PRESENTATION ON 23rd NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT Panasonic

PANASONIC LIFE SOLUTIONS INDIA PVT LTD. Unit-05, Daman



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



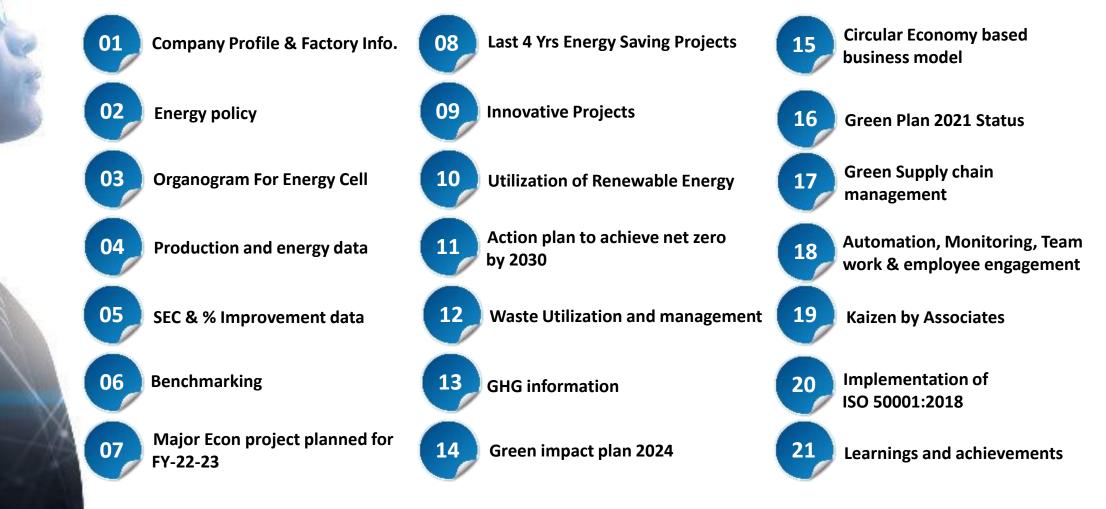


Mr. Bijalkumar Patel Manager-Facility Management (Certified Energy Auditor and Manager) CII Certified Energy Efficiency professional

