NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT

SMR Automotive Systems India Ltd – Chennai [Vision Division]

Presented By

Ashok Jindal [Unit Head – Operations]

Manickavel [DGM – Maint & EMS]

CII
Confederation of Indian Industry

motherson

Introduction - SMR Automotive System India Ltd

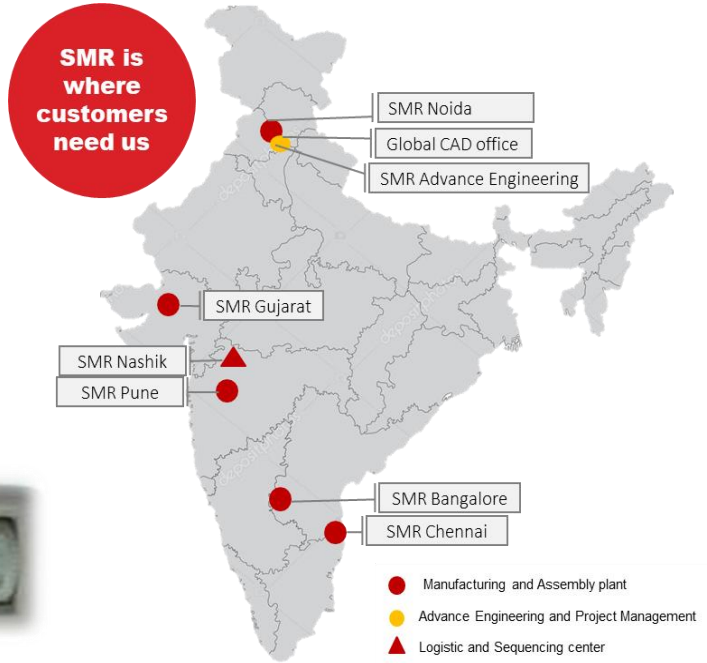
motherson

SMR Chennai - Information

- Foundation : April 2003
- Plant Location : Chennai, Tamil Nadu
- Contracted DM : 1.4 MW
- Energy Used : Electricity, Diesel, LPG
- Consumption : ~ 7.7 Mil. KWH / Year
- Plant operation : 300Days / Year (3 Shift Operation)

50001 ISO CERTIFIED

SMR India Footprints



Products

Exterior Mirrors

Interior Mirrors

Cabin Reading Lamps

Customer

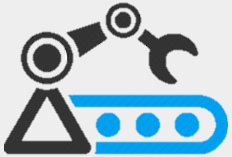
HYUNDAI · KIA · RENAULT NISSAN MITSUBISHI · TOYOTA · SUZUKI · RENAULT · STELLANTIS · Ford

Manufacturing Process

Mirror Assembly

Manual cum equipment aided assembly process

MM5 Assembly

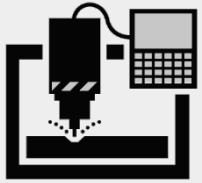


Fully Automated Assembly Process

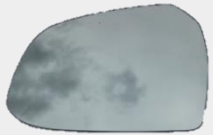
Paint Shop

Robotic operated paint shop

Glass Line



Auto glass cutting & coating process

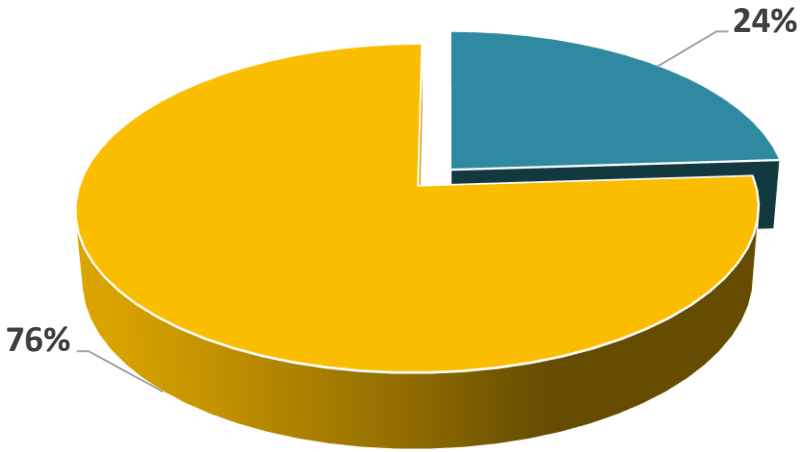


Injection Molding

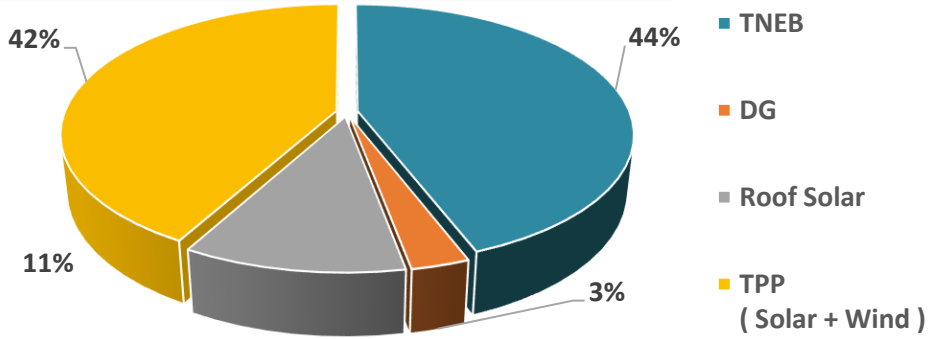
All electric injection molding process

Energy Consumption Overview

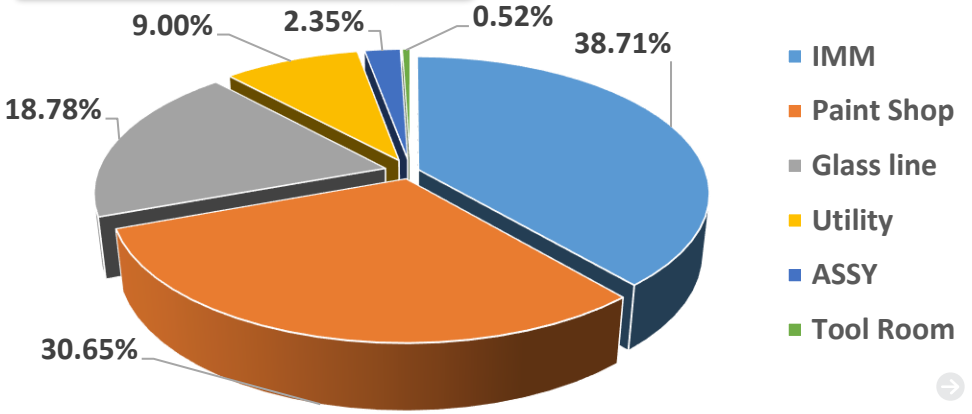
Plant transformation cost – 23~2024



Electrical Sources stratification – 23~2024

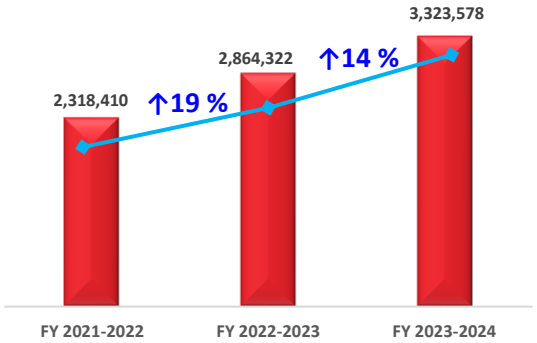


Section Wise Distribution

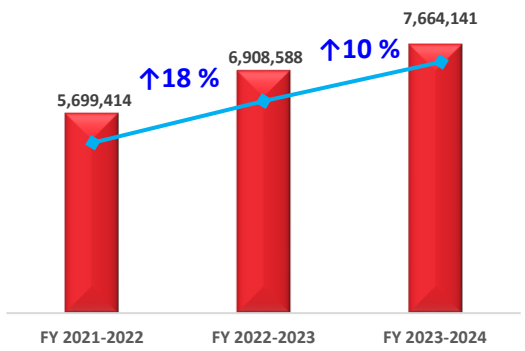


Production data and Energy consumption
(FY 21-22 ~ FY 23-24)

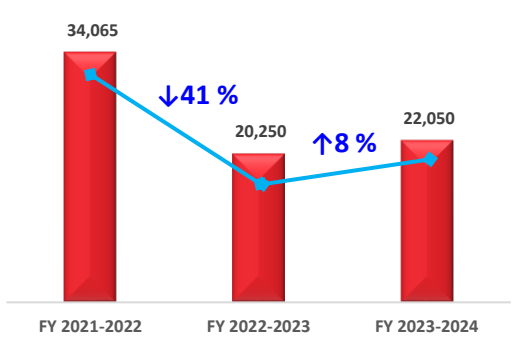
Production qty



Electrical



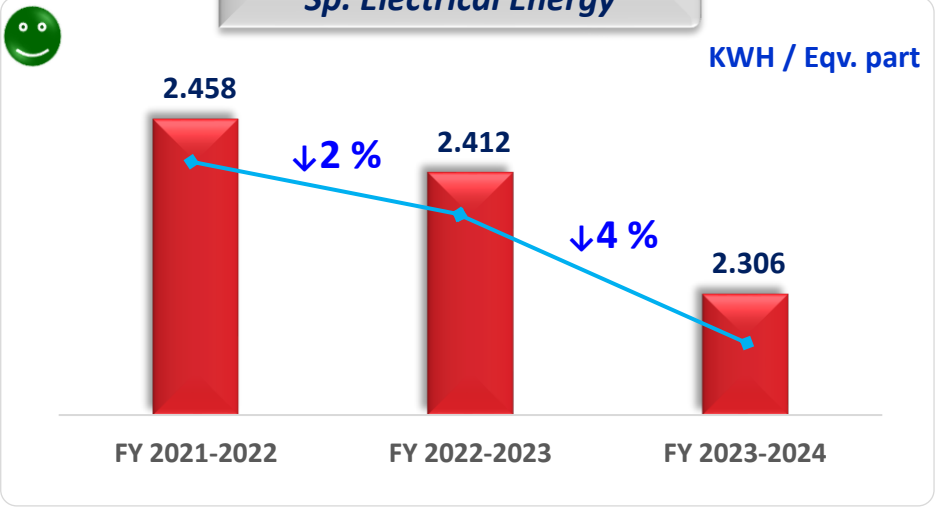
LPG



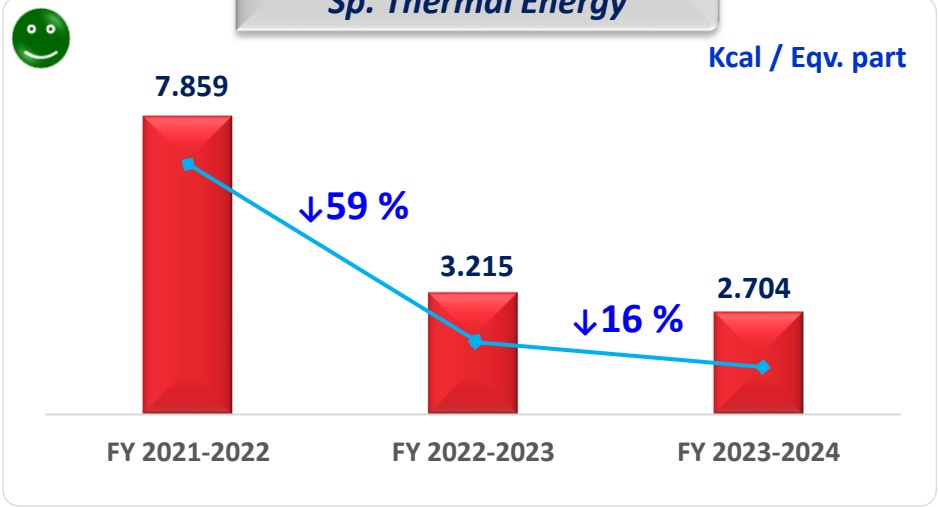
Parameters	Units of Measurements	FY 2021-2022	FY 2022-2023	FY 2023-2024
Production qty (ORVM & IRVM)	Each	23,18,410	28,64,322	33,23,578
Electrical consumption	kWh	56,99,414	69,08,588	76,64,141
LPG consumption	Kgs	34,065	20,250	22,050

Sp. Energy consumption - Electrical & Thermal
(FY 21-22 ~ FY 23-24)

Sp. Electrical Energy



Sp. Thermal Energy



6% Reduction in last three years

Implement the Energy saving activities and Improve the Equipment Efficiency

66% Reduction in last three years

Paint shop washing chemical used instead of hot water washing (Hot water Prewashing eliminated)

TOTD – Base load Challenge

Energy Intensity Reduction

MACHINE SELECTION

33 NUMBERS OF ALL ELECTRIC INJECTION MOLDING MACHINES IN PLACE OF HYDRAULIC

-35%

ENERGY INTENSITY REDUCED BY **35%**

HVLS INSTALLATION

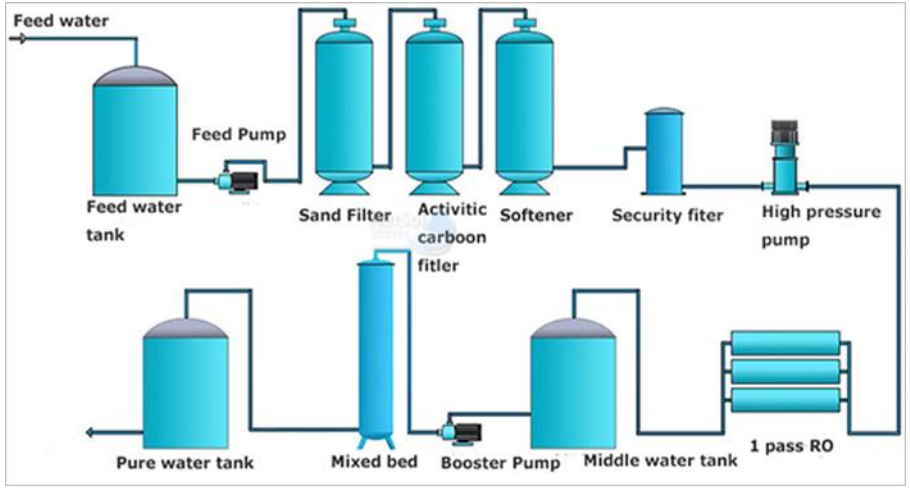
12 NUMBERS OF HVLS FANS PROVIDED FOR BETTER AIR CIRCULATION AND ENERGY REDUCTION AGAINST SMALL FANS

-31%

ENERGY INTENSITY REDUCED BY **31%**

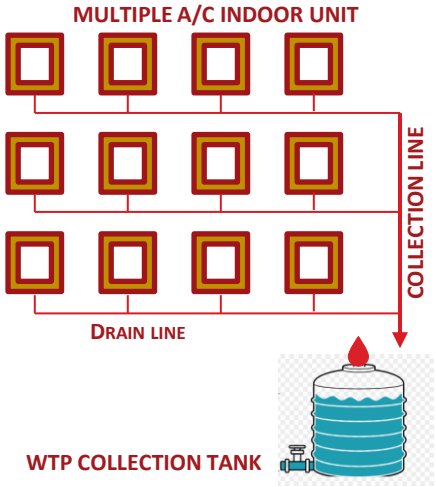
Water usage reduction

WATER TREATMENT



12,517 KL PER ANNUM WATER HAS BEEN REUSED AFTER TREATMENT. ZLD ALSO USED TO OPTIMIZE THE WATER REQUIREMENT

AIR CONDITIONER DRAIN WATER



13.5 KL WATER PER ANNUM HAS BEEN COLLECTED FROM AIR CONDITIONERS CONDENSATE AND USED ALONG WITH PROCESS WATER TANK

Water usage reduction

ADIABATIC COOLING TOWER

80% WATER SAVING BY THE USAGE OF ADIABATIC COOLING TOWER IN PLACE OF OPEN TYPE COOLING TOWER

RAIN WATER HARVESTING SYSTEM

18,980 KL WATER PER ANNUM SAVED / RECHARGED THROUGH RAINWATER HARVESTING SYSTEM

WATER INTENSITY REDUCED BY **18%**

Major ENCON Project - Internal Benchmarking

motherson

Short – Term Plan

- Energy Audits
- Employee Engagement
- IE2 motors replacement with IE4
- Induction Heater instead of Mica heaters
- Dehumidifier set point optimization
- Barrel Heater Jackets
- HVLS fan Installation
- Robot cycle time reduction
- Dryer energy saving kit

Long – Term Plan

- EC Fans instead of Induction motor in Air handling unit
- Compressor Waste heat recovery system
- Utilization of dual source Fuel for Diesel generator (PNG & Diesel)
- Group captive power Procurement
- Conversion of LPG oven to Electric oven
- Chiller replacement from Air cooled to water cooled

List of Major Encon Projects planned - FY 2024 -25

S.No	Installed Date	Description	Vertical / Location	KWh Savings / Month	Monthly Cost Savings in INR	KWh Savings / Annum	Annualized Cost Savings in INR	Investments	ROI in years
1	Mar-24	Energy Saving Kit for IMM Dryer Dryer 6	Molding	2,405	22,850	28,863	2,74,199	2,00,000	0.7
2	Aug-24	Sludge Pit Water Circulation pump Motor VFD	Paint Shop	2,080	19,760	24,960	2,37,120	1,03,040	0.4
3	Sep-24	Energy Saving Kit for IMM Dryer Dryer 7	Molding	2,405	22,850	28,863	2,74,199	2,00,000	0.7
4	Sep-24	Energy Saving Kit for IMM Dryer Dryer 8	Molding	2,405	22,850	28,863	2,74,199	2,00,000	0.7
5	Sep-24	Energy Saving Kit for IMM Dryer Dryer 9	Molding	2,405	22,850	28,863	2,74,199	2,00,000	0.7
6	Sep-24	Energy Saving Kit for IMM Dryer Dryer 10	Molding	2,405	22,850	28,863	2,74,199	2,00,000	0.7
7	Oct-24	Solar Light Pipe at FG area and Bin Cleaning area	FG area	1,136	10,789	13,628	1,29,466	5,00,000	3.9
8	Dec-24	Artic Master for 74 TR Chiller	Paint Shop	2,834	26,923	34,008	3,23,076	7,00,000	2.2
9	Feb-25	EC fans in place of AHU blowers	Paint Shop	6,424	61,028	77,088	7,32,336	12,00,000	1.6
Total				24,500	2,32,749	2,93,999	27,92,991	35,03,040	

Energy Projects in Pipeline…

▪ Group captive power - Solar PPA

- ▪ **Project Information**
  - ✓ To execute Group captive model power purchase to get less CO2 emission
- ▪ **Investment Details**
  - ✓ Cost Saving 6.93 mio INR / Year
- ▪ **Benefits**
  - ✓ Co2 emission reduced up to 2742 t CO2e
  - ✓ Cost Saving 6.22 mio INR / Year
- ▪ **Year of Implementation - 2025**

▪ Enhancement of HVLS Fan

- ▪ **Project Information**
  - ✓ By using HVLS fans to cater the air requirement in shop floor for human comfort
- ▪ **Investment Details**
  - ✓ Cost Saving 1.59 mio INR / Year
- ▪ **Benefits**
  - ✓ Co2 emission reduced up to 96.24 t CO2e
  - ✓ Cost Saving 1.04 mio INR / Year
- ▪ **Year of Implementation - 2025**

▪ EC fans in place of AHU blowers

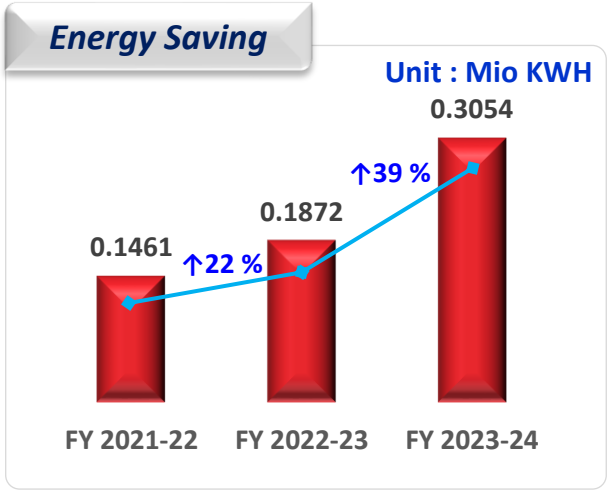
- ▪ **Project Information**
  - ✓ Usage of Electronically Commutated motor in place of Induction motor at AHU for energy efficiency
- ▪ **Investment Details**
  - ✓ Cost Saving 1.19 mio INR / Year
- ▪ **Benefits**
  - ✓ Co2 emission reduced up to 55.04 t CO2e
  - ✓ Cost Saving 0.7 mio INR / Year
- ▪ **Year of Implementation - 2025**

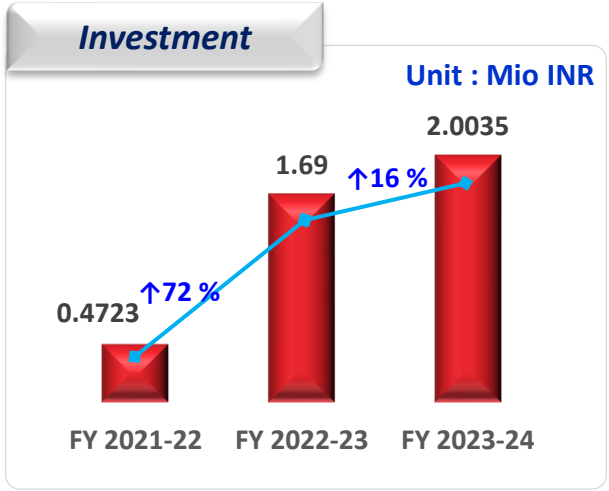
▪ Energy efficient Motor Installation

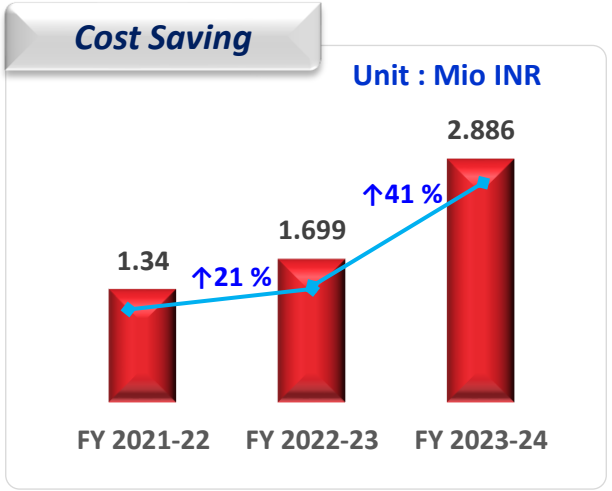
- ▪ **Project Information**
  - ✓ To use premium energy efficiency constructed motors in place of Less efficient motors
- ▪ **Investment Details**
  - ✓ Cost Saving 0.4 mio INR / Year
- ▪ **Benefits**
  - ✓ Co2 emission reduced up to 6.45 t CO2e
  - ✓ Cost Saving 0.08 mio INR / Year
- ▪ **Year of Implementation - 2026**

5. Energy saving projects for Last three years

motherson







Year	No of Projects	Energy Saving (kWh Million)	Investment (INR Million)	Total Saving (INR Million)	Payback period (Months)
FY 2021-22	5	0.1461	0.4723	1.340	4.8
FY 2022-23	5	0.1872	1.6900	1.699	12
FY 2023-24	9	0.3054	2.0035	2.886	8.4

~54.92 TOE reduction in last three years

Energy saving projects completed 2023 ~ 24

motherson

Projects completed

19 Numbers of Energy saving projects completed

Energy saved

3,05,428 KWH unit saved

** Co2e reduction

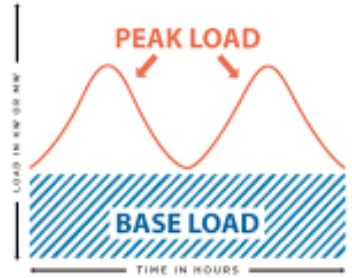
968 MT co2e reduced

** Co2e reduction : including additional renewable sources usage...

Energy reduction – Initiatives Implemented

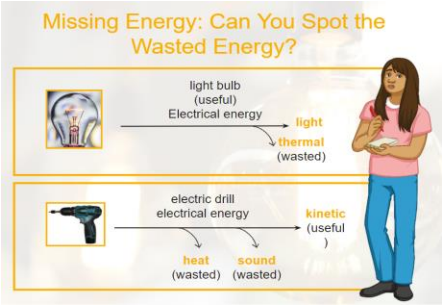
motherson

Reducing Load Factors



VFD Installation

Minimizing energy wasted through heat, light and sound

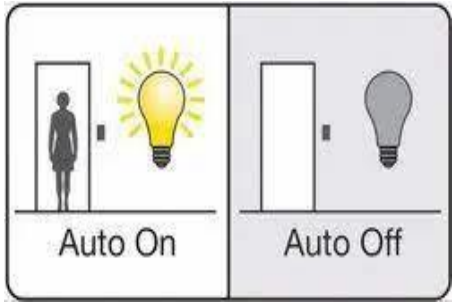


Periodical Thermography assessment on Electrical system

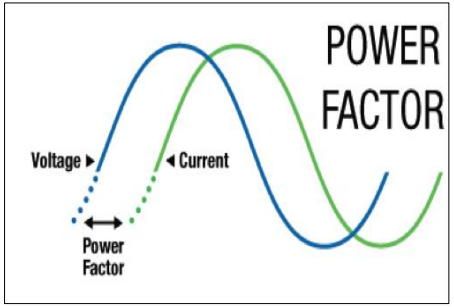
Periodical Air compressor FAD assessments and correction

Periodical Air leak assessments and correction

Occupancy sensors installed in conference halls, Office areas, Rest rooms



Maintaining Near unity Power factor



Energy saving projects implementation

motherson

• List of Major Encon Projects in FY 2023 -24

#	Installed Date	Description	Vertical / Location	KWh Savings / Month	Monthly Cost Savings in INR	KWh Savings / Annum	Annualized Cost Savings in INR	Investments	ROI in years
1	01.05.2023	Induction Heater for IMM Barrel Zone 1 Heater - For 5 machines (Phase 2)	Molding	882	7,934	10,578	95,202	1,37,500	1.4
2	05.09.2023	Street Light Intermediate Poles with Motion Sensor Phase 1 (11 lights)	Utility	208	1,871	2,495	22,455	22,368	1.0
3	05.09.2023	Occupancy Sensor provision in rest room and conference halls (Phase 2)	Admin	461	4,148	5,530	52,535	9,310	0.2
4	10.09.2023	IMM MES display panel Lights automatic cut off system Phase 1 (8 tables)	Molding	17	1,791	199	1,791	1,400	0.8
5	29.09.2023	Energy Saving through installation of VFD for Sludge Pit System Water Circulation Motor - 1	Paint Shop	1,304	11,737	15,649	1,40,841	13,000	0.1
6	30.12.2023	Energy Saving Kit for IMM Dryer Dryer 2,3,4,5 (4 Machines)	Molding	9,620	91,390	1,15,452	10,96,812	8,00,000	0.7
7	02.01.2024	Power saving and part over burn issue in IRVM Oven	Assembly	23	222	280	2,660	-	0.0
8	05.01.2024	Glass line washing motor automatic on & off	Glass line	140	1,264	1,685	15,165	20,000	1.3
9	05.03.2024	HVLS Fan Installation for Assembly area (6 No's)	Assembly	12,797	1,21,568	1,53,560	14,58,820	10,00,000	0.7
Total Savings				**25,451**	**2,41,924**	**3,05,428**	**28,86,281**	**20,03,578**	**0.7**

Year	No of Projects	Investment (INR Million)	Energy Saving (kWh Million)	Total Saving (INR Million)	Payback period (Months)
FY 2022-23	9	2.0035	0.3054	2.886	8.4

Energy saving projects implementation

motherson

• List of Major Encon Projects in FY 2022 -23

#	Installed Date	Description	Vertical / Location	KWh Savings / Month	Monthly Cost Savings in INR	KWh Savings / Annum	Annualized Cost Savings in INR	Investments	ROI in years
1	01.04.2022	Induction Heater for IMM Barrel Zone 1 Heater - For 5 machines (Phase 1)	Molding	859	7,729	10,305	92,745	1,90,000	2.0
2	30.08.2022	IMM Dehumidifier dryer idle off system	Molding	7,670	69,027	92,037	8,28,329	4,00,000	0.5
3	30.09.2022	To Eliminate the ideal Running of Hopper feeding in Worn Drive inspection machine	Molding	25	225	300	2,700	-	0.0
4	30.11.2022	Artic Master for 96TR Chiller	Paint Shop	4,645	41,804	55,739	5,01,651	9,00,000	1.8
5	22.12.2022	Energy Saving Kit for IMM Dryer Dryer 1	Molding	2,405	22,850	28,863	2,74,203	2,00,000	0.7
Total Savings				**15,604**	**1,41,635**	**1,87,244**	**16,99,628**	**16,90,000**	**1.0**

Year	No of Projects	Investment (INR Million)	Energy Saving (kWh Million)	Total Saving (INR Million)	Payback period (Months)
FY 2022-23	5	1.6900	0.1872	1.699	12

Energy saving projects implementation

• List of Major Encon Projects in FY 2021 -22

S.No	Installed Date	Description	Vertical / Location	KWh Savings / Month	Monthly Cost Savings in INR	KWh Savings / Annum	Annualized Cost Savings in INR	Investments	ROI in years
1	30.04.2021	Power saving for PT pumps at Paint shop through VFD instead of DOL starter	Paint Shop	237	2,132	2,843	25,587	70,000	2.7
2	24.07.2021	TO Established Energy Saving activity on Molding dehumidifer Dryer (Previously One dryer material feeding at 3 machine. ASA material using max 4 to 5 machine)	Molding	4,691	42,220	56,293	5,06,637	-	0.0
3	05.09.2021	Assembly Line Shutdown during Idle time (Program linked with EOLT)	Assembly	2,226	20,034	26,712	2,40,408	22,500	0.1
4	20.10.2021	To Eliminate the idle running time and Man depend Process of Canteen Ambient Cooling System ON/OFF Operation	Utility	759	6,833	9,110	81,990	2,000	0.02
5	15.03.2022	HVLS Fan Installation for FG and Store Area	FG & Store	4,266	40,522	51,186	4,86,267	3,77,820	0.8
Total Savings				**12,179**	**1,11,741**	**1,46,144**	**13,40,889**	**4,72,320**	**0.4**

Year	No of Projects	Investment (INR Million)	Energy Saving (kWh Million)	Total Saving (INR Million)	Payback period (Months)
FY 2021-22	5	0.4723	0.1461	1.3409	4.8

Project - Power consumption reduction at IMM dryer

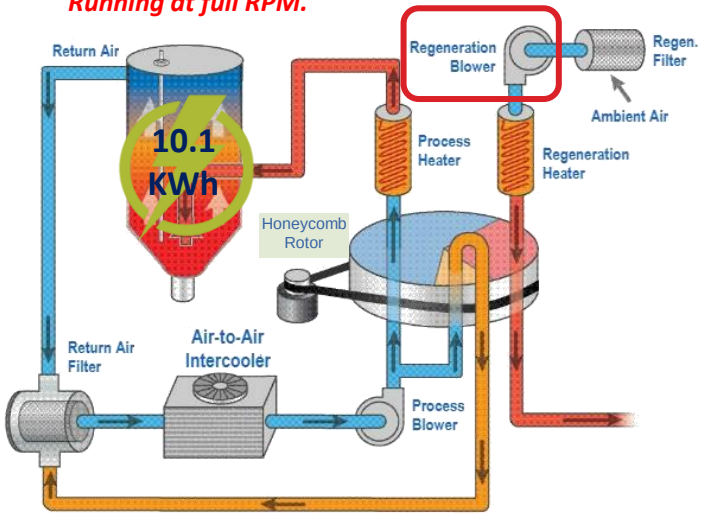
motherson

Project

- Project carry out for consumption reduction at IMM dryer on regular running time

Before Project Execution

Regeneration Blower Running at full RPM.



Opportunity :-

Dehumidifying Dryer : Regeneration blower running at full RPM after preheating of material. It's lead to More power consumption.

After Project Execution

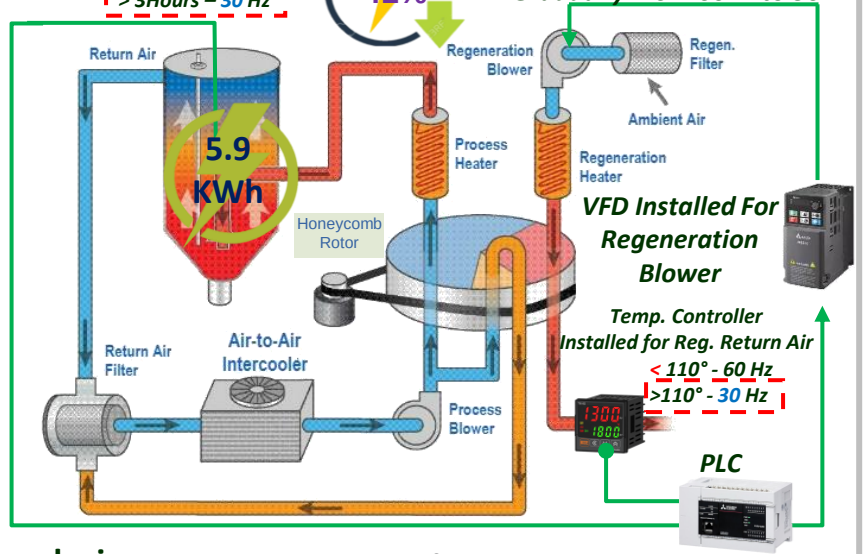
Dryer Preheating time Monitoring through PLC

< 3 Hours - 60 Hz

> 3Hours – 30 Hz

41%

Reduce the Blower Speed Gradually From 60Hz to 30 Hz

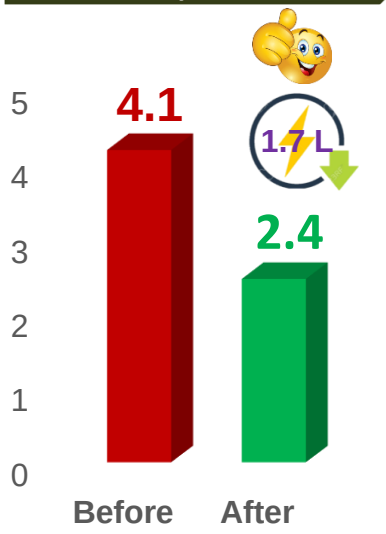


Conclusion :- *Now VFD is installed for the Regeneration blower, and a Temperature controller is installed for Regeneration return air temperature monitoring. Whenever the preheat time exceeds 3 hours and the return air temperature is greater than 110° Celsius, the blower speed is automatically reduced from 60Hz to 30Hz. Now Dryer Power consumption Reduced.*

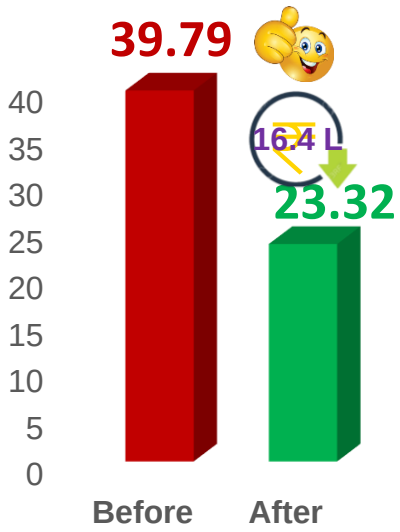
Benefits - Power consumption reduction at IMM dryer

motherson

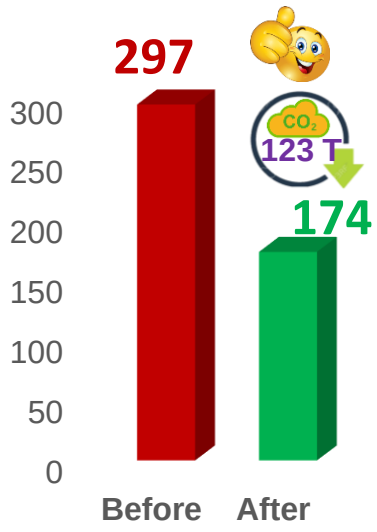
Power Consumption in kwh lakhs / Annum



Power Cost in INR Lakh / Annum



CO2e Emission in Metric ton / Annum



Investment Details

Description	Value
Total Investment (for 6 Dryer's)	12,00,000 INR
Total Cost saving (for 6 Dryer's)	16,46,853 INR
ROI	0.7 Year

Horizontal Deployment in our SMR Chennai Unit :-

D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10
						Under Progress			

Horizontal Deployment at Other SMR Unit (COSA region):-

Status	SMR-Pune	SMR-Noida	SMR-Thailand	SMR-Bangalore	SMR-Gujarat
Implemented	1		-	-	-
Under Progress	13	-	-	-	-
Feasibility Study	-	✓	✓	-	-
Remarks	Budgeted on FY 24-25	Feasibility Under Study	Feasibility Under Study	No Molding Operation	No Molding Operation

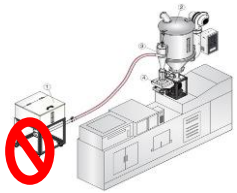
Project - Idle time Elimination

motherson

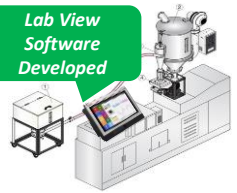
Project

- Project carry out for Eliminate the Dryer ideal time
- In house Development of the Lab view program and Interlock with Equipment

Before Project Execution

Production Startup Steps	Control Method	Current Failure Mode
1 Dryer Switch On	Manual	
2 Dryer fed the material to Machine & Production Start	Manual	➢ Possible to run the production without Material Pre-Heating ➢ Generate the Quality Defects ➢ Dryer will run always while machine idle condition • **Energy Loss**
3 Production stop and Changeover to next plan	Manual	
4 Dryer running idle continuously	Manual	

After Project Execution

Production Startup Steps	Control Method	New Controls
1 Feed the production start time on MMI of CMFS	Poka yoke Control	*Lab View Software Developed* 
2 Dryer will Run Automatically as per requirement & Production Run	Poka yoke Control	➢ Software will not allow the production with out Material Preheating ➢ Dryer will stop automatically if more than 90 mins • **Energy Save**
3 Production Stop and changeover to next plan	Manual	
4 Dryer Stop Automatically if more than 90mins machine idle	Poka yoke control	

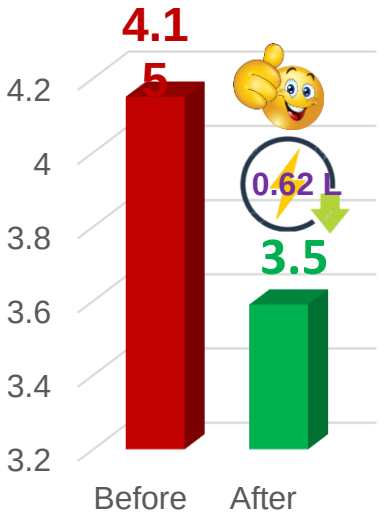
Result

- Reduced Power Consumption [92,037 KWH / Year]
- Machine life span Increased and Human intervention not required

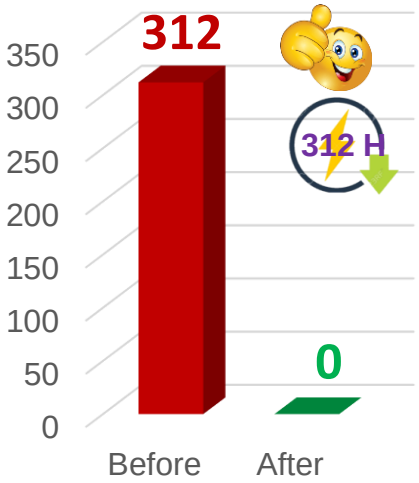
Benefits - Idle time Elimination

motherson

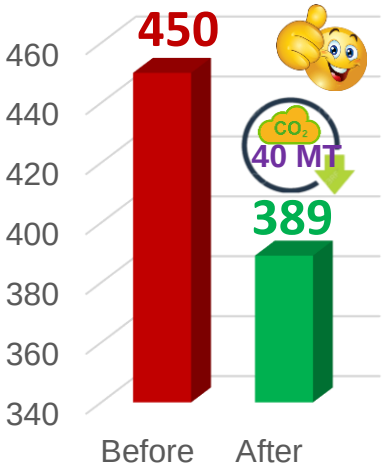
Power Consumption in kwh/ Annum



Production Downtime in hour/ Annum



CO2e Emission in Metric ton/ Annum



Investment Details

Description	Value
Investment	70,000 INR
Overall Cost saving	5,67,226 INR
ROI	0.12 Yrs

Horizontal Deployment in all dryers

D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10

Horizontal Deployment at Other SMR Unit (COSA region):-

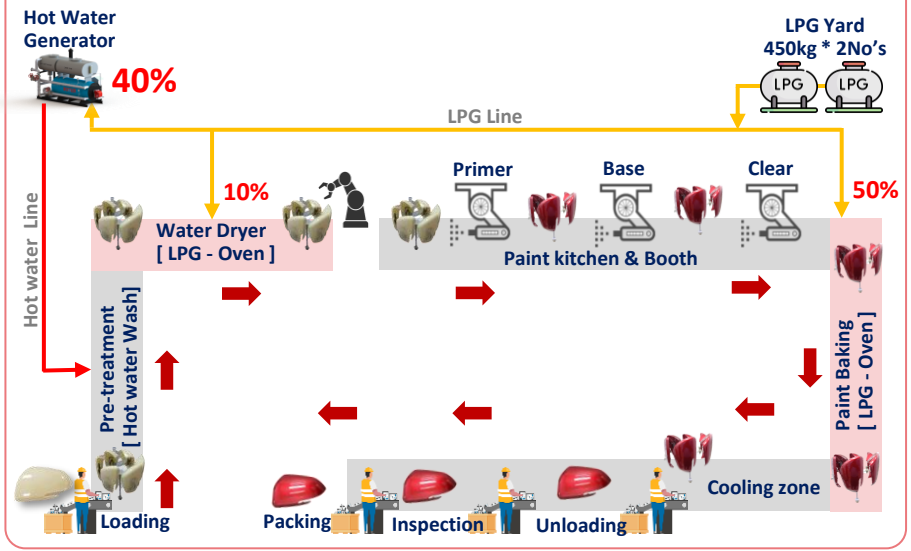
Status	SMR-Pune	SMR-Noida	SMR-Thailand	SMR-Bangalore	SMR-Gujarat
Implemented	-	-	-	-	-
Under Progress	-	✓	-	-	-
Feasibility Study	✓		✓	-	-
Remarks	Feasibility Under Study	Under Progress	Feasibility Under Study	No Molding Operation	No Molding Operation

Project – LPG Consumption Reduction

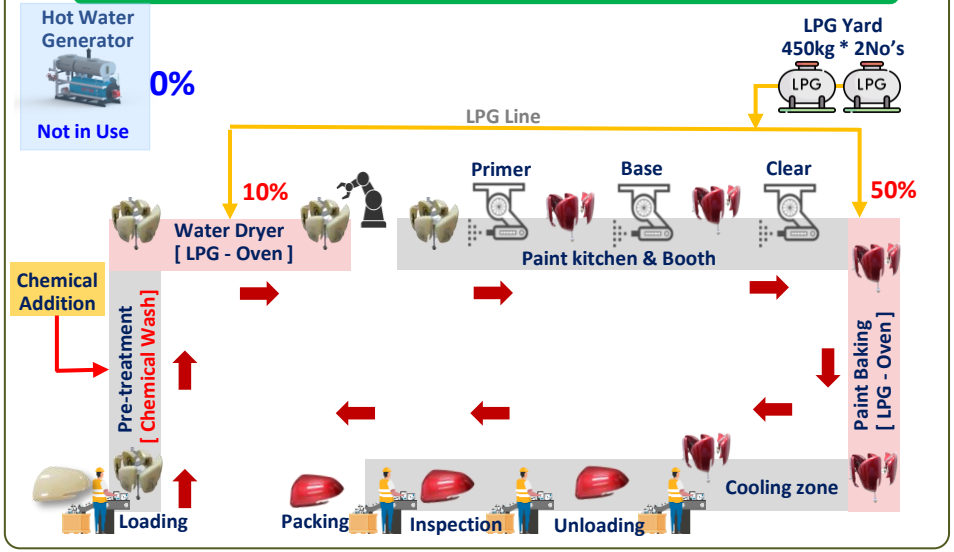
Project

- Project carry out for Reduce the consumption of LPG in Paint shop Prewashing operation
- Implement the Gardoprep 5635 & Gardobond-additive H 7353 chemical washing instead of hot water washing

Before Project Execution



After Project Execution



40% Consumption of LPG for Hot water Generator

De-greasing / Pretreatment of Parts has been done with hot water which was generated through LPG fired Hot water generator.

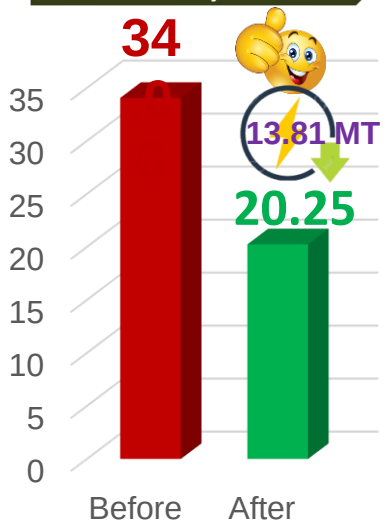
0% Consumption of LPG for Hot water Generator

De-greasing / Pretreatment of Parts has been done with Chemical water with out using hot water.

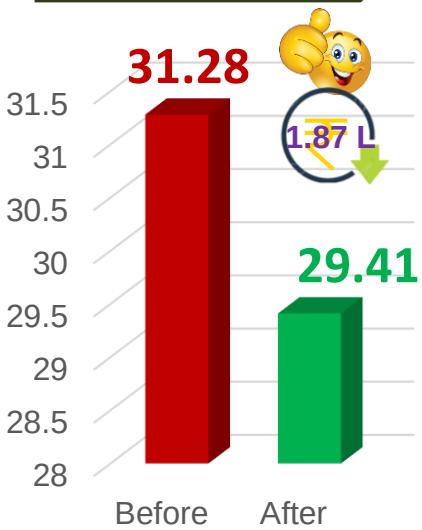
Benefits - LPG Consumption Reduction

motherson

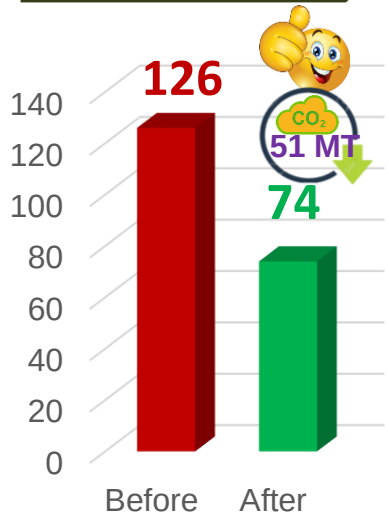
LPG Consumption in Metric ton/ Annum



LPG Cost in INR Lakh / Annum



CO2e Emission in Metric ton/ Annum



Investment Details

Description	Value
Investment	Nil
Chemical cost / year	10,81,440 INR
Overall Cost saving	1,87,201 INR
ROI	Immediate

Result

- Reduced LPG Consumption [13.81 MT / Year]
- Cost Saving consider the chemical cost [1,87,201 INR / Year]
- CO2e Emission Reduction [51 Metric ton / Year]

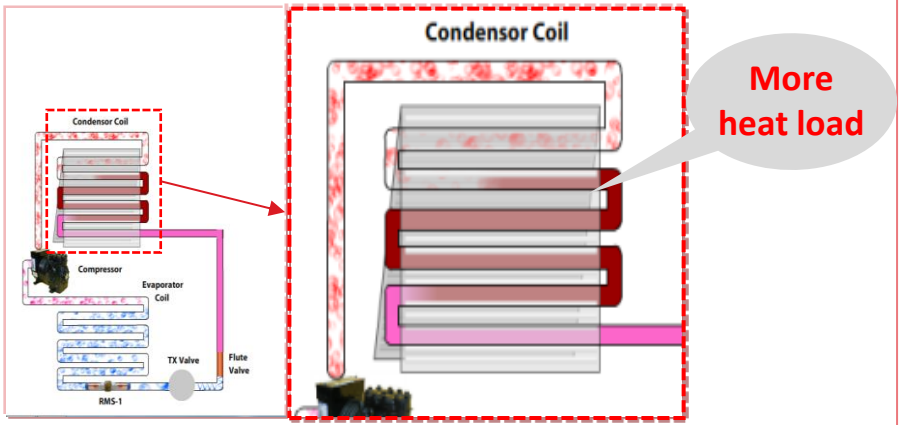
Project - Artic Master for 96TR Chiller

motherson

Project

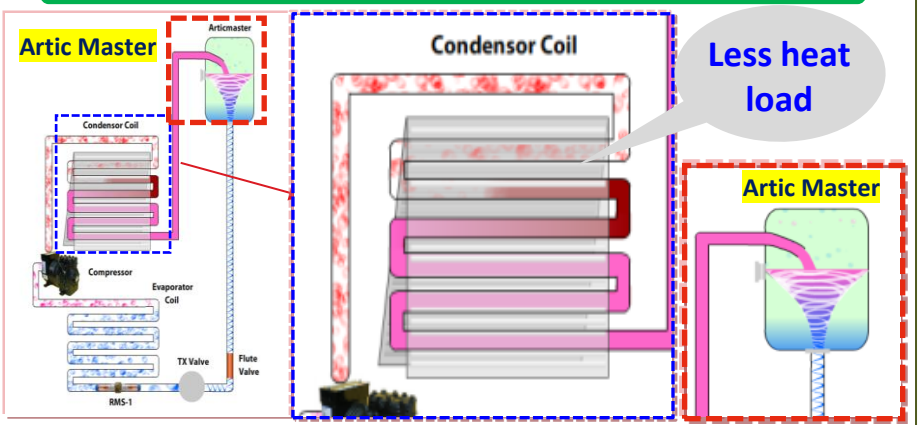
- Project carry out for Eliminate the transformation Loss in Chiller-Technical efficiency
- Implement the Artic master and reduce the temperature of the refrigerant [Better condensing P ∝ T]

Before Project Execution



- Condensing area Less , DISC Pressure high & High current
- Condensing (P ∝ T) Efficiency less

After Project Execution



- Increases the condensing area , DISC Pressure low & reduce current
- Better condensing (P ∝ T)

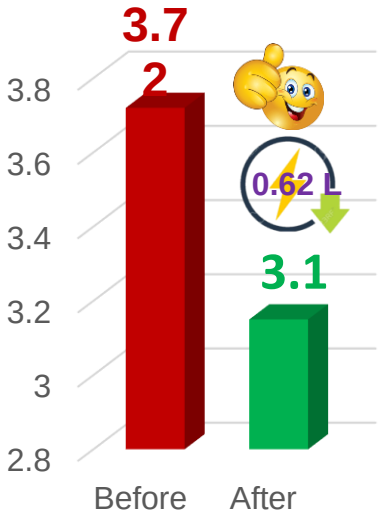
Working Principle

- The liquid refrigerant entering into Artic master is made to rotate in a Whirlpool/ Vortex motion.
- It creates a low pressure at the center making the liquid to sub cool further.
- The colder evaporator coil temperature increases the condensation level of moisture in the air, removing more moisture and latent heat.

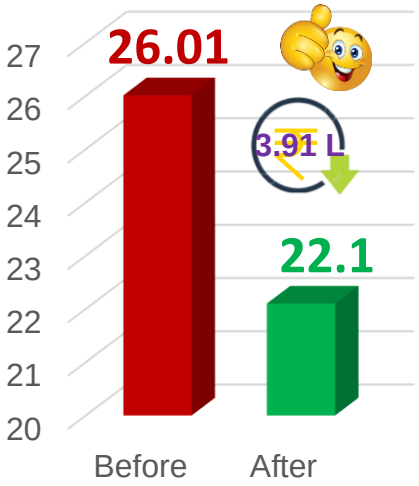
Benefits - Artic Master for 96TR Chiller

motherson

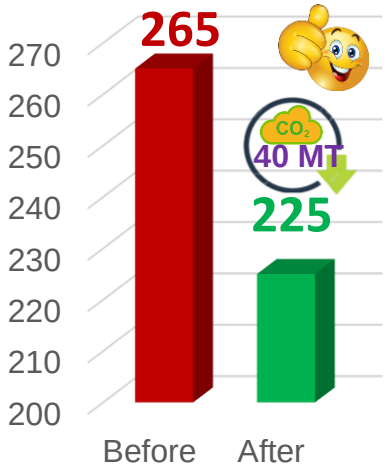
Power Consumption in kwh lakhs / Annum



Power Cost in INR Lakh / Annum



CO2e Emission in Metric ton/ Annum



Investment Details

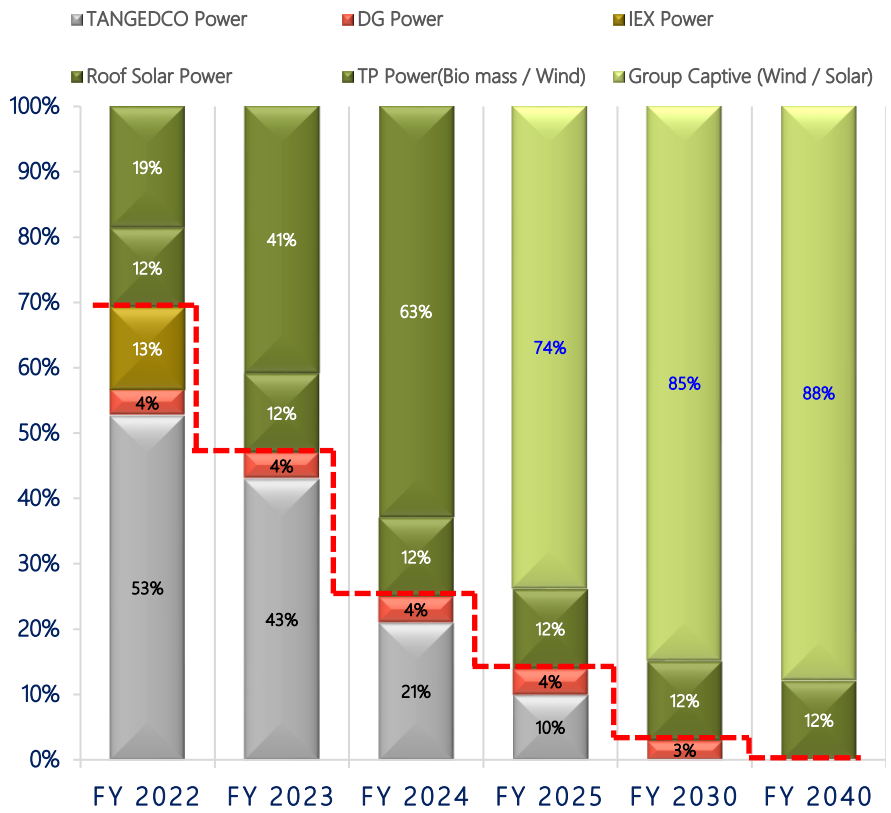
Description	Value
Investment	8,84,200 INR
Overall Cost saving	3,90,168 INR
ROI	2.4 Yrs

Result

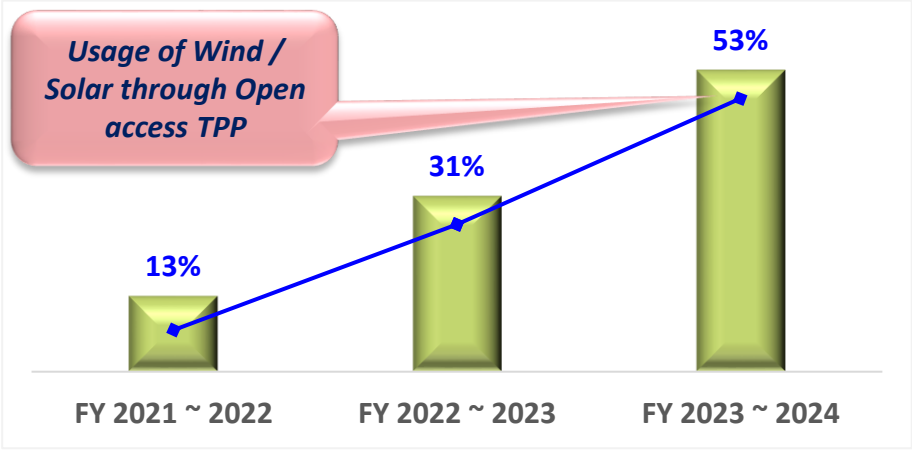
- Reduced Power Consumption [55,739 KWH / Year]
- Enhances the life span of the compressor

Utilization of Renewable Energy sources

Energy Source Ratio & Goal



Utilization of RE in Last Three Years (On site & Off site)



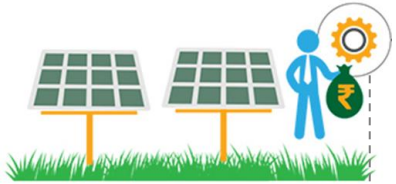
Year	Consumption from on-site RE (in Million kWh)	Consumption from off-site RE (in Million kWh)
FY 2021 ~ 2022	0.754	-
FY 2022 ~ 2023	0.840	1.288
FY 2023 ~ 2024	0.840	3.217

Structure of Renewable Energy sources

Renewable Energy – Off Site

Open Access – Third party power

Vendor will generate Solar / Wind Energy



Vendor will wheel RE power to SMR site, using Govt. grid infrastructure

Contracted Demand 1.1MW

SMR Chennai

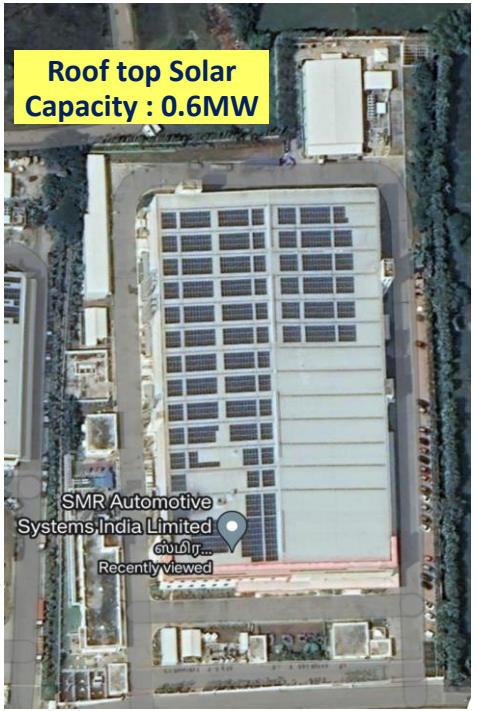
Vendor will release the bill for electricity consumed

~41% Utilization from TPP - RE

Renewable Energy – On Site

Roof top Panel

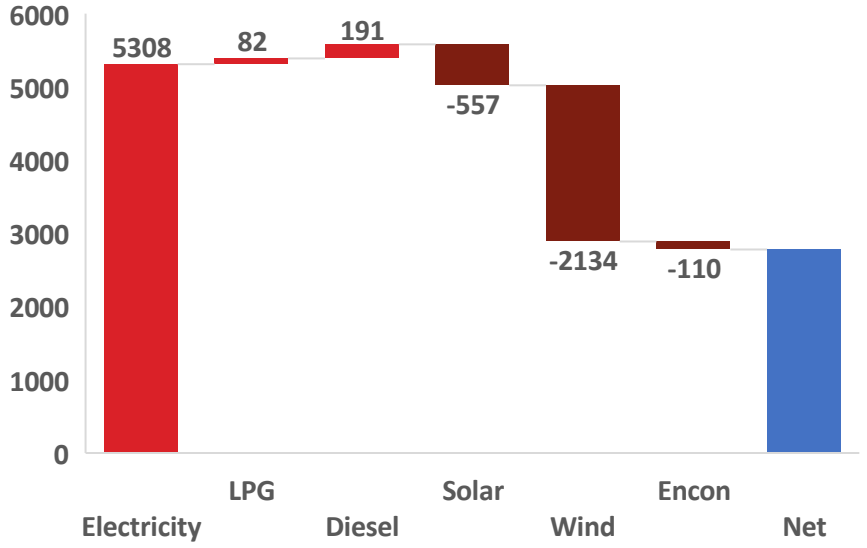
Inverter Panel



~12% Utilization from Roof top Solar - RE

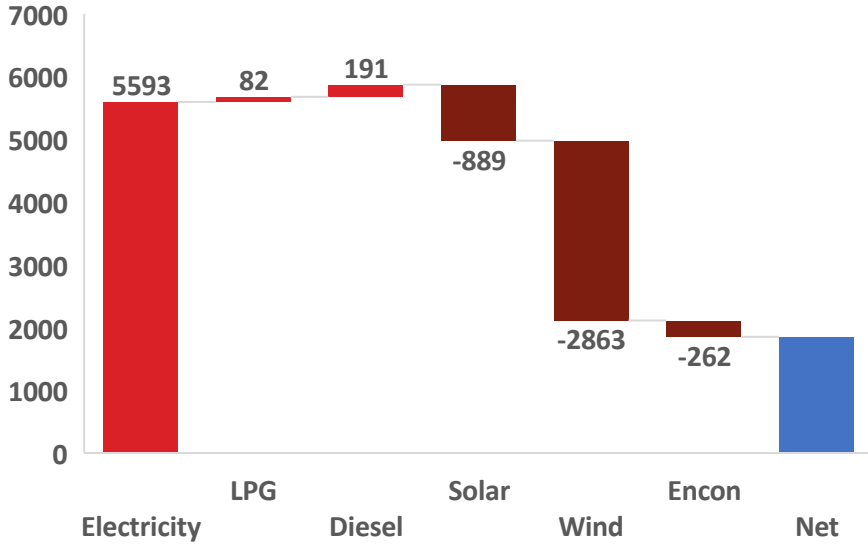
GHG Inventorisation

Scope 1 & Scope 2 – 2023 ~ 24



-50.19% CO2e Emission offset (Scope 1 & 2)

Forecast : Scope 1 & Scope 2 – 2024 ~ 25

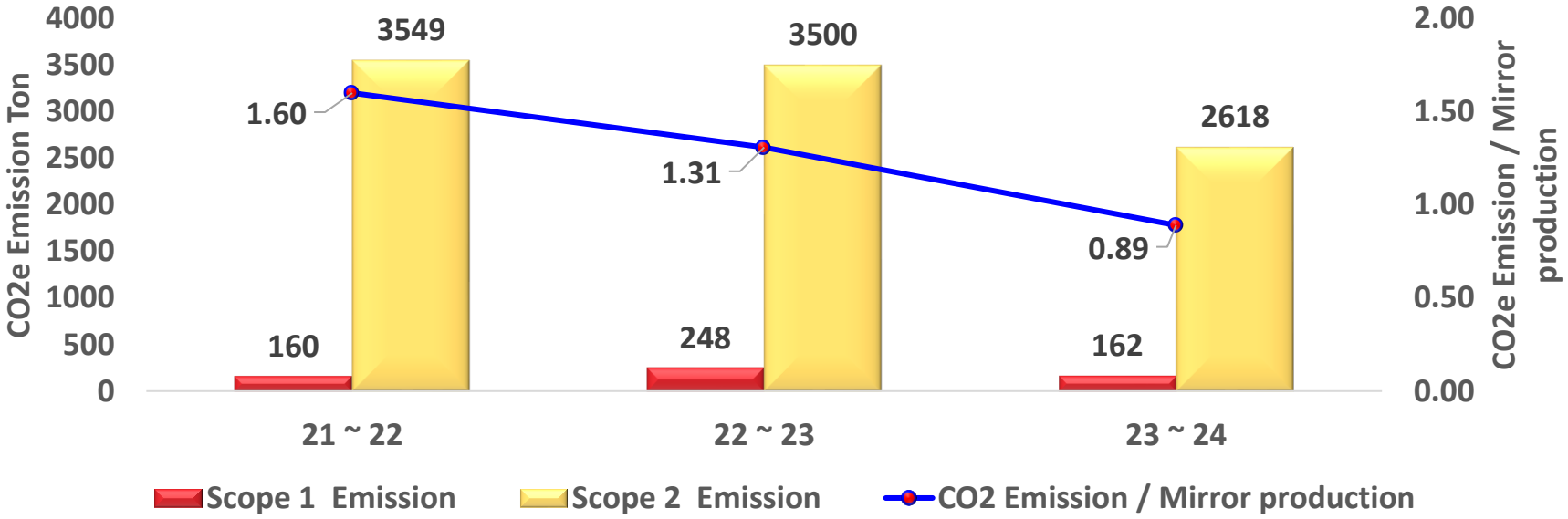


-68.42% CO2e Emission offset (Scope 1 & 2)

Project Identified	Target	CO2e offset potential
ENCON Projects	367.55 MWH	262 Tons
Green power procurement	1340 MWH Solar + 4317 MWH Wind TPP	4034 Tons

Carbon footprint trend & emission intensity

CO2e Emission intensity



Year	21 ~ 22	22 ~ 23	23 ~ 24
Scope 1 Emission	160	248	162
Scope 2 Emission	3549	3500	2618
CO2e Emission / Mirror production	1.60	1.31	0.89

GHG Short term and Long-term action plan

motherson

Short term target (5-10 years)

Long-term target

2021 → 2025 → 2030 → 2040

Establish Baseline
SBT 1.5C vs 2019 Baseline

95%
Minimum coverage for Scope 1 & 2

80%
Renewable Energy coverage

ZERO
Target accelerated to achieve Net Zero by 2040

ISO 50001
All operation sites 100% ISO 50001 verified

Suppliers Engagement
Motherson to monitor and measure of suppliers adopting to SBT targets and Carbon questionnaires (CDP, EcoVardis, SAQ)

100%
Renewable Energy coverage

50%
Reduction in emissions

100%
Green electricity Manufacturing

80%
Minimum coverage for Scope 3

NET ZERO

Note : Science-based targets initiative (SBTi) provides a clearly-defined pathway for companies and financial institutions to reduce greenhouse gas (GHG) emissions.

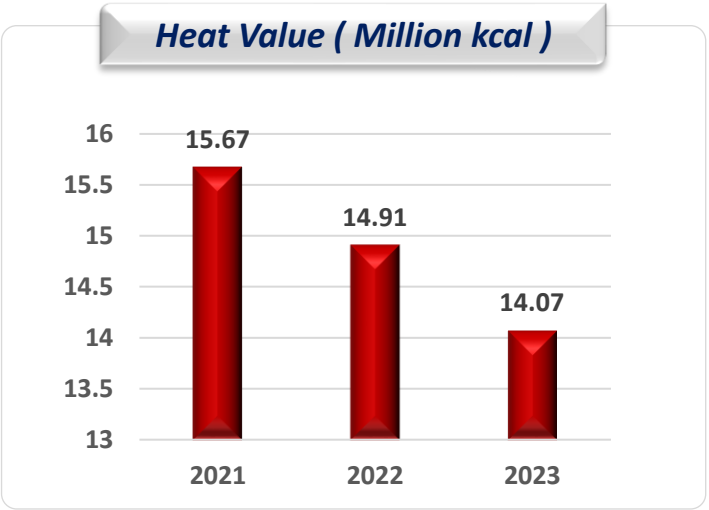
Utilization of Waste Material as Fuel

SMR – Chennai

Co-processing

Transport to cement industry

Used as ARF (Alternate Resource Fuel)



Year	Waste Material	Processing method	Generation (Kgs)	GCV of waste fuel in Kcal	Heat value (Million kcal)
2021	Paint Sludge	Transported to cement industries for blending with fuel	39180	4000	15.67
2022	Paint Sludge		37290	4000	14.91
2023	Paint Sludge		35190	4000	14.07

Recycle and Reuse Activity – 2023 ~ 24

motherson

REUSE

3500 KGS OF PACKAGING MATERIALS REUSED

REUSE

1200 NUMBERS OF USED CHEMICAL CONTAINERS SEND BACK TO MANUFACTURER FOR REUSE

REUSE

3600 KGS OF CLOTH COVER HAS BEEN REUSED IN OUR FG PRODUCT PACKAGING'S

Green Supply Chain Management

Responsible value chain

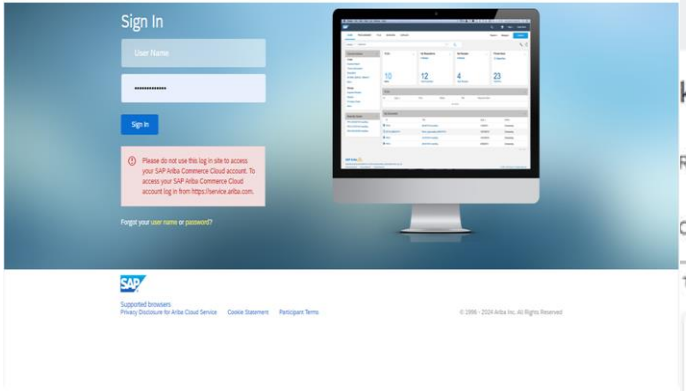
- All product which are manufactured with in the supply chain are required to meet the EnMS and Environment standards in the respective market segment.
- Implement Product Carbon Footprint (PCF) processes and awareness throughout the value chain
- Improve energy efficiency use and promote use of renewable energy throughout the supply chain.
- Actively support the implementation of carbon offset initiatives in the value chain.

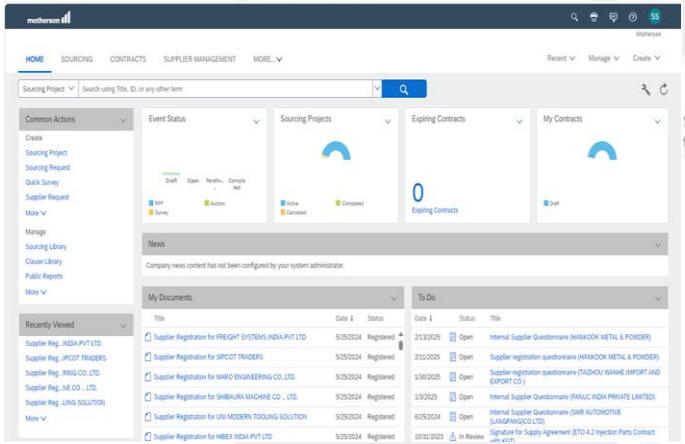
Training to Supply chain

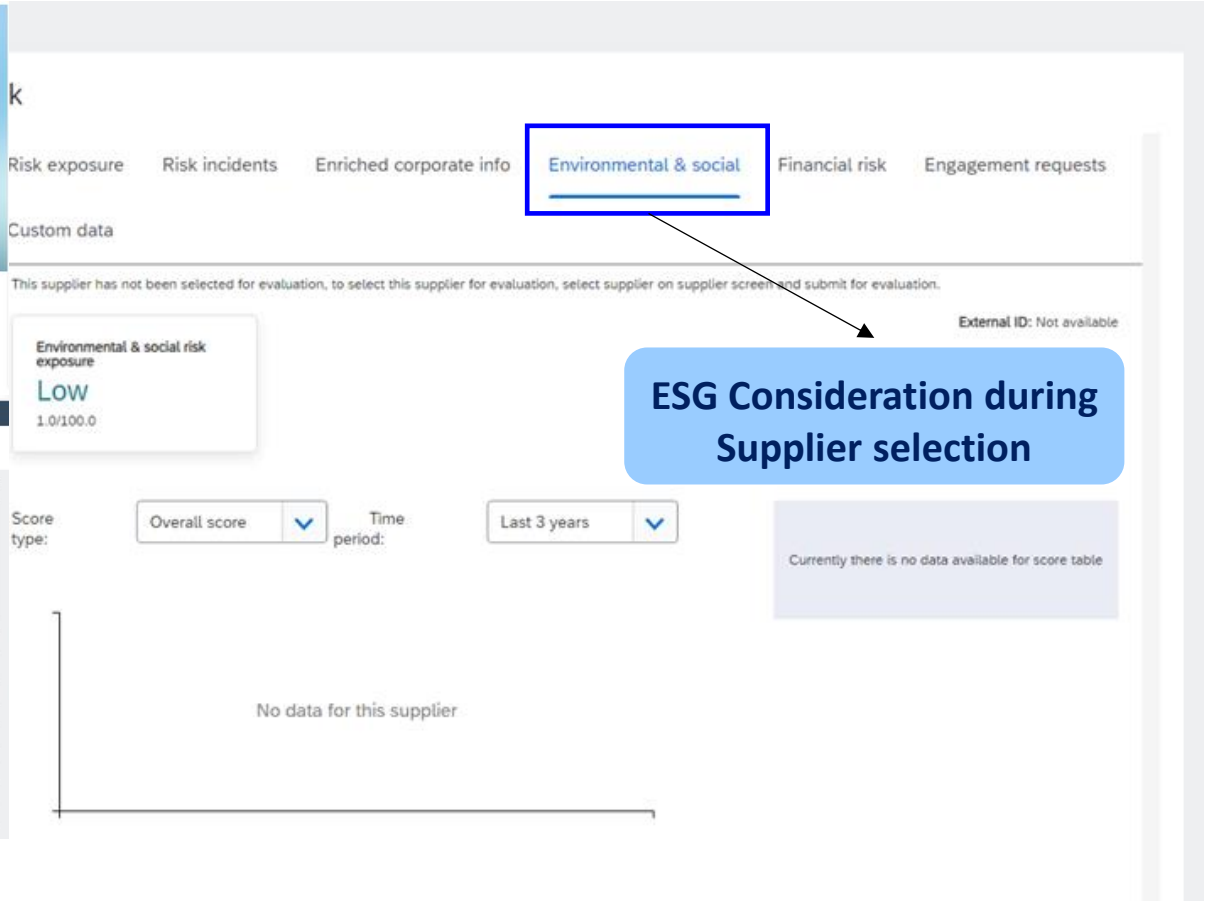
EnMS & CO2 Reduction

Training conducted for Suppliers

Supplier Selection and Risk Assessment through SAP - Ariba







Member of Responsible Minerals Initiative

motherson

https://www.responsiblemineralsinitiative.org/about/members-and-collaborations/

Search... JOIN RMI Responsible Business Alliance RBA Foundation Minerals Grievance Platform Member Portal ShareFile Global Risk Map RBA-Online & Risk Readiness Assessment Material Insights eLearning

RMI MINERALS DUE DILIGENCE ASSURANCE PROCESS REPORTING TEMPLATES TRAINING & RESOURCES NEWS & EVENTS ABOUT FACILITY DATABASE

- Renesas Electronics Corporation
- Ricoh Company Ltd.
- Roku, Inc.
- Roper Technologies, Inc.

S

- Saft
- Sagemcom
- Samsung Display Co., Ltd.
- Samsung Electro-Mechanics
- Samsung Electronics
- Samsung SDI
- Samvardhana Motherson Reflectec (SMR)
- Sandvik AB
- Sanmina-SCI
- Schaeffler AG
- Schneider Electric
- SCUD (Fujian) Electronics Co., Ltd.
- Seagate Technology
- Seiko Epson Corporation
- Semiconductor Manufacturing International Corporation
- Sharp Corporation
- Sherritt
- Sherwin Williams
- Siemens AG
- Siemens Energy
- Sierra Wireless, Inc.
- SigmaTron International Inc.
- Signify
- Silicon Laboratories Inc.
- Silicon Motion Technology Corp.
- Siltronic AG
- Simatelex Manufactory Co., Ltd.
- Simplo Technology Co., Ltd.
- SK Hynix
- SK Innovation
- SK keyfoundry Inc.
- Skyworks Solutions, Inc.
- Solidigm
- SONGWON Industrial Group
- sonnen GmbH
- Sonos, Inc.
- Sony Group Corporation
- Stanley Black & Decker
- Stars Microelectronics (Thailand) PCL
- STATS ChipPAC Ltd.
- Steelcase
- Stellantis N.V.
- STERIS Corporation
- STMicroelectronics
- Stoneridge, Inc.
- Stryker Corporation
- Sumitomo Electric Industries, Ltd.
- Super Micro Computer, Inc.

RESPONSIBLE MINERALS INITIATIVE

Top

Best performance Indicator – SMR Groups

QCDDMSES

Vivek Gopala Krishnan

You are here
Home

Back | Download

Year	Company	Report Type	Unit	KPI Scope	Department
2023 - 2024	SMR	Plant	SMR-IndiaSouth	Global	Environment

Automated KPIs | Approve | Approval In Process | Unlock | Exclude

KPI	YTM	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Gas Consumption/Turnover(m3/K LC)	0.0000	0.0003	0.0004	0.0004	0.0003								
Electricity Consumption/Turnover(KWh/K(LC))	0.0000	1.9421	1.8562	1.9286	1.9102								
Carbon Footprint (Electricity, Fuels, Gas)(MTCDE/K(LC))	0.0000	0.0012	0.0009	0.0003	0.0009								
Water Consumption/Turnover(m3/K LC)	0.0000	0.0066	0.0068	0.0062	0.0055								
Fuel Consumption/Turover(Litre/K(LC))	0.0000	0.0874	0.0574	0.0284	0.0166								
Water Consumption - dischorge(m3/K LC)	0.0000	0.0030	0.0033	0.0028	0.0028								
Waste Generation(Kg/K(LC))	0.0000	0.1561	0.1949	0.2438	0.1833								
Carbon Footprint (Electricity, Fuels, Gas)(MTCDE / K EUR)	0.0000	0.1079	0.0804	0.0267	0.0817								
Gas Consumption(m3/K(EUR))	0.0000	0.0270	0.0358	0.0357	0.0272								
Electricity Consumption(Kwh/K(EUR))	0.0000	174.5948	165.9209	171.9484	173.4752								
Water Consumption(m3/K(EUR))	0.0000	0.5933	0.6078	0.5528	0.4995								
Fuels consumption(Liter/K(EUR))	0.0000	7.8573	5.1308	2.5321	1.5075								
Noturol Gas(m3)	0.0000	0.0000	0.0000	0.0000	0.0000								
CNG & LNG(m3)	0.0000	0.0000	0.0000	0.0000	0.0000								
LPG(m3)	0.0000	1.3500	0.9000	1.8000	1.3500								
Other Gas(m3)	0.0000	90.0000	130.0000	130.0000	110.0000								
Electricity Consumption non renewables-contracted(Kwh)	0.0000	418219.0000	283257.0000	67179.0000	423211.0000								
Electricity Consumption renewables - own produced(Kwh)	0.0000	77729.0000	74848.0000	74871.0000	68569.0000								
Electricity Consumption renewables third party own(Kwh)	0.0000	114152.0000	207263.0000	540062.0000	215816.0000								

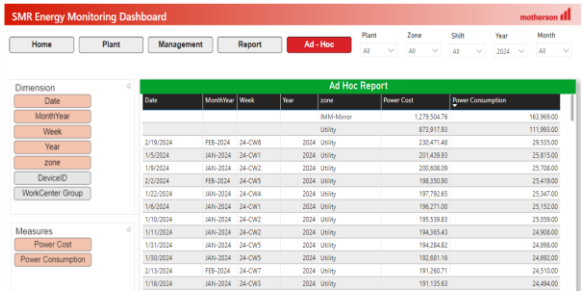
- **Monitoring of Energy , Environment , Safety and Operational KPI among the SMR plants**
- **1st Place has been attained by SMR Chennai consecutively for the past two year**

Best performance Awards SMR Global

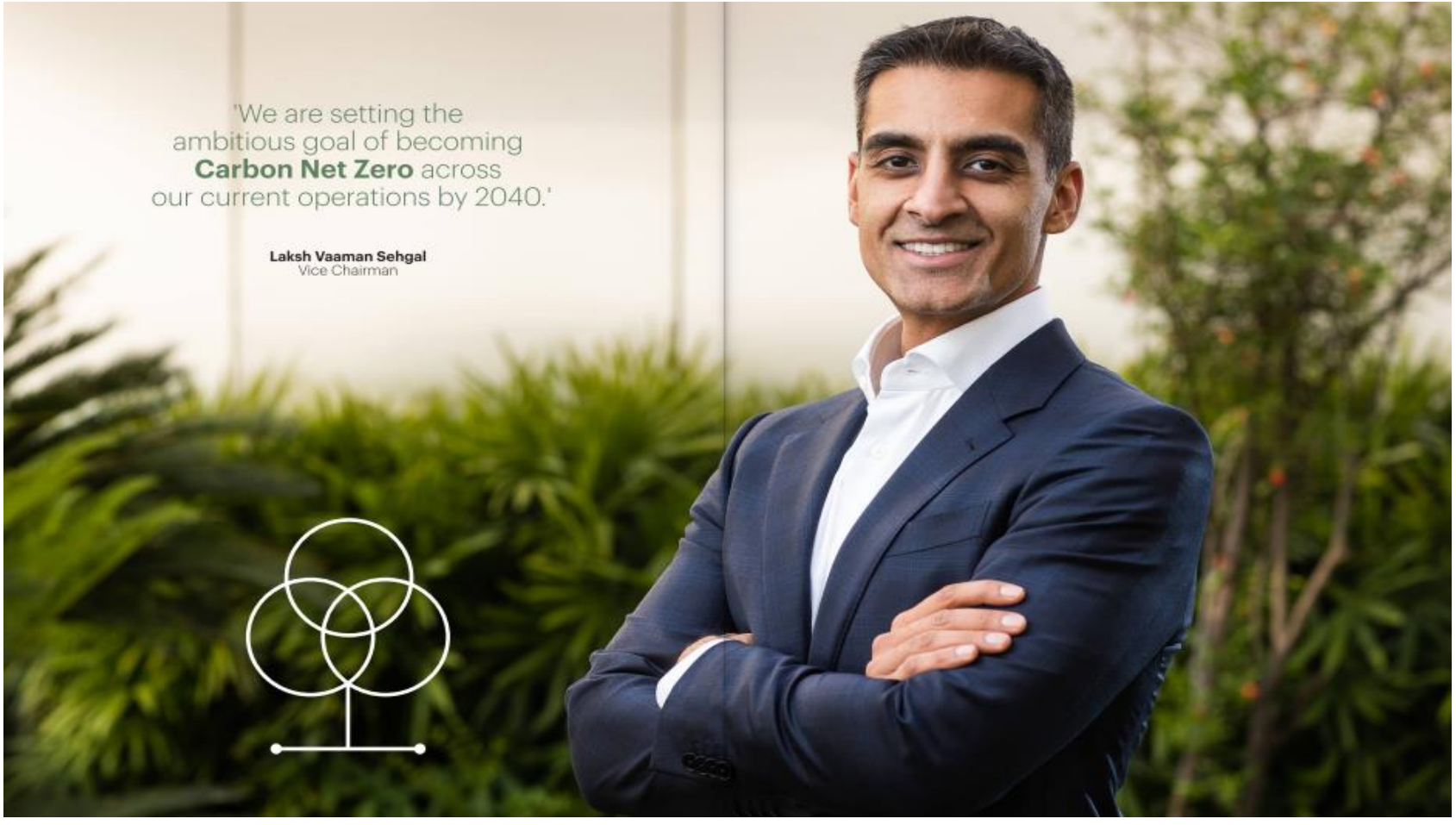
Online - Energy Monitoring System

motherson

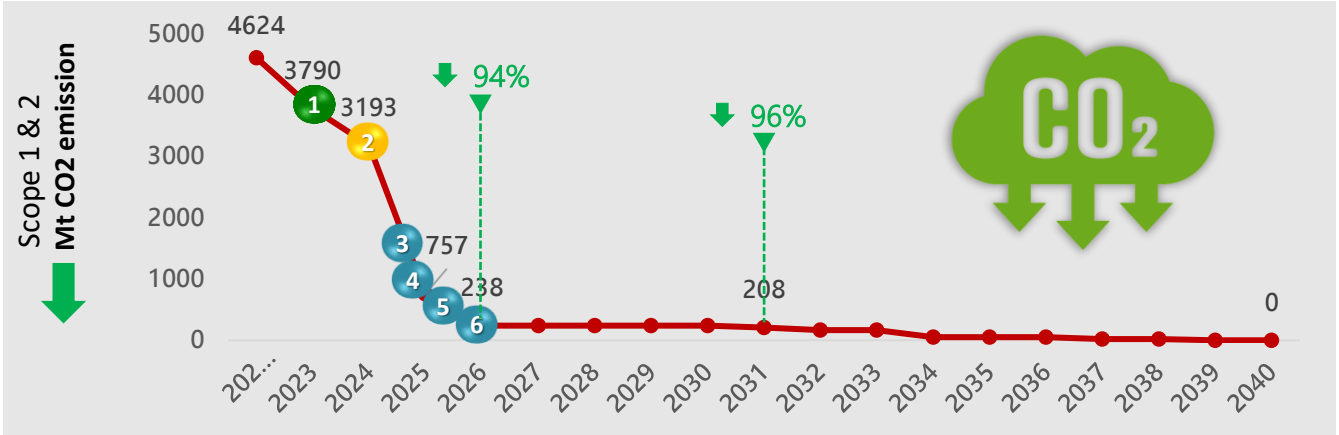
Energy Monitoring System



NET ZERO Commitment from Top Management



NET ZERO Road Map – SMR Chennai



Energy Transition – Key Projects

Planned year	Project #	CO2 Reduction / Energy improvement Activity	Energy Improvement [in kWh / m^3]	CO2e Improvement [t CO2e]	Required CAPEX [mio INR]	Status
2023	1	Induction Heater for IMM Barrel	25,186	17.88	0.17	Implemented
2023	2	Energy saving kit for IMM dryer	120,223	85.84	0.99	Ongoing
2025	3	Group captive power - Solar PPA	-	2,742	6.93	Initiated
2025	4	HVLS Fan in place of Air Handling Unit	134,784	96.24	1.59	Initiated
2025	5	EC fans in place of AHU blowers	77,088	55.04	1.19	Initiated
2026	6	IE3 Motor Installation	9,034	6.45	0.40	Initiated

ISO Certifications and 2023 -24 Awards

BUREAU VERITAS

Bureau Veritas Certification

SMR Automotive Mirrors Stuttgart GMBH

Hedelfinger Straße 60, Baden-Württemberg, 70327 Stuttgart, Germany

This is a multi-site certificate, additional site(s) are listed on the next page(s)

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

Standards

ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018

Scope of certification

Design and manufacturing of vision systems, components and assemblies

Original cycle start date for ISO 14001 & ISO 45001:	18 March 2020
Original cycle start date for ISO 50001:	07 August 2024
Expiry date of previous cycle for ISO 50001:	Not Applicable
Certification Audit date for ISO 50001:	17 April 2024
Recertification cycle start date for ISO 14001 & ISO 45001:	18 March 2023
Certification cycle start date ISO 50001:	07 August 2024

Subject to the continued satisfactory operation of the Organisation's Management System, this certificate is valid until: 03 March 2026

Certificate No. IND.23.7064/IM/U Version: 4 Issue date: 07 August 2024

For certificate authenticity, click here https://certcheck.ukas.com/

ISO 14001	IND42145
ISO 45001	IND42144
ISO 50001	IND47948

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

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom.

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

Pg 1 of 7

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

OHWS Management Awards Hyundai Motors

Best performance Awards Toyota Motors

Best Support Awards Stellantis

Thank you.