Amara Raja Energy & Mobility Limited

2024 CDP Corporate Questionnaire 2024

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Terms of disclosure for corporate questionnaire 2024 - CDP

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Contents

C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

(1.2) Select the currency used for all financial information disclosed throughout your response.

Select from:

☑ INR

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Publicly traded organization

(1.3.3) Description of organization

Amara Raja Energy & Mobility Limited (ARE&M), is one of India's leading manufacturers of automotive and industrial batteries. ARE&M is a major player and technology leader in the Indian storage battery industry, holding a significant market share in the production of lead-acid batteries for both industrial and automotive applications. ARE&M operates several subsidiary companies, including: - Amara Raja Batteries Middle East (FZE) (ARBME), which handles trading operations in the Middle East. - Amara Raja Circular Solutions Private Limited (ARCS), which operates a lead-acid battery recycling facility in Cheyyar, Tamil Nadu. - Amara Raja Advanced Cell Technologies Private Limited (ARACT), set up in Mahboobnagar, Telangana, is into manufacturing of lithium-ion batteries & other advanced cell technolgies. - Amara Raja Power Systems Private Limited (ARPS), which manufactures EV chargers. During February 2024, Group company Mangal Industries Limited's battery components manufacturing division has merged into ARE&M, which specializes in injection molding for battery plastic components. During the fiscal year 2023-24, ARE&M achieved an annual standalone turnover of INR 112,603 million. ARE&M saw approximately 8% revenue growth in FY 2023-24 compared to the previous fiscal year (FY 2022-23). Following the merger of Mangal Industries' battery component division into ARE&M in February 2024, GHG emissions (Assured from independent assurance agency against ISO 14064-1 standard) amounting to 16,424 tons of CO2e have been factored into the company's decarbonization plan, with heightened reduction targets for Scope 1 and Scope 2 emissions. ARE&M operates facilities in Tirupati and Chittoor, employing 2,361 staff and 5,968 workers. The company counts prestigious companies such as Maruti Suzuki India Limited, Hyundai Motors India Limited, Daimler trucks AG, Ford India Limited, Tata Motors Limited, Mahindra and Mahindra Limited, Honda Cars India Limited, Renault Nissan, Honda Motorcycles & Scooters India Private Ltd, Royal

Enfield, Bajaj Auto Ltd, Airtel Ltd, Schneider Electric, Indus towers Ltd among its clients. ARE&M exports industrial and automotive batteries to over 50 countries worldwide. In India, the company's top-tier automotive and home UPS/Inverter batteries are distributed under the Amaron and PowerZone brands through an extensive retail network. These products and services are favored by major industries, including telecom (service providers and equipment manufacturers), UPS, Indian Railways, Motive, and Power and Gas sectors. Amara Raja embodies a synergy of diverse elements working in harmony. The company's five core values—Innovation, Excellence, Entrepreneurship, Experience, and Responsibility—are symbolized by five colors, representing the elements of nature and the mindset necessary to uphold each value. More information about ARE&M is available on the website https://www.amararaja.com.
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

(1.4.1) End date of reporting year

03/30/2024

(1.4.2) Alignment of this reporting period with your financial reporting period

Select from:
☑ Yes

(1.4.3) Indicate if you are providing emissions data for past reporting years

Select from:
☑ Yes

(1.4.4) Number of past reporting years you will be providing Scope 1 emissions data for

Select from:
☑ 1 year

(1.4.5) Number of past reporting years you will be providing Scope 2 emissions data for

Select from:
☑ 1 year

(1.4.6) Number of past reporting years you will be providing Scope 3 emissions data for

Select from:

☑ 1 year

[Fixed row]

(1.4.1) What is your organization's annual revenue for the reporting period?

112603000000

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	Select from: ☑ Yes

[Fixed row]

(1.6) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

ISIN code - bond

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

INE885A01032

ISIN code - equity

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

CUSIP number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

Ticker symbol

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

SEDOL code

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

LEI number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

D-U-N-S number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

86-218-3253

Other unique identifier

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

L31402AP1985PLC005305
[Add row]

(1.7) Select the countries/areas in which you operate.

Select all that apply

☑ India

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ Yes, we have mapped or are currently in the process of mapping our value chain

(1.24.2) Value chain stages covered in mapping

Select all that apply

☑ Upstream value chain

☑ Downstream value chain

(1.24.3) Highest supplier tier mapped

Select from:

☑ Tier 1 suppliers

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ All supplier tiers known have been mapped

(1.24.7) Description of mapping process and coverage

Out of the total purchases made in 2023-24 towards input materials, Around 90% of the costs are accounted for procuring the primary and secondary lead & lead alloys. ARE&M sources the primary lead from Hindustan Zinc Limited, and Korea Zinc Company Ltd. The secondary lead required for the operations has been sourced from various local suppliers such as Nile Limited, Pondy Oxide & Chemicals Ltd, Pilot Industries Limited, Powertreck Industries, Gravita India Limited, Aardee Industries Pvt Ltd.
[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

	Plastics mapping	Value chain stages covered in mapping
	Select from: ☑ Yes, we have mapped or are currently in the process of mapping plastics in our value chain	*Select all that apply* ☑ Upstream value chain ☑ Downstream value chain

[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

5

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Short-term: The climate-related risks and opportunities identified to have an immediate impact on the company's business i.e. within five years, are categorized under the short-term horizon. It is proposed to achieve 30% of Scope 1 and 2 emissions reduction by 2027 through green energy procurement, green open access method, and RE power purchase agreements. Other significant environmental impact envisaged from the operations is the withdrawal of water from freshwater sources. ARE&M has implemented zero-liquid discharge facilities at both manufacturing facilities to recycle the treated wastewater which resulted in reduction of water footprint by about 20% from the baseline. As part of the corporate sustainability initiative, ARE&M has adopted rainwater harvesting programs such as the construction of 23 check dams in the region. We also have multiple site rain water harvesting reservoirs and our water replenishment is more than water consumption. During FY25 we shall undergo assurance process to validate the claim. Both the manufacturing locations have adopted greenbelt and plantation activities in an area of about 500 acres to enhance the biodiversity in the area. Adoption of ZLD facilities ensures no wastewater is discharged onto the natural water bodies. ARE&M is not operating any coal-fired boilers or furnaces; hence the environmental and ecological impacts are not envisaged. ISO 14001Environmental management systems have been implemented at all the operating facilities.

Medium-term

(2.1.1) From (years)

5

(2.1.3) To (years)

10

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Mid-term: Potential climate-related risks and opportunities that may impact the company's business in near future (5-10 years) are categorized into medium-term. Considering the change in market requirements and trade obligations, ARE&M intends to reduce the production carbon footprint by achieving a 60% reduction in scope 1 and 2 emissions by 2032 through green energy procurement, green open access method, and RE power purchase agreements. ARE&M facilities have already adopted zero liquid discharge operations and thereby the dependency on groundwater has been reduced.

Long-term

(2.1.1) From (years)

10

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ No

(2.1.3) To (years)

28

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Long-term business risks and opportunities are usually anticipated and identified based on scenario analysis, international guidelines, market predictions, etc. Therefore, the climate risks and opportunities identified to have an impact beyond 10 years duration are termed as long-term. Our definition of long-term coincides with our Net-Zero Goal 2050. Based on the published data (World Bank Climate Change Knowledge portal), the region might experience increased rainfall intensity by 2030 and beyond. This might lead to water logging in the nearby areas that might affect the business operations for a short-term period of 4 to 5 days a year. ARE&M has already designed the stormwater drains in the facility for peak precipitation for a 50-year return period in the area. As per the WRI water risk tool, ARE&M facilities fall under the moderate water scarcity area for the 2030 scenario. ARE&M facilities have already adopted Zero liquid discharge schemes to reduce the freshwater footprint significantly.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process
	Select from: ☑ Yes	*Select from:* ☑ Both dependencies and impacts

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Local

☑ National

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ Enterprise Risk Management

☑ Internal company methods

☑ ISO 31000 Risk Management Standard

International methodologies and standards

☑ ISO 14001 Environmental Management Standard

Other

☑ External consultants

☑ Internal company methods

☑ Materiality assessment
☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Heat waves
☑ Heavy precipitation (rain, hail, snow/ice)

Chronic physical
☑ Changing precipitation patterns and types (rain, hail, snow/ice)
☑ Heat stress
☑ Increased severity of extreme weather events
☑ Temperature variability

Policy
☑ Carbon pricing mechanisms
☑ Changes to international law and bilateral agreements
☑ Changes to national legislation

Market
☑ Changing customer behavior

Reputation
☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback

Technology
☑ Transition to lower emissions technology and products

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Local communities

☑ Regulators

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

*We have established an Enterprise Risk Management (ERM) framework to help identify the strategic, financial and operational risks. The company's risk management framework has been developed in accordance with ISO 31000 (Risk management guidelines) that delineates process of risk assessment, compilation of risk registers, identification of Key Risk Indicators and associated action plans, mapping of events and its mitigation. Climate risk is integrated as a key risk in our (ERM) and financial planning. We follow the '5*5' Risk Matrix for risk assessment. The risk score of each risk is calculated based on velocity of occurrence, potential severity of impact and likelihood of occurrence and rated on a 5-point scale. Based on the risk score risks are prioritized and subsequent mitigation plans are prepared. The impact, likelihood & velocity of topics such as climate change are rated on a 5-point scale and basis the ratings, the risk score is calculated Issues that may cause substantial and financial impact i.e. changes in EBITDA, significant production capacity reductions, fatalities or injuries, lasting environmental impacts, or legal penalties. Physical and transition risks due to climate change have been mapped. Possible impacts due to excessive precipitation, possible drought frequency, and temperature rise have been assessed using the World Bank Climate Change Knowledge portal. Based on the published data (World Bank Climate Change Knowledge portal), the region might experience increased rainfall intensity by 2030 and beyond. This might lead to water logging in the nearby areas that might affect the business operations for a short-term period of 4 to 5 days a year. ARE&M has already designed the stormwater drains in the facility for peak precipitation for a 50-year return period in the area. As per the WRI water risk tool, ARE&M facilities fall under the moderate water scarcity area for the 2030 scenario. The economic impact on the business due to the rise of 1.5 degrees C scenario has been assessed using the published data on the increase in industrial cooling, and air conditioning requirements. The possible transitional risks such as carbon border adjustment mechanisms beyond 2032 have been assessed based on the prevailing ETS market values in the EU. Due to the introduction of Green open access regulations by GOI in 2022, RE power for commercial and industrial use will be made available at a cheaper price by 2030. Hence, ARE&M found investments in the RE power will be a business case. Opportunities to invest in the RE power projects under the Green open access scheme have also been evaluated periodically. Other significant environmental impact envisaged from the operations is the withdrawal of water from freshwater sources. ARE&M has implemented zero-liquid discharge facilities at both manufacturing facilities to recycle the treated wastewater which resulted in reduction of water footprint by about 20% from the baseline. As part of the corporate sustainability initiative, ARE&M has adopted rainwater harvesting programs such as the construction of 23 check dams in the region. We also have multiple site rain water harvesting reservoirs and our water replenishment is more than water consumption. During FY25 we shall undergo assurance process to validate the claim. ARE&M is also focused on developing the necessary infrastructure, capabilities, and partnerships to support India shift towards RE and electric mobility.*

Row 2

(2.2.2.1) Environmental issue

Select all that apply

☑ Plastics

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Quantitative only

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

(2.2.2.10) Integration of risk management process

Select from:

☑ A specific environmental risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ Enterprise Risk Management

☑ Internal company methods

☑ ISO 31000 Risk Management Standard

☑ Other enterprise risk management, please specify **:**Regulatory requirements for Extended producer responsibility under Plastic Waste Management Rules 2016

International methodologies and standards

☑ ISO 14001 Environmental Management Standard

☑ Life Cycle Assessment

Other

☑ Materiality assessment

(2.2.2.13) Risk types and criteria considered

Policy

☑ Changes to international law and bilateral agreements

☑ Changes to national legislation

☑ Increased difficulty in obtaining operations permits

Market

☑ Availability and/or increased cost of recycled or renewable content

☑ Changing customer behavior

Reputation

☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback

Technology

☑ Transition to recyclable plastic products

☑ Transition to increasing recycled content

Liability

☑ Non-compliance with regulations

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Regulators

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ Yes

(2.2.2.16) Further details of process

Plastic material use inventory has been developed. Plastic waste generation at the site due to packaging waste has been inventoried. We use recyclable stretch film for web sealing packing and send all generated plastic waste to authorized recyclers. A significant portion of plastic components in batteries are recycled. As a part of the extended producer responsibility regulations of GoI, plastic waste recycling credits have been procured from authorized recycling vendors through the government portal.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:

☑ Yes

(2.2.7.2) Description of how interconnections are assessed

An increase in global temperatures can lead to reduced productivity of employees and hence ARE&M has launched a preliminary assessment on the additional capital cost for installing workplace room air conditioning systems vis-à-vis the increase in workers' productivity. An increase in rainfall intensity in the region by 2030/2040 can lead to localized flood situations for a short span of 4 to 5 days once in three to four years. ARE&M has reviewed the stormwater drain adequacy of the facility to ensure that no flood water will be stagnant at the plants to avoid any production disruptions. The possible transitional risks such as carbon border adjustment mechanisms beyond 2032 have been assessed based on the prevailing ETS market values in the EU. Due to the introduction of Green open access regulations by GoI in 2022, REpower for commercial and industrial use will be made available at a cheaper price by 2030. Hence, ARMEL found investments in the RE power will be a business case. Opportunities to invest in the RE power projects under the Green open access scheme have been evaluated periodically. ARE&M is also focused on developing the necessary infrastructure, capabilities, and partnerships to support India shift towards RE and electric mobility, aiming to be a leader in this transition. India's ambitious renewable energy and electric vehicle (EV) plans provide significant opportunities for the battery and energy storage industry. The country targets 500 GW of renewable energy capacity by 2030, necessitating advanced energy storage systems (ESS) to manage the intermittent nature of solar and wind power and 30% EVs by 2030. This is critical for ensuring grid stability and peak load management. Additionally, the push for EVs is expected to create high demand for lithium-ion batteries, supported by government schemes like the Production Linked Incentive (PLI) for Advanced Chemistry Cell (ACC) batteries. Amara Raja is positioning itself as a leader in India's energy storage and electric mobility market with significant investments and strategic partnerships. The company is investing 9,500 crore in a 16 GWh lithium-ion cell manufacturing facility and a 5 GWh battery pack unit in Telangana, focusing on Lithium Iron Phosphate (LFP) and

Nickel Manganese Cobalt (NMC) chemistries. These cells will support both electric vehicles (EVs) and energy storage systems (ESS). Amara Raja has formed multiple key partnerships to strengthen its technological and supply capabilities: 1. InoBat: Amara Raja has invested in Slovakia-based InoBat for technology collaboration and potential access to raw materials through partners like Rio Tinto. 2. Gotion High-Tech: Through its partnership with Gotion, a leader in LFP technology, Amara Raja is localizing production and leveraging global supply chains. 3. Log9 Materials: The company collaborates with Log9 on large cylindrical LFP cells, with a focus on commercial applications in India's EV market.
[Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:

☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.3.3) Types of priority locations identified

Sensitive locations

☑ Areas of limited water availability, flooding, and/or poor quality of water

Locations with substantive dependencies, impacts, risks, and/or opportunities

☑ Locations with substantive dependencies, impacts, risks, and/or opportunities relating to water

(2.3.4) Description of process to identify priority locations

Based on the published data (World Bank Climate Change Knowledge portal), the region might experience increased rainfall intensity by 2030 and beyond. This might lead to water logging in the nearby areas that might affect the business operations for a short-term period of 4 to 5 days a year. ARE&M has already designed the stormwater drains in the facility for peak precipitation for a 50-year return period in the area. As per the WRI water risk tool, ARE&M facilities fall under the

moderate water scarcity area for the 2030 scenario. ARE&ML facilities have already adopted Zero liquid discharge schemes to reduce the freshwater footprint significantly. As part of our risk management framework, we engage multiple times annually with key upstream and downstream stakeholders—such as suppliers, regulators, local communities, investors, and consumers—to address emerging concerns around physical and transition climate risks and their contributions to mitigating climate impacts. We engage with customers regularly through stakeholder initiatives and feedback programs to understand their climate-related priorities. We share our performance, targets on climate action & future plans with our customers. We conduct regular training programs for our marketing teams to equip them with the knowledge and progress on our sustainability initiatives and performance. In terms of supplier engagement, our annual due diligence process identifies ESG risks, including climate-related risks, across our supply chain. This allows us to mitigate concerns such as material price fluctuations, resource shortages, and regulatory noncompliance. We work closely with suppliers as part of our sustainability strategy to address these challenges. We periodically assess vendors on a range of ESG parameters, including ethics, labor welfare, safety, environment, and climate management. We mandate corrective actions from suppliers who fall short of our standards and handhold them in taking these actions. Our Sustainable Sourcing Policy guides this process by setting clear expectations on ESG performance and climate goals. In FY 2024, we assessed 17 suppliers (including all critical ones).