Mr. Brijrajsinh Rana Executive Engineer – Facility Management

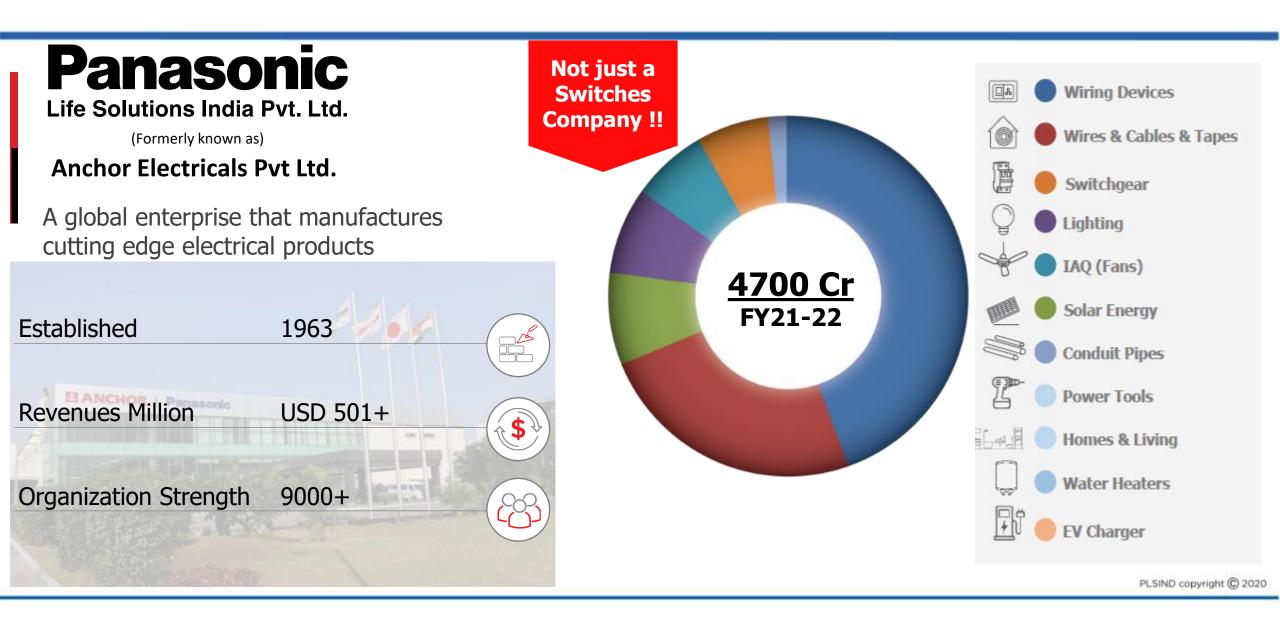


CONTENTS



ANCHOR

MAXIMISE YOUR POTENTIAL



ANCHOR



ENERGY POLICY

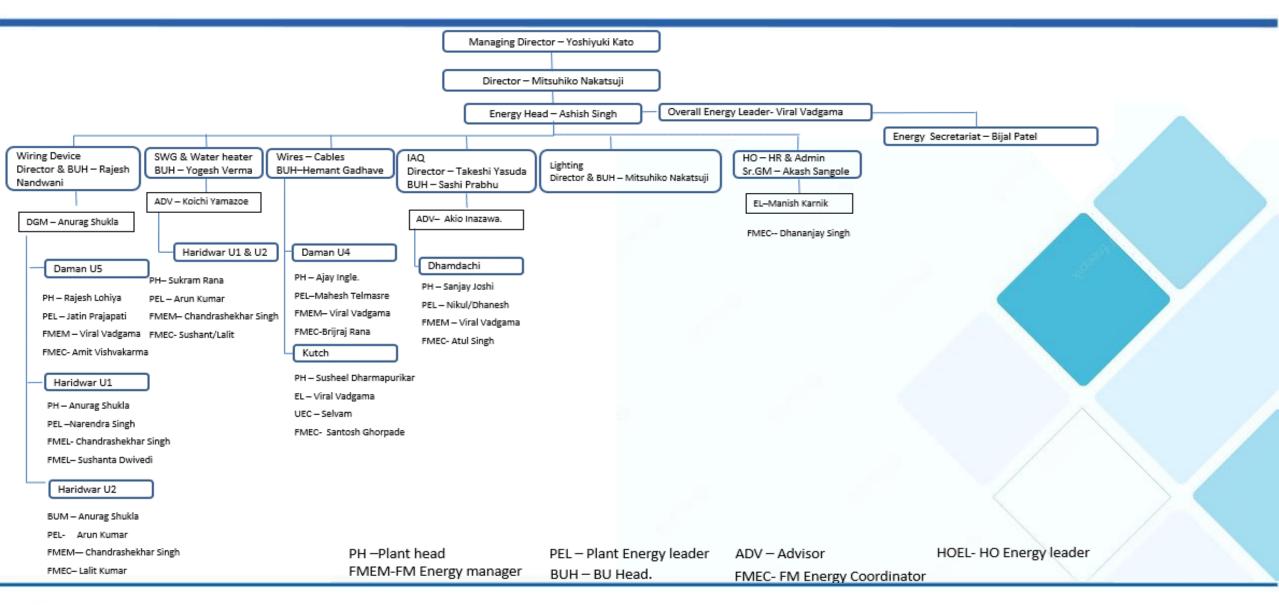
ENERGY POLICY Continual improvement is process to reduce As an integral part of our business philosophy and core values, we at Panasonic Life Solutions India Pvt. Ltd., are committed to achieve excellence in energy conservation. energy performance. To fulfil this commitment, we shall provide information & resources to integrate best energy conservation practices in all our activities. We will have special focus on: · Continuous monitoring and controlling energy consumption. Continuous monitoring Continual improvement in manufacturing process, to reduce energy consumption. and controlling energy Comply with all relevant statutory and other requirements applicable to energy use, consumption and efficiency. consumption. 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. Management commit for adopting energy efficient For Panasonic Life Solutions India Pvt. Ltd. technology, product and design. Energy conservation awareness to all Kazuki Yao employees.

Managing Director (Occupier) Date: 01.05.2021

ANCHOR

MAXIMISE YOUR POTENTIAL

ORGANOGRAM FOR THE ENERGY CELL



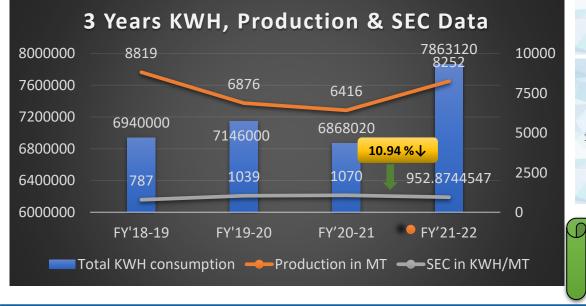
ANCHOR

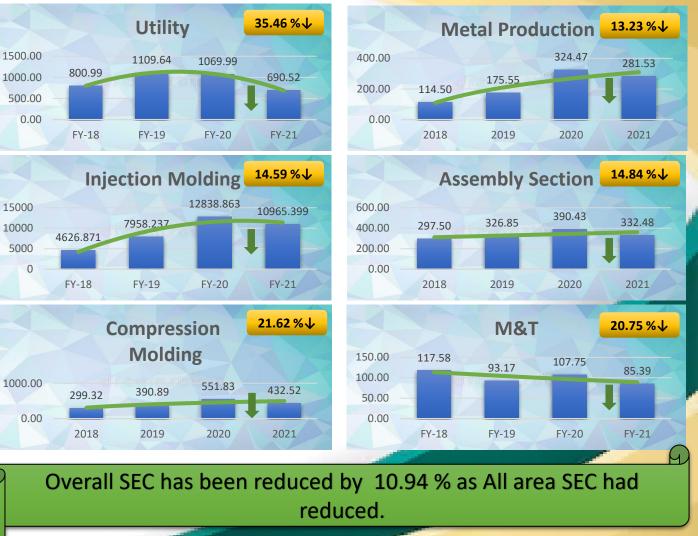
MAXIMISE YOUR POTENTIAL

Panasonic

OVERALL PRODUCTION, ENERGY AND SEC DATA - (FY 18-19 to 21-22)

Year	Total KWH consumption	Production in MT	SEC in KWH/MT
FY'18-19	6940000	8819	787
FY'19-20	7146000	6876	1039
FY'20-21	6868020	6416	1070
FY'21-22	7863120	8252	953

