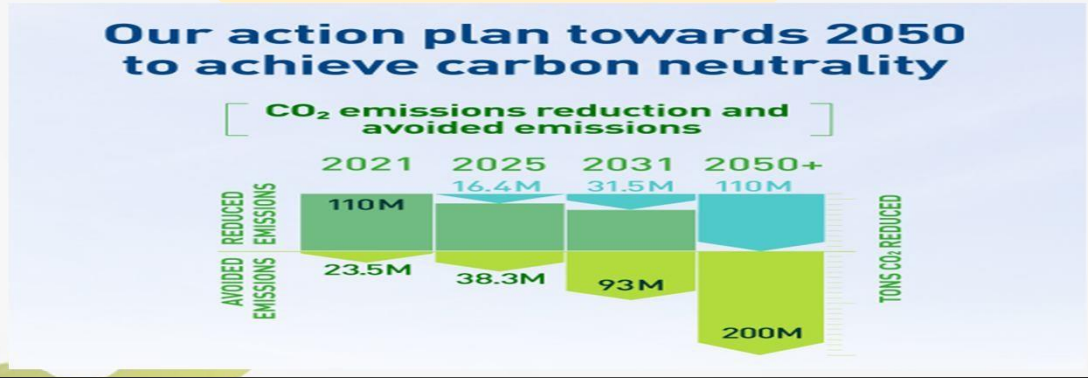
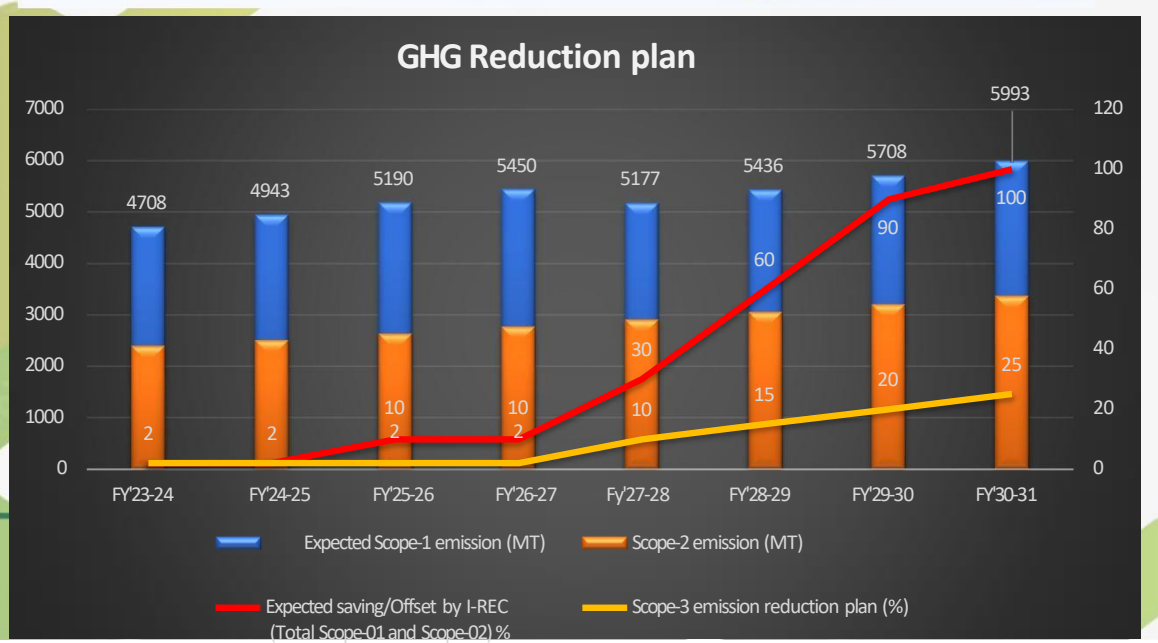
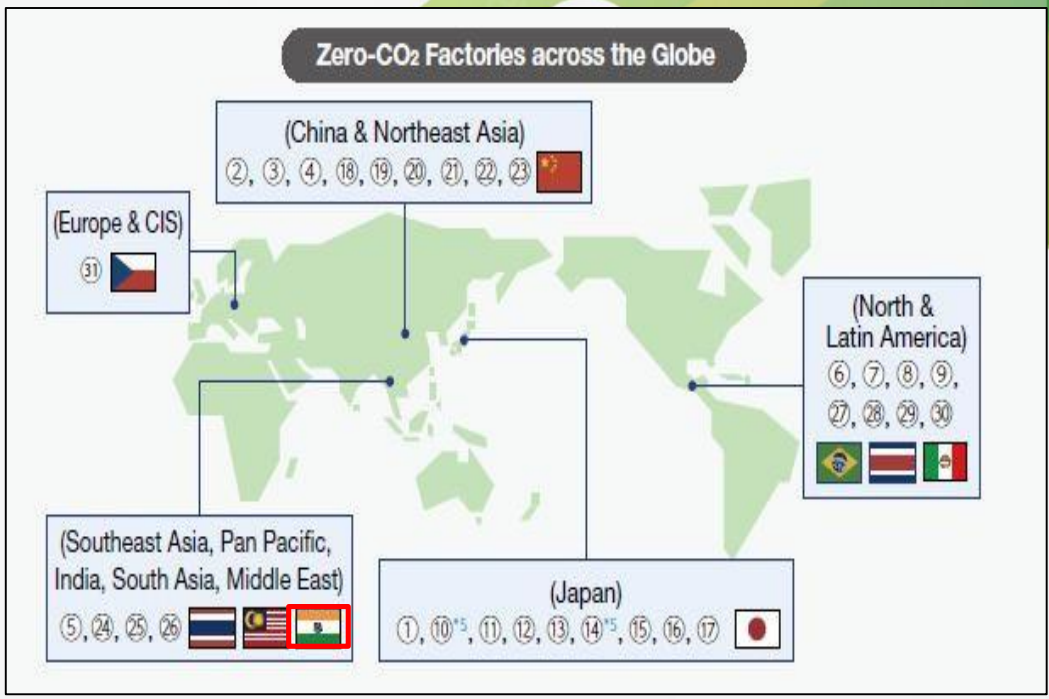
STRATEGIC ACTION PLAN FOR ACHIEVEING NET ZERO BY 2030