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ Yes, we will be disclosing the list/geospatial map of priority locations

(2.3.6) Provide a list and/or spatial map of priority locations

Tirupati-Site.pdf
[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

(2.4.6) Metrics considered in definition

Select all that apply

☑ Frequency of effect occurring

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

Based on the published data (World Bank Climate Change Knowledge portal), the region might experience increased rainfall intensity by 2030 and beyond. This might lead to water logging in the nearby areas that might affect the business operations for a short-term period of 4 to 5 days a year. As per the WRI water risk tool, ARE&M facilities fall under the moderate water scarcity area for the 2030 scenario.

Opportunities

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

(2.4.6) Metrics considered in definition

Select all that apply

☑ Other, please specify **:**Preventing business disruptions such as stoppage of the plant and production loss due to flood and drought incidents

(2.4.7) Application of definition

ARE&M has already designed the stormwater drains in the facility for peak precipitation for a 50-year return period in the area. ARE&M facilities have already adopted Zero liquid discharge schemes to reduce the freshwater footprint significantly. Due to the introduction of Green open access regulations by GoI in 2022, RE power for commercial and industrial use will be made available at a cheaper price by 2030. Hence, ARE&M found investments in the RE power will be a business case. Opportunities to invest in the RE power projects under the Green open access scheme have been evaluated periodically.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Environmental risks exist, but none with the potential to have a substantive effect on our organization

(3.1.3) Please explain

Based on the published data (World Bank Climate Change Knowledge portal), the region might experience increased rainfall intensity by 2030 and beyond. This might lead to water logging in the nearby areas that might affect the business operations for a short-term period of 4 to 5 days a year. As per the WRI water risk tool, ARE&M facilities fall under the moderate water scarcity area for the 2030 scenario. Due to the absence of any carbon tax mechanism in India, the transitional risks due to carbon tax policies are also not envisaged until 2030. Since ARE&M is currently not involved in business activities in Europe, the carbon border adjustment mechanism is not applicable as of now.

Plastics

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Environmental risks exist, but none with the potential to have a substantive effect on our organization

(3.1.3) Please explain

Plastic material use inventory has been developed. Plastic waste generation at the site due to packaging waste has been inventoried. Our factories are certified as (SUP) Single Use Plastic free. We use recyclable stretch film for web sealing packing and send all generated plastic waste to authorized recyclers. A significant portion of plastic components in batteries are recycled. As a part of the extended producer responsibility regulations of GoI, plastic waste recycling credits have been procured from authorized recycling vendors through the government portal.
[Fixed row]

(3.5) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Select from:

☑ No, and we do not anticipate being regulated in the next three years

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Energy source

☑ Use of renewable energy sources

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ India

(3.6.1.8) Organization specific description

The Company has increased its reliance on renewable energy sources, such as solar power. Currently, renewable energy accounts for 23.46% of the overall energy mix. ARE&M has invested in the solar rooftop PV facilities and also off-site captive RE power as per the applicable local regulations with a total RE installed capacity of 62 MW. This initiative resulted in the avoidance of 67,104 tons of CO2 emissions.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced direct costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Due to the utilization of an additional 46.5 million KWHR of electrical power from REpower sources during FY 23:24, the electrical energy bills to INR 325.5 million have been reduced. With the prevailing grid power tariff of INR 7 per KWHR of electrical energy, the savings from reducing grid power use have been estimated.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

744000000

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

744000000

(3.6.1.23) Explanation of financial effect figures

the total RE power installation is 62 MW with about 150,000 KWHr per MW, the total RE power generation is estimated as 93 million KWHR. Considering the prevailing grid power tariff of about INR 8 per KWHR of electrical energy, the savings from the reduction of grid power use have been estimated as INR 744 million per year.

(3.6.1.24) Cost to realize opportunity

2493000000

(3.6.1.25) Explanation of cost calculation

the total RE power installation is 62 MW with about 150,000 KWHr per MW, the total RE power generation is estimated as 93 million KWHR. Considering the prevailing grid power tariff of about INR 8 per KWHR of electrical energy, the savings from the reduction of grid power use have been estimated as INR 744 million per year.

(3.6.1.26) Strategy to realize opportunity

Installed 62 MW RE power.
[Add row]

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

(3.6.2.1) Financial metric

Select from:
☑ OPEX

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

700000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 21-30%

(3.6.2.4) Explanation of financial figures

The Company has increased its reliance on renewable energy sources, such as solar power. Currently, renewable energy accounts for 23.46% of the overall energy mix.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ Quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

Board Diversity policy is available on the company's website: https://www.amararajabatteries.com/Investors/DownloadPolicyPDF/27?nameBoard%20Diversity%20Policy The Board recognizes that a diverse Board with an inclusive culture will make good the differences in skills, experience, education, gender, age, race, geography, ethnicity, background and other distinctions between the directors. We believe that discussions at Board meetings will be more open, transparent, balanced and wide ranging if a significant degree of diversity can be achieved amongst its members. Healthy discussion involving a wide range of views will, we believe, ultimately bring about better Board decisions. The Nomination and Remuneration Committee is responsible for identifying and nominating process of candidates for their appointment to the office of Director, subject to approval by the Board and shareholders. The Nomination and Remuneration Committee shall ensure an optimum and balanced members of the Board with complementary knowledge, expertise and skills in areas such as business strategy, finance, accounting, legal, marketing, manufacturing, technology and such other areas that the Board considers desirable in order to make the

Board as an effective governing Board. An overriding principle is that all appointments of the Board will be based on merit and suitability of the candidate to the particular role being filled and subject to this overriding principle, the nomination

(4.1.6) Attach the policy (optional)

ARBL - Board Diversity Policy.pdf
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Director on board
☑ Board-level committee
☑ Chief Executive Officer (CEO)
☑ Chief Technology Officer (CTO)
☑ Chief Compliance Officer (CCO)
☑ Chief Procurement Officer (CPO)

☑ Chief Financial Officer (CFO)
☑ Chief Operating Officer (COO)
☑ Chief Sustainability Officer (CSO)

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:
☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply
☑ Individual role descriptions
☑ Other policy applicable to the board, please specify **:**Environmental, Climate Action, Sustainability Policy

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:
☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply
☑ Reviewing and guiding annual budgets
☑ Overseeing and guiding scenario analysis
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
☑ Reviewing and guiding innovation/R&D priorities
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Overseeing reporting, audit, and verification processes
☑ Monitoring the implementation of a climate transition plan

(4.1.2.7) Please explain

Please refer to page 198 of the integrated report FY 2023-24 for various policies. The board conducts Sustainability performance reviews quarterly which includes climate actions and plans as part of the agenda. The board reviews the Business Responsibility and Sustainability Report (BRSR) along with a detailed presentation on key ESG aspects, energy, and carbon emissions, principle-wise status of ARE&M w.r.t the identified 9 principles of BRSR, Key Sustainability KPIs are reviewed by the Board. We have established a Sustainability Committee to define the Sustainability Roadmap and monitor its progress on a monthly basis. This Committee comprises of the key officials including Chief Sustainability Officer and is chaired by the Executive Director. The board is appraised of the Sustainability Committee's work and progress of identified projects. The inputs by board members are discussed in the Sustainability committee to further refine the ESG vision for the organization. The board conducts Sustainability performance reviews quarterly which includes climate actions and plans as part of the agenda. The board reviews the Business Responsibility and Sustainability Report (BRSR) along with a detailed presentation on key Sustainability aspects, energy, and carbon emissions, principle-wise status of AREML w.r.t the identified 9 principles of BRSR, Key Sustainability KPIs are reviewed by the Board. The board is appraised of the Sustainability Committee's work and progress of identified projects.

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Other, please specify **:**Sustainability Committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

☑ Other policy applicable to the board, please specify **:**Environmental, Climate Action, Sustainability Policy

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Approving corporate policies and/or commitments
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Monitoring supplier compliance with organizational requirements
☑ Monitoring compliance with corporate policies and/or commitments
☑ Overseeing and guiding the development of a climate transition plan
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

(4.1.2.7) Please explain

Please refer to page 198 of the integrated report FY 2023-24 for various policies. The board conducts Sustainability performance reviews quarterly which includes climate actions and plans as part of the agenda. The board reviews the Business Responsibility and Sustainability Report (BRSR) along with a detailed presentation on key ESG aspects, energy, and carbon emissions, principle-wise status of ARE&M w.r.t the identified 9 principles of BRSR, Key Sustainability KPIs are reviewed by the Board. We have established a Sustainability Committee to define the Sustainability Roadmap and monitor its progress on a periodic basis. This Committee comprises of the key officials including Chief Sustainability Officer and is chaired by the Executive Director. The board is appraised of the Sustainability Committee's work and progress of identified projects. The inputs by board members are discussed in the Sustainability committee to further refine the ESG vision for the organization. The board conducts Sustainability performance reviews quarterly which includes climate actions and plans as part of the agenda. The board reviews the Business Responsibility and Sustainability Report (BRSR) along with a detailed presentation on key Sustainability aspects, energy, and carbon emissions, principle-wise status of AREML w.r.t the identified 9 principles of BRSR, Key Sustainability KPIs are reviewed by the Board. The board is appraised of the Sustainability Committee's work and progress of identified projects.
[Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Integrating knowledge of environmental issues into board nominating process

☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Additional training

☑ Training in an environmental subject by a certified organization, please specify

Other

☑ Other, please specify **:**The leadership team and the board members have undergone a series of training programs on sustainability, net zero, renewable energy technology, water management and ESG (BRSR).

[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes

	Management-level responsibility for this environmental issue
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Committee

☑ Sustainability committee

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

☑ Managing public policy engagement related to environmental issues

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments
☑ Measuring progress towards environmental corporate targets
☑ Measuring progress towards environmental science-based targets
☑ Setting corporate environmental policies and/or commitments
☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan
☑ Implementing a climate transition plan
☑ Conducting environmental scenario analysis
☑ Managing annual budgets related to environmental issues
☑ Implementing the business strategy related to environmental issues
☑ Developing a business strategy which considers environmental issues
☑ Managing environmental reporting, audit, and verification processes
☑ Managing major capital and/or operational expenditures relating to environmental issues
☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other

☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:

☑ Other, please specify **:**Executive Director

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

Sustainability Committee Oversees the overall execution, mission, and efficacy of the sustainability program and its function. Executive Director is the chairman of the meeting. CSO is the convener of monthly Sustainability committee meetings & member of the high-level Growth Committee (GROCOM). GROCOM constitutes of all the Business Heads, Group function heads, and senior leaders from all businesses of the Group. This committee focuses on the review & approval of group-level policies including for sustainability and climate change along with tracking and driving the progress on group-level priority projects. The following are the committee's key responsibilities: • Assess and analyze company policies and processes in accordance with the organization's commitment to sustainability. • Brainstorm and identify creative ways to balance business obligations and sustainability outcomes. • Build capacity within the organization on matters related to sustainability & climate change. • Propose and implement strategies to address various environmental concerns including climate change, energy use, conservation, reduction of pollution, recycling, building and facility design, and general education on sustainability. • Evaluate the efficacy of sustainability programs; recommends and implements improvements as necessary. • Conduct benchmarking across sectors and identify projects to mitigate any adverse environmental impacts • Compile comprehensive reports that clearly outline the identified climate risks, their likelihood, and potential consequences. • Collaborate with internal stakeholders and effectively communicate climate risks to external stakeholders via sustainability reports, and disclosure frameworks (e.g., BRSR, Sustainability report, CDP, TCFD).

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Committee

☑ Sustainability committee

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing public policy engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

(4.3.1.4) Reporting line

Select from:

☑ Other, please specify **:**Executive Director

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

All relevant environmental aspects are reported under the BRSR framework (Principle 6). Please refer to pages 124, and 224 of the integrated report for the FY 2023-24. Sustainability Committee Oversees the overall execution, mission, and efficacy of the sustainability program and its function. Executive Director is the chairman of the meeting. CSO is the convener of monthly Sustainability committee meetings & member of the high-level Growth Committee (GROCOM). GROCOM constitutes of all the Business Heads, Group function heads, and senior leaders from all businesses of the Group. This committee focuses on the review & approval of group-level policies including for sustainability and climate change along with tracking and driving the progress on group-level priority projects. Environmental sustainability is promoted through nature-based solutions, focusing on extensive tree plantation efforts both within and around our facilities. This commitment enhances biodiversity, improves ecosystem health, and contributes significantly to carbon sequestration and air quality improvement. Currently, we maintain a green cover over 55% of our operational areas, having successfully planted 82,611 saplings on-site and an additional 71,000 saplings in surrounding areas.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

10

(4.5.3) Please explain

Our Executive Director (ED) is a member of ARE&M's Board of Directors and chairs the Sustainability Committee which plays a pivotal role in providing overall guidance on all identified key ESG issues and reviews the company's progress towards sustainability goals. The board is briefed on various climate-related issues, yearly targets, site performance, and progress of targets by our ED. ED is also authorized to sanction CAPEX & OPEX budgets and other necessary resources for the implementation of climate adaptation and mitigation actions. Our ED's responsibilities also include taking decisions related to Procurement, Human Resources, Finance, Legal, and operations which support the implementation of our Climate strategy.
[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Corporate executive team

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Organization performance against an environmental sustainability index

☑ Reduction in absolute emissions in line with net-zero target

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in emissions intensity

☑ Increased share of renewable energy in total energy consumption

☑ Reduction in absolute emissions

Resource use and efficiency

☑ Improvements in emissions data, reporting, and third-party verification

☑ Energy efficiency improvement

☑ Reduction in total energy consumption

Pollution

☑ Reduction/elimination of environmental incidents and/or environmental notices (notices of violation)

Engagement

☑ Increased engagement with suppliers on environmental issues

☑ Increased engagement with customers on environmental issues

☑ Increased value chain visibility (traceability, mapping)

☑ Implementation of employee awareness campaign or training program on environmental issues

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Short-Term Incentive Plan, or equivalent, only (e.g. contractual annual bonus)

(4.5.1.5) Further details of incentives

All the members of Corporate Executive Committee (EXCOM) & Sustainability Committee including Chairman, Executive Directors, President, COO, CSO, CTO, CMOs, CFO, Company Secretary, Business HR Heads, Quality & Process Control Head, Supply Chain Management Head & Technology Head have their Bonus & Incentives linked to Balanced Score Card performance system. One of the key elements of this Balanced Score Card is Sustainability Index which has various specific targets on sustainability issues like Capability training, ESG Data & analytics, Safety standards implementation, Awards, carbon emission reduction, water intensity reduction, LTIFR reduction, waste management etc. Allocation of bonus percentage is carried out at the end of fiscal year after a cross functional review of target achievements.