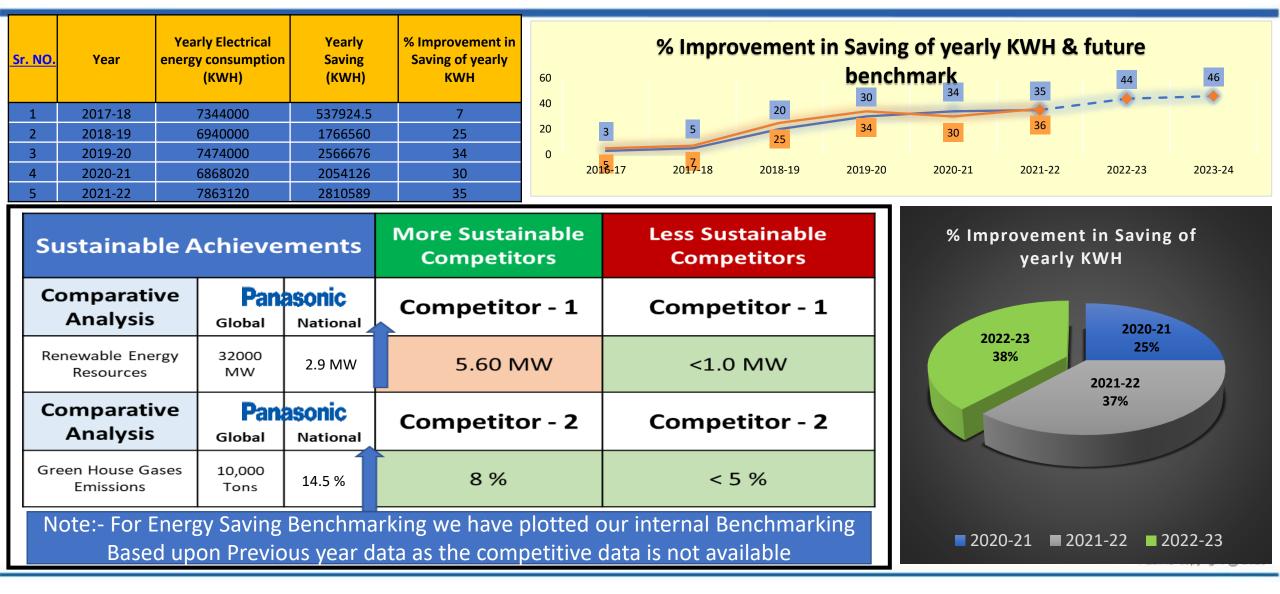




ANCHOR

MAXIMISE YOUR POTENTIAL

BENCHMARKING



ANCHOR



MAJOR E-CON PROJECTS FOR FY 2021-22

Sr. No	Title of Project	Annual Electrical Saving (kWh)	Annual Electrical Cost Saving (Rs million)	Payback (Months)	Comments
1	Reduction in Energy consumption by reducing operating frequency of STP blower motor at Factory and Commercial building STP and motor replacement to energy eff motor	30962	0.1461	0	Inhouse
2	Energy Conservation In Multiform Ing Machine	12960	0.061	0	Inhouse
3	Energy Conservation in Air-compressor by adopting innovative advance technology	184614	0.8684	9.67	Technology upgradation
4	Conversion of Elgi air-compressor (Commercial building) from fixed speed to Variable speed	23288	0.109	9.91	Technology upgradation
5	Energy conservation through improvement in productivity by 200% in dehumidifiers of Injection Molding machines	165672	0.7788	0	Inhouse
6	Reduce Air wastage by installing Pneumatic Valve controlling at Compression molding section	324000	1.53	0.2	Inhouse
7	Reduction in plant area air leakages - 6% Energy saving of total consumption of air-compressor	4776	0.224	0	Inhouse
8	Energy saving by reducing use of conveyer of injection molding machine by interlocking conveyer with machine	11292	0.0532	0	
9	Generation of renewal energy i.e., solar power generation	984538	4.65	0	
10	Reduced energy consumption by installation of motion sensor in 50 nos. light, Energy Saving	4320	0.0204	2.94	Technology upgradation
11	Reduced assembly area air-conditioners energy consumption by procuring energy efficient air- conditioner at Unit-05	160494	0.7591	36.36	Technology upgradation
12	Reduced energy consumption by installation of drive in Cooling tower fan and STP Air blower	12484	0.059	8.95	Technology upgradation
13	Reduced energy consumption by replacing CFL Lighting to LED in Canteen, Locker room, Washroom and Staircase Areas,	27648	0.131	0.46	Technology upgradation
14	Energy saving by utilizing cell fans instead of AC after regular shift 4:15 PM Energy saving	282963	1.3384	2.87	Innovative thinking
15	Reduce energy consumption by manufacturing molds with higher Cavities to reduce machine loading time Energy saving	66560	0.3148	0	In-house
16	Energy saving by installation of LED streetlight in place of conventional streetlight - Energy Saving	8985	0.0424	25.47	Technology upgradation
17	By increase utilization of Thyristor based APFC panel and install Active filter in the plant (Servo Controlled Machines) (Reduction of electricity by 2%)	504313	2.3854	8.05	Technology upgradation
18	Energy Efficient sludge pump set installation in both STP	720	0.003406	246.62	Technology upgradation
	Total	2810589	13.474406	4.96	