Achieve Net zero in 2030



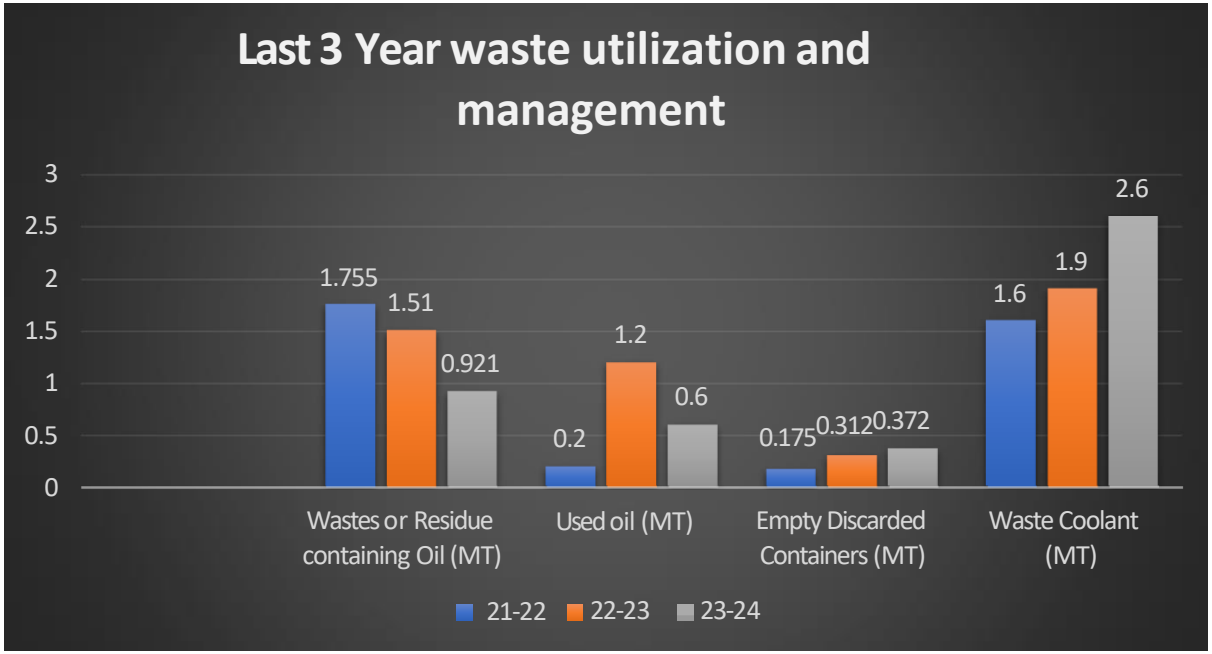




- Present Capacity of solar plant across PLSIND is 5.2 MW.
- Explore feasibility of renewable power generation by FY'25 and initiation for agreement activity.
- Presently we have one Net-zero factory in India.

