AMARA RAJA
Gotta be a better way

POWERING TRANSITION
TO SUSTAINABLE TOMORROW

SUSTAINABILITY REPORT FY 2022 – 23

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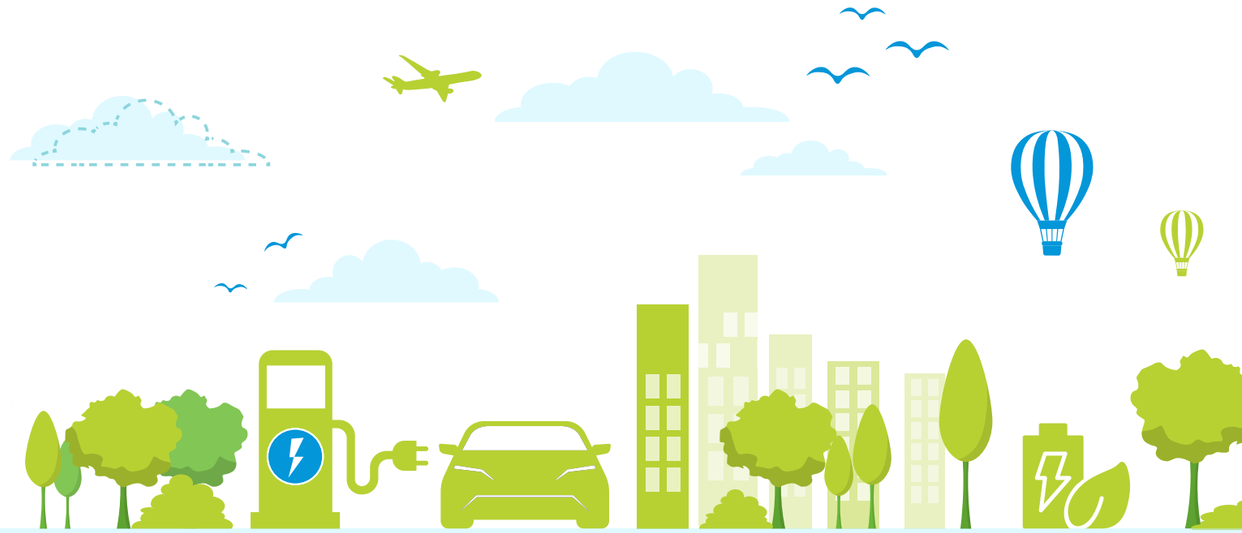

01

About the Report

Welcome to Amara Raja Energy & Mobility Limited's (ARE&ML) (Formerly known as Amara Raja Batteries Limited) first Sustainability Report, a noteworthy landmark in our pursuit of sustainability, which has underscored the way we conduct business since inception. This report is a comprehensive and transparent narrative of our sustainability efforts and achievements, spanning the environmental, social and governance practices that shape our business, guided by the Amara Raja Way®.

The report has been prepared in reference to the Global Reporting Initiative (GRI) Universal standards, 2021 and includes the GRI Content Index at the end. The GRI Standards are a set of globally agreed sustainability reporting requirements that enable organizations to consistently report on their sustainability performance and impacts. The report also aligns with the United Nations Sustainable Development Goals (SDGs) and the National Guidelines on Responsible Business Conduct (NGRBC).

Reporting Period

The reported sustainability progress spans the financial year from April 1, 2022, to March 31, 2023. This report has been prepared on a standalone basis.

Scope and Reporting Boundary

The sustainability performance disclosures in this report pertain to our Indian operations that serve our automotive and industrial business segments. The performance of our verticals has been highlighted separately through relevant indicators.

Independent Assurance

The non-financial sustainability disclosures in this Sustainability Report are verified by DNV Business Assurance India Private Limited (DNV) and the assurance statement is part of this report.

Forward Looking Statement

The report contains forward-looking statements about future prospects, which involve various risks and uncertainties. These statements are based on assumptions made using available information, and since these assumptions can change over time, the associated estimates may also change. These forward-looking statements reflect the Company's current intentions and beliefs as of the date they were made, and the Company is not obligated to update them for new information or future events.

Feedback

We welcome feedback from our stakeholders and value suggestions to help us improve our policies, processes, and performance. Please send your comments and suggestions to:

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Amara Raja Energy & Mobility Limited
Email -pt1@amararaja.com I Phone: 040-2313900

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CIN: L31402AP1985PLC005305

02

About the Theme

As nations worldwide transition to decarbonized economies, solutions such as renewable energy with storage, electric mobility, amongst others are taking center stage, underpinned largely by government policies, incentives, and the public's growing recognition of the significance of these initiatives.

As a leading battery manufacturer, ARE&ML is positioned to **power the transition to sustainable tomorrow.** Our unwavering dedication to resource efficiency, the adoption of renewable energy, and responsible environmental practices, coupled with our investments in pioneering energy storage technologies, exemplify our commitment to creating a more resilient world for current and future generations.

02

Leadership Message

Message from Chairman & Managing Director

Dear Stakeholders,

FY 2022-23 has been a challenging year for businesses worldwide as they grappled with inflationary pressures arising from a combination of factors including fiscal measures taken during the pandemic, supply chain disruptions, an energy crisis in Europe and other fall outs of the Russia-Ukraine war. India has not been spared these challenges; however, the country has weathered the storm with resilience and wide-ranging measures to spur long term growth.

Sustainability-related risks have been a growing concern and a prominent theme in recent years, as acknowledged by the World Economic Forum (WEF) and other organizations. As per the latest assessment, 7 out of the top 10 risks identified by WEF are directly related to sustainability with climate change at the top of ranking.

Climate change is a significant and multifaceted global risk with far-reaching implications for the environment, society, and the economy. As a forward-looking organisation, we acknowledge the fact that addressing climate change is not just about risk management; it also presents opportunities for innovation, sustainable development, and global cooperation.

At the national level, India has set ambitious targets and implemented various policies and initiatives to accelerate its transition towards renewable energy. India's thrust on renewable energy & Net zero emissions, reflects its commitment to addressing both energy security and environmental sustainability while promoting economic growth and development. However, balancing economic growth with emissions reduction can be challenging, as the country's primary focus is on poverty alleviation and providing energy access to millions. Also, many low-carbon technologies can be expensive to implement.

The energy storage industry plays a crucial role in helping countries and organizations achieve their net-zero emissions commitments. Energy storage technologies help address some of the key challenges associated with renewable energy integration and the reduction of greenhouse gas emissions. The industry is a key enabler of renewable energy adoption and grid decarbonization. Energy storage technologies are critical for ensuring the reliability, resilience, and scalability of renewable energy sources, making them a vital component of the transition to a more sustainable and clean energy future. Batteries provide a means of storing excess energy generated from renewable sources like solar and wind. In areas with limited access to the grid, batteries are crucial for storing energy generated by small-scale renewable systems, such as solar panels or wind turbines.