ANCHOR

MAXIMISE YOUR POTENTIAL

MAJOR E-CON PROJECTS FOR FY 2022-23

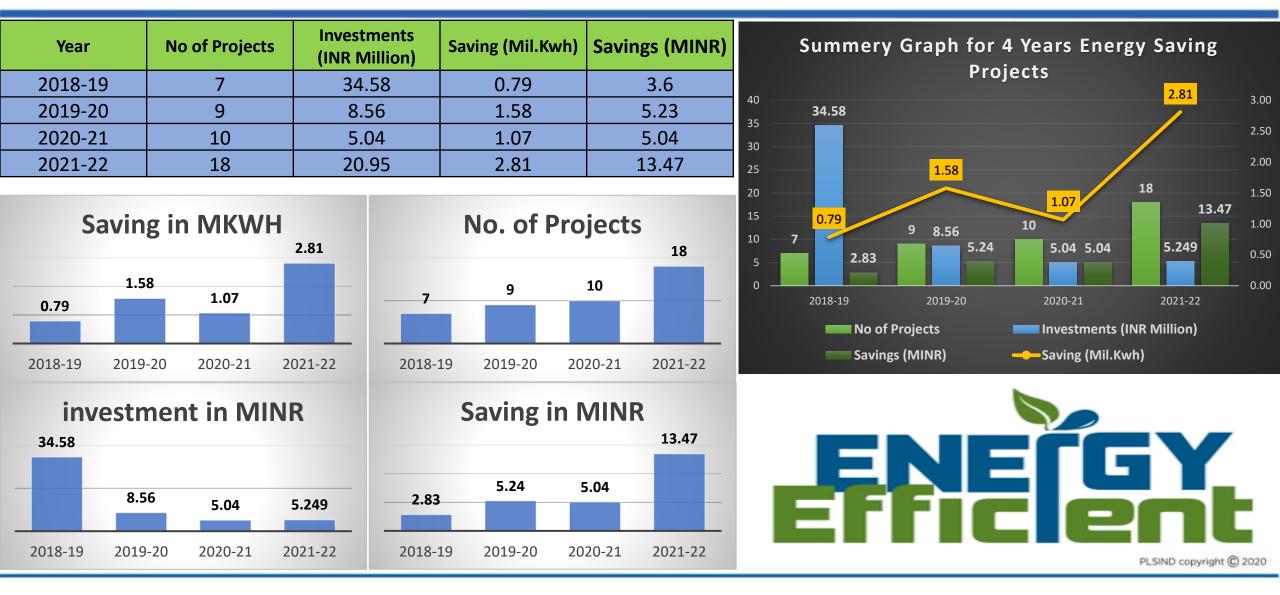
ANCHOR

Sr. No	Title of Project	Annual Electrical	Investment (Rs	Payback	Comments			
51.140		Saving (kWh)	million)	(Months)	connents			
1	Controlling of the air at shop floor area for Auto turning off ie approx. 1.0 %	7680	0	0	Inhouse			
2	Reduction in energy consumption by installation of Drive at cooling tower Pump. Ie approx. 5.2 $\%$	10260	0.3	68	Technology Upgradation			
3	Replacement of Air Guns with Energy Efficient Guns (10 Nos. of Guns) 12 % Energy Saving	16500	0.015	2	Technology Upgradation			
4	Energy saving by 20% by replacement of less cavity molds with higher cavity molds (04 Nos of Molds)	14890	0	0	Modification			
5	Installation of PIR Sensor in Main Stores Unloading Area for energy saving.ie 50 %	7200	0	0	Technology Upgradation			
6	Reduction in Power consumption by replacing old hydraulic machine with new all electric	17280	16	2157				
	injection molding machine (4 Nos of Machines) approx. 30 % Less power consumption compared to previous Machine				Technology upgradation			
7	Reduction of the energy consumption in the screw fitting table by use of 24 Volt Motor for the Screwing in place of 220 Volt motor 85 %	14800	0.05	8	Modification			
8	Energy saving at our existing Old fixed speed AC with VRV AC i.e. approx. 5.0 % for MCD & Design office	93720	1.8	45	Technology Upgradation			
9	Energy saving at our existing RO plant by replacing with energy efficient RO plant i.e. 31 %	1740	0.3	402	Technology Upgradation			
10	Reduction in energy consumption by reducing compressed air uses inside plant by closing all leakages .i.e. 6.3 % Reduction	46000	0	0	Inhouse Control			
11	Reduction in energy consumption by installation of Energy efficient motor at STP blower. I.e. approx. 5% by installing of I4 motor	2430	0.08	77	Technology Upgradation			
12	Street light Energy consumption reduction using solar street light at the plant area-Approx. 0.62 %	4330	1.4	753	Technology Upgradation			
13	10% HVAC Consumption Reduction by cooling Area reduction ie Installation of PVC Curtains/ Wall at the injection Molding Machine for Cooling and reduction of Consumption	49100	1	47	Inhouse			
	Total 285930 20.95							
PLSIND copyright © 2020								