WASTE UTILIZATION AND MANAGEMENT

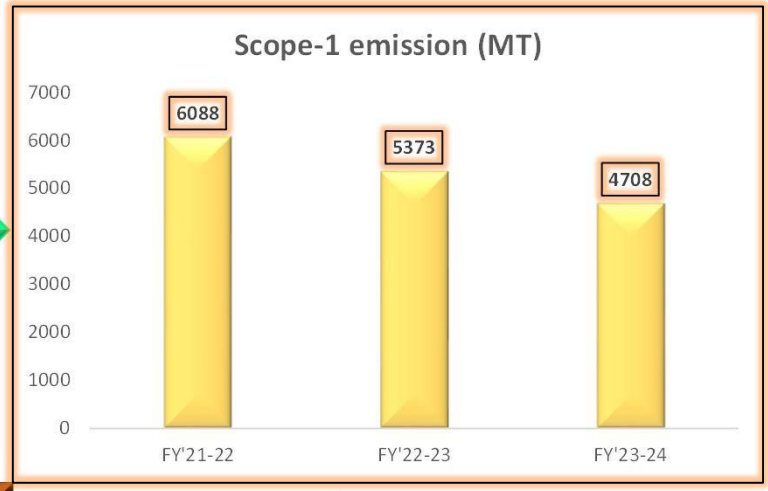
Sr. No.	Year / Type of Waste	21-22	22-23	23-24
1	Wastes or Residue containing Oil (MT)	1.755	1.51	0.921
2	Used oil (MT)	0.2	1.2	0.6
3	Empty Discarded Containers (MT)	0.175	0.312	0.372
4	Waste Coolant (MT)	1.6	1.9	2.6
5	**Total Water consumption (MT)**	3431	3240	16444

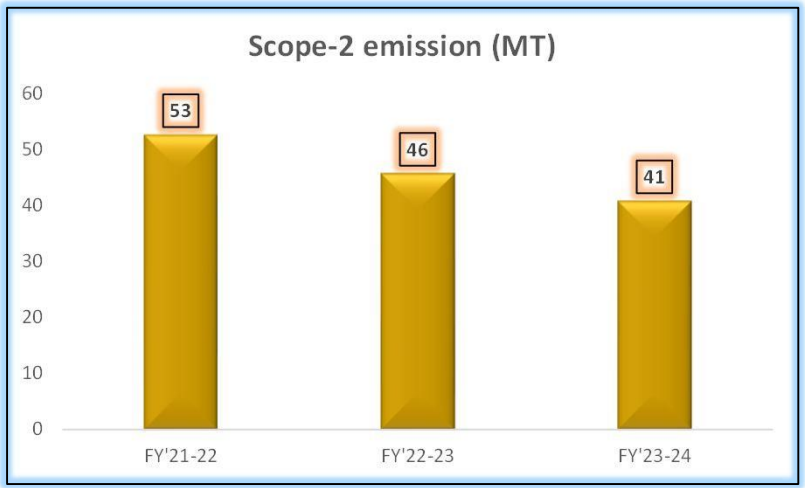


The Waste coolant generation has increased by 27 % due to new RBD machine and tank replaced activity done.

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

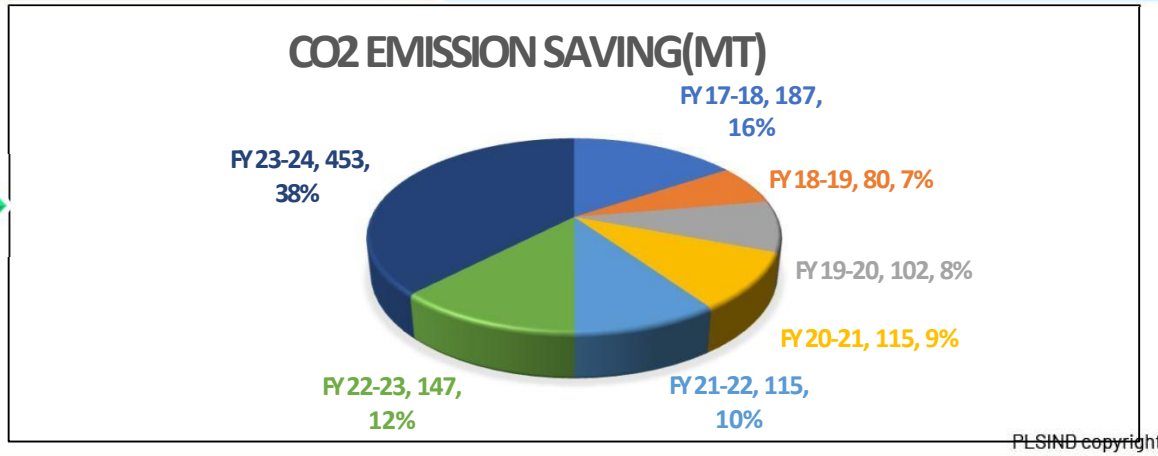
Year	Scope-1 emission (MT)	Scope-2 emission (MT)
FY'21-22	6088	53
FY'22-23	5373	46
FY'23-24	4708	41





Sr.No	Year	Saved Co2 Emission in Ton
1	FY'17-18	495
2	FY'18-19	1626
3	FY'19-20	2351
4	FY'20-21	2789
5	FY'21-22	2032
6	FY'22-23	1471