At Amara Raja, transition to new energy systems offers us optimism for continued growth and expansion as an Energy and Mobility company. It shines a light on opportunities to embed sustainability more deeply in our business. We plan to lead the energy transition by developing batteries for EVs & energy storage solutions. We are invested in start-ups in India and abroad venturing into advanced cell chemistry & new energy. We are committed towards increasing renewable energy, designing products which enable this transition and efficient resource utilization to minimize the environmental impacts.

Amara Raja's New Energy Division which leverages lithium-ion technologies to develop low emissions solutions for electric mobility and battery storage, not only aligns with India's goals for decarbonization but also supports our own plans to reduce emissions in our business and enhance its overall sustainability.

A well-designed sustainability strategy can provide a wide range of benefits to organizations, from improving their bottom line, operational efficiencies, alignment with our core purpose, employee attraction & retention, meeting investors & customers' expectations to enhancing their reputation and resilience. By addressing environmental, social, and governance issues, we aim to position ourselves for long-term success in an evolving business landscape.

The importance of accountability, ethical decision making, and robust oversight mechanisms to sustainable operations and business growth cannot be stated enough. Our commitment to the highest standards of corporate governance has consistently enabled us to satisfy and advance our customers' business objectives, create value for our stakeholders, promote environmental preservation, and drive sustainable growth at Amara Raja. Deepening this commitment, in FY 2022-23, we became signatory to United Nations Global Compact (UNGC) with a pledge to promote its principles in our business strategy and the organizational culture.

Our sustainability interventions are not limited within our four walls but extends to engaging our value chain partners for partnering us on this journey.

On the economic front, our revenue has grown by an impressive 19% year-on-year, while our profit before tax has risen by 35% compared to the previous year. This growth has been exceptional, driven by robust demand in automotive and industrial applications. Importantly, this growth has been powered by the unwavering dedication and support of our many stakeholders, to whom I extend deep gratitude for reposing trust and confidence in us.

At Amara Raja, our core purpose is to transform our increasing spheres of influence and to improve the quality of life by building institutions that provide better access to better opportunities to more people all the time. Through the Amara Raja way and through enduring progressive partnerships we will be a global leader in energy & mobility solutions.

As an organisation we are committed to net zero, working towards water neutrality, adopting circular economy principles, engaging with value chain partners and making a net positive impact in the community around us.

As we look ahead to transitioning to a more sustainable future, I am confident that our high standards of excellence and our people will continue to be the cornerstone of our sustained growth and progress.

With best wishes,

Jayadev Galla
Chairman & Managing Director

Message from Executive Director, Automotive & Industrial

Dear Stakeholders,

Sustainability is core to what we do at Amara Raja. Despite the myriad of challenges we faced, our unwavering commitment to innovation, efficiency, and sustainability allowed us to significantly improve revenue and profitability. Our revenue increased by 19% and profit before tax by 35% during the year.

The lead acid battery business shall continue to play a significant role for us. We have robust plans to capitalize on many opportunities, expand our product portfolio, and spread our geographical reach beyond the Indian Ocean Rim to Europe and the Americas. We are currently present in over 50 countries and aim to make that 80 in the next few years. Our overseas market contribution already stands at approximately 12% of our revenues. While achieving this phenomenal growth, our commitment to sustainability stewardship and transparency remained steadfast and has also accelerated with each passing year. In line with India's commitment to Net Zero by 2070, decarbonization is our key priority. We plan to be a net zero organization by 2050 and implement a comprehensive strategy with targets aligned with the decarbonization approach outlined by the Science Based Target Initiative (SBTi). This year, we have disclosed our FY 2022-23 Carbon performance and 2050 net zero plan through CDP climate change disclosures.

We have installed 59.1 MW of renewable energy infra and will commission another 7.5 MW to increase our renewable energy mix. Our absolute carbon emissions (scope 1+2) have reduced by 8%, and our carbon intensity (scope 1+2) has reduced by 23% in FY 2022-23, respectively. As part of our net zero plan, we are committed to reducing our scope 1 and scope 2 absolute emissions by 60% by 2032. We are also engaging and collaborating with our value chain partners to reduce Scope 3 specific intensity by 30% by 2032.

Water is scarce, and we shall do what it takes to reduce our dependence on freshwater while working towards water neutrality. Our units have world-class ETPs and zero liquid discharge systems and deployed many water efficiency initiatives over the years. We have created rainwater harvesting bodies with a 75,000m^3 capacity at our operating units and a 6500m^3 stormwater collection pond for collecting runoff water. We are committed to improving groundwater levels through initiatives like check dams, rainwater harvesting, and restoration of ponds within and outside.

More than 70% of our raw material today comes from recycled sources. We are setting up our own battery recycling unit with a capacity of 150,000 tons per annum to increase the quantum of recycled input material further. During the year, we conducted lifecycle assessment for our key products to understand our environmental footprint and devise a strategy to mitigate the same.

We are bringing product innovation to make our products last longer, corrosion resistant, maintenance-free, and reduce resource consumption during manufacturing. A few examples include AGM battery development and deployment for Automotive Start-Stop/Hybrid vehicle applications and the development of material-efficient batteries for the UPS and Data Centre.

We have established Sustainability committee at the apex level to define the Sustainability roadmap and monitor progress. We have taken ambitious targets on energy & carbon, water and wastewater management, circular economy, and gender diversity, as well as community investments and impact. The year is marked by a renewed effort to build sustainability capabilities amongst leaders. We also have established an ESG analytics solution to improve disclosure and monitor progress.

Our endeavor and highest priority is to provide a safe and healthy work environment for our employees. We have significantly improved our operational systems and automated processes to minimize operator fatigue in critical areas, improve process consistency, and enhance ergonomics and safety. We have invested in highly efficient closed-loop dust & fume extraction systems to protect our employees and environment from lead dust hazards. To cater to our employees' primary health care needs, we have fully equipped, well-facilitated OHC operating around the clock. However, we realize the need to further improve our safety performance and shall be working towards implementing behavior-based safety and the use of technology and digitization. During the year, we had an unfortunate fire incident at one of our manufacturing facilities in Chittoor, resulting in property loss. Learnings from this incident have been horizontally deployed across all our sites.

We support the Ten Principles of the United Nations Global Compact on human rights, labor, environment, and anti-corruption and express our commitment to making the UNGC and its principles part of our company's strategy, culture, and day-to-day operations.

Our people are our greatest assets, and as a testament to our empowering work culture, Amara Raja Energy & Mobility Limited has clinched the Best Place to Work award announced by the Great Place to Work Institute.

As we continue striding forward to new opportunities and sustainable growth, I sincerely thank my colleagues, our business partners, communities, and other stakeholders for their unstinting support and faith in us.

With Best wishes,

Harshavardhana Gourineni
Executive Director,
Automotive & Industrial

Message from Executive Director, New Energy Business

Dear Stakeholders,

As we look to the future with optimism, we have the opportunity to shape it in a positive and meaningful way. Climate change mitigation plans across the globe are ensuring massive investments in energy transition technologies, supported by consumer demand, government policies and incentives.

There is consensus that electrical mobility shall see an exponential rise in years to come. There would be additional demand for energy storage from renewable energy industry, as well as data centers, telecom and other use scenarios.

In November 2022, we established Amara Raja Advanced Cell Technologies (ARACT) to focus exclusively on expanding our lithium cell manufacturing and pack assembly operations. We shall be investing INR 9,500 crores in one of the India's largest gigafactories coming up at Mahbubnagar, Telangana in a phased manner. The 16 GWh capacity facility shall create employment opportunities for 4,500 people and equal opportunity for indirect employment.

The technology space is ever evolving and while we invest in building manufacturing capacity for mature technologies, we stay flexible and open to emerging technologies and cell chemistries.

We have envisaged a larger Giga Corridor that will comprise of the factory as well as a state-of-the-art collaborative R&D facility that will drive developments in the new energy space. Projects at the Giga corridor are being designed on green building principles for sustainability where we aim to:

- Maximize renewable energy
- Ensure no ground water abstraction and zero liquid discharge
- Maximize rain water harvesting
- Design products for ease of recycling
- Upskill and reskill existing talent and hire the best
- Ensure work force diversity
- Form partnership with technical institutions on customized skills and community skill building

We are confident that the strategic decisions we have taken will not only deliver business growth but will enable us to do so sustainably, fulfilling our commitments to environmental preservation and creating social value. Electric commercial vehicles will become increasingly common in E- commerce and logistics and many logistics players have completely electrified fleets for the first and last mile. Many businesses are under pressure to go green, which is driving electrification in the small and light commercial segments and we shall see this segment driving the EV movement for next few years. Our ambition is to be a leader in this segment and thus be a part of sustainable transformation journey.

Together, we will harness the power of innovation, sustainability, and transformative energy solutions to shape a prosperous future for all.

With Best wishes,

Vikramadithya Gourineni
Executive Director,
New Energy Business

01

Sustainability Highlights

Environment

59.1 MW of solar panels installed contributing to **12%** share of renewable energy

12% energy intensity reduction

8% absolute reduction in scope 1 & 2 emission and intensity reduction by **23%**

21% water intensity reduction

Established Zero Liquid Discharge across sites

75,000m³ capacity rainwater harvesting infrastructure created

70% recycled lead used as input material

96% of waste recycled and waste generation intensity reduced by **14%**

0.15+ million of saplings planted

Conducted Life Cycle Assessment for two major products

Social

0.1+ million training hours

87% Employee engagement score

14% reduction in LTIFR

40% improvement in near miss reporting

INR 16 crores invested in community initatives

Governance

Formation of Sustainability committee at the Apex level

27% growth in EBITDA

Investment of INR **9,500 crore** over a period of 10 years in 'Amara Raja Giga Corridor' project

2,500+ channel partners

Zero data breaches

NB : All the % changes are relative to FY 2021-22

Accolades

16th Six Sigma National Competition by CII, Bengaluru, September 2022

2 Platinum, 2 Gold

12th CII National Poka-Yoke Competitions, January 2023

2 Platinum, 4 Gold, 7 Silver

International Convention on QC Circles, Jakarta-Indonesia, November 2022

8 Gold

Great Place to Work® Institute (India) 2023

Gold - Green Building Certification from the Indian Green Building Council 2018

Sustainable Organization Award by UBS Forum, September, 2023

IESW Company of the Year - Energy Storage, 2023

Won Best award for Excellence in Water Management by CII-SR Industrial Water Management Competition, August 2023

Golden Peacock Award for Sustainability, September 2023

Golden Peacock Award for Innovative Product and Services-Electrical Equipment, 2020

Won Large Enterprise and One of the Top 25 Innovative Companies in the Category of Manufacturing by CII Industrial Innovation Award, 2019

Great Place to Work

Sustainable Organization by UBS


Excellence in Water Management by CII

International Convention on QC Circles

IESW Company of the Year

Best Industry in Lead Awareness and Control

05

About Us

The flagship company of the Amara Raja Group, Amara Raja Energy & Mobility Limited (ARE&ML) erstwhile ARBL, was established in 1985 by our Founder Chairman, Dr. Ramachandra N Galla, upon his return to India from the USA. Deeply convinced that an entrepreneur's responsibility goes beyond fulfilling business objectives he established ARE&ML, envisioning it to empower and better the lives of people in his home district of Chittoor in Andhra Pradesh.

From modest beginnings with the first manufacturing facility and office in Karakambadi village in Chittoor district of Andhra Pradesh, ARE&ML is today a leading Energy and Mobility company, recognized as a technology frontrunner and leading integrated manufacturer for advanced lead-acid battery systems worldwide. We have further expanded to encompass a New Energy division that addresses emerging opportunities in lithium-ion batteries for alternate energy purposes.

1985 — Amara Raja Energy & Mobility Limited and Amara Raja Power Systems started by Dr. R.N. Galla

1988 — Collaboration with GNB for launching VRLA technology in India that replaced flooded batteries

1997 — ARE&ML diversified into automotive batteries & signed JV for technological collaboration with world leader in batteries

2000 — Path breaking zero maintenance Amaron automotive batteries launched

2005 — Food processing business, Galla Foods launched to benefit local farmers

2008 — Amara Raja Infra is incorporated to reliably and efficiently undertake the group's growing Infra needs

2015 — Amara Raja Growth Corridor, a 500 Acre Industrial Park with modern infrastructure inaugurated

2016 — Amara Raja Electronics commences EMS business for industrial, automotive and consumer segments

2017 — State of art plastic injection molding facility started at Mangal Industries to address needs of automotive industry

2021 — ARE&ML transforms into an Energy and Mobility company to address changing market needs

Purpose, Values and Vision

Core Purpose

To transform our increasing spheres of influence and to improve the quality of life by building institutions that provide better access to better opportunities to more people. . . all the time.

Core Values

Our 5 core values are enshrined in our guiding philosophy, the Amara Raja Way®. Each value is associated with an element of nature and a specific mind state and is represented by a different colour.

Innovation

Innovation to us is proactively rebelling for better ways of doing things leading to newer possibilities.

Entrepreneurship

Entrepreneurship to us is leading with courage and conviction to convert gaps into opportunities, create wealth and contribute to growth.

Responsibility

Responsibility to us is the total ownership of our thoughts and actions in every situation to achieve maximum common good in the best interest of Environment, Society, Customer, Supplier, Employee and Shareholders.

Excellence

Excellence to us is continually enhancing our performance to consistently produce outstanding results with lasting impact.

Experiences

Experiences to us are what we create for our stakeholders which make them feel part of something special, leading to endearing relationships.

Vision

Through the Amara Raja Way and through enduring progressive partnerships we will be a Global Leader in Energy and Mobility Solutions and a dominant player in the Indian Ocean Rim.

Our Presence

Continually expanding our footprint to serve new markets and customers, our presence spans numerous industries across 50+ countries, the majority of which are situated along the Indian Ocean Rim.

In India, we operate 7 state -of- the -art manufacturing facilities across Tirupati and Chittoor districts in Andhra Pradesh. We also have a network of 23 offices, including a corporate office in Hyderabad and an overseas office in the Middle East, which seamlessly serve our clientele worldwide.

Employees

7,500+

Channel Partners

2,500+

Memberships

9 Indian

2 International

The Largest manufacturer of VRLA batteries in the Indian Ocean Rim

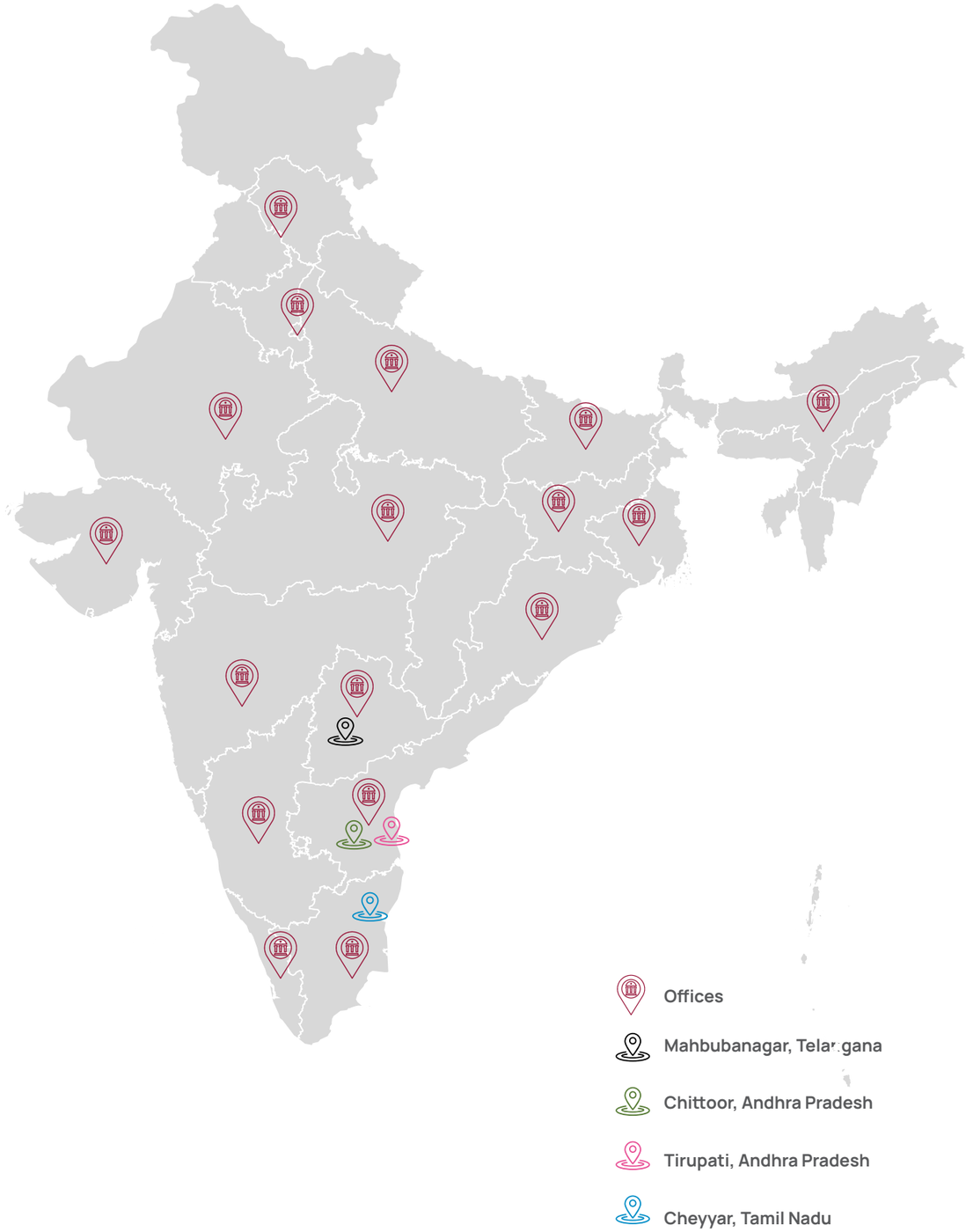
Featured in **Forbes India Super 50** Companies

AMARON was the **first ZERO maintenance battery** for Automotive application in India

One of the Seven wonders Taj Mahal is powered by ARE&ML

Every 3rd car in Singapore is powered by ARE&ML

Every 2nd Telecom Tower in India is powered by ARE&ML



Product Portfolio

Industrial Batteries

Our industrial batteries are engineered to provide the best performance, reliability, and consistency over the life of the product.

- UPS
- Telecom
- Railways
- Defence
- Motive
- Solar

Automotive Batteries

ARE&ML is a pioneer manufacturer of VRLA batteries in India, building them the highest standards in the segment.

- Passenger Vehicles
- Commercial Vehicles
- Farm Vehicles
- Home UPS/Inverter
- 2 and 3 Wheeler Vehicles
- E-Rickshaw

Li-ion Batteries

Amara Raja Advanced Cell Technologies offers cells, battery and charging solutions in Li-ion technologies.

- 2 Wheeler Vehicles
- 3 Wheeler Vehicles
- 4 Wheeler Vehicles
- Telecom
- Energy Storage Solutions

Brands

Automotive Batteries

Amaron®

PowerZone®

Industrial Batteries

PowerStack®

Amaron Sleek™

Amaron Volt™

Genpro

Amaron Quanta®

Amaron Quanta® - HWS

Amaron Brute™

Amaron Solar

Amaron Quanta® - S-XEL

Our product labels adhere to the local laws of the markets we serve and extend to include safe usage, recycling details, and disposal information, aligning with all relevant jurisdictions. This commitment ensures zero incidents of non-compliance with product and service information and labeling standards. As part of the largest 38MWh VRLA Battery Energy Storage system in Africa, ARE&ML showcased maintenance-free lead acid and lithium batteries at the Power & Energy Africa 2023 exhibition in Kenya

Li-ion Batteries for 3-Wheelers

Of the many energy storage systems available, batteries are most used in EVs. The Li-ion battery is more useful than other types owing to:

- Low carbon footprint
- High energy density
- Wide temperature operationality
- Life cycle
- High cell voltage
- Low self-discharge

Impacts:

ARE&ML batteries have run electric vehicles for over 55 crores cumulative kilometers

Creditable market share in electric 3 -wheeler segment

Sustainability at ARE&ML

Stakeholder Engagement & Materiality

In our endeavors to build a sustainable organization, we focus on issues that are most important or material to our stakeholders and the business. These issues were identified through a materiality assessment that generated topics of concern for our key stakeholder groups that we can control and influence.

01 STEP → *Universe of Issues*

ESG issues mapped based on business strategy, industry standards, and global mega-trends.

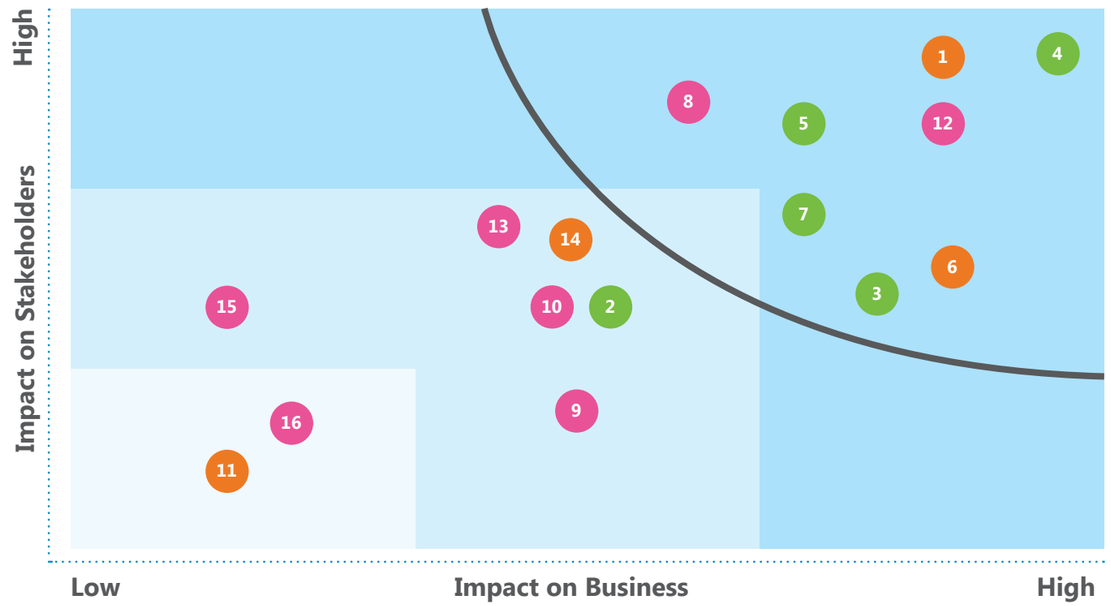
02 STEP → *Business Objectives & Risk Assessment*

Key issues were evaluated vis-à-vis their criticality and ability to help us meet defined business objectives and manage risks.

03 STEP → *Stakeholder Analysis*

Stakeholder discussions and consultations were conducted through detailed questionnaires and interviews.

Materiality Results



Environment

- 2 Air Quality Management
- 3 Energy Management
- 4 Climate Change
- 5 Waste Management
- 7 Water Management

Social

- 8 Community Engagement
- 9 Employee Engagement
- 10 Diversity, Equality, Inclusion & Belongingness
- 12 Occupational Health and Safety
- 13 Product Innovation
- 15 Human Rights
- 16 Training & Development

Governance & Economic

- 1 Economic Value Creation
- 6 Compliance
- 11 Grievance Management
- 14 Responsible Sourcing

The table below highlights the issues of highest materiality and the reasons thereof. For details of the risks and opportunities they present for the company, please refer to page no. 151 of ARE&ML's annual report FY 2022-23

Material Issue	Rationale	Page No.
Climate Change	• Key to achieving ARE&ML's goal of Net Zero by 2050 • Foster new business opportunities to develop innovative solutions	44
Economic Value Creation	• To maintain market stability • Create economic value for shareholders	98
Occupational Health and Safety	• Focus on employee wellbeing • Improve workplace safety • Minimize lead exposure	81
Waste Management	• Enables transition to circular processes • Promotes resource efficiency • Improved used battery collection	58
Water Management	• Promote efficient water utilization • Facilitates equitable water access for surrounding communities • Important for achieving water neutrality	54
Community Engagement	• Maintain regulatory compliance • Enhances the trust with communities • Skill development for enhanced livelihood • Social license to operate	86
Compliance	• Provide license to operate • Important to maintain reputation and Stakeholders confidence	32, 44, 103
Energy Management	• Improve energy efficiencies in operations • Accelerated adoption of clean technologies and renewable energy	44

Sustainability Strategy

Sustainability underpins our growth strategy, as reflected in our efforts to embed it throughout our value chain. Beginning with promoting sustainability in the supply and procurement processes, we aim for accelerating resource efficiency and cleaner production in manufacturing, and responsible disposal and recycling of products at the end of their life. Concurrently, we remain focused on fostering the socio-economic progress of communities along with our own growth.

To enhance the sustainability of our business, we have set ourselves clear goals and targets that align with material issues for the business and our stakeholders. **Set with baseline measures taken in FY 2021-22, we aim to achieve the following goals by FY 2023-24.**

Energy and Carbon

7 AFFORDABLE AND CLEAN ENERGY · 12 RESPONSIBLE CONSUMPTION AND PRODUCTIO · 13 CLIMATE ACTION

Goal

- Increase share of renewable energy to **25%**
- Reduce carbon intensity (Scope 1 and 2 emissions) by **30%** and overall absolute reduction by **10%**
- Reduce energy intensity by **15%**
- Complete life cycle assessment for two high-volume products

Water

6 CLEAN WATER AND SANITATION

Goal

- Reduce specific freshwater consumption by **20%** in absolute and water intensity by **30%**

Circular Economy

8 DECENT WORK AND ECONOMIC GROWTH
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Goal

- Reduce waste intensity by **20%**
- Increase recycled raw materials in production to **80%+** (lead & lead alloys)
- Improve battery recycling collection rate to **50%** as per BWMR, 2022

Occupational Health and Safety

3 GOOD HEALTH AND WELL-BEING

Goal

- Continue to be a **zero-fatality** organization
- Reduce Lost Time Injury Frequency Rate (LTIFR) by **60 %**
- **100%** compliance with initial medical examination and periodic medical examinations

People

5 GENDER EQUALITY

Goal

- Improve gender diversity within the organization to **14%**

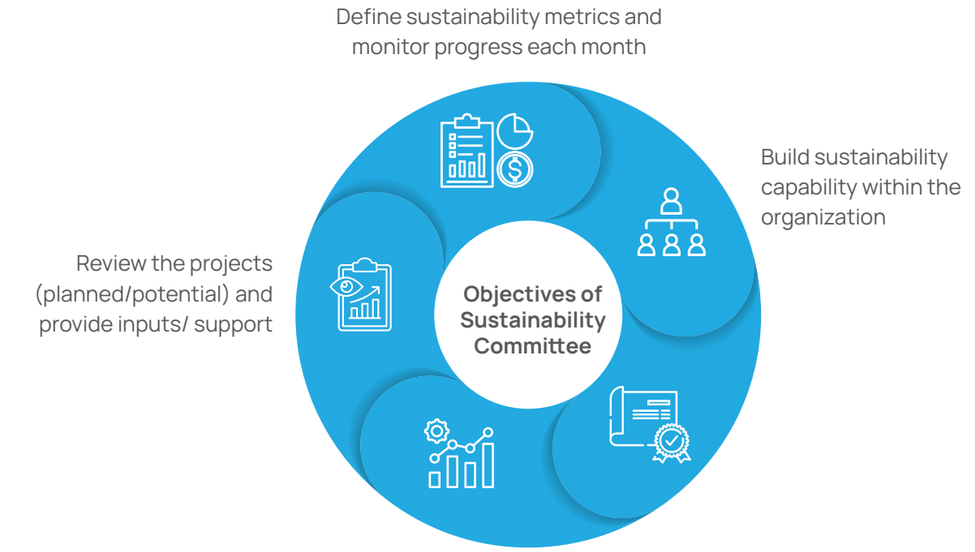
Communities

5 GENDER EQUALITY
4 QUALITY EDUCATION
3 GOOD HEALTH AND WELL-BEING
8 DECENT WORK AND ECONOMIC GROWTH

Goal

- Complete village infrastructure projects (underground drainage and solid waste management)
- Establish a second skill development center for rural youth and increase livelihood opportunities

The progress of sustainability initiatives and achievement of goals is overseen by our Executive Sustainability Committee which comprises members of the company's management team. Broadly, this committee focuses on strengthening sustainability within the Amara Raja Group, as well as in other key areas such as manufacturing processes, supply chain, people management, and corporate social responsibility.



07

Transitioning to a Sustainable Future

Environmental Stewardship

One of the ways in which we transition to a sustainable tomorrow is by promoting responsible resource management across our operations. We have undertaken multiple initiatives to improve energy and water consumption efficiencies, lower our carbon footprint, bolster supply chain resilience, enhance waste and water management, and support biodiversity conservation. We remain aligned with all relevant environmental laws, regulations, and guidelines in our endeavors.

100% of ARE&ML sites are ISO 14001:2015 and ISO 50001:2018 certified

Energy and Carbon

Energy plays a pivotal role in our operations, constituting a large portion of the resources required for battery manufacturing. From the very beginning, we have prioritized energy conservation and integrated it into our core values. We have implemented the ISO 50001 Energy Management System which has led to benefits such as lower energy use and operational costs. Moreover, we have embraced the concept of 'greening the system,' which involves adopting renewable energy and cleaner technologies to minimize our environmental impact.

Energy Monitoring System (EMS)

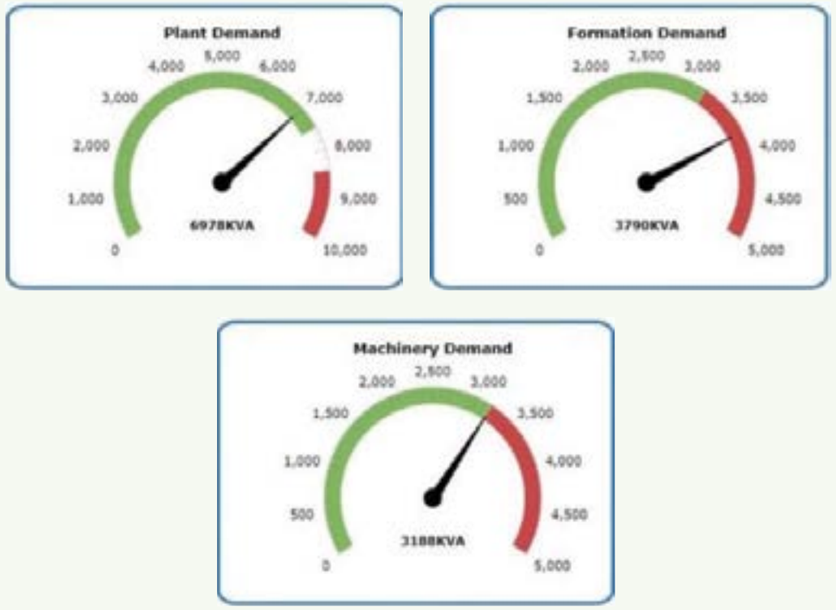
The energy monitoring system, a digital tool is pivotal to enhancing operational energy efficiency as it enables real time monitoring of energy use and corrective actions for performance gaps. The primary objective of implementing this initiative at ARE&ML was to raise the operational efficiency of our system by replacing labor intensive manual data recording methods with a cutting-edge online energy monitoring system. With this technological transition, we aimed to streamline data collection from 2,000 energy meters, facilitating the precise capture of information across more than 700 energy performance indicators (EnPIs).

Impacts:

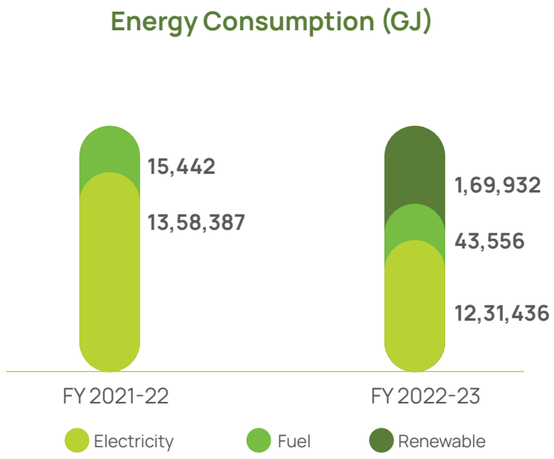
Aimed to streamline data collection from 2,000 energy meters

Capture more than 700 energy performance indicators (EnPIs)

EMS Dashboard



In the reporting year, our efforts resulted in decreased energy intensity by 12%. We successfully integrated offsite captive renewable energy infrastructure and introduced solar power to our energy mix thus improving our renewable energy mix to 12%.



Installation of Offsite Captive Solar Power

With a commitment to reduce our reliance on conventional energy sources and embracing renewable alternatives, we have set an ambitious target of replacing 25% of our energy with renewables by 2024. Our strategic investment of INR 241 Crores to install 59.1 MW captive solar power plants is pivotal to achieve this goal. We shall be adding another 7.5 MW capacity this year. This generated approximately 47 million units of energy, powering the plants in Chittoor and Tirupati.

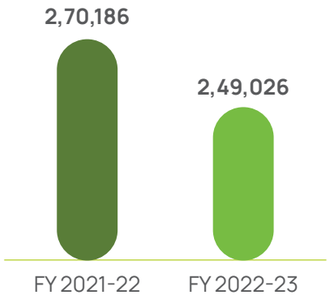
Impacts:

Avoided 33,514 tons of CO_2 emissions annually

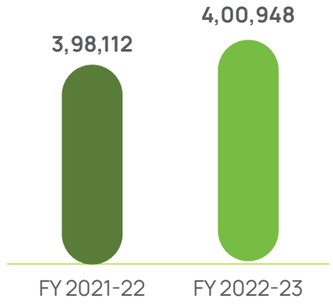
Generation potential of 67 Million units annually from 2024 onwards

During FY 2022-23, our absolute scope 1 & 2 emissions decreased by over 8%, owing to our captive solar project and diverse energy conservation strategies. Our commitment to environmental responsibility extends to Scope 3 emissions, where we monitor eight categories: purchased goods, upstream transport, waste, employee travel, business travel, downstream transport, end of life, and leased assets.

Scope 1 & 2 emissions ($MTCO_2e$)



Scope 3 emissions ($MTCO_2e$)



During the reporting period, emission intensity (Scope 1 & 2) per crore of turnover decreased by 23%.

Efficient LPG Consumption Reduction in Zero Liquid Discharge plant

With the installation of ZLD plants in Tirupati and Chittoor, we aimed to optimize. LPG usage, reduce costs, and enhance productivity, while ensuring that all treated effluents are recycled, thereby minimizing the need to draw water from bore wells.

Our ZLD plants make use of a Multiple Effect Evaporator (MEE) that uses steam to evaporate waste liquid. The resultant condensate is used as boiler feed water, thus lowering our use of LPG.

Impacts:

Reduced carbon emissions by 858 $MtCO_2e$/Year

Annual savings of INR 29 Million

35% reduction in LPG consumption

Replacement of Conventional Centrifugal Blowers with Brush Less Direct Current Motors (BLDC)

Upgrading blowers with efficient BLDC motors optimizes airflow, allowing adaptable speed control for varying needs, particularly in winter and at night. This enhancement significantly boosts the efficiency and performance of a plant's system. The value created includes precise airflow control and achieving targeted conditions.

We replaced conventional blowers with BLDC motors across 31 projects.

Impacts:

Energy savings of 4.7 million units

Specific energy consumption reduced from 2.5 units to 2.2 units per battery

Before Modification (Conventional Blower)

After Modification (Brush Less Direct Current Blower)

ARE&ML diligently complies with regulations pertaining to Sulphur Oxides (SOx), Nitrogen Oxides (NOx) and Particulate emissions. We regularly monitor our emissions from stacks and ensure they are maintained below statutory limits.

Our efforts to improve energy efficiency are reflected in multiple initiatives we have implemented across varied aspects of our operations. Some of the measures taken and their impacts are as follows.

Initiative	Impact
Replacing conventional centrifugal blowers with Brushless Direct Current motors	• Improved energy efficiency upto **80%** • **4.7** Million units of energy saved across **31** projects
Improving heater controls	• Annual cost savings of INR **1.57** Million
Eliminating air leaks and optimizing compressor air	• Annual energy savings of **0.7** Million units and cost savings of INR **4.5** Million
Replacing pneumatic vibrators with electrical vibrators in Day Tanks/ Baghouses/ Silos	• Annual cost savings of INR **1.24** Million
Replacing AODD pumps with IE3 electrical pumps in the effluent treatment process	• Reduced energy consumption by **0.08** Million units each year • Annual cost savings of INR **0.49** Million
Auto descaling of condenser tubes in water / acid chillers	• Annual cost savings of INR **0.53** Million
Interlocking of condenser pumps with compressor	• Annual energy savings of **0.17** Million units • Annual cost savings of INR **1.0** Million
Installation of lead level sensors to minimize energy spikes	• Annual energy consumption reduced by **0.015** million units • Annual cost savings of INR **0.9** Million
Use of additional insulation in lead pots to lower energy consumption	• Annual energy consumption reduced by **0.15** Million units
Replacing T5 FTL/ Metal Halide lamps with LED lighting	• Energy consumption per square meter of plant lighting reduced from **3.5** units to **1.5** unit • Annual cost savings of INR **0.54** Million

Our *Net Zero* Plan

Aligning with our aim of Powering Transition to Sustainable Tomorrow, we aspire to be Net Zero by 2050. To achieve this, we are following a comprehensive Net Zero strategy, that encompasses phased decarbonization approaches and industry best practices. We have established specific SbTi-aligned Net Zero Targets for reductions, delineating our intentions for the short, medium and long terms

Base year Emissions (2022)

Scope 1 & 2: **2,70,186** $MtCO_2e$

Scope 3: **3,98,112** $MtCO_2e$

Reporting year Emissions (2023)

Scope 1 & 2: **8%** reduction from base year

2022

Transition to cleaner energy

- Energy efficiency projects(1.5% YOY reduction)
- 187 MW of installed RE
- 50% EV (Internal logistics)
- Fuel switchover HSD to Gas
- Refrigerant change to low GWP
- Plantation of 100,000 trees
- Inhouse efficient lead recycling
- Vendor engagement and target setting

Scope 1 & 2
30% reduction from base Year

2027

Accelerating

- Energy efficiency projects delivering 1.5% YOY reduction
- Additional 70 MW RE
- 100% EV for employee & internal logistics
- Tree plantation 100,000
- Part procurement from Net Zero committed supplier
- RE for secondary lead smelters
- Logistics decarbonisation (ship/train)
- Nature based solutions

Scope 1 & 2
60% reduction from base Year

Scope 3
30% reduction from base Year

2032

Scaling Up

- 100% Firm 24x7 renewable electricity with energy storage
- 100% shift towards Electric or hydrogen driven vehicles
- 100% recycled RM
- Tree plantation
- Decarbonization of secondary lead smelters
- Prefer supply chain partners with Net Zero Commitments

Scope 1 & 2
90% reduction from base Year

Scope 3
50% reduction from base Year

2040

Fulfilling commitment – Goal '0'

- 100% RE and 100% EV
- Hydrogen and biomass for 100% fuel application
- Tree plantation
- Carbon sequestration and offsetting for remaining
- Engage with supply chain partners with Net Zero Commitments & demonstrable progress

Scope 1 & 2
100% reduction from base Year

Scope 3
90% reduction from base Year

2050

we will reach

Net Zero

Scope 1 & 2

Scope 3

Water

With 18% of the global population and only 4% of freshwater resources, India is among the most water stressed countries in the world. At ARE&ML, we are conscious of the finite nature of this precious resource and strive for its efficient use and conservation in local communities. While our processes are not water-intensive, we are dedicated to responsible water use in our operations and have taken steps to minimize our water footprint.

In line with our commitment to responsible water management, we adhere to the procedures outlined in ISO 14001:2015 to address water related impacts. We have also adopted a holistic approach to water stewardship encompassing close monitoring of consumption, repurposing used water, and boosting groundwater levels. In this respect, we have installed advanced irreversible electromagnetic water flow meters that allow precise monitoring and leak detection.

Leveraging our Zero Liquid Discharge (ZLD) plants, we are reducing reliance on groundwater withdrawal while 100% reuse of treated water in the process. Additionally, our effluent treatment plants (ETP) repurpose water from amenities, eliminating the need for conventional sewage treatment.

To recharge groundwater, we have created rainwater harvesting structures of 75,000 m^3 capacity at ARE&ML's operational units. We have also built a 6,500 KL capacity rainwater storage pond that supports groundwater recharging.

Zero Liquid Discharge plant

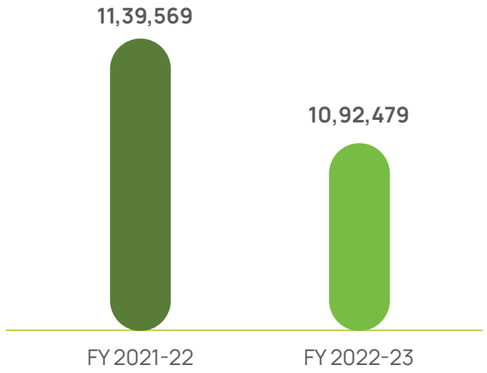
We established ZLD plants at all our manufacturing facilities. Following a 3-step process of pre-treatment, evaporation, and crystallization, these plants prevent liquid waste discharge and enhance water recovery and reuse.

Impacts:

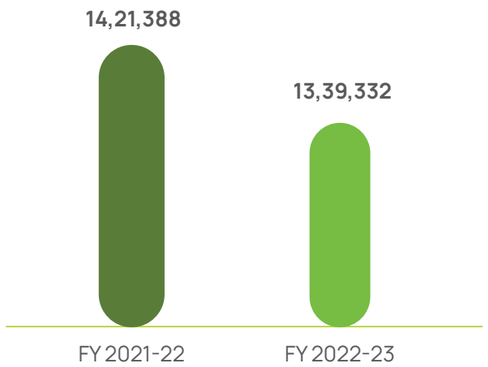
Conserving 650+ KLD of water

Avoided equivalent groundwater withdrawal

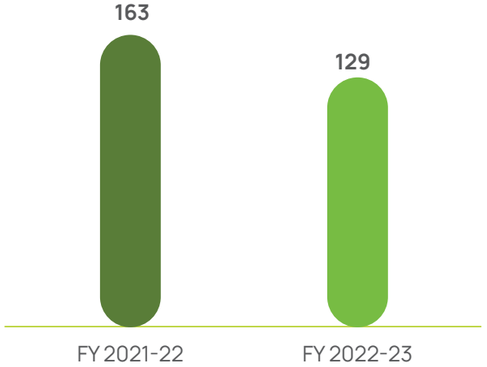
Water withdrawal by source (in KL)



Water Consumption (KL)



Water Intensity (KL/INR Cr)



In the current year, overall water consumption and water withdrawal, decreased by 5.7% and 4% respectively over the previous year. This has resulted in the decrease of water intensity by 21%.

Our manufacturing facilities are situated in regions that are categorized as safe zone by the Central Groundwater Board.

Preventing Battery Scaling with Innovative Water Solution

In the battery charging process, we faced a challenge with the formation of white scale precipitate due to the high content of total dissolved solids (TDS) in the raw water used for circulating and maintaining the temperature of electrolytes resulted in the batteries needing frequent cleaning, leading to increased downtime and operational inefficiencies.

To address this issue, instead of utilizing raw water, we leveraged the advanced capabilities of our ZLD plant, which provided water with TDS levels lower than 50 parts per million. This cleaner water was utilised for circulation during the charging process and for cleaning the batteries post-charging.

Impacts:

- Reduce consumption of raw water by up to 10 KLD
- Eliminated costs linked to raw water use and cleaning
- Increased efficiency and productivity and reduced downtime

Chemical Dose Optimizations

In FY 2022-23, at our both sites, we embarked on a transformative journey to optimize the chemical dosages in our effluent treatment plant (ETP). The key objective was to ensure effective and efficient wastewater treatment while minimizing chemical usage, reducing costs, and lessening the environmental impact of the treatment process. A pivotal challenge emerged from high chemical usage without proper optimization, leading to excessive sludge generation and soaring disposal costs. To overcome these hurdles, a dose optimization study was initiated, focusing on process and effluents from amenities.

Impacts:

- Reduced chemical usage
- Improved efficiency due to minimized operator errors
- Annual savings ~ INR 9 Million
- Effectively reduced colour and odour in amenities effluents

Rainwater Storage Pond with Check Dam

Our facility in Tirupati did not have a dedicated stormwater storage pond to capture rainwater runoff from our premises. In response, ARE&ML implemented a three-step approach to water management.

- We built a network of stormwater channels throughout the plant and boundaries
- To mitigate impact of contaminants, we installed intermediate grit chambers in the stormwater channels
- We built a rainwater storage pond with a check dam that can hold up to 6,500 KL of rainwater runoff

Impacts:

- Stored rainwater was put to multi-purpose use such as including plant usage, laundry, and other non-potable water needs
- Reduced reliance on groundwater leading to improved water management and conservation efforts

Waste

A significant portion of our waste production stems from battery waste, which is an inherent by-product of our battery manufacturing operations. Our waste includes hazardous items like lead, battery scrap, as well as non-hazardous materials such as metals and cables. We have a designated area for solid waste storage, and our team follows procedures to collect and classify waste into bins. The waste thus collected is disposed or recycled through authorized vendors.

We have seen reduction in waste intensity by 14% during the year.

Parameter	FY 2021-22	FY 2022-23
E-Waste	1.67	2.6
Bio-Medical waste	0.22	0.25
Battery waste	5,126.77	5,095.8
Other Hazardous waste	17,090.99	16,508
Other Non-hazardous waste	6,069.52	7,545.2
Total Waste generated	**28,289**	**29,151**
Waste Intensity per Crore of turnover (MT/INR Cr)	**3.25**	**2.80**

Table: Total Waste Generated (in metric tons)

We recycled 27,823 MT of waste, accounting for 96% of our total waste. We are working towards reducing our waste to landfills.

From Biodegradable Waste to Manure

The ARE&ML manufacturing campuses produce around 2,062 kg of organic waste each day, supplied primarily by our industrial kitchens and gardens.

Our recently installed saw dust machine is being utilized to convert wood waste into saw dust. This is combined with organic food waste in our organic waste converter and transformed into manure, which is used for gardening purposes. This initiative has enabled us to manage our organic waste while advancing circularity.

Impacts:

Manure used for gardening purposes

Waste diverted from landfills

Organic Waste Converter facility

Enabling Circular Economy

Lead is one of the most recyclable and recycled material. As ARE&ML's manufacturing relies on lead as a primary material, we have embraced a holistic lead management approach that spans procurement, processing, waste, and recovery. Our closed-loop system optimizes lead use and recycling, and we manage batteries responsibly through Extended Producer Responsibility (EPR) while ensuring compliance with the applicable waste management rules for batteries and plastic.

Demonstrating active engagement in product stewardship activities, we implement a robust system for collecting used batteries at collection centers across the country and implement mechanisms for refurbishing and reusing them. Our input raw material encompasses various components, including pure lead, lead alloy, copper, and polypropylene materials. We have made significant progress in the input of recycled materials in our production processes.

We have recycled 79,747 metric tons of hazardous waste from used products and packaging material in FY 2022-23. We aim to increase this proportion by establishing more battery collection mechanisms and creating our own infrastructure for lead