9

ENERGY SAVING PROJECTS IMPLEMENTED IN LAST 4 YEARS

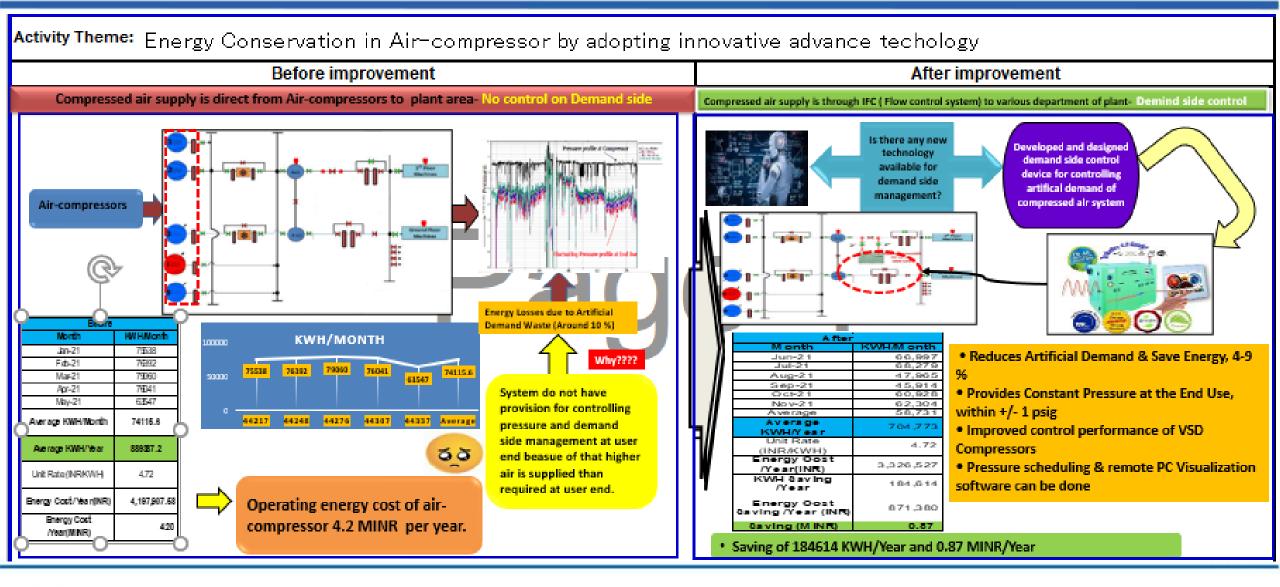


10

Panasonic

ANCHOR

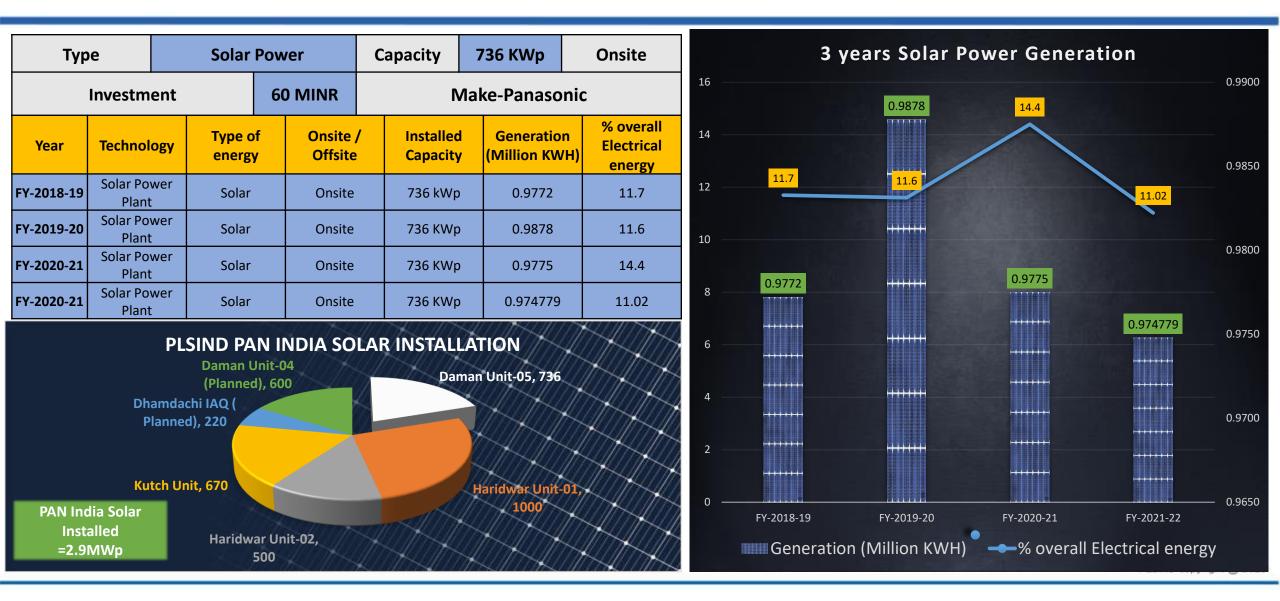
INNOVATIVE PROJECT IMPLEMNETATION



ANCHOR

MAXIMISE YOUR POTENTIAL

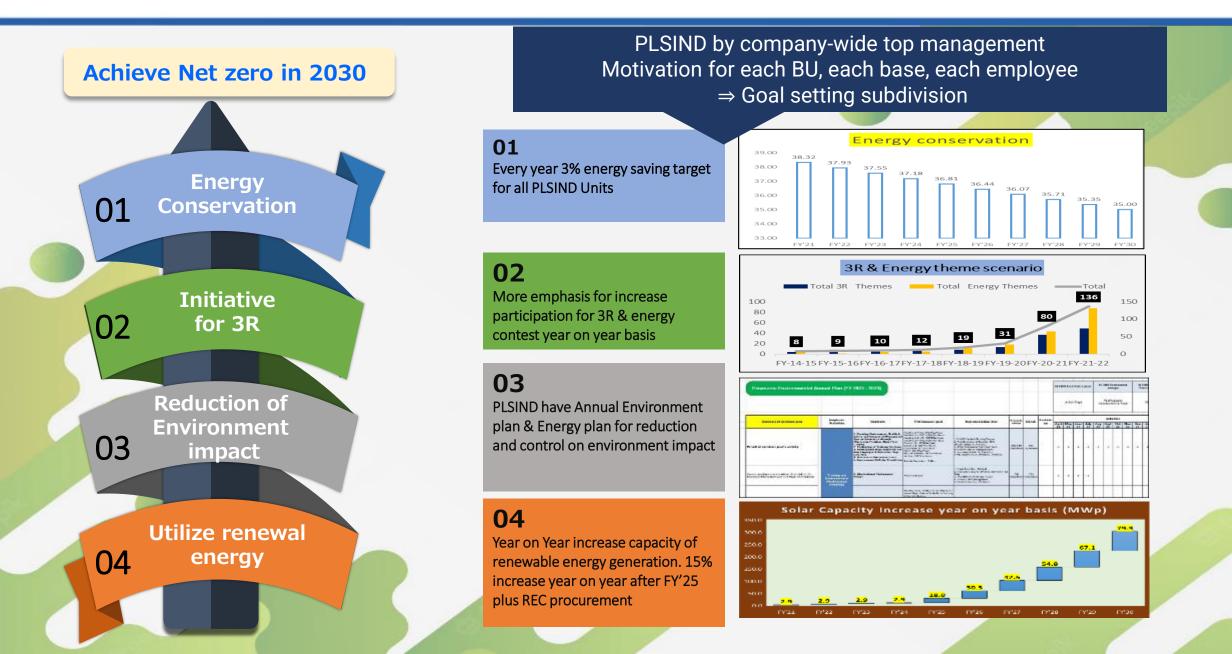
UTILIZATION OF RENEWABLE ENERGY RESOURCE



ANCHOR

MAXIMISE YOUR POTENTIAL

STRATEGIC ACTION PLAN FOR ACHIEVEING NET ZERO BY 2030



WASTE UTILIZATION AND MANAGEMENT

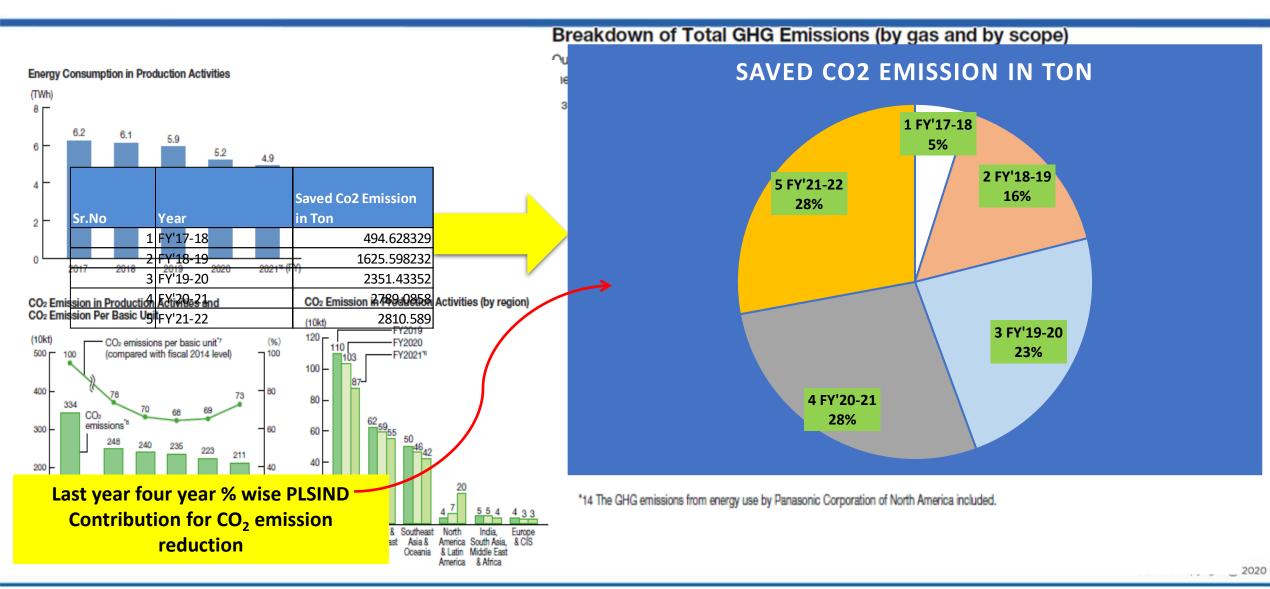
	Year	2018-2019	2019-2020	2020-2021	2021-2022
Sr.No	Type of waste generated	Quantity of waste generated (MT/year)		Quantity of waste generated (MT/year)	Quantity of waste generated (MT/year)
1	Wastes OR Residue Containing oil	3.328	2.426	2.019	2.345
2	Used Oil	8.93	5.547	1.973	2.95
З	Empty Discarded Containers	1.88	1.537	0.974	1.81
4	Waste Thinner & Flux	0.37	0.122	0.073	0.165
5	Waste Resin	0.72	0.2	0.29	0.455
6	Waste Coolant	1.43	1.8	1.4	0.8
7	Waste Batteries	ο	о	ο	0.176
	Total Water Consumption	31538 KL	28393 KL	24271 KL	28149 KL
	⁹ Treated Waste (ater Used for Gardening	22774 KL	20385 KL	14272 KL	18664 KL