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

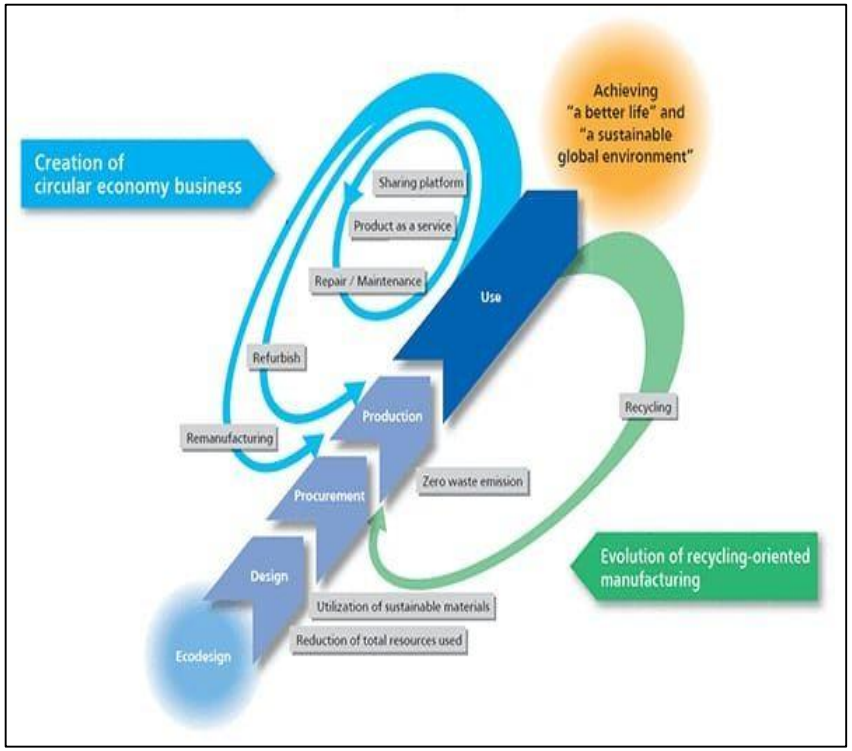


CIRCULAR ECONOMY (CE) BASED BUSINESS MODEL

- **Circular Economy (CE):**
- - Recycling ratio of factory waste: 99% or more
- - Use of recycled resin: 90 kt or more (cumulative amount from FY2023-2025)
- - CE-based business models/products: 13 businesses (10 businesses in FY2022)

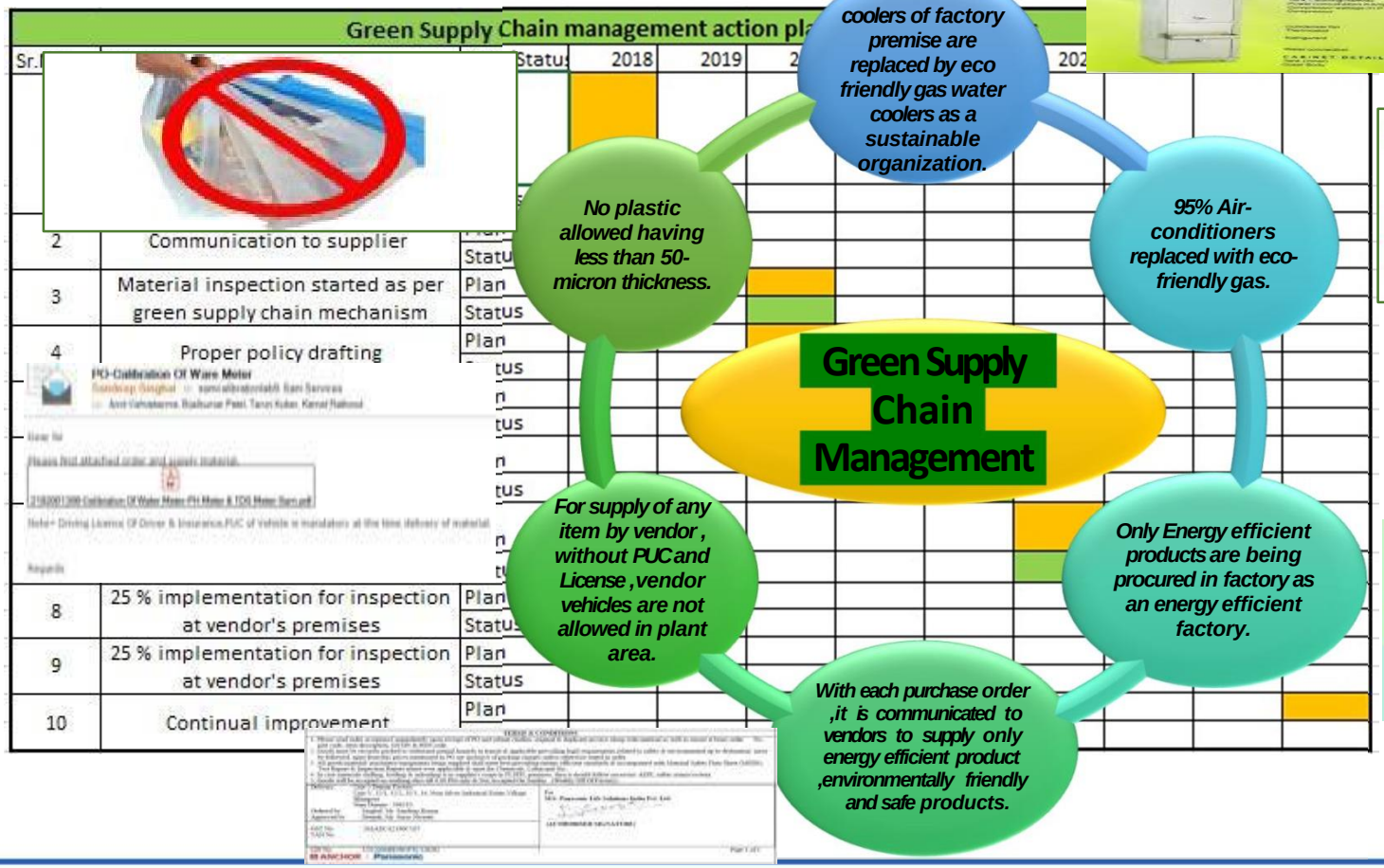
GREEN IMPACT PLAN 2024 (Fiscal 2025, 2031 targets and Fiscal 2023 actual results)