(4.5.1.6) How the position’s incentives contribute to the achievement of your environmental commitments and/or climate transition plan

By integrating sustainability into the performance incentives, ARE&M ensures that the position's personal goals are aligned with the company's broader sustainability goals. This encourages decision-makers to factor in environmental, social, and governance (ESG) considerations alongside traditional business metrics, such as profit and growth. Climate action goals & targets are part of the sustainability Index & Balanced Score Card. Monitoring of progress on these targets is carried out on a monthly basis during the sustainability committee. This focused approach has lead to significant improvements in our environmental & sustainability performance. Refer page 58 to 60 of Integrated report FY2023-34. https://www.amararajaeandm.com/AwardAndDis/Index
[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply
☑ Climate change

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

Climate change mitigation and adaptation, Resource conservation, Circular economy Prevention of air pollution and water pollution Water conservation, and wastewater management, Energy conservation, Biodiversity management etc.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to take environmental action beyond regulatory compliance

☑ Other environmental commitment, please specify **:**Prevention of air pollution and water pollution Water conservation, and wastewater management, Energy conservation, Optimal use of resources,

Climate-specific commitments

☑ Commitment to net-zero emissions

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with Sustainable Development Goal 6 on Clean Water and Sanitation

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

AREM - Environmental Sustainability Policy 25.09.2024.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:
☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply
☑ Science-Based Targets Initiative (SBTi)
☑ UN Global Compact

(4.10.3) Describe your organization's role within each framework or initiative

AREML has signed for science-based targets (SBTi) and net zero plan has been aligned with SBTi framework for 1.5 Degree C pathway. The Company is also a signatory to the United Nations Global Compact, and conducts human rights due diligence based on UNGC protocol.
[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply
☑ No, we have assessed our activities, and none could directly or indirectly influence policy, law, or regulation that may impact the environment

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

(4.11.3) Global environmental treaties or policy goals in line with public commitment or position statement

Select all that apply

☑ Another global environmental treaty or policy goal, please specify **:**SBTi and UNGC

(4.11.4) Attach commitment or position statement

ED Signed SBTi Commitment Letter & CMD CDP Commitment.pdf

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ No

(4.11.8) Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan

ARE&M has been collecting GHG emission inventory data from all the raw material suppliers such as primary lead suppliers (Hindustan Zinc Limited, Korea Zinc Limited), Secondary lead suppliers (Nile, Pondy oxide, Pilot Industries Limited, powertreck industries, Gravita India Limited, Aardee Industries), which covers more than 90% of the raw material procurement by economic value. A series of training and awareness programs are being conducted for these supply chain partners. Monthly data collection and review meetings with all the above-mentioned suppliers have been taken up to review the suppliers' GHG emission reduction program. These suppliers are encouraged to take emission reduction targets and monitor the same. Supplier site assessments are also conducted once in a year to validate the GHG emission data collection methods and reporting procedures.

(4.11.9) Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select from:

☑ Not an immediate strategic priority

(4.11.10) Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

While ARE&M does not have a specific policy on "Public Advocacy" in place at present, active engagement in advocacy efforts is a key part of its operations, particularly those that have an impact on the Energy storage Industry and the organization itself. Representation in 11 trade and industry chambers/associations is maintained, including notable entities such as the Indian Battery Manufacturing Association, Auto Component Manufacturers Association, Recycling and Environment Association of India, and Confederation of Indian Industries (CII) at the national level. On a global scale, ARE&M holds representation in the United Nations Global Compact (UNGC) and World Economic Forum (WEF). In addition, collaboration with statutory authorities is undertaken to address regulatory policies.
[Fixed row]

(4.12) Have you published information about your organization's response to environmental issues for this reporting year in places other than your CDP response?

Select from:
☑ Yes

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:
☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply
☑ GRI
☑ Other, please specify **:**Business Responsibility & Sustainability Reporting (BRSR)

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Value chain engagement

☑ Content of environmental policies

(4.12.1.6) Page/section reference

Net zero plan commitment - pages 56 and 57 of the integrated report 2023-24. Principle 6 (Business should respect and make efforts to protect and restore the environment) of the BRSR report disclosures - pages 219 to 226 of the integrated report 2023-24.

(4.12.1.7) Attach the relevant publication

ARE&M_Integrated Report_FY 2023-24.pdf

(4.12.1.8) Comment

In its initial attempt, ARE&M received a B CDP rating for climate action, demonstrating its commitment to a net zero plan within its operations and across its value chain. This promising start fuels the company's determination to maintain this momentum. Over the year, ARE&M launched the Amara Raja Sustainability Academy, an online training program designed to enhance the company's sustainability capabilities. The program, tailored to specific job roles, has already seen participation from 300 leaders. The Sustainability Committee conducts regular reviews of the company's sustainability performance to ensure alignment with its goals. The company also undertook a life cycle assessment for its products to understand and mitigate their environmental impact, reinforcing its commitment to environmental

stewardship. These accomplishments are a testament to the company's dedication and diligence. The journey has also yielded valuable insights, particularly in the realm of safety. The company recognizes that behavioral changes are pivotal to enhancing safety and that demonstrate a culture of safety is a continuous process requiring consistent effort and vigilance. Furthermore, the company acknowledges the need for ongoing improvement in areas such as diversity and inclusion. Business leaders have set stringent targets to promote inclusivity and improve performance on diversity, addressing talent attraction, retention, and growth.
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Every three years or less frequently

[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA NZE 2050

(5.1.1.3) Approach to scenario

Select from:

☑ Quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Policy

☑ Market

☑ Technology

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 4.0°C and above

(5.1.1.7) Reference year

2022

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2030

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Changes to the state of nature

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Impact of nature footprint on reputation

Regulators, legal and policy regimes

☑ Global regulation

☑ Methodologies and expectations for science-based targets

☑ Other regulators, legal and policy regimes driving forces, please specify **:**Climate disclosure requirements stated by the Reserve Bank for all banks shall be applicable from 2026.CBAM requirements for all the goods from 2032. A carbon trading scheme has been introduced by Government of India. Customer's requirements.

Relevant technology and science

☑ Other relevant technology and science driving forces, please specify **:**The battery industry is set for massive growth driven by the global shift towards electric vehicles (EVs) and renewable energy (RE). Demand for lithium-ion batteries is expected to surge as EV adoption & BESS increases.

Direct interaction with climate

☑ On asset values, on the corporate

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

As per the World Bank Climate Change Knowledge portal, the operating sites experience medium drought scenarios for the period 2030 and 2040. Similarly, the number of heaviest rain days will increase by about three to five days by 2050 which might disrupt the plant operations As per the World Bank Climate Change Knowledge portal, the operating sites may experience 10 to 15 days of very high temperatures, which might affect the business operations in terms of decrease in workers' productivity, absenteeism, reduced energy efficiency of electrical motors, increase in work room cooling loads of the production facilities. The change in market preferences is also one of the major drivers. Consumers, especially in sectors such as telecommunications, data centers, and backup power, are increasingly demanding longer-lasting, maintenance-free, and efficient batteries. Demand for lithium-ion batteries is expected to surge as EV adoption increases, while innovations like newer chemistries and recycling solutions will address efficiency and sustainability concerns. Government incentives, such as India's ACC PLI scheme, are promoting local manufacturing, while the need for energy storage systems (ESS) to support renewable energy grids is also driving demand. OEM clients are also seeking scope 1 and scope 2 emission reporting and action plans for decarbonization. Coal and fuel prices have increased significantly in recent years promoting the facility to explore the economic feasibility of using renewable power, India has updated the GHG reduction plan (NDCs), and progressing towards achieving Net Zero by 2070. Various policies such as Green open access regulations will help to procure the RE power at economically viable options. Reserve Bank of India, GoI, released guidelines on climate risk screening in the lending process for banks, and banks are required to monitor and report the high carbon intensity

portfolios from 2026 onwards. EU Carbon border adjustment mechanism (CBAM - Carbon board tax) will be effective from January 2032 for all imports, which might inflict additional costs for high carbon intensity products. Mandatory value chain GHG emission reporting requirements by EU companies from 2032 under CSDR requirements will prompt the global supply chains to report their climate action requirements.

(5.1.1.11) Rationale for choice of scenario

Published data and information has been adopted: The Climate Change Knowledge Portal (CCKP) provides global data on historical and future climate, vulnerabilities, and impacts - https://climateknowledgeportal.worldbank.org/ Climate data from reputable models and databases were analyzed using the RCP 8.5 scenario to assess climate projections for Tirupati and Chittoor regions. The analysis revealed a significant temperature rise of 4.0 to 5.5 degrees Celsius by 2100, with increased heatwaves posing risks to public health and agriculture. Precipitation patterns may shift, causing variability in rainfall, leading to water management challenges and potential water scarcity. Extreme weather events like cyclones, storms, and floods are also projected to increase, potentially causing infrastructure damage and service disruptions. The study highlights key climate-related risks in these regions, emphasizing the importance of implementing climate policies to address the challenges posed by this high-emission trajectory. ARE&M has assessed Transition Risks induced by climate change using the IEA Net Zero Emissions by 2050 (NZE 2050) scenario. IEA's NZE 2050 scenario aligns with the objective of achieving net-zero greenhouse gas emissions by 2050.
[Add row]

(5.1.2) Provide details of the outcomes of your organization’s scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

Emerging regulation Carbon pricing mechanisms - Rise of imported raw material costs and supply chain disruptions Risk of losing the advantage and market share in emerging markets. If ARE&M is not to adopt climate mitigation measures and continues with a business-as-usual scenario, its carbon emissions (Scope 1 and 2) are projected to reach 460965 tons by 2027 business as usual scenario. As a consequence of this significant carbon footprint, ARE&M would be liable to pay up to 85 per ton of carbon emitted in the international market and INR 2000 in the domestic market, which can result into a financial burden of INR 1524 million per year by the end of 2027, in case decarbonization programs are not adopted. ARE&M has identified flooding as a highly impacting acute physical risk through scenario analysis using the flood risk assessment tool of the World Resource Institute and World Bank Knowledge Exchange Portal. It is projected that the number of heaviest rainfall days will increase to 5 to 6 days in a year and such events may occur once in three to five years. Taking these factors into account, financial risk has been estimated as INR 2750 million with a consideration of the number of days the plant would undergo shut-down due to flooding in the operation or supply and value chain. Recognizing the impact that these events could have on our revenue by disrupting plant operations, we are actively evaluating risk mitigation measures to safeguard business continuity and ensure the resilience of our operations in the face of a changing climate and increased flood risks. The estimated annual increase in operational costs resulting from chronic physical risks is based on several factors, including the heightened usage of HVAC systems and a rise in employee absenteeism due to health issues exacerbated by the effects of climate change. The following assumptions have been made to estimate the financial impacts to the organization based on the published information on climate change impacts on the business: (1). Reduces 2% GDP (overall productivity of business), (2). 3 to 5% increase in HVAC costs, (3). Cuts the life of electrical motor winding insulation by 5%, (4). Increase in raw material cost by 2.5%, (5). Increases worker absenteeism by about 3%, (6). Reduces fuel economy by about 5%. These factors have been carefully considered to project the potential financial impact on our operations to the tune of INR 4040 million and to develop appropriate strategies to address and mitigate these risks proactively. Our customers are increasingly calling for us to adopt clear carbon emission reduction targets and significantly boost our share of renewable energy. They are placing a high value on sustainability and expect us to lead by example in reducing our environmental impact. To meet these expectations, we are committed to integrating more renewable energy into our operations and aligning our strategies with global efforts to combat climate change. Climate risk mitigation is not just about managing risks but unlocking a range of strategic opportunities. We understand that by investing in sustainable practices, we stand to gain a competitive advantage, foster innovation, improve efficiency, and strengthen stakeholder relationships, all while contributing positively to the global fight against climate change.
[Fixed row]

(5.2) Does your organization’s strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

(5.2.3) Publicly available climate transition plan

Select from:

☑ Yes

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ Yes

(5.2.5) Description of activities included in commitment and implementation of commitment

ARE&M is not involved in producing coal or fuel oil-based thermal power at the site. A small quantity of diesel is used to operate diesel generator sets, process heating, and internal material transport. LPG is used for process heating & steam generation for Zero liquid discharge plant operations at the facility. The overall Scope 1 emissions from the above-mentioned sources is 2821 Tons CO2e, which is less than 3% of the total Scope 1 and 2 emissions. ARE&M procures the electrical power from the grid and hence has no intention of installing any fossil fuel-based captive power plant at the site in the future. As a part of the transition plan, the following aspects have been committed under the corporate net zero plan: ARE&M has installed 62 MW of solar power which resulted in GHG emissions to the tune of 67,100 Tons per year. Committed to reducing Scope 1 and 2 emissions by 30% at the end of FY27, and 60% by the end of 2032 from the baseline FY22 levels. This will be achieved by adopting the following interventions: (1). Installation of an additional 2.5 MW of solar rooftop facilities at the operating facilities, (2). Energy conservation programs to reduce grid power consumption by 1.5% YoY basis for the next five years, (3). Procurement of green power through IEX and group captive green open-access methods as per the current regulations stipulated by the Ministry of Power, which will account for about 10% of the grid power consumption, (4). Procurement of green power through a combination of the following methods as per the emerging green open access rules 2022 issued by the Ministry of Power: (i). Group captive green power sourcing, and (ii). Power Purchase Agreement (PPA) with the approved RE generators. (5). Replacement of some of the diesel-operated forklifts with battery-operated vehicles, (6). Phasing out of the Air conditioning using high GHG potential refrigerants We are setting up a battery recycling plant with an eventual capacity of 150000 Tonnes per annum of lead at Cheyyar in Tamil Nadu. This facility will strengthen circularity, encourage responsible lead management and minimize our environmental impact. Our Giga corridor project spread across 262 acres, for Advanced Chemistry Cell manufacturing and Battery Pack assembly with capacities up to 16 GWh and 5 GWh respectively.

(5.2.7) Mechanism by which feedback is collected from shareholders on your climate transition plan

Select from:

☑ We have a different feedback mechanism in place

(5.2.8) Description of feedback mechanism

ARE&M has been adopting the following feedback mechanism: GHG emission inventory is collected from all the operating sites every month through a robust and validated digitized method, GHG emissions from all the material supply vendors (90% of the scope 3 emissions) are collected every month and the same has been validated through internal verification procedures. The data and information on the GHG emissions, planned and achieved GHG emission targets, and support needed from the board are reviewed by the chief sustainability officer, and the same is presented to the Executive Director and the sustainability committee every month. Budget approvals from the board for the implementation of the net zero program are obtained during the AGM. The chief financial officer, Chief Operations Officer, chief sustainability officer, and the respective plant heads are primarily responsible for the implementation of the net zero plan.

(5.2.9) Frequency of feedback collection

Select from:

☑ More frequently than annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

Key assumption for the transition plan: (1). GHG emissions from the facility will increase by about 10% to 12 YoY (projected average for the period FY25 - FY30) due to an increase in company turnover, (2). No fossil fuel-fired captive power plants will be installed, (3). Green power will be sourced through various options specified under the Green Open Access Rules 2022 issued by the Ministry of Power, GoI, Group solar power options will be explored for procuring Green Power, (4). As per the revised NDCs committed by the Government of India, the grid emission factor will reduce from the current level of 0.716 Kg/KWHR ton to 0.55 Kg/KWHR due to an increase in installed RE power by GoI, which helps to reduce the GHG emissions by 25% of the Scope 2 emissions of the facility by 2032. Phasing out of the Air conditioning units using high GHG potential refrigerants or replacing refrigerants with low GWP shall be implemented.

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

Installed 62 MW of solar power units (solar rooftop units and off-site solar power), which accounts 23.46% of the total electrical energy consumption, that resulted in achieving 67,100 Tons of GHG emissions avoidance, Implemented various energy conservation measures and achieved 1.5% reduction in grid power consumption that resulted in the avoidance of about 3,700 Tons per year of GHG emissions.

(5.2.12) Attach any relevant documents which detail your climate transition plan (optional)

ARE&M-NetZeroplan.pdf

(5.2.13) Other environmental issues that your climate transition plan considers

Select all that apply

☑ Plastics

☑ Water

(5.2.14) Explain how the other environmental issues are considered in your climate transition plan

ARE&M prioritizes water management through the implementation of effluent treatment plants & sewerage treatment plants in each production unit, ensuring effective wastewater management. We have also established a Zero Liquid Discharge (ZLD) system with capacities of 280 KLD and 500 KLD, which guarantees that 100% of treated effluents are recycled back into the production process. Inhouse sewage treatment facilities with reuse water pools enable the repurposing of treated wastewater for horticultural uses. ARE&M has implemented various water conservation measures including recycling treated wastewater through Zero Liquid

Discharge systems (ZLD) and achieved 20% reduction in absolute water usage. Freshwater intensity has been reduced from 12.9 KL/INR million in FY 2022-23 to 8.1 KL/INR million in FY 2023-24. Facilities achieved Excellence in Water Management awards from CII, India. Additionally, ARE&M constructed a stormwater collection pond with a capacity of 6,500 KL to capture runoff during the initial 30 to 45 minutes of rainfall. This water is treated in a dedicated rainwater treatment plant and reused for laundry purposes. To improve groundwater levels, ARE&M has undertaken initiatives such as building check dams, rainwater harvesting, and restoring ponds within and outside our facilities. Rainwater harvesting bodies at operating units have a combined capacity of 75,000 KL. We are water positive and assurance for the same through third party planned in FY 2024-25. Regular audits of our Environmental Management Systems (EMS) help identify and implement strategies to reduce water consumption. Currently, recycled sources account for 83% of the lead used in our manufacturing. We are working to increase this proportion by expanding our used battery collection mechanisms. Plastic material use inventory has been developed. Plastic waste generation at the site due to packaging waste has been inventoried. As a part of the extended producer responsibility regulations of GoI, plastic waste recycling credits have been procured from authorized recycling vendors through the government portal.
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:
☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply
☑ Products and services
☑ Upstream/downstream value chain
☑ Investment in R&D
☑ Operations
[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

The battery manufacturing sector is significantly impacted by net-zero programs, which drive demand for energy-efficient and sustainable technologies. To meet emission reduction goals, battery manufacturers must adopt cleaner production methods, reduce carbon footprints, and innovate in battery efficiency and recycling. These programs also boost demand for electric vehicles (EVs) and renewable energy storage solutions, further influencing the sector to prioritize eco-friendly materials, enhance supply chain sustainability, and support global decarbonization efforts. OEMs and manufacturers are seeking low-carbon footprint batteries by prioritizing sustainable sourcing of raw materials, improving energy efficiency in production, and adopting recycling practices. Amara Raja Advanced Cell Technologies Private Limited ('ARACT'), Telangana, India, a wholly-owned subsidiary of the Company of ARE&M, was incorporated on November 29, 2022. The Company is in the process of setting up a Lithium Cell Gigafactory and Battery Pack Assembly Plant in Divitipally, Telangana, and the commercial operations from these new facilities are yet to commence.