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



ANCHOR

MAXIMISE YOUR POTENTIAL

Panasonic

PANASONIC GROUP RELEASES GREEN IMPACT PLAN 2024

ANCHOR

Outline of IMPACT PLAN targets for	2024 and	 OWN IMPACT (Scope 1, 2, 3^{*3}): Impact on emissions reduction from the Group's VC 	- CO ₂ reduction: Target of 16.34 Mt	 Net-zero CO₂ emissions factories: 37 factories (7 factories already emissions-free at end of FY2021)
CONTRIE IMPACT: Im emissions red society throug busines	pact on luction to gh existing	- CO ₂ reduction contribution to customers and society: Target of 38.3 Mt (23.47 Mt in FY2022)	 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 (5 businesses in FY2021)	PLSIND copyright © 2020



CIRCULAR ECONOMY (CE) BASED BUSINESS MODEL

Circular Economy (CE):

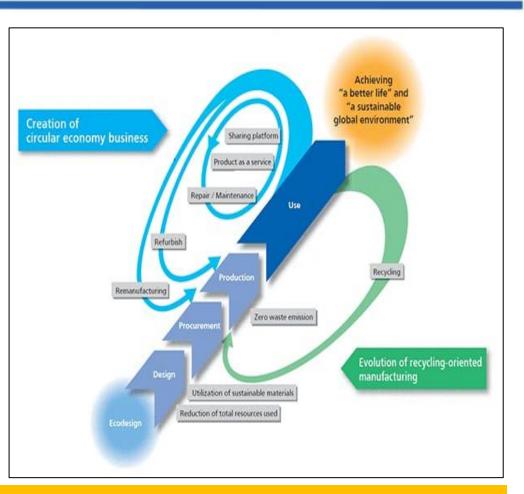
Recycling ratio of factory waste: 99% or more

Use of recycled resin:
 90 kt or more (cumulative amount from FY2023-2025)

 CE-based business models/products: 13 businesses (5 businesses in FY2021)

	OWN IMPACT			The second
		in our own VC ^{*1}	-	16.34 Mt ⁻²
	Scopes 1&2"	Zero-CO ₂ factories	7 factories	37 factories
02/	ecopeo las	CO ₂ reductions	-	0.26 Mt ⁻²
Energy	Scope 3'1			16.08 Mt ⁻²
	CONTRIBUTION	IMPACT	0000000	
	"Avoided Emiss	ions" for society	23.47 Mt	38.3 Mt
			98.7%	99% or more
Resources/ CE ^{'3}			43.3 Kt	90 Kt
15	CE-based busin	actions in our own VC*1 — as 1&2*1 Zero-CO2 factories CO2 reductions 7 factories — as 1*1 CO2 reductions in use of our products by customers — BUTION IMPACT d Emissions" for society 23.47 Mt ag ratio of factory waste 98.7%	13 businesses	

*3 CE: Circular Economy *4 *3-year sum": FY2020-FY2022 cumulative results / FY2023-FY2025 cumulative targets



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



ANCHOR



GREEN PLAN 2021 STATUS

GHGs from the Whole Supply Chain (by Scope)

	Orteres	Emission	ns(10 kt)
	Category	FY2020	FY2021
Scope 1 ^{*14}		39	33
Scope 2 ^{*15}		193	187
	1. Purchased goods and services	1,805	1,656
	2. Capital goods	72	64
	3. Fuel- and energy-related activities	24	23
	4. Upstream transportation and distribution	86.6	81.5
	5. Waste generated in operations	1.6	1.5
	6. Business travel	2.2*17	1.2"17
	7. Employee commuting	3.0"17	2.0*17
Scope 3 ^{*16}	8. Upstream leased assets	1.5 ^{°17}	2.4 ^{*17}
	9. Downstream transportation and distribution	2.0"17	1.7*17
	10. Processing of sold products	-	-
	11. Use of sold products	8,313	8,593*18
	12. End-of-life treatment of sold products	118	105
	13. Downstream leased assets	-	-
	14. Franchises	-	-
	15. Investments	-	-

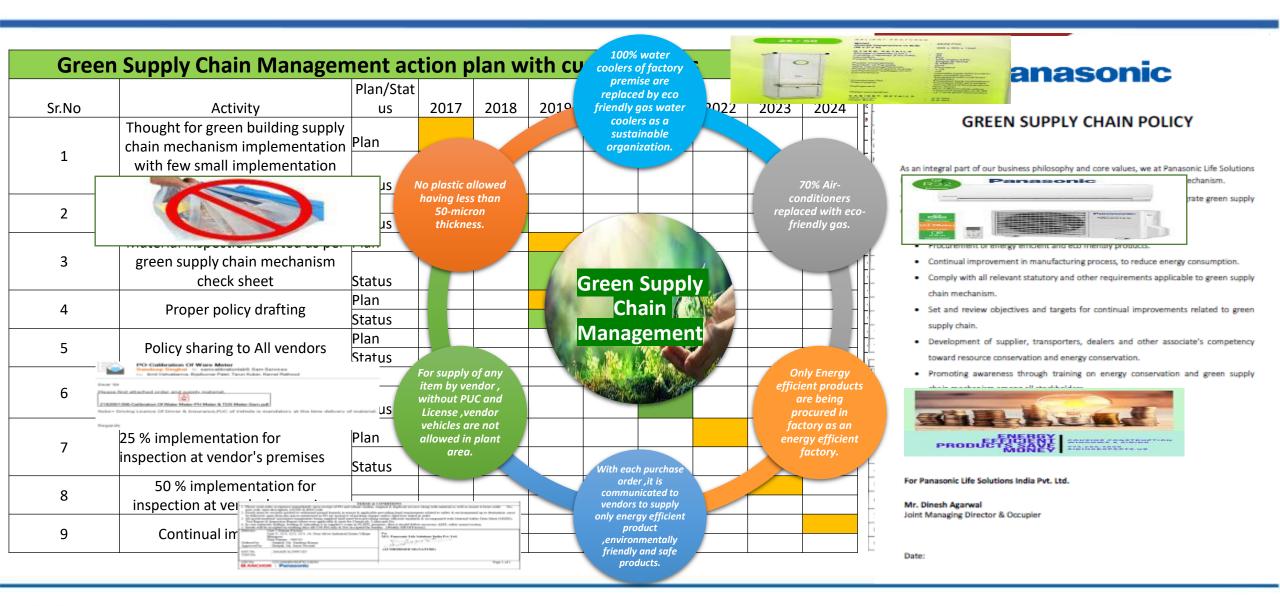
Environmental Action Plan "Green Plan 2021"