		Item		Fiscal 2023 actual results	Fiscal 2025 targets GREEN IMPACT PLAN 2024	Fiscal 2031 targets
Material issues	CO_2 / Energy	OWN IMPACT Emissions reduction in our own Value Chain[2]		– 21.70 Mt (9.39 Mt)[6]	16.34 Mt	31.45 Mt[7]
		Scopes 1 &2[*1]	Zero- CO_2 factories	Total 31 factories	Total 37 factories	
			CO_2 reductions	0.36 Mt	0.26 Mt	
		Scope 3[*1] (Category 11)	CO_2 reductions in use of our products by customers	– 9.1 Mt	16.08 Mt	
		CONTRIBUTION IMPACT Avoided Emissions for society[3]		37.23 Mt	38.30 Mt	93.00 Mt
	Resources/ CE* *Circular Economy	Factory waste recycling ratio[4]		99.1%	99.0%	
		Recycled resin used[5] (Fiscal 2023 to 2025 total for GIP2024 targets)		12,400 tons	Fiscal 2023 to 2025 total 90,000 ton	
		Circular economy business models and products (Total)		10 businesses	13 businesses	
Continuing challenge	Biodiversity	Reducing and restoring the impact of business activities on the ecosystem to become nature positive				
		Procurement of sustainable raw materials, businesses that contribute to biodiversity green spaces, and products and services that contribute to biodiversity				
	Water	Reduce water consumption in business activities and products/services				
	Chemical substances	Reducing the environmental impact of chemical substance's business activities and products				
	Local communities	Promote environmental initiatives to contribute to local communities and educate the next generation				
	Compliance	Ensure compliance with environmental laws and regulations				



We will promote effective utilization of resources and maximization of customer value by creating liner to circular economy business and evolving recycling-oriented manufacturing.

GREEN SUPPLY CHAIN MANAGEMENT SYSTEM



100% water coolers of factory premise are replaced by eco friendly gas water coolers as a sustainable organization.

No plastic allowed having less than 50-micron thickness.

95% Air-conditioners replaced with eco-friendly gas.

Green Supply Chain Management

For supply of any item by vendor , without PUC and License , vendor vehicles are not allowed in plant area.

Only Energy efficient products are being procured in factory as an energy efficient factory.

With each purchase order ,it is communicated to vendors to supply only energy efficient product ,environmentally friendly and safe products.

Panasonic

POLICY

...we at Panasonic Life Solutions ...ply chain mechanism.

...rces to integrate green supply

We will have special focus on:

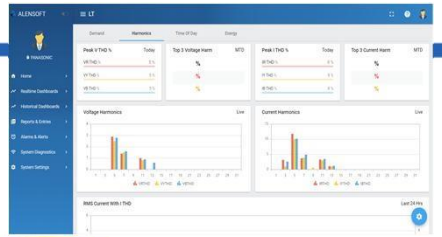
- Procurement of energy efficient and eco friendly products.
- Continual improvement in manufacturing process, to reduce energy consumption.
- Comply with all relevant statutory and other requirements applicable to green supply chain mechanism.
- Set and review objectives and targets for continual improvements related to green supply chain.