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Over 50% of GHG emissions in the battery manufacturing industry come from purchased goods (Scope 3 emissions), with most materials sourced from recycled lead suppliers. While primary lead suppliers have adopted or are transitioning to net-zero and decarbonization programs, secondary lead suppliers continue to rely on fossil fuels, resulting in higher emissions. ARE&M is actively engaging these secondary suppliers to gather GHG data. Amara Raja Circular Solutions Private Limited ('ARCS'), Andhra Pradesh, India, a subsidiary of ARE&M, is in the process of establishing a secondary lead recycling facility with a capacity of 150,000 Tons per year capacity is being set up in Cheyyar, Tamil Nadu, which helps to reduce the specific "Scope 3 GHG emissions (purchased goods) in the future.

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Rapid technological changes pose a significant risk to business prospects, necessitating agile adaptation and innovation to maintain competitiveness. Innovation is needed to improve energy density, reduce reliance on scarce materials, enhance recycling technologies, and lower carbon footprints while ensuring batteries are safer, more efficient, and cost-effective. We remain dedicated to innovating and developing cutting-edge solutions tailored to customer needs. This commitment includes investing in niche and pertinent technologies to maintain competitiveness. For instance, our Lithium batteries designed for telecom applications are currently undergoing field trials and are poised for commercial deployment in the near future. Promising advancements made in advanced lead acid and alternate chemistry storage technologies signifying our commitment to pushing the boundaries of energy storage. Validated and ready to launch, Integrated cutting-edge plate manufacturing technology specifically tailored for enhancing the performance and reliability of UPS system.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Scope 2 emissions contribute to about 35% of the total emissions. The majority of the Scope 2 emissions are attributed to charging of the battery before dispatching to the market. Energy efficiency is a constant drive at AR&EM operations. Due to the changing RE Power procurement regulatory landscape in India such as the introduction of Green Open Access Power Rules 2022, by GoI, ARE&M will explore all possibilities of enhancing the green power procurement from various options such as green power tariff scheme, group captive power scheme, and green power purchase agreement model etc., The Scope 1 emissions from the operating sites contribute to less than 1% of the total GHG emissions. Since the existing operating sites have already adopted cleaner fuels for heating of material and steam generation for ZLD operations, GHG emissions from the fossil fuel at the operating sites is not a priority at this juncture. Although the Scope 1 emissions from refrigerant use is less than 0.5% of the total GHG emissions, these emissions contribute to more than 45% of the Scope 1 emissions. It is proposed to phase out the air conditioning units utilizing high GWP refrigerants in a phased manner.
[Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Capital expenditures

☑ Capital allocation

☑ Acquisitions and divestments

(5.3.2.2) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

Environmental risks and opportunities are integral to ARE&M's financial planning. We are focusing on strategic investments in sustainable energy, innovation in clean technologies, and managing environmental risks, while aligning our capital expenditures with our long-term sustainability goals. This ensures that we not only comply with regulatory requirements but also capitalize on opportunities in the evolving global energy landscape.
[Add row]

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition
	Select from: ☑ Yes	*Select all that apply* ☑ Other methodology or framework

[Fixed row]

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

Select from:

☑ Other, please specify **:**CAPEX spent on the RE power and ZLD facilities

(5.4.1.5) Financial metric

Select from:

☑ CAPEX

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

2622000000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

100

(5.4.1.8) Percentage share of selected financial metric planned to align in 2025 (%)

0

(5.4.1.9) Percentage share of selected financial metric planned to align in 2030 (%)

35

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization’s climate transition

ARE&M has installed 62 MW of solar power which resulted in GHG emissions to the tune of 67,100 Tons per year. Committed to reducing Scope 1 and 2 emissions by 30% at the end of FY27, and 60% by the end of 2032 from the baseline FY22 levels. This will be achieved by adopting the following interventions: (1). Installation of an additional 2.5 MW of solar rooftop facilities at the operating facilities, (2). Energy conservation programs to reduce grid power consumption by 1.5% YoY basis for the next five years, (3). Procurement of green power through IEX and group captive green open-access methods as per the current regulations stipulated by the Ministry of Power, which will account for about 10% of the grid power consumption, (4). Procurement of green power through a combination of the following methods as per the emerging green open access rules 2022 issued by the Ministry of Power: (i). Group captive green power sourcing, and (ii). Power Purchase Agreement (PPA) with the approved RE generators. (5). Replacement of some of the diesel-operated material handling equipment's with battery-operated vehicles, (6). Phasing out of the Air conditioning using high GHG potential refrigerants
[Add row]

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

(5.5.1) Investment in low-carbon R&D

Select from:

☑ Yes

(5.5.2) Comment

We will continue to invest in all emerging battery technologies and energy management systems apart from expanding capacities for lead-acid batteries. we are also investing into significant research and development capabilities for providing solutions in Energy and Mobility applications. investments in Research and Development aimed at optimizing lead utilization in battery production are ongoing. Our commitment to sustainability is evident through the maximization of recycled lead in these processes. We prioritize resource conservation through efficiency measures that minimize raw material inputs. Moreover, a substantial portion of our procurement is sourced from local suppliers, a strategic initiative aimed at reducing potential supply chain disruptions. The Group is investing in Giga factory for manufacturing lithium-ion cells and investing in technology start-up companies to leverage capabilities for the new energy business. Our commitment to sustainable growth through the creation of a circular economy will be further strengthened by our investment into a greenfield Battery Recycling Plant in Tamil Nadu, this will eventually cater to 25% to 30% of overall raw material requirements. Advanced New Lead Acid Technologies: Promising advancements made in advanced lead-acid and alternate chemistry storage technologies signify our commitment to pushing the boundaries of energy storage. Amara Raja Power Systems (100% Subsidiary) is in to manufacturing of Industrial Chargers, Integrated Power Systems, EV Chargers for 2W and 3W applications and other energy management devices.
[Fixed row]

(5.5.2) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.

Row 1

(5.5.2.1) Technology area

Select from:

☑ Energy storage

(5.5.2.2) Stage of development in the reporting year

Select from:

☑ Full/commercial-scale demonstration

(5.5.2.3) Average % of total R&D investment over the last 3 years

63

(5.5.2.4) R&D investment figure in the reporting year (unit currency as selected in 1.2) (optional)

82279784

(5.5.2.5) Average % of total R&D investment planned over the next 5 years

60

(5.5.2.6) Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Under the banner of Lead Optimization, most of the lead used by ARE&M is sourced from recycled batteries. This practice minimizes the mining of lead and its associated toxicological effects. The R&D division is actively engaged in several internal projects aimed at increasing material efficiency and reducing the consumption of lead and acid in batteries. These projects fall broadly under the research area of lead optimization. Advanced New Lead Acid Technologies: Promising advancements made in advanced lead-acid and alternate chemistry storage technologies signify our commitment to pushing the boundaries of energy storage. ARACT (wholly owned subsidiary of ARE&M), has signed a technical licensing agreement with GIB EnergyX Slovakia s.r.o., a subsidiary of Gotion High-Tech Co Ltd, China. As part of the agreement GIB EnergyX will license Gotion's world class LFP technology for lithium-ion cells to ARACT. ARE&M and Log9 Materials have entered in to a significant collaboration aimed at advancing clean energy and electric vehicle (EV) technology. This partnership is centered around leveraging their respective strengths to accelerate the adoption of lithium-ion batteries, particularly for electric mobility and energy storage solutions.
[Add row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: ☑ Yes	*Select all that apply* ☑ Carbon

[Fixed row]

(5.10.1) Provide details of your organization’s internal price on carbon.

Row 1

(5.10.1.1) Type of pricing scheme

Select from:

☑ Implicit price

(5.10.1.2) Objectives for implementing internal price

Select all that apply

☑ Conduct cost-benefit analysis

☑ Drive energy efficiency

☑ Drive low-carbon investment

☑ Identify and seize low-carbon opportunities

(5.10.1.3) Factors considered when determining the price

Select all that apply

☑ Alignment to international standards

☑ Cost of required measures to achieve climate-related targets

☑ Price/cost of renewable energy procurement

☑ Price/cost of voluntary carbon offset credits

(5.10.1.4) Calculation methodology and assumptions made in determining the price

ARE&M is committed to reducing 30% of the total Scope 1 and 2 emissions by 2027 and 60% by 2032 through various interventions such as Green open access, rooftop solar power, group captive power, and various RE power procurement methods through Green Open Access Rules 2022, GoI. The Green Power Tariff mechanism suggested by GoI under the Green Open Access Rules 2002 indicates an electrical energy tariff difference of INR 4 to 5 per KWHR as against the grid power cost of INR 7 to 8 per KWHR. Based on this information, the payback period of the solar power installation will be in the order of 5 to 6 years. ARE&M has invested about INR 2622 million towards RE and energy conservation measures that have resulted in GHG emissions to the tune of 67,100 TPA. Based on this information the internal carbon price is estimated as USD 30 per ton of GHG over a solar power plant life span of 15 years. ARE&M is exploring sourcing of green power from various sources inline with the Green Open Access Rules 2022 issued by GoI. This includes the purchase of RE power from the state electricity boards as per Green Power Tariff regulations, solar power plant operators as per Green Open Access Rules, or Group Captive RE Power projects. Based on the above rationale, ARE&M has estimated the likely internal carbon price as INR 1800 per T of CO2e (USD 20 per Ton).

(5.10.1.5) Scopes covered

Select all that apply

☑ Scope 2

(5.10.1.6) Pricing approach used – spatial variance

Select from:

☑ Uniform

(5.10.1.8) Pricing approach used – temporal variance

Select from:

☑ Static

(5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

1800

(5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

1800

(5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

☑ Capital expenditure

(5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

☑ No

(5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

33

(5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

Investments on the RE power installation and Green Open Access Power have been monitored by the finance and project team. These projects are audited by a third party as per the Indian Financial Reporting practices stipulated by GoI. The Green Open Access Rules 2022 facilitate easier access to renewable energy for consumers, promoting the transition to cleaner power sources. By enabling open access to renewable energy markets, these rules encourage industries and businesses to source energy directly from renewable power generators.
[Add row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Plastics
Investors and shareholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Plastics
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Plastics

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Contribution to supplier-related Scope 3 emissions

(5.11.1.3) % Tier 1 suppliers assessed

Select from:
☑ 51-75%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

Raw material procurement contributes to more than 50% of the Scope 3 emissions. All key raw material suppliers and trade battery suppliers have been considered in emission inventory program and also net zero program.

(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:
☑ 51-75%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

17
[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:
☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to climate change

(5.11.2.4) Please explain

Raw material procurement contributes to more than 50% of the Scope 3 emissions. All critical suppliers have been considered for emission inventory program and also net zero program.
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

As per our sustainable procurement policy, suppliers are mandatorily reporting, Scope 1 and 2 emissions, water consumption, waste generation & safety statistics every month. Supplier audits are conducted every year. Various training programs are conducted for all the suppliers.
[Fixed row]

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Climate change

(5.11.6.1) Environmental requirement

Select from:

☑ Disclosure of GHG emissions to your organization (Scope 1 and 2)

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ First-party verification

☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 51-75%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 51-75%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:

☑ 51-75%

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:

☑ 51-75%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Retain and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:

☑ None

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply

☑ Assessing the efficacy and efforts of non-compliant supplier actions through consistent and quantified metrics

☑ Providing information on appropriate actions that can be taken to address non-compliance

☑ Re-integrating suppliers back into upstream value chain based on the successful and verifiable completion of activities

(5.11.6.12) Comment

As per our sustainable procurement policy, suppliers are mandatorily reporting, Scope 1 and 2 emissions and water consumption every month. Supplier audits are conducted every year. Various training programs are conducted for all the suppliers.
[Add row]

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Emissions reduction

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to make credible renewable energy usage claims

☑ Provide training, support and best practices on how to measure GHG emissions

Information collection

☑ Collect climate transition plan information at least annually from suppliers

☑ Collect GHG emissions data at least annually from suppliers

☑ Collect targets information at least annually from suppliers

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 51-75%

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ 51-75%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

As per the sustainable procurement policy, suppliers are mandatorily reporting, Scope 1 and 2 emissions and water consumption every month. Supplier audits are conducted every year. Various training programs are conducted for all the suppliers.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Share information about your products and relevant certification schemes

☑ Share information on environmental initiatives, progress and achievements

Innovation and collaboration

☑ Align your organization’s goals to support customers’ targets and ambitions

☑ Engage with stakeholders to advocate for policy or regulatory change

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 51-75%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Customer needs on their decarbonization plans and various sustainability reporting obligations.

(5.11.9.6) Effect of engagement and measures of success

Submission of annual GHG emission data with the customer seeking the climate action targets of ARE&M.
[Add row]

(5.12) Indicate any mutually beneficial environmental initiatives you could collaborate on with specific CDP Supply Chain members.

Row 1

(5.12.1) Requesting member

Select from:

(5.12.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.12.4) Initiative category and type

Change to supplier operations

☑ Increase proportion of renewable energy purchased

(5.12.5) Details of initiative

We have made substantial investments in solar power generation, with a capacity of 62 MW. Additionally, AREM has ambitious plans to procure an additional 279 MW equivalent of green power over the next decade. This proactive approach toward renewable energy will not only help reduce the company's Scope 2 greenhouse gas (GHG) emissions but also position AREM favorably in a carbon-conscious regulatory environment, potentially attracting more customers and investors.

(5.12.6) Expected benefits

Select all that apply

☑ Increased transparency of upstream/downstream value chain

☑ Reduction of own operational emissions (own scope 1 & 2)

(5.12.7) Estimated timeframe for realization of benefits

Select from:

☑ 1-3 years

(5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

Select from:

☑ No

(5.12.11) Please explain

We have not estimated lifetime CO2e savings.
[Add row]

(5.13) Has your organization already implemented any mutually beneficial environmental initiatives due to CDP Supply Chain member engagement?

	Environmental initiatives implemented due to CDP Supply Chain member engagement
	Select from: ☑ Yes

[Fixed row]

(5.13.1) Specify the CDP Supply Chain members that have prompted your implementation of mutually beneficial environmental initiatives and provide information on the initiatives.

Row 1

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini1

(5.13.1.5) Initiative category and type

Relationship sustainability assessment

☑ Align goals to feed into customers targets and ambitions

(5.13.1.6) Details of initiative

We have aligned our goals and targets with customer's Net Zero goals & targets.

(5.13.1.7) Benefits achieved

Select all that apply

☑ Reduction of own operational emissions (own scope 1 & 2)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

Increasing the share of renewable energy in the energy mix has reduced our scope 2 carbon emissions, enhancing energy security, lowering long-term energy costs, and fostering sustainable economic growth.

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

Row 2

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini2

(5.13.1.5) Initiative category and type

Relationship sustainability assessment

☑ Other assessment, please specify :Participation in Drive Sustainability initiative Assessment

(5.13.1.6) Details of initiative

Daimler Truck AG is working together with several automotive manufacturers as part of the Drive Sustainability Initiative to enhance sustainability in the supply chain. To achieve this, we have developed a standard Sustainability Assessment Questionnaire (SAQ 5.0) for Automotive Sector Suppliers. As an important supplier to them, AREM has participated in the assessment and demonstrated our sustainability practices and initiatives.

(5.13.1.7) Benefits achieved

Select all that apply

☑ Increased transparency of upstream/downstream value chain

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

We have obtained a score of 84 out of 100 in the assessment.

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

[Add row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

The GHG accounting and net zero targets are defined based on the operational control approach in line with the Integrated report disclosures for FY2023-24. The following facilities and operations have been considered: (1). ARE&M's operational facilities located at Tirupati and Chittoor, (2). Mangal Industries Limited's (MIL) battery plastic component components manufacturing facility which was merged with ARE&M in February 2024. The estimated GHG emission levels of 17,500 TPA from MIL will be accounted under Scope 1 emissions of ARE&M for the FY2024-25.

Plastics

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control approach has been adopted in line with the Integrated report disclosures for FY2023-24. The following facilities and operations have been considered: (1). ARE&M's operational facilities located at Tirupati and Chittoor, (2). Mangal Industries Limited's (MIL) battery plastic component components manufacturing facility which was merged with ARE&M in February 2024. All the facilities are registered under EPR regulations of the Plastic Waste Management Rules 2016, GoI.

Biodiversity

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control approach has been adopted in line with the Integrated report disclosures for FY2023:24. The following facilities and operations have been considered: (1). ARE&M's operational facilities located at Tirupati and Chittoor, (2). Mangal Industries Limited's (MIL) battery plastic component components manufacturing facility which was merged with ARE&M in February 2024. The facilities are not located at notified ecologically sensitive areas. No additional land has been acquired for the business operations at both the operating plants, hence the ecological and biological impacts are not envisaged. Watershed development programs are adopted at both the operating facilities. At Amara Raja, ARE&M prioritizes environmental sustainability through nature-based solutions, focusing on extensive tree plantation efforts both within and around our facilities. This commitment enhances biodiversity, improves ecosystem health, and contributes significantly to carbon sequestration and air quality improvement. Currently, ARE&M maintains a green cover over 55% of our operational areas, having successfully planted 82,611 saplings on-site and an additional 71,000 saplings in surrounding areas. We have conducted Biodiversity assessment and there are no endangered or protected species of flora & fauna in our proximity.
[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:
☑ No

(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

(7.1.1.1) Has there been a structural change?

Select all that apply
☑ Yes, a merger

(7.1.1.2) Name of organization(s) acquired, divested from, or merged with

Mangal Industries Limited (MIL) - Battery Component Division

(7.1.1.3) Details of structural change(s), including completion dates

Mangal Industries Limited's (MIL) battery plastic component components manufacturing facility was merged with ARE&M in February 2024. The expected GHG emission levels of 17,500 TPA from this Battery division will be accounted under Scope 1 emissions of ARE&M for the FY2024-25.
[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply ☑ No

[Fixed row]

(7.1.3) Have your organization’s base year emissions and past years’ emissions been recalculated as a result of any changes or errors reported in 7.1.1 and/or 7.1.2?

(7.1.3.1) Base year recalculation

Select from:

☑ No, because the impact does not meet our significance threshold

(7.1.3.3) Base year emissions recalculation policy, including significance threshold

Mangal Industries Limited's (MIL) battery plastic components manufacturing facility was merged with ARE&M in February 2024. The contribution of GHG emissions from this merger is limited to two months (Feb and March 2024), which accounts to less than 3000 TPA, i.e less than 1.5% of the total Scope 1 and 2 emissions. As per the base year methodology any change in GHG emissions /- 5% from the baseline data will be considered for defining the revised baseline scenario.

(7.1.3.4) Past years’ recalculation

Select from:

☑ No

[Fixed row]

(7.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Select all that apply

☑ IPCC Guidelines for National Greenhouse Gas Inventories, 2006

☑ ISO 14064-1

☑ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

☑ The Greenhouse Gas Protocol: Scope 2 Guidance

☑ The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

(7.3) Describe your organization's approach to reporting Scope 2 emissions.

	Scope 2, location-based	Scope 2, market-based	Comment
	Select from: ☑ We are reporting a Scope 2, location-based figure	*Select from:* ☑ We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure	*The calculations used here are based on India's average emission factor from Central Electricity Authority (CEA)*

[Fixed row]

(7.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Select from:

☑ No

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

2282.0

(7.5.3) Methodological details

Annual diesel consumption for the Diesel Generator sets, boilers, and internal transporting vehicles has been metered and the IPCC emission factors for the diesel fuel have been adopted for estimating the GHG emissions. LPG and Acetylene have been used for lead-melting furnaces. Fuel gas consumption is metered at the facilities. IPCC emission factors for LPG have been adopted for estimating the GHG emissions from the furnace. Chillers and air conditioning units of varied sizes are in operation across the facilities. The quantity of refrigerant refilling activities is being recorded. Based on the GWP suggested by IPCC for each of the individual refrigerants, the total GHG emission (CO2e) has been estimated.

Scope 2 (location-based)

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

267904

(7.5.3) Methodological details

Grid emission factors published by the Ministry of Energy, GoI for the period 2022 has been adopted. An emission factor of 0.71 Kg/KWHR has been considered as the average grid emission factor in India.

Scope 2 (market-based)

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not applicable

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

253794

(7.5.3) Methodological details

Purchased goods and services (procurement of primary Lead, secondary lead, Sulphuric acid, and Polypropylene) have been considered. The economic intensity GHG emission factors published by USEPA Scope 3 emission hub have been adopted.

Scope 3 category 2: Capital goods

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Since 90% of the operating cost is covered by raw-material procurement and the CAPEX spent on the capital goods for the FY2023:24 is also very small, hence these emissions are not considered.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

The facility consumes a very small amount of diesel and LPG for its operations and hence, this segment of the scope 3 emissions is not considered.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

7023

(7.5.3) Methodological details

Upstream Transport & Distribution (raw material transport by road, and sea) - economic intensity method has been adopted for estimating the GHG emissions. IPCC and USEPA emission factors for the transport sector have been adopted to estimate GHG emissions.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

1901

(7.5.3) Methodological details

Waste generated from the operations (Plastic Waste, E-Waste, Other Hazardous Waste (Liquids and Solids, Waste Recycled, Landfilling Waste Generation, Incineration) - USEPA emission factors for the waste generation and processing sectors have been adopted to estimate GHG emissions.

Scope 3 category 6: Business travel

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

680.0

(7.5.3) Methodological details

Business travel - GHG emissions are estimated based on the economic value method. The total annual spending on business travel has been converted into average kilometers covered under each category (taxi, railway, and air) based on the prevailing tariffs. The travel distance thus estimated is used to compute the GHG emissions based on the emission factors published by GHG Protocol, India chapter.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

2023

(7.5.3) Methodological details

The emission calculation in this category is on the basis of a fuel-based method. Fuel consumption for company provided transport has been considered. However, it is to be noted that employee commuting through the usage of one's own vehicle was not included in the estimation. The total fuel consumption is used to compute the GHG emissions based the IPCC emission factors.

Scope 3 category 8: Upstream leased assets

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not covered

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

1017.0

(7.5.3) Methodological details

Economic intensity method (spend method) has been adopted for estimating the GHG emissions. IPCC and USEPA emission factors for the transport sector have been adopted to estimate GHG emissions.

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

ARE&M products are NOT further processed by the dealers or distributors. The products are used by end consumers.

Scope 3 category 11: Use of sold products

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Due to a lack of any proven emission factors, these emissions are not estimated. ARE&M will develop a methodology and report these emissions in the future.

Scope 3 category 12: End of life treatment of sold products

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

131452

(7.5.3) Methodological details

USEPA emission factors for scope 3 emission have been adopted. The specific emission rate of 0.658 TCO2/t of recycled lead has been adopted.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

03/31/2022

(7.5.2) Base year emissions (metric tons CO2e)

222

(7.5.3) Methodological details

Emissions due to electrical power consumption (grid power) of the warehouses and Distribution centers have been considered. Grid emission factor of 0.71 Kg/KWHR of the electrical power consumed by the warehouse and distribution centers has been considered.

Scope 3 category 14: Franchises

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not considered under this submission

Scope 3 category 15: Investments

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not considered under this submission

Scope 3: Other (upstream)

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not applicable

Scope 3: Other (downstream)

(7.5.1) Base year end

03/30/2022

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not applicable
[Fixed row]

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

6604

(7.6.3) Methodological details

Annual diesel consumption for the Diesel Generator sets, boilers, and internal transporting vehicles has been metered and the IPCC emission factors for the diesel fuel have been adopted for estimating the GHG emissions. LPG and Acetylene have been used for lead-melting furnaces. Fuel gas consumption is metered at the facilities. IPCC emission factors for LPG have been adopted for estimating the GHG emissions from the furnace. Chillers and air conditioning units of varied sizes are in operation across the facilities. The quantity of refrigerant refilling activities is being recorded. Based on the GWP suggested by IPCC for each of the individual refrigerants, the total GHG emission (CO2e) has been estimated.

Past year 1

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

6159

(7.6.2) End date

03/30/2023

(7.6.3) Methodological details

Annual diesel consumption for the Diesel Generator sets, boilers, and internal transporting vehicles has been metered and the IPCC emission factors for the diesel fuel have been adopted for estimating the GHG emissions. LPG and Acetylene have been used for lead-melting furnaces. Fuel gas consumption is metered at the facilities. IPCC emission factors for LPG have been adopted for estimating the GHG emissions from the furnace. Chillers and air conditioning units of varied sizes are in operation across the facilities. The quantity of refrigerant refilling activities undertaken by the vendors is being recorded. Based on the GWP suggested by IPCC for each of the individual refrigerants, the total GHG emission (CO2e) has been estimated. Grid emission factors published by the Ministry of Energy, GoI for the period 2023 has been adopted. An emission factor of 0.716 Kg/KWHR has been considered as the average grid emission factor in India. According to the press release issued by MOEFCC, the grid emission factors will be reduced as low as 0.55 Kg/KWHR by the end of 2030 due to the adoption of renewable energy policies in India.

The following Scope 3 categories have been considered for the previous and current reporting periods. Purchased goods and services (procurement of primary Lead, secondary lead, Sulphuric acid, and Polypropylene) have been considered. The economic intensity GHG emission factors published by USEPA Scope 3 emission hub have been adopted. Traded lead-acid batteries also considered under the scope 3 emissions. Upstream Transport & Distribution (raw material transport by road, and sea) - economic intensity method has been adopted for estimating the GHG emissions. IPCC and USEPA emission factors for the transport sector have been adopted to estimate GHG emissions. Waste generated from the operations (Plastic Waste, E-Waste, Other Hazardous Waste (Liquids and Solids, Waste Recycled, Landfilling Waste Generation, Incineration) - USEPA emission factors for the waste generation and processing sectors have been adopted to estimate GHG emissions. Business travel - GHG emissions are estimated based on the economic value method. The total annual spending on business travel has been converted into average kilometers covered under each category (taxi, railway, and air) based on the prevailing tariffs. The travel distance thus estimated is used to compute the GHG emissions based on the emission factors published by GHG Protocol, India chapter.
[Fixed row]

(7.7) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

209781

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.4) Methodological details

The grid emission factor of 0.716 Kg/KWHR as reported by the Ministry of Power, GoI has been adopted.

Past year 1

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

242867

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2023

(7.7.4) Methodological details

The grid emission factor of 0.716 Kg/KWHR as reported by the Ministry of Power, GoI has been adopted.
[Fixed row]

(7.8) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

(7.8.1) Evaluation status

Select from:
☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

325655

(7.8.3) Emissions calculation methodology

Select all that apply
☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Purchased goods and services (procurement of primary Lead, secondary lead, Sulphuric acid, and Polypropylene) have been considered. The economic intensity GHG emission factors published by US EPA Scope 3 emission hub have been adopted. In the case of primary and secondary lead procurement, an emission factor

of 0.405 TCO2e/t, and 0.658 TCO2e/t have been considered for the estimation of the GHG emissions. In the case of sulfuric acid and polypropylene, emission factors the US EPA scope emission factors of 0.00405 TCO2e/t, and 1.55 TCO2e/t respectively.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Purchased goods account for more than 90% of the total procurement costs in the facility. The contribution of capital goods to the overall GHG emissions will be less significant and hence has not been considered under this evaluation.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The facility consumes a very small amount of diesel and LPG for its operations and hence, this segment of the scope 3 emissions is not considered.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

5889

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Upstream Transport & Distribution (raw material transport by road, and sea) - economic intensity method has been adopted for estimating the GHG emissions. IPCC and USEPA emission factors for the transport sector have been adopted to estimate GHG emissions.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

1901

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average product method

☑ Waste-type-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Waste generated from the operations (Plastic Waste, E-Waste, Other Hazardous Waste (Liquids and Solids, Waste Recycled, Landfilling Waste Generation, Incineration) - USEPA emission factors for the waste generation and processing sectors have been adopted to estimate GHG emissions.

Business travel

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

1347

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Hybrid method

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Business travel - GHG emissions are estimated based on the economic value method. The total annual spending on business travel has been converted into average kilometers covered under each category (road and air) based on the prevailing tariffs. The travel distance thus estimated is used to compute the GHG emissions based on the emission factors published by GHG Protocol, India chapter.

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

2289

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Hybrid method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

The emission calculation in this category is on the basis of a fuel-based method and includes transportation through company buses & cars. However, it is to be noted that employee commuting through the usage of one's own vehicle was not included in the estimation.

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

ARE&M is not hiring any warehouse or leaded assets for the storage of raw materials.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

23040

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

economic intensity method has been adopted for estimating the GHG emissions. IPCC and USEPA emission factors for the transport sector have been adopted to estimate GHG emissions.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

ARE&M products are NOT further processed by the dealers or distributors. The products are used by end consumers.

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, not yet calculated

(7.8.5) Please explain

Due to a lack of any proven emission factors, these emissions are not estimated. ARE&M will develop a methodology and report these emissions in the future.

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

44837

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

☑ Average product method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

USEPA emission factors for scope 3 emission have been adopted. The specific emission rate of 0.658 TCO2/t of recycled lead has been adopted.

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

741

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Emissions due to electrical power consumption (grid power) of the warehouses and Distribution centers have been considered. Grid emission factor of 0.716 Kg/KWHR of the electrical power consumed by the warehouse and distribution centers has been considered.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not evaluated

(7.8.5) Please explain

Will be considered in the future scenarios

Investments

(7.8.1) Evaluation status

Select from:
☑ Not evaluated

(7.8.5) Please explain

Will be considered in the future scenarios

Other (upstream)

(7.8.1) Evaluation status

Select from:
☑ Relevant, not yet calculated

(7.8.5) Please explain

Not relevant

Other (downstream)

(7.8.1) Evaluation status

Select from:
☑ Relevant, not yet calculated

(7.8.5) Please explain

Not relevant
[Fixed row]

(7.8.1) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

(7.8.1.1) End date

03/30/2023

(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)

289436

(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)

0

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

0

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

6891

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

1930

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

1971

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

2164

(7.8.1.9) Scope 3: Upstream leased assets (metric tons CO2e)

0

(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)

1118

(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)

0

(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

0

(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

44837

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

269

(7.8.1.15) Scope 3: Franchises (metric tons CO2e)

0

(7.8.1.16) Scope 3: Investments (metric tons CO2e)

0

(7.8.1.17) Scope 3: Other (upstream) (metric tons CO2e)

0

(7.8.1.18) Scope 3: Other (downstream) (metric tons CO2e)

0

(7.8.1.19) Comment

The total estimated scope 3 emissions are 400948 TPA.
[Fixed row]

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	*Select from:* ☑ Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	*Select from:* ☑ Third-party verification or assurance process in place
Scope 3	*Select from:* ☑ Third-party verification or assurance process in place

[Fixed row]

(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:
☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.1.4) Attach the statement

AREM Assurance Statement FY24 - GHG Inventorization.pdf

(7.9.1.5) Page/section reference

Page 2 of the document

(7.9.1.6) Relevant standard

Select from:
☑ ISAE3000

(7.9.1.7) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Row 1

(7.9.2.1) Scope 2 approach

Select from:

☑ Scope 2 location-based

(7.9.2.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.2.5) Attach the statement

AREM Assurance Statement FY24 - GHG Inventorization.pdf

(7.9.2.6) Page/ section reference

Page 2 of the document

(7.9.2.7) Relevant standard

Select from:

☑ ISAE3000

(7.9.2.8) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.3) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Row 1

(7.9.3.1) Scope 3 category

Select all that apply

- ☑ Scope 3: Business travel
- ☑ Scope 3: Employee commuting
- ☑ Scope 3: Downstream leased assets
- ☑ Scope 3: Purchased goods and services
- ☑ Scope 3: Waste generated in operations
- ☑ Scope 3: End-of-life treatment of sold products
- ☑ Scope 3: Upstream transportation and distribution
- ☑ Scope 3: Downstream transportation and distribution

(7.9.3.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.3.5) Attach the statement

AREM Assurance Statement FY24 - GHG Inventorization.pdf

(7.9.3.6) Page/section reference

Page 2 of the document

(7.9.3.7) Relevant standard

Select from:
☑ ISAE3000

(7.9.3.8) Proportion of reported emissions verified (%)

100
[Add row]

(7.10) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Select from:
☑ Decreased

(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Change in renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

33590

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

100

(7.10.1.4) Please explain calculation

62 MW of RE power has been installed (solar rooftop and Group Captive RE power as per Open Access Rules of GoI). The above measures have resulted in about 47 million KWHR of RE power during the reporting period FY2023-24

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

33086

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

100

(7.10.1.4) Please explain calculation

ARE&M has spearheaded several projects aimed at promoting energy efficiency, including: Improvement of the heater control system for lead pots, Conversion of V-belt drive to direct coupling in FA/FE Systems, Automation of the cooling tower process pump by, providing Variable Frequency Drives (VFD), Replacement of old conventional chargers with Insulated Gate Bipolar Transistor (IGBT) chargers, Installation of High-Volume Low-Speed (HVLS) axial, fans in finishing areas, Replacement of conventional lights with energy efficient LED lights, Upgradation of oven control panels with IGBT technology, Installation of an automatic descaling system for acid chillers2, Elimination of dumper washing tunnel blowers in line 1, Interlinking of FA System with respect to production lines, Manual alternation of street lighting switch-on in the North and South sides Implementation of timer-based lighting control (6.00 PM to 06.00 AM), Reduction of skin temperature in lead melting pots, Replacement of conventional motors with Brushless DC (BLDC) motors in HVAC Air Handling Units (AHUs), Downgrading of the finishing line 2

conveyor motor from 2Hp to 1Hp, Improvement of power factor at the Sub-Distribution Board (SDB) level, Replacement of pneumatic vibrators with electrical vibrators, Installation of occupancy sensors for stores, charger rooms, formation tubs, and other utility buildings to control lighting energy, Replacement of Air-Operated Double Diaphragm, (AODD) pumps with energy-efficient Electrically, Operated Double Diaphragm (EODD) pumps in the Effluent Treatment Plant (ETP), Installation of a VFD for the treated water transfer pump at ETP with a capacity of 20 hp, Reduction of compressed air leaks in the shop floor, Optimization of energy usage in curing and drying ovens ETC.

Divestment

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Acquisitions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Mergers

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Mangal Industries Limited's (MIL) Battery component division, which is involved in battery plastic components manufacturing facility has been merged with the ARE&M in Feb 2024. The contribution of GHG emissions from this facility for the overall scope 1 and 2 is less than 1%, hence these emissions will be reported in the next financial year onwards.

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

32641

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

1.5

(7.10.1.4) Please explain calculation

Although is an increase in production by about 8% during the reporting year, there is a marginal increase in the revenue generated. Due to the utilization of more renewable power, Scope 2 emissions are reduced. The RE power use has increased from 47203 MWh in the previous year to 93721 MWh in the current reporting year.

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in boundary

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in physical operating conditions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No impacts or disruptions in business operations occurred due to extreme weather conditions as stated in the guidance note.

Unidentified

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No reportable activities identified

Other

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:
☑ Location-based

(7.11) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?

Select from:
☑ Increased

(7.11.1) For each Scope 3 category calculated in 7.8, specify how your emissions compare to the previous year and identify the reason for any change.

Purchased goods and services

(7.11.1.1) Direction of change

Select from:
☑ Increased

(7.11.1.2) Primary reason for change

Select from:
☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

36219

(7.11.1.4) % change in emissions in this category

13

(7.11.1.5) Please explain

There is an increase in sales revenue by about 8%, which resulted in increase in raw material procurement such as primary lead, secondary lead, sulfuric acid, and polypropylene. Due to introduction of lubricants trading business, there is a marginal addition of GHG emissions from purchased goods. Due to the above changes, the overall GHG emissions from purchased goods category has marginally increased.

Upstream transportation and distribution

(7.11.1.1) Direction of change

Select from:

☑ Decreased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

1002

(7.11.1.4) % change in emissions in this category

14.5

(7.11.1.5) Please explain

Following initiatives were implemented: Use of Multi Model Logistics (Road-Train- Sea), Deployment of higher tonnage vehicles, Route optimization, Training drivers on safety and fuel saving efficient driving, Engagement with fleet owners for better service & delivery & installation of GPS.

Waste generated in operations

(7.11.1.1) Direction of change

Select from:

☑ Decreased

(7.11.1.2) Primary reason for change

Select from:

☑ Other, please specify **:**Insignificant change

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

29

(7.11.1.4) % change in emissions in this category

1.5

(7.11.1.5) Please explain

There is an insignificant change to the tune of 1.5%, such variations are very common in the waste generation quantities.

Business travel

(7.11.1.1) Direction of change

Select from:

☑ Decreased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

624

(7.11.1.4) % change in emissions in this category

32

(7.11.1.5) Please explain

There is a marginal reduction in business air travel during the reporting period when compared with earlier year. The overall GHG emission contribution from business travel is less than 0.35% of the total Scope 3 emissions, which is insignificant.

Employee commuting

(7.11.1.1) Direction of change

Select from:

☑ Increased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

125

(7.11.1.4) % change in emissions in this category

6

(7.11.1.5) Please explain

There is a marginal increase in employee travel due to changes in number of employees and workers in the facility. The overall GHG emissions from employee travel contribute to less than 0.6% of the total Scope 3 emissions.

Downstream transportation and distribution

(7.11.1.1) Direction of change

Select from:

☑ Increased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

21922

(7.11.1.4) % change in emissions in this category

999

(7.11.1.5) Please explain

The following are the possible reasons for the increase in GHG emissions: The overall sales revenues have increased by about 8% from the previous year, Due to coverage of a greater number of down-stream transportation activities under the GHG accounting.

End-of-life treatment of sold products

(7.11.1.1) Direction of change

Select from:

☑ Decreased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

52330

(7.11.1.4) % change in emissions in this category

55

(7.11.1.5) Please explain

Due to increased recycled input from our suppliers our end of life emissions have come down.

Downstream leased assets

(7.11.1.1) Direction of change

Select from:

☑ Increased

(7.11.1.2) Primary reason for change

Select from:

☑ Change in output

(7.11.1.3) Change in emissions in this category (metric tons CO2e)

472

(7.11.1.4) % change in emissions in this category

175

(7.11.1.5) Please explain

Since the overall emissions from this category are insignificant (
[Fixed row]

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:
☑ No

(7.15) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Select from:
☑ Yes

(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Row 1

(7.15.1.1) Greenhouse gas

Select from:
☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

2817

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 2

(7.15.1.1) Greenhouse gas

Select from:
☑ N2O

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

4

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 3

(7.15.1.1) Greenhouse gas

Select from:
☑ HFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

3783

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)
[Add row]

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
India	*6604*	*209781*	*0*

[Fixed row]

(7.17) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

Select all that apply

☑ By facility

☑ By activity

(7.17.2) Break down your total gross global Scope 1 emissions by business facility.

Row 1

(7.17.2.1) Facility

Tirupati - Karakambadi facilities

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

3023

(7.17.2.3) Latitude

13.673249

(7.17.2.4) Longitude

79.503676

Row 2

(7.17.2.1) Facility

Amara Raja Growth Corridor (ARGC)- Chittoor

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

3581

(7.17.2.3) Latitude

13.210177

(7.17.2.4) Longitude

79.040186
[Add row]

(7.17.3) Break down your total gross global Scope 1 emissions by business activity.

Row 1

(7.17.3.1) Activity

Diesel Generator

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

107

Row 2

(7.17.3.1) Activity

Boiler - HSD

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

376

Row 3

(7.17.3.1) Activity

ETP-ZLD (LPG Based)

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

828

Row 4

(7.17.3.1) Activity

Lead Melting Furnace (LPG & Acetylene)

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

483

Row 5

(7.17.3.1) Activity

Internal Cargo Transportation (HSD)

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

243

Row 6

(7.17.3.1) Activity

Chiller & Air conditioning (Refrigerant)

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

3783

Row 7

(7.17.3.1) Activity

Fire Extinguisher

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

0.3
[Add row]

(7.20) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

Select all that apply
☑ By facility

(7.20.2) Break down your total gross global Scope 2 emissions by business facility.

	Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Tirupati - Karakambadi facilities*	*8902*	*0*
Row 2	*Amara Raja Growth Corridor (ARGC)-Chittoor*	*120699*	*0*

[Add row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based emissions (metric tons CO2e)	Please explain
Consolidated accounting group	*6604*	*209781*	*Emissions from the directly controlled operations of ARE&M in line with the integrated report and financial reporting have been presented.*
All other entities	*0*	*0*	*Not applicable*

[Fixed row]

(7.23) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Select from:

☑ No

(7.26) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Row 1

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:
☑ Scope 2: location-based

(7.26.4) Allocation level

Select from:
☑ Company wide

(7.26.6) Allocation method

Select from:
☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:
☑ Currency

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

0.04

(7.26.9) Emissions in metric tonnes of CO2e

585

(7.26.10) Uncertainty (±%)

100

(7.26.11) Major sources of emissions

Scope 1 and 2 of the organization's GHG emissions are allocated to the specific client based on the revenue earned pro-rata basis. Since most of the revenue is generated from open market sales such as dealers and retailers, the GHG emission allocation for the OEMS/clients is not a priority aspect for the business at this juncture.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Since most of the revenue is generated from open market sales such as dealers and retailers, the GHG emission allocation for the OEMS/clients is not a priority aspect for the business at this juncture.

(7.26.14) Where published information has been used, please provide a reference

Not considered
[Add row]

(7.27) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Row 1

(7.27.1) Allocation challenges

Select from:

☑ Diversity of product lines makes accurately accounting for each product/product line cost ineffective

(7.27.2) Please explain what would help you overcome these challenges

The energy consumption line-wise data is proprietary information and would require establishing detailed measurement protocols to assign allocation numbers to multiple customers in multiple geographies. As an organization, we are committed to reduce our Scope 12 emissions by 30% by 2027 from baseline year 2021-2022.
[Add row]

(7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

(7.28.1) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Select from:

☑ No

(7.28.3) Primary reason for no plans to develop your capabilities to allocate emissions to your customers

Select from:

☑ Not an immediate strategic priority

(7.28.4) Explain why you do not plan to develop capabilities to allocate emissions to your customers

Based on the market demand and requirements, the number of customers varies significantly from year to year. Hence, the allocation of emissions to each of the customers will be a major challenge, however, ARE&M will review the possibilities to allocate the emissions to the major customers with certain sales threshold volumes in the future.
[Fixed row]

(7.29) What percentage of your total operational spend in the reporting year was on energy?

Select from:

☑ More than 0% but less than or equal to 5%

(7.30) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ No
Consumption of purchased or acquired cooling	*Select from:* ☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ No

[Fixed row]

(7.30.1) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

10683

(7.30.1.4) Total (renewable and non-renewable) MWh

10683

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:
☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

93721

(7.30.1.3) MWh from non-renewable sources

292990

(7.30.1.4) Total (renewable and non-renewable) MWh

386712

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

93712

(7.30.1.3) MWh from non-renewable sources

303673

(7.30.1.4) Total (renewable and non-renewable) MWh

397395
[Fixed row]

(7.30.6) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ Yes
Consumption of fuel for the generation of steam	*Select from:* ☑ Yes
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ No

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Not used in the facilities

Other biomass

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Not used in the facilities

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Not used in the facilities

Coal

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Not used in the facilities

Oil

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

2965

(7.30.7.3) MWh fuel consumed for self-generation of electricity

483

(7.30.7.4) MWh fuel consumed for self-generation of heat

2527

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Diesel is utilized for heating the lead melting furnace, and captive power generation in the standby DG sets.

Gas

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

7717

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

1673

(7.30.7.5) MWh fuel consumed for self-generation of steam

6044

(7.30.7.8) Comment

LPG and acetylene are used for lead furnace heating, and steam generation for ZLD facility.

Other non-renewable fuels (e.g. non-renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.8) Comment

Not used in the facilities

Total fuel

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

10683

(7.30.7.3) MWh fuel consumed for self-generation of electricity

483

(7.30.7.4) MWh fuel consumed for self-generation of heat

4200

(7.30.7.5) MWh fuel consumed for self-generation of steam

6044

(7.30.7.8) Comment

None
[Fixed row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

India

(7.30.16.1) Consumption of purchased electricity (MWh)

386711

(7.30.16.2) Consumption of self-generated electricity (MWh)

1140

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

31622

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

419473.00
[Fixed row]

(7.34) Does your organization measure the efficiency of any of its products or services?

(7.34.1) Measurement of product/service efficiency

Select from:
☑ Yes

(7.34.2) Comment

Recognizing the critical role of R&D, we are establishing the E-positive Energy Labs, a state-of-the-art innovation and research facility in Hyderabad, Telangana. A significant part of this facility is dedicated to collaborating with customers, supplier partners, start-ups, and innovation entities to create an ecosystem for innovative technologies. ARE&M is India's first AGM (Absorbent Glass Mat) two-wheeler and car battery manufacturer. The Company is working towards introducing world-class proprietary 'Duraframe' plate technology and expanding the product portfolio leveraging its cutting-edge AGM and EFB technologies. Absorbent Glass Mat (AGM) batteries have a very low internal resistance, are capable to deliver high currents on demand and offer relative long service life, even when deep-cycled. AGM is maintenance free, provides good electrical reliability and is lighter than the flooded lead-acid type. It stands up well to low temperatures and has a low self-discharge. The leading advantages are a charge that is up to five times faster than the flooded version, and the ability to deep cycle. AGM offers a depth-of-discharge of 80 percent; the flooded, on the other hand, is specified at 50 percent DoD to attain the same cycle life. Our focus for the upcoming fiscal is on research and development, circularity, capacity optimization, and geographic expansion into new markets. We plan to introduce more value-added products such as AGM batteries, further incorporate stamped grid technology to reduce conversion costs and raw material usage, and delve into bi-polar technology for future performance requirements. We are the first Company in India to manufacture Valve Regulated Lead Acid (VRLA) batteries that provide performance reliability, consistency, durability and minimal maintenance, even in the most demanding situations. ARE&M launched Auxiliary battery featuring Multi-Stamp Grid Technology, meets new age electric vehicle test requirements, reliability, and performance.
[Fixed row]

(7.34.1) Provide details of the metrics used to measure the efficiency of your organization's products or services.

Row 1

(7.34.1.1) Category of product or service

Select from:
☑ Batteries (including fuel cells)

(7.34.1.2) Product or service (optional)

Punch Grid Duraframe batteries are ideal for automotive, industrial, and heavy-duty applications where high cranking power, durability, and vibration resistance are key. AGM batteries excel in deep-cycle, backup power, and renewable energy systems, where maintenance-free operation, spill-proof design, and deep discharge capability are more important.

(7.34.1.3) % of revenue from this product or service in the reporting year

75

(7.34.1.4) Efficiency figure in the reporting year

80

(7.34.1.5) Metric numerator

Select from:

☑ %

(7.34.1.6) Metric denominator

Select from:

☑ unit revenue

(7.34.1.7) Comment

Punch Grid Duraframe batteries are ideal for automotive, industrial, and heavy-duty applications where high cranking power, durability, and vibration resistance are key. Absorbent Glass Mat (AGM) batteries have a very low internal resistance, are capable to deliver high currents on demand and offer relative long service life, even when deep-cycled. AGM is maintenance free, provides good electrical reliability and is lighter than the flooded lead-acid type. It stands up well to low temperatures and has a low self-discharge. The leading advantages are a charge that is up to five times faster than the flooded version, and the ability to deep cycle. AGM offers a depth-of-discharge of 80 percent; the flooded, on the other hand, is specified at 50 percent DoD to attain the same cycle life.
[Add row]

(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Row 1

(7.45.1) Intensity figure

1.92

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

216385

(7.45.3) Metric denominator

Select from:
☑ unit total revenue

(7.45.4) Metric denominator: Unit total

112603000000

(7.45.5) Scope 2 figure used

Select from:
☑ Location-based

(7.45.6) % change from previous year

19.5

(7.45.7) Direction of change

Select from:
☑ Decreased

(7.45.8) Reasons for change

Select all that apply
☑ Change in renewable energy consumption

(7.45.9) Please explain

The emission intensity of scopes 1 and 2 (total) has been represented in Tons per million INR of the company revenue for the FY 2023-24. Due to the very high denominator value (Revenue in INR), the specific emission rate is estimated as very low, and the value is not accommodated in the specified column.
[Add row]

(7.52) Provide any additional climate-related metrics relevant to your business.

Row 1

(7.52.1) Description

Select from:

☑ Energy usage

(7.52.2) Metric value

12769

(7.52.3) Metric numerator

1440000 Giga Joules

(7.52.4) Metric denominator (intensity metric only)

INR 112603 million

(7.52.5) % change from previous year

8

(7.52.6) Direction of change

Select from:

☑ Decreased

(7.52.7) Please explain

The specific energy consumption has been projected as Mega Joules per million INR revenue. Total energy consumption includes RE power, grid power, and fossil fuel consumption. Although the total revenue has increased by 8% from the previous year the specific emission rate has been reduced by about 8% due to reduced in-house power generation by stand-by DG sets at the facility.
[Add row]

(7.53) Did you have an emissions target that was active in the reporting year?

Select all that apply

☑ Absolute target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:

☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)
☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply
☑ Scope 1
☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:
☑ Location-based

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

2282

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

267904

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

0.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

270186.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2027

(7.53.1.55) Targeted reduction from base year (%)

30

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

189130.200

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

6604

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

209781

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

216385.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

66.38

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% Scope 1 & Scope 2 in all the manufacturing facilities of ARE&M in India. Our baseline Scope 12 emissions is 270,186 TCO2e. Considering the year-on-year revenue growth and merger of battery component manufacturing facility (MIL), under the Do-Nothing-Scenario, the estimated total Scope 1 & Scope 2 emissions will be 460965 TCO2e. Based on these estimates, the net reduction needed will be in the order of 271835 TCO2e.

(7.53.1.83) Target objective

Reduce the GHG emissions from the purchase of grid power through various options available through Green Open Access Rules 2022, GoI. This will not only help the organization's carbon footprint but also gain the economic advantage of reduced green energy tariffs in the near future.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

ARE&M installed 62 MW of RE power until FY2023:24, which helped to reduce about 69,100 TCO2e. The following decarbonization plan has been proposed to achieve the reduction targets as stated for scope 1 and 2 emissions by 2027: (1). Improving the electrical energy use efficiency and adopting various energy conservation measures, a cumulative grid electrical energy demand will be reduced by about 7.5% of the base-year, (2). Installing additional rooftop solar power installations to avoid grid power, (3). Procuring green power from various options such as group solar, green power tariff scheme or green power purchase agreements through Green Open Access Rules 2022, (4). 50% electrification of internal vehicles by 2027, (5). Replacement of high GWP refrigerants with low GWP ones

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 2

(7.53.1.1) Target reference number

Select from:

☑ Abs 2

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Nitrous oxide (N2O)

☑ Hydrofluorocarbons (HFCs)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

2282.0

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

267904.0

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

0.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

270186.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100.0

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100.0

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100.0

(7.53.1.54) End date of target

03/30/2032

(7.53.1.55) Targeted reduction from base year (%)

60

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

108074.400

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

6604

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

209781

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

216385.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

33.19

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% Scope 1 & Scope 2 in all the manufacturing facilities of ARE&M in India. Our baseline Scope 12 emissions is 270,186 TCO2e. Considering the year-on-year revenue growth and merger of battery component manufacturing facility (MIL), traded battery component facilities, and possible reduction in grid emission factors from 0.716 Kg/KWH to less than 0.55 Kg/KWHR due to progress made by the government of India under the NDCs implementation, under the Do-Nothing-Scenario, the estimated total Scope 1 & Scope 2 emissions will be 523645 TCO2e by the end of 2032. Considering the decarbonization plan considered for the period 2024-2027, net reduction in GHG emissions needed will be in the order of 415571 TCO2e by the end of 2032.

(7.53.1.83) Target objective

Reduce the GHG emissions from the purchase grid power through various options available through Green Open Access Rules 2022, GoI. This will not only help the organization's carbon footprint but also gain the economic advantage of reduced green energy tariffs in the near future.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

The following decarbonization plan will be adopted for the period 2027:2032 to achieve the reduction targets as stated for scope 1 and 2 emissions by 2032: (1). Reduced grid emission factors from current levels of 0.716 KG/KWHR to less than 0.55 KG/KWHR by the end of 2030 will help to reduce the scope 2 emissions, (2). Procuring green power from various options such as group solar, green power tariff scheme or green power purchase agreements through Green Open Access Rules 2022, (3). Phasing out of high Global Warning Potential (GWP) refrigerants with lower GWP ones, (4). 100% electrical vehicles for company-owned vehicles.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 3

(7.53.1.1) Target reference number

Select from:

☑ Abs 3

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 1 – Purchased goods and services

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

253794

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

253794.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

253794.000

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

82

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2032

(7.53.1.55) Targeted reduction from base year (%)

30

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

177655.800

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

325655

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

325655.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

325655.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

-94.38

(7.53.1.80) Target status in reporting year

Select from:

☑ New

(7.53.1.82) Explain target coverage and identify any exclusions

The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% of the GHG emissions from the scope 3 (Purchased goods). Our baseline Scope 3 emissions (Purchased goods) is 253794 TCO2e. Considering the year-on-year revenue growth and merger of battery component manufacturing facility (MIL), and possible reduction in grid emission factors from 0.716 Kg/KWH to less than 0.55 Kg/KWHR due to progress made by the government of India under the NDCs implementation, under the Do-Nothing-Scenario, the estimated total Scope 3 emission (Purchased goods) will be 668420 TCO2e by the end of 2032. It is committed to reduce GHG emissions by 30% from the baseline of 2022 emissions. The net GHG emission reduction (purchased goods) needed will be 490764 TCO2e.

(7.53.1.83) Target objective

Purchased goods contribute to more than 80% of the Scope 3 emissions. The majority of Scope 3 (Purchased goods) is attributed to the procurement of primary lead, secondary lead, and traded batteries. By adopting this target, the organization's carbon footprint will be significantly reduced.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

The following GHG reduction plan will be adopted to reduce the Scope 3 (purchased goods) emissions by 30% by the end of 2032 in line with the Science Based Targets (SBTi): (1). Reduced grid emission factors from current levels of 0.716 KG/KWHR to less than 0.55 KG/KWHR by the end of 2030 will help to reduce the scope 2 emissions of the suppliers significantly, (2). Our major primary lead suppliers have already committed to net zero plans, (3). Commissioning of 150,000 Tonnes Per annum battery recycling facility at Cheyyar. Due to the adoption of RE & Liquified Natural Gas instead of Furnace Oil use at our facility as part of the Scope 1 and Scope 2 emission targets of 60% at our own facilities by 2032, the GHG emissions from the secondary lead recycling will be reduced significantly, (4). We are engaging with all secondary lead recyclers, and encouraging them to adopt carbon reduction targets and switch over to cleaner fuels.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 4

(7.53.1.1) Target reference number

Select from:

☑ Abs 4

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 4 – Upstream transportation and distribution

☑ Scope 3, Category 9 – Downstream transportation and distribution

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.17) Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

7023

(7.53.1.22) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

1017

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

8040.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8040.000

(7.53.1.38) Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

(7.53.1.43) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

2

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2032

(7.53.1.55) Targeted reduction from base year (%)

30

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

5628.000

(7.53.1.62) Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

5889

(7.53.1.67) Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

23040

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

28929.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

28929.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

-866.04

(7.53.1.80) Target status in reporting year

Select from:

☑ New

(7.53.1.82) Explain target coverage and identify any exclusions

To reduce the transportation-related emissions in the upstream and downstream activities by 30% from the base year 2021:22. The total base year emissions from the upstream and downstream activities was 8040 Tons. The projected emissions from these categories by the end of 2032 will be 13609 Tons. The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% of the GHG emissions from the scope 3 (Upstream and downstream transport categories). Our baseline Scope 3 emissions (Upstream and downstream transport categories) is 8040 TCO2e. Considering the year-on-year revenue growth, under the Do-Nothing-Scenario, the estimated total Scope 3 emission (Upstream and downstream transport categories) will be 13609 TCO2e by the end of 2032. It is committed to reduce GHG emissions by 30% from the baseline of 2022 emissions. The net GHG emission reduction (Upstream and downstream transport categories) needed will be 7,981 TCO2e.

(7.53.1.83) Target objective

To reduce the transportation related emissions in the upstream and down stream activities by 30% from the base year.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

The following initiatives have been proposed to meet the targets: (1). Fuel Efficiency & Alternative Fuels: - Shift a portion of the fleet to CNG and bio-diesel to reduce emissions. (2). Route Optimization Systems: - Use route optimization software to minimize fuel use and travel time. (3). Shift to Rail (Ro-Ro Services): - Maximize use of India's Roll-on Roll-off (Ro-Ro) services to reduce road congestion and emissions. (4). Fleet Maintenance: - Implement regular fleet maintenance to ensure better fuel efficiency. (5). Larger Trucks: - Invest in larger trucks with better fuel efficiency to reduce overall trips

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 5

(7.53.1.1) Target reference number

Select from:

☑ Abs 5

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 6 – Business travel

☑ Scope 3, Category 7 – Employee commuting

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.19) Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

680

(7.53.1.20) Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

2023

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

2703.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

2703.000

(7.53.1.40) Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

100

(7.53.1.41) Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

0.67

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2032

(7.53.1.55) Targeted reduction from base year (%)

30

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

1892.100

(7.53.1.64) Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

1347

(7.53.1.65) Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

2289

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

3636.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

3636.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

-115.06

(7.53.1.80) Target status in reporting year

Select from:

☑ New

(7.53.1.82) Explain target coverage and identify any exclusions

The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% of the GHG emissions from the scope 3 (Business travel and employee commute categories). Our baseline Scope 3 emissions (Business travel and employee commute categories) is 2703 TCO2e. Considering the year-on-year revenue growth,

under the Do-Nothing-Scenario, the estimated total Scope 3 emission (Business travel and employee commute categories) will be 7462 TCO2e by the end of 2032. It is committed to reduce GHG emissions by 30% from the baseline of 2022 emissions. The net GHG emission reduction (Business travel and employee commute categories) needed will be 5567 TCO2e.

(7.53.1.83) Target objective

To reduce the emissions by 30% from the base year for both business travel and employee commuting.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

Fuel Efficiency & Alternative Fuels: - Encouraging the employee transport contractors to use low carbon emissions vehicles such as CNG, biodiesel, and electrical vehicles, - Encouraging employees to use electric vehicles, - Preferring low carbon transportation modes for business travel.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

Row 6

(7.53.1.1) Target reference number

Select from:

☑ Abs 6

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

03/30/2023

(7.53.1.6) Target coverage

Select from:

☑ Business activity

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.1.11) End date of base year

03/30/2022

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

2282

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

267904

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

0.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

270186.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2040

(7.53.1.55) Targeted reduction from base year (%)

90

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

27018.600

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

6604

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

209781

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

216385.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

22.13

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The target was set in FY 2022-23, and the baseline is FY 2021-22. Covers 100% Scope 1 & Scope 2 in all the manufacturing facilities of ARE&M in India. Our baseline Scope 12 emissions is 270,186 TCO2e. Considering the year-on-year revenue growth and merger of battery component manufacturing facility (MIL), under the Do-Nothing-Scenario, the estimated total Scope 1 & Scope 2 emissions will be 969231 TCO2e by the end of 2040 based on the assumptions that the sales volumes will increase by about 8% YoY basis beyond FY 2032 and there will be a reduction in grid emission factor from 0.716 to 0.55 Kg/KHWR beyond FY 2032. Based on these estimates, the net reduction needed will be in the order of 942212 TCO2e.

(7.53.1.83) Target objective

To reduce the Scope 1 and 2 emissions by 90% from the baseline levels by the end of FY 2040.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

The following strategy will be adopted: 1. Use of 100% RE power to avoid Scope 2 emissions through Green Open Access Rules regulations such as green tariff mechanism, Group captive power, and green power purchase agreements. 2. 100% shift towards Electric or hydrogen-driven vehicles 3. Use of biomass fuel for boilers to generate the steam for the ZLD system, 4. Consider replacing the LPG-fired furnaces with green power-based electric furnaces. 5. Use of low GWP refrigerants based on technological progress in India's HVAC systems by the end of 2040.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

(7.54) Did you have any other climate-related targets that were active in the reporting year?

Select all that apply

☑ Targets to increase or maintain low-carbon energy consumption or production

(7.54.1) Provide details of your targets to increase or maintain low-carbon energy consumption or production.

Row 1

(7.54.1.1) Target reference number

Select from:

☑ Low 1

(7.54.1.2) Date target was set

03/30/2023

(7.54.1.3) Target coverage

Select from:

☑ Business activity

(7.54.1.4) Target type: energy carrier

Select from:
☑ Electricity

(7.54.1.5) Target type: activity

Select from:
☑ Consumption

(7.54.1.6) Target type: energy source

Select from:
☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

03/30/2024

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

377329

(7.54.1.9) % share of low-carbon or renewable energy in base year

12.1

(7.54.1.10) End date of target

03/30/2024

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

24.2

(7.54.1.12) % share of low-carbon or renewable energy in reporting year

24.2

(7.54.1.13) % of target achieved relative to base year

100.00

(7.54.1.14) Target status in reporting year

Select from:

☑ Achieved

(7.54.1.16) Is this target part of an emissions target?

Yes

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ Other, please specify **:**This is part of the decarbonization plan targets for FY2027.

(7.54.1.19) Explain target coverage and identify any exclusions

Yes, as a part of the long-term emission reduction targets, ARE&M has installed additional RE power of about 2.5 MW in FY2023:24 in addition to 59.1 MW of RE power installed in the previous years and also implemented various electrical energy conservation measures. This has reduced a cumulative 93721 MWh of electrical energy, thereby achieving a cumulative GHG emission reduction of 67,104 TCO2e. In addition to this, ARE&M also procured RE power from the green open access scheme such as group captive solar power.

(7.54.1.20) Target objective

the target objectives are as follows: 1. to reduce the scope 2 emissions, especially purchased electricity from the grid, 2. to achieve the economic advantage of utilizing the RE power due to a differential tariff of about INR 4.5 per KWHR as against the grid power tariff.

(7.54.1.22) List the actions which contributed most to achieving this target

Installed additional RE power of about 2.5 MW in FY2023:24 and also implemented various electrical energy conservation measures. In addition to this, ARE&M also procured RE power from the green open access scheme such as group captive solar power.

Row 2

(7.54.1.1) Target reference number

Select from:

☑ Low 2

(7.54.1.2) Date target was set

03/30/2024

(7.54.1.3) Target coverage

Select from:

☑ Business activity

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

03/30/2022

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

377329

(7.54.1.9) % share of low-carbon or renewable energy in base year

12.1

(7.54.1.10) End date of target

03/30/2025

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

23

(7.54.1.12) % share of low-carbon or renewable energy in reporting year

24.2

(7.54.1.13) % of target achieved relative to base year

111.01

(7.54.1.14) Target status in reporting year

Select from:
☑ Underway

(7.54.1.16) Is this target part of an emissions target?

Yes

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ Other, please specify **:**This is part of the decarbonization plan targets for FY2027.

(7.54.1.19) Explain target coverage and identify any exclusions

Yes, as a part of the short-term emission reduction targets. It is proposed to procure about 12 million KWHr of electrical power through green open access rules 2022, GoI, every year from FY24:25 onwards.

(7.54.1.20) Target objective

the target objectives are as follows: (1). to reduce the scope 2 emissions by about 8600 TCO2e every year, especially purchased electricity from the grid

(7.54.1.21) Plan for achieving target, and progress made to the end of the reporting year

It is proposed to procure about 12 million KWHr of electrical power through green open access schemes during the FY 2024:25.

Row 3

(7.54.1.1) Target reference number

Select from:

☑ Low 3

(7.54.1.2) Date target was set

03/30/2024

(7.54.1.3) Target coverage

Select from:

☑ Business activity

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:
☑ Consumption

(7.54.1.6) Target type: energy source

Select from:
☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

03/30/2022

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

377329

(7.54.1.9) % share of low-carbon or renewable energy in base year

12.1

(7.54.1.10) End date of target

03/30/2026

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

30.8

(7.54.1.12) % share of low-carbon or renewable energy in reporting year

24.2

(7.54.1.13) % of target achieved relative to base year

64.71

(7.54.1.14) Target status in reporting year

Select from:

☑ New

(7.54.1.16) Is this target part of an emissions target?

Yes

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ Other, please specify **:**This is part of the decarbonization plan targets for FY2027.

(7.54.1.19) Explain target coverage and identify any exclusions

Yes, as a part of the short-term emission reduction targets. (1). It is proposed to install an additional 6.7 MW of solar rooftop units to harness about 10 million KWHr of RE power through this scheme by the end FY 2026. This will help to avoid 7200 TCO2e per year, which will be 6% of the total RE power use in the target year (FY 2025:26). (2). It is proposed to use RE power to the tune of 50 million KWhr/year through group captive RE solar power and green open access mechanism. This will help to reduce Scope 2 emissions by 35,800 T every year.

(7.54.1.20) Target objective

the target objectives are as follows: to reduce the scope 2 emissions by about 43,00 TCO2e every year through the specified two activities such as solar roof top solar energy and sourcing RE power through green open access mechanism

(7.54.1.21) Plan for achieving target, and progress made to the end of the reporting year

This initiative will be taken up in the FY205:26

Row 4

(7.54.1.1) Target reference number

Select from:

☑ Low 4

(7.54.1.2) Date target was set

03/30/2024

(7.54.1.3) Target coverage

Select from:

☑ Business activity

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

03/30/2022

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

3777329

(7.54.1.9) % share of low-carbon or renewable energy in base year

12.1

(7.54.1.10) End date of target

03/30/2027

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

56

(7.54.1.12) % share of low-carbon or renewable energy in reporting year

24.2

(7.54.1.13) % of target achieved relative to base year

27.56

(7.54.1.14) Target status in reporting year

Select from:

☑ New

(7.54.1.16) Is this target part of an emissions target?

Yes

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ Other, please specify **:**This is part of the decarbonization plan targets for FY2027.

(7.54.1.19) Explain target coverage and identify any exclusions

Yes, it is a part of the short-term emission reduction plan. By the end of FY 2027, the total electrical energy demand will be in the order of 630 million KWHR, out of which 165 million KWHr of power will be sourced through RE power by the end of FY2026. In order to meet the short-term emission targets of 30% reduction of Scope 2 emissions from the base year FY 2022 by the end of FY 2027, an additional 187 million KWHr of RE power will be sourced from green open access mechanisms such as group captive and power purchase agreements with REpower suppliers.

(7.54.1.20) Target objective

The target objective is to reduce the scope 2 emissions by about 1,34,000 TCO2e by sourcing RE power through a green open access mechanism such as group captive and power purchase agreements with REpower suppliers.

(7.54.1.21) Plan for achieving target, and progress made to the end of the reporting year

This initiative will be taken up in the FY2026:27

Row 5

(7.54.1.1) Target reference number

Select from:

☑ Low 5

(7.54.1.2) Date target was set

03/30/2024

(7.54.1.3) Target coverage

Select from:

☑ Business activity

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

03/30/2022

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

3777329

(7.54.1.9) % share of low-carbon or renewable energy in base year

12.1

(7.54.1.10) End date of target

03/30/2032

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

60

(7.54.1.12) % share of low-carbon or renewable energy in reporting year

24.2

(7.54.1.13) % of target achieved relative to base year

25.26

(7.54.1.14) Target status in reporting year

Select from:

☑ New

(7.54.1.16) Is this target part of an emissions target?

Yes

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ Other, please specify **:**This is part of the decarbonization plan targets for FY2032

(7.54.1.19) Explain target coverage and identify any exclusions

As a part of the mid-term plan, ARE&M targets to reduce the scope 1 & 2 emissions by 60% (0.6 x 270186 162,112 TCO2e) from the baseline scenario of FY2022. This will be achieved progressively.

(7.54.1.20) Target objective

Considering the change in grid emissions from 0.716 KHWr to 0.55 KHWhr by the end of 2030 due to the implementation of NDCs by GoI, the scope 1 and 2 emissions will be in the order of 523645 TCO2e by the end of 2032 under Do-Nothing Scenario. To limit the scope 1 and 2 emissions to 108074 T by the end of 2032, about 131928 TCO2e shall be removed in addition to various interventions proposed during the period FY205:2027 (please refer to the other targets specified). It is proposed to procure the REPower to the tune of 242 million KWHr/year (equivalent to 161 MW installed Solar Power generation capacity) electrical power from various green open access methods such as Group captive RE, REpower purchase agreements.

(7.54.1.21) Plan for achieving target, and progress made to the end of the reporting year

This initiative will be taken progressively during the period FY2028 to FY 2032.
[Add row]

(7.55) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Select from:
☑ Yes

(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	*1*	*`Numeric input*
To be implemented	*0*	*0*
Implementation commenced	*1*	*8592*
Implemented	*2*	*41039*
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes
☑ Motors and drives

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

6874

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

52000000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

27000000

(7.55.2.7) Payback period

Select from:

☑ 1-3 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 11-15 years

(7.55.2.9) Comment

Various energy savings measures were adopted in the FY year 2023:24 (Please refer to page no. 236 of the Integrated report 2023:24) The Company continued its focused energy conservation efforts through up-gradation of process technology, effective production scheduling and various energy saving initiatives including the installation of energy-efficient equipment. Few initiatives are mentioned below. Effective scheduling of equipment for increasing capacity utilization Chargers' cooling fans automation during idle running - Optimum utilization of DE System by timing control - Replacement of centrifugal blowers with BLDC fans for FA systems - Optimization of pressure settings in air compressor - Conveyor motor size optimization wherever possible - Replacement of old chargers with IGBT chargers - Replacement of conventional lights with LED lights - Replacement of AODD pumps with energy EODD pump in ETP - Conversion of V-belt drive to cogged teeth belt for Wet scrubbers. - Air Compressor heat recovery system - Replacement of pneumatically operated vibrators with electrically operated vibrators - Demand reduction through power factor improvement - Reduction of Lead pot skin temperature by advanced insulation systems

Row 2

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption

☑ Solar PV

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

2740

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

18750000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

83000000

(7.55.2.7) Payback period

Select from:

☑ 4-10 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 16-20 years

(7.55.2.9) Comment

Additional 2.57 MW solar power has been added in the FY2023:24, which accounted for about 3.8 Million KWHR of green electrical power. Considering the difference tariff of INR (7.5 - 2.5) INR 5 per KWHR, the net savings are achieved due to utilization of solar PV power

Row 3

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Other, please specify **:**Efficient LPG Consumption Reduction in Zero Liquid Discharge Plant

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

858

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:
☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

25000000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:
☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:
☑ Ongoing

(7.55.2.9) Comment

Due to the implementation of energy conservation measures in the ZLD plant LPG consumption has reduced.

Row 4

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption
☑ Solar PV

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

30568

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

0

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

About 42 million KWHR of RE power has been procured from various green open-access methods as per applicable regulations in India. Since there not much variation in the green power tariff the net financial savings from procurement of green open access power has yet to be realized.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Internal price on carbon

(7.55.3.2) Comment

Adopting an internal carbon pricing mechanism holds immense potential benefits for ARE&M. It ensures efficient resource allocation, lowers operational costs, and reduces the risk of regulatory non-compliance. The company gains the opportunity to capitalize on cost-saving measures and drive sustainability initiatives effectively. Moreover, implementing internal carbon pricing positions ARE&M as a responsible and sustainable company, earning the trust and support of investors and stakeholders, ultimately enhancing its reputation and facilitating access to capital in the dynamic business landscape.

Row 3

(7.55.3.1) Method

Select from:

☑ Dedicated budget for energy efficiency

(7.55.3.2) Comment

ARE&M identified the energy reduction initiative in line with the corporate long-term commitment beginning of every year and the budget for the same will be allocated part of the annual budget. Also, the facility has a provision to request an additional budget

Row 4

(7.55.3.1) Method

Select from:

☑ Dedicated budget for low-carbon product R&D

(7.55.3.2) Comment

ARE&M identified the renewable power installation initiative in line with the corporate long-term commitment beginning of every year and the budget for the same will be allocated as part of the annual budget. Also, the facility has a provision to request an additional budget
[Add row]

(7.71) Does your organization assess the life cycle emissions of any of its products or services?

	Assessment of life cycle emissions	Comment
	Select from: ☑ Yes	*LCA has been done through third party.*

[Fixed row]

(7.71.1) Provide details of how your organization assesses the life cycle emissions of its products or services.

(7.71.1.1) Products/services assessed

Select from:
☑ Representative selection of products/services

(7.71.1.2) Life cycle stage(s) most commonly covered

Select from:
☑ Cradle-to-grave

(7.71.1.3) Methodologies/standards/tools applied

Select all that apply

☑ ISO 14040 & 14044

(7.71.1.4) Comment

LCA is undertaken to assess the environmental profile of the lead acid batteries and identify the hotspots in the value chain of the product for optimization and further reduction of environmental impacts. This study will help in providing:• An indication of the environmental performance of the product being analyzed and suitable optimizations could be done.• Detailed knowledge of significant parameters of characteristic products for improving sustainability performance in the supply chain.• Development of suitable environmental and sustainable strategies (short term and long term) could be adopted.• R&D team could run various scenarios on raw material, process, and energy efficiency improvements, resource conservation, waste reduction, and recycling.
[Fixed row]

(7.73) Are you providing product level data for your organization’s goods or services?

Select from:

☑ No, I am not providing data

(7.74) Do you classify any of your existing goods and/or services as low-carbon products?

Select from:

☑ No

(7.79) Has your organization canceled any project-based carbon credits within the reporting year?

Select from:

☑ No

C10. Environmental performance - Plastics

(10.1) Do you have plastics-related targets, and if so what type?

(10.1.1) Targets in place

Select from:

☑ Yes

(10.1.2) Target type and metric

Plastic polymers

☑ Reduce the total weight of virgin content in plastic polymers produced and/or sold

☑ Increase the proportion of post-consumer recycled content in plastic polymers produced and/or sold

End-of-life management

☑ Increase the proportion of recyclable plastic waste that we collect, sort, and recycle

Extended Producer Responsibility (EPR)

☑ Ensure compliance with EPR policies and schemes

(10.1.3) Please explain

We have targets to increase recycled Polypropylene Copolymer in production to 20%. Please refer to page 199 of below Integrated Report for FY 2023-24. Bound by the Extended Producer Responsibility (EPR) regulations, ARE&M has successfully developed and submitted an EPR plan to the Pollution Control Board. This has resulted in registration as a Brand Owner, empowering the organization to manage the disposal of Multilayered Plastic (MLP) and other plastic waste generated by its products in line with the EPR Action Plan (please refer to page 205 of the Integrated Report 2023:24). Percentage of recycled or reused input plastic material to total material (by value) used in production (for manufacturing industry) has increased from 6.7% in FY 2022:23 to 10.7% FY 2023:24 (please refer to page no 207 of the integrated report). https://www.amararajaeandm.com/AwardAndDis/Index
[Fixed row]

(10.2) Indicate whether your organization engages in the following activities.

Production/commercialization of plastic polymers (including plastic converters)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

Not applicable

Production/commercialization of durable plastic goods and/or components (including mixed materials)

(10.2.1) Activity applies

Select from:

☑ Yes

(10.2.2) Comment

We are in the business of manufacturing Lead Acid Batteries which has Polypropylene compound as part of the product. Earlier the PP compound was sourced from Mangal Industries Limited (MIL), a group company. However from February 2024 the Battery component (Polypropylene compound) division of MIL has been merged with AMR&M. The facility is involved in the manufacture of plastic components of the battery through Injection moulding process.

Usage of durable plastics goods and/or components (including mixed materials)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

Not applicable

Production/commercialization of plastic packaging

(10.2.1) Activity applies

Select from:
☑ No

(10.2.2) Comment

Not applicable

Production/commercialization of goods/products packaged in plastics

(10.2.1) Activity applies

Select from:
☑ No

(10.2.2) Comment

Not applicable

Provision/commercialization of services that use plastic packaging (e.g., food services)

(10.2.1) Activity applies

Select from:
☑ No

(10.2.2) Comment

Not applicable

Provision of waste management and/or water management services

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

Not applicable

Provision of financial products and/or services for plastics-related activities

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

Not applicable

Other activities not specified

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

Not applicable
[Fixed row]

(10.4) Provide the total weight of plastic durable goods and durable components produced, sold and/or used, and indicate the raw material content.

Durable goods and durable components sold

(10.4.1) Total weight during the reporting year (Metric tons)

25007

(10.4.2) Raw material content percentages available to report

Select all that apply

☑ % post-consumer recycled content

(10.4.6) % post-consumer recycled content

10.76

(10.4.7) Please explain

ARE&M utilizes recyclable stretch film of suitable thickness for web sealing packing. The generated plastic waste is sent exclusively to authorized recyclers. A significant portion of the plastic components used in batteries are recycled. The recycling of plastics, particularly packaging, is an ongoing initiative as part of the plastic waste management standards. Extended Producer Responsibility (EPR) regulations, we have developed an EPR plan and earned registration as a Brand Owner. This allows us to manage the disposal of Multilayered Plastic (MLP) and other plastic waste from its products in accordance with the EPR Action Plan. [Fixed row]

C11. Environmental performance - Biodiversity

(11.2) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Land/water management

☑ Livelihood, economic & other incentives

[Fixed row]

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
	Select from: ☑ Yes, we use indicators	*Select all that apply* ☑ State and benefit indicators

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

Legally protected areas

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

There are no notified ecologically sensitive sites such as RAMSAR wetlands, or protected forests, and National Parks and wildlife sanctuaries within 10 Km radius of the facilities.

UNESCO World Heritage sites

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

None within 10 Km radius of the facilities

UNESCO Man and the Biosphere Reserves

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

None within 10 Km radius of the facilities

Ramsar sites

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:
☑ No

(11.4.2) Comment

None within 10 Km radius of the facilities

Key Biodiversity Areas

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:
☑ No

(11.4.2) Comment

None within 10 Km radius of the facilities

Other areas important for biodiversity

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:
☑ No

(11.4.2) Comment

None within 10 Km radius of the facilities
[Fixed row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Waste data

☑ Carbon removals

☑ Fuel consumption

☑ All data points in module 7

☑ Emissions breakdown by business division

☑ Electricity/Steam/Heat/Cooling generation

☑ Base year emissions
☑ Progress against targets
☑ Renewable Electricity/Steam/Heat/Cooling generation
☑ Year on year change in absolute emissions (Scope 3)
☑ Renewable Electricity/Steam/Heat/Cooling consumption
☑ Year on year change in absolute emissions (Scope 1 and 2)
☑ Electricity/Steam/Heat/Cooling consumption
☑ Emissions reduction initiatives/activities

(13.1.1.3) Verification/assurance standard

General standards

☑ ISAE 3000

Climate change-related standards

☑ ISO 14064-1

(13.1.1.4) Further details of the third-party verification/assurance process

ARE&M Integrated Report for FY 2023-24 along with Business Responsibility & Sustainability Report (BRSR) has been externally assured by Bureau Veritas Industrial Services India Pvt Ltd in lines with ISAE 3000 Standard. ARE&M GHG Inventory has been externally assured by Bureau Veritas Industrial Services India Pvt Ltd in lines with ISO 14064-1 Standard.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

AREM Assurance Statement - IR & BRSR FY24.pdf
[Add row]

(13.2) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

(13.2.1) Additional information

As per the guidelines issued by the Stock Exchange Board of India (SEBI), ARE&M has submitted the Business Responsibility and Sustainable Report (BRSR), wherein section 6 of the report presents the details of the environmental indicators such as emissions, water uses, wastewater discharge, wastewater recycled, waste generated and disposed, etc., Please refer to pages 219 to 226 of the BRSR report: https://www.amararajaeandm.com/Files/AnnualGeneralMeetingFiles/2023/BRSR%20FY%202023-24.pdf

(13.2.2) Attachment (optional)

AREM Assurance Statement - IR & BRSR FY24.pdf
[Fixed row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

Chief Sustainability Officer

(13.3.2) Corresponding job category

Select from:
☑ Chief Sustainability Officer (CSO)
[Fixed row]