	Category	ory 2021 targets					
		Increase th to total end		Total energy created'1 : total energy used'2 = 1 : 8.5		1: 14.5	
			Increase amount of energy created	Amount of ene 30 TWh or n		16 TWh	
		Products & Services	Increase the size of contribution toward energy savings through products and services	through produ Direct ^{*4} : 25 1	ution toward energy savings icts and services ^{*3} : TWh or more TWh or more	Direct: 30 TWh Indirect: 1.8 TWh	
			Expand energy creation busin	lesses		_	
	Energy		Expand energy efficient products and services utilizing		es business, focusing on	_	
Material Issues			Promote zero-CO2 model factories - Establish model factory using advanced hydrogen technology - Establish at least one zero-CO2 model factory in each region ¹⁶		_		
		Factories	Factories Increase the use of renewab through the generation of renormality on-site and procurement of renergy		Renewable energy generated on our sites?: 40 GWh or more	35 GWh	
			Promote energy efficiency in p - Reduce energy loss through - Improve productivity through	_			
	Resources	Create circo models	ular economy business economy options for existing businesses 100%			_	
			ource consumption and e use of sustainable materials	Recycled resir (2019 to 2021 to	n usage ^{'a} : 42 kt or more ^(tal)	28 kt (2019 to 2020 total)	
		Achieve Zer factories glo	ro Waste Emissions from obally	Factory waste recycling rate ^{'9} : 99 % or more		98.7%	
	Water	Water Reduce water consumption in production activities					
Other environmenta sustainability goals	Chemical substances	Minimize the environmental impact of chemical substances usage in production activities and products					
bilit	Biodiversity	Promote pr					
nmenta y goals	Local communities	Promote en	vironmental initiatives to contri	ibute to local co	mmunities and educate the n	ext generation	
0 <u>m</u>	Compliance	Ensure com	pliance with environmental lav	vs and regulatio	ns		

ANCHOR



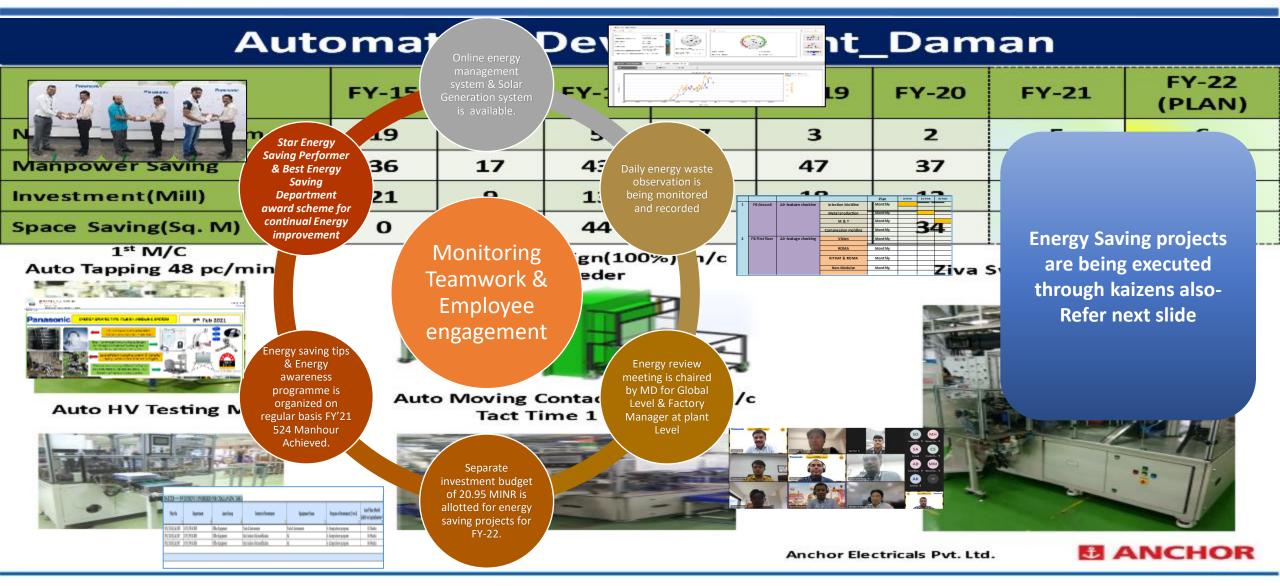
GREEN SUPPLY CHAIN MANAGEMENT SYSTEM



ANCHOR

MAXIMISE YOUR POTENTIAL

MONITORING, TEAM-WORK AND EMPLOYEE ENAGAMENT

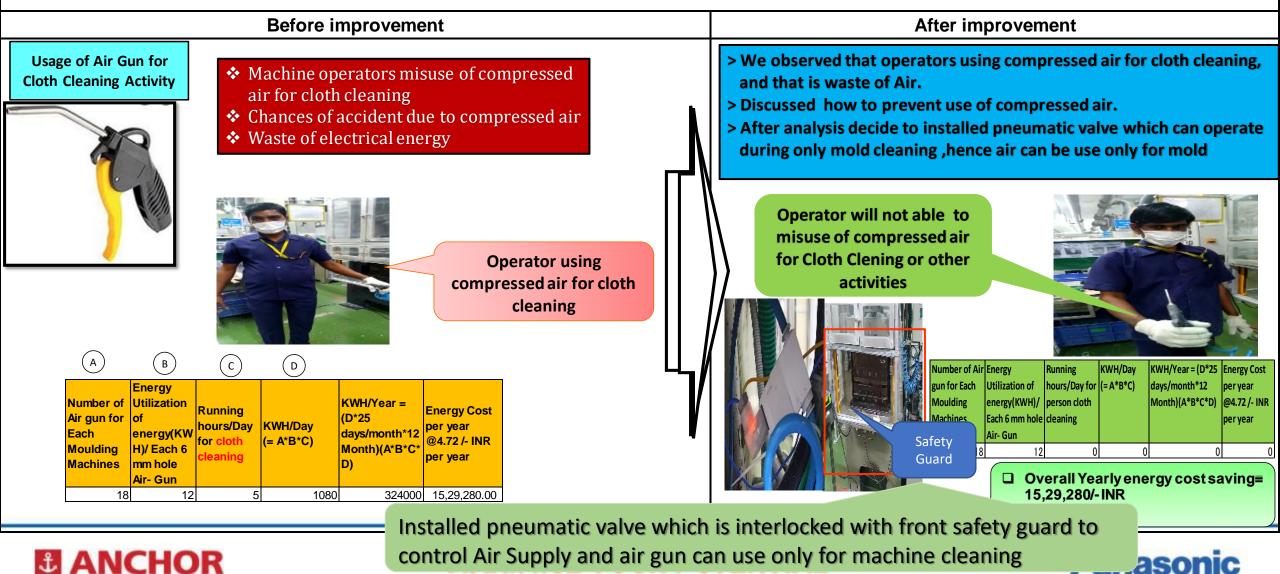


ANCHOR



INNOVATIVE KAIZEN PROJECT BY ASSOCIATES

Activity Theme: Reduce Air Leakage by installing Pnumatic Valve



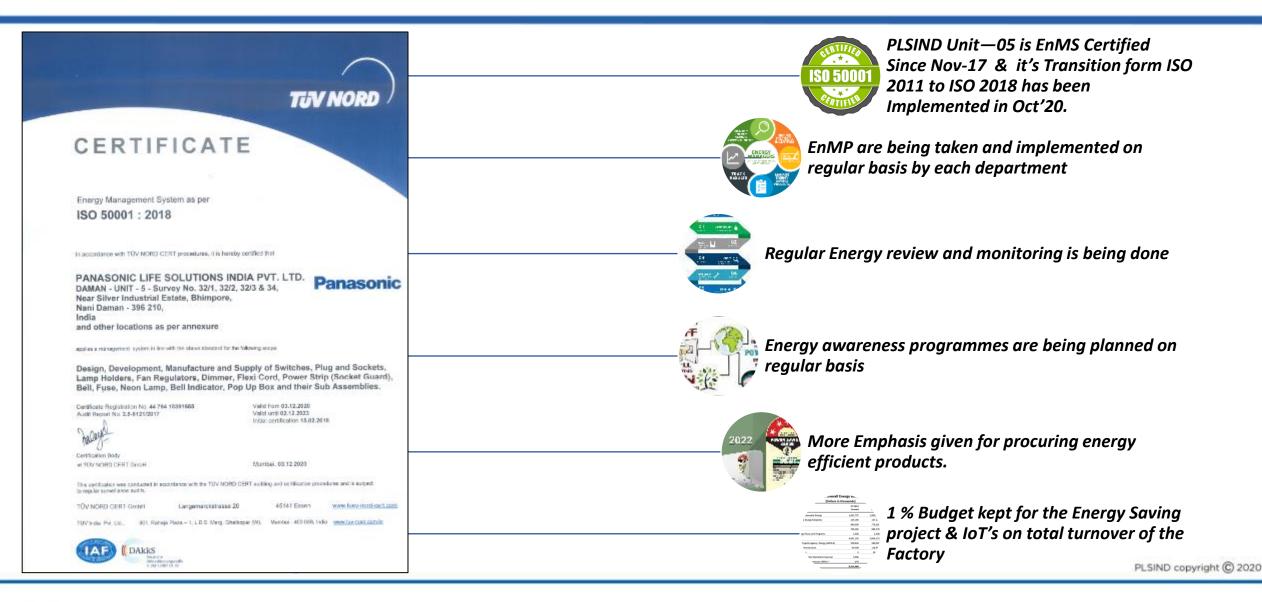
OTHER INNOVATIVE KAIZEN PROJECT BY ASSOCIATES

Improvement in productivity by 200% in dehumidifiers of Injection Moulding machines	1,65,672 KWH/Year Saving
Injection molding machine grinder interlocking with Main machine	4776.0 KWH/year Saving
injection molding machine interlocking with conveyer	11292 KWH/year Saving
Reducing operating frequency of STP blower motor	30223 KWH/year Saving
Reduce Air Leakage by installing Pneumatic Valve controlling at Compression moulding	3,24,000/- KWH/Year Saving
Energy Conservation In Multiforming Machines by process modification	12960 KWH/ Year Saving
STP motor replacement to energy efficient motor	739 KWH/Year Saving
TOTAL ACTIVITY =	7 Nos
TOTAL SAVING (IN KWH) = 5,4	49,662 KWH / Year
	PLSIND copyright (© 2020





IMPLEMENTATION OF ISO 50001:2018



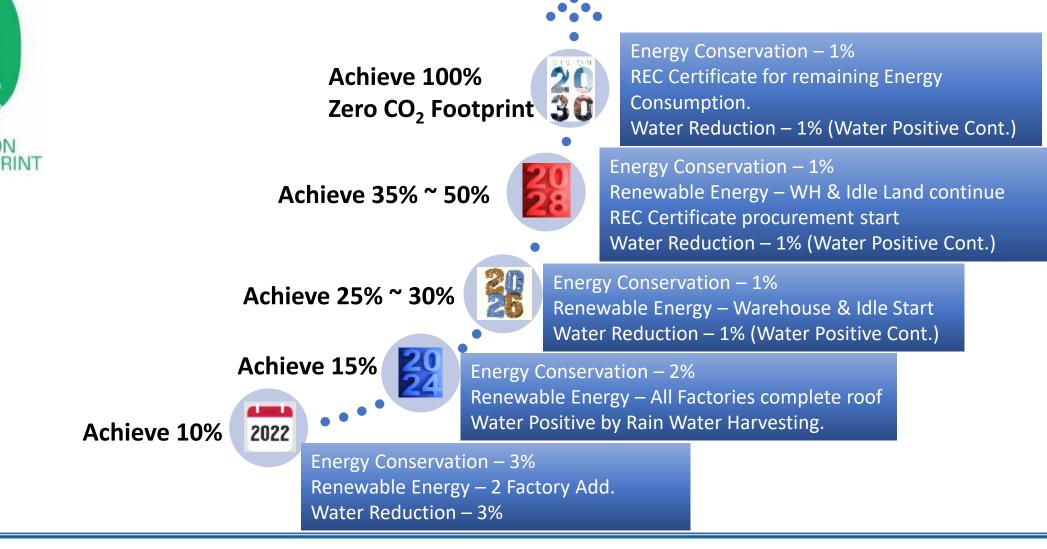
ANCHOR

MAXIMISE YOUR POTENTIAL

Milestones and Future Plan.

TOGETHER WE CAN MAKE NET ZERO BY 2030 POSSIBLE FOR Factories





ANCHOR

MAXIMISE YOUR POTENTIAL



LEARNING FROM CII ENERGY AWARD 2021 OR ANY PROGRAM



ANCHOR

MAXIMISE YOUR POTENTIAL



INTERNL GLOBAL PANASONIC GROUP AWARDS AND RECOGNITION



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

ANCHOR

MAXIMISE YOUR POTENTIAL



EXTERNAL AWARDS AND RECOGNITIONS



Thank You

Contact Details:-Name:-Mr.Viral Vadgama E-mail:-viral.vadgama@in.panasonic.com Mobille no:-8980717960

PLSIND copyright © 2020



ANCHOR