...other associate's competency

...nservation and green supply

For Panasonic Life Solutions India Pvt. Ltd.

MONITORING, TEAM-WORK AND EMPLOYEE ENGMENT



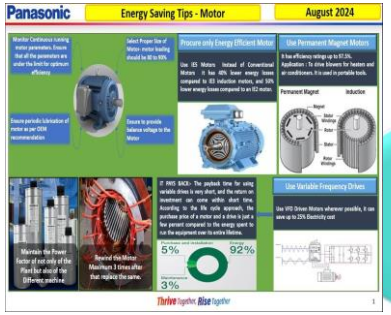
Online energy management system & Solar Generation system is available.

Daily energy waste observation is being monitored and recorded

Energy review meeting is chaired by MD for Global Level & Factory Manager at plant Level

Separate investment budget of 5 MINR is allotted for energy saving projects for FY-24.

Energy saving tips & Energy awareness programme is organized on regular basis .



Star Energy Saving Performer & Best Energy Saving Department award scheme for continual Energy improvement

Monitoring Teamwork & Employee engagement

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

TECHNOLOGY UPDGRADATION FOR ROD BREAKDOWN MACHINE (RBD)

SRNO	PARAMETER	EXISTING RBD DC CONTROL SYSTEMS	NEW RBD AC CONTROL SYSTEM
1	Control system Type	DC	AC
2	Make	Siemens	Siemens
3	Technology	Old	Latest Digital
4	Present status	Becoming obselete	Readily available
5	Service support	Not easily available	Available
6	Spares	Not easily available	Available
7	Maint cost	High	Low
8	Power saving	Less, due to low power factor <0.65 lag	More, as power factor is good >0.8 lag
9	Speed	Maximum 25 MPS	Maximum 31.5 MPS
10	Current Running speed	18 MPS	31.5 MPS
11	Plant BP acheivement	Not possible - outsourcing required	Possible- excess capacity
12	KWH/MT	108	105 - because of less required maint machine available time will increase which leads to improving productivity and power consumption
13	Maintenance	Frequent Maint required	Maintenance free
14	Running cost	High	Low
15	Productivity	Less due to frequent required Maint	More as less maintenance
16	Approx power saving		3-5% over DC system

IMPLEMENTATION OF ISO 50001:2018


TÜVNORD

Certificate

Management system as per
ISO 50001: 2018

PANASONIC LIFE SOLUTIONS INDIA PVT. LTD.
(WIRE AND CABLE DIVISION)
Unit IV - 4 V 5, Silvar Industrial Estate,
Patalia Road, Bhimpore, Nani Daman - 396 210,
Daman & Diu,
India
with the locations according to the annex

Panasonic

Manufacture of Insulated Wires & Cables.

IAF

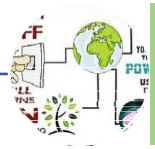
DAkkS

TÜVNORD GROUP

PEWIN Unit—04 is EnMS Certified Since Nov-17 & it's Transition form ISO 2011 to ISO 2018 has been Implemented in Jan'21.

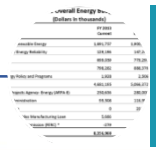
EnMP are being taken and implemented on regular basis by each department

Regular Energy review and monitoring is being done



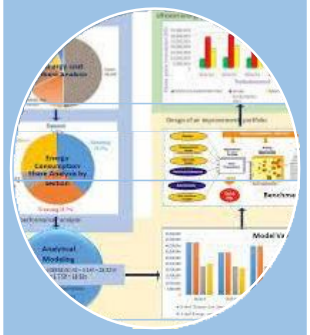
Energy awareness programmes are being planned on regular basis

More Emphasis given for procuring energy efficient products.

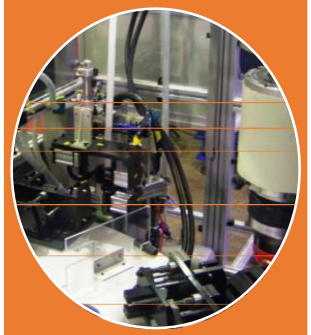


More than 1 % Budget kept for the Energy Saving project & IoT's on total turnover of the Factory

LEARNING FROM CII ENERGY AWARDS OR ANY PROGRAM



Section Wise Capturing of SEC in KWH/ MT Started as suggested by CII.



Automation Implementation of Energy Kaizen from Other Industries .

IFC System Installed for Air Compressor at the PLSIND U-4 Premises as per suggestion received From CII

Gain More Knowledge for Green Supply Chain management.

Zero Waste Land field certification

GreenCO Certification

Resource and Energy Management form APEX INDIA award & Golden Peacock Award

INTERNL GLOBAL PANASONIC GROUP AWARDS AND RECOGNITION


CERTIFICATE OF COMMENDATION

Director in Charge Award

India Daman Unit 5 Action Group for Reduction of Plant Facility Consumption Energy

You contributed greatly through the activities to reduce consumption of energy in the plant facilities by the introduction of solar power system.

In addition, you won the "National Energy Conservation Award 2019 Bureau of Energy Efficiency" 1st Prize in Consumer Goods Sector and this excellent achievement has improved our company value and brand value.

Therefore, we grant you the aforementioned award and this certificate of commendation on the occasion of the anniversary of the company foundation.

May 5, 2020

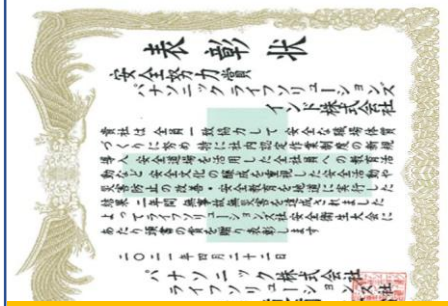
Director in Charge of HR

Toru Kanno

Life Solutions Company,

Panasonic Corporation Director in charge Award in FY'20

For Energy conservation


表彰状

安全努力賞

パナソニック ライフソリューションズ インド株式会社

Safety Effort Award in FY'21

For Safety improvement


Certificate of Commendation

1st LS Company Energy Saving and 3R Case Sharing Meeting

Good Idea Award

Panasonic Life Solutions India Pvt., Ltd. Unit-4 Production & Development

Award theme

Reduce Copper Scrap from 18.5 MT/Month to 14.9 MT/Month (19% Reduction)

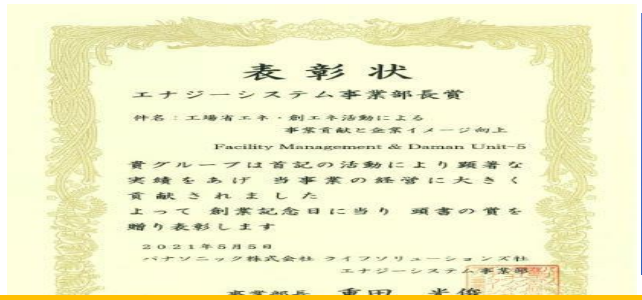
At the 1st LS Company Energy Saving and 3R Case Sharing Meeting's, your group's activity idea was selected, by a vote among employees, as showing particular merit.

We would like to further spread this initiative by presenting the award of the headline here.

June 30, 2021

Certificate of Commendation from LSCompany for Reducing the Copper Scrap at Unit-4 in FY'21

For 3R Category


表彰状

エナジーシステム事業部長賞

件名：工場省エネ・創エネ活動による

事業貢献と企業イメージ向上

Facility Management & Daman Unit-5

貴グループは首記の活動により顕著な実績をあげ 当事業の経営に大きく貢献されました

よって 創業記念日に当り 頌書の賞を贈り表彰します

2021年5月5日

パナソニック株式会社 ライフソリューションズ社

エナジーシステム事業部

Energy Saving Business Division Directors Award to unit 5 in FY'21

For Energy conservation

Various Awards received from Panasonic, Japan by PLSIND :

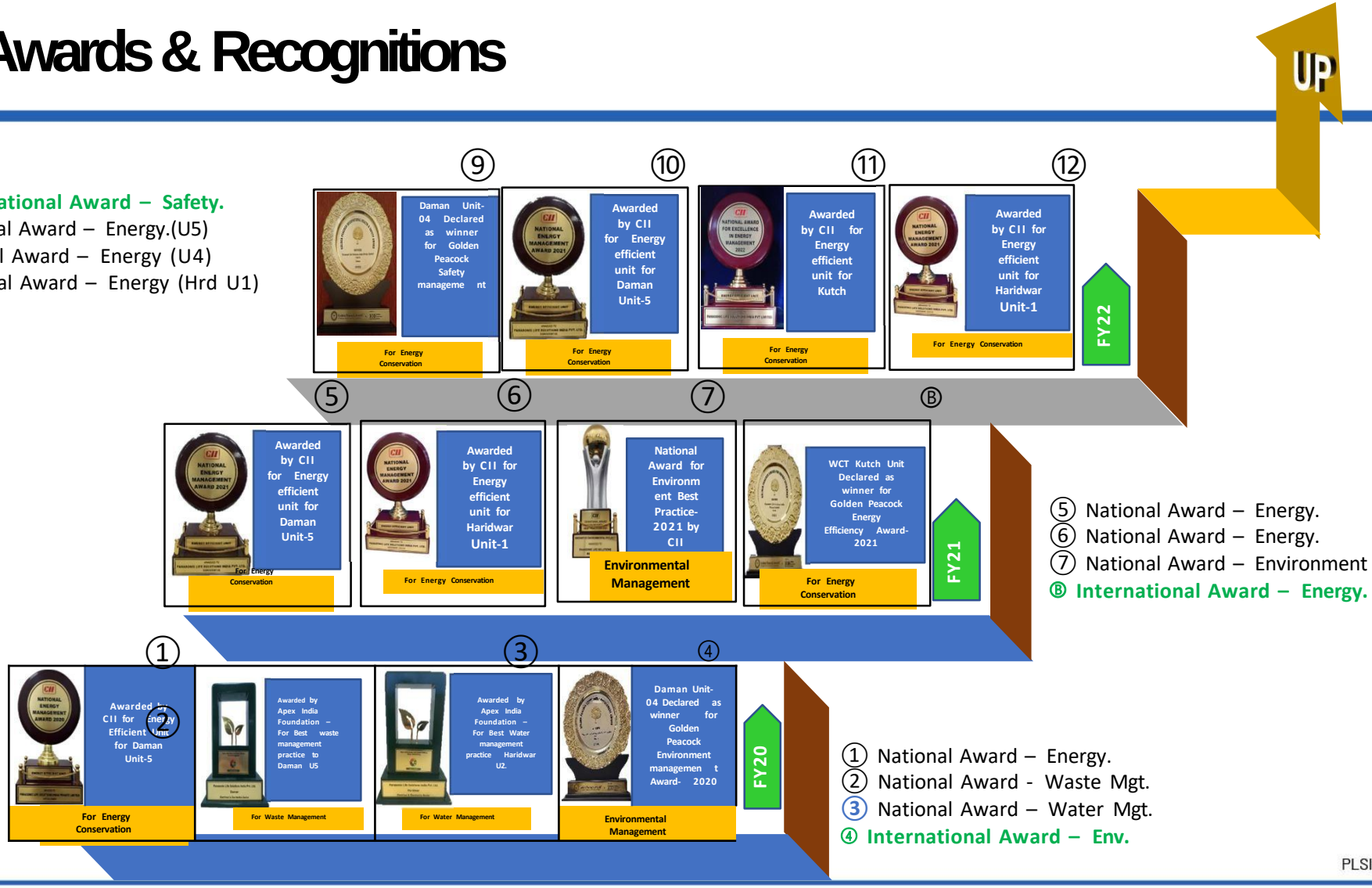
Certificate of Commendation : Directors In charge Award for Energy Conservation. – FY-20 Safety Improvement Award for safety initiatives by PLSIND – FY-21

Certificate of Commendation : Good Idea Award for Copper waste reduction. – FY-21

Directors Award : For Energy conservation Activity. – FY-21

External Awards & Recognitions

⑨ **International Award – Safety.**
⑩ National Award – Energy.(U5)
⑪ National Award – Energy (U4)
⑫ National Award – Energy (Hrd U1)



⑤ National Award – Energy.
⑥ National Award – Energy.
⑦ National Award – Environment
Ⓑ **International Award – Energy.**

① National Award – Energy.
② National Award - Waste Mgt.
③ National Award – Water Mgt.
④ **International Award – Env.**

External Awards & Recognitions – FY-23

Environment Best Practice - 2023

Award received for Environmental Projects from CII.

Energy Efficient Unit – Hrd U2

Award received for Energy Management Activities from CII, First Time.

Energy Efficient Unit – Daman U5

Award received for Energy Management Activities from CII, 4th Time..

Energy Efficient Unit - Kutch

Award received for Energy Management Activities from CII, 2nd Time.

External Awards & Recognitions – FY-23

HSE Excellence & ESG Global Awards

Award received for various safety initiatives across PEWIN

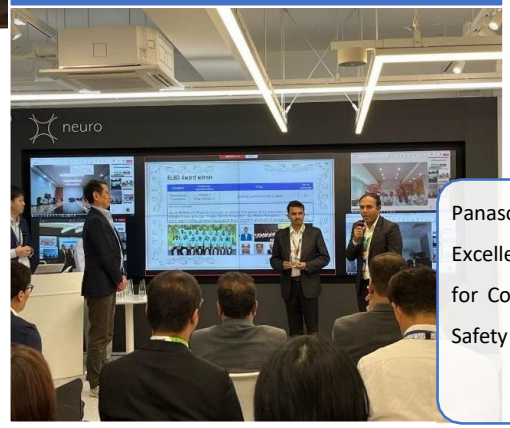
National Safety Convention –Gold Award

Gold Awards received by Unit-04 and Kutch Unit for Safety improvement at respective Units

Environment Best Practice - 2023

Award received for Environmental Projects from CII- 3rd time.

ELBD Excellence Award



Panasonic ELBD Excellence Award for Commendable Safety performance.

Golden Peackok safety Award

Award received for Energy Management Activities from CII, 4th Time..

Save Energy Today for Brighter Tomorrow

THANK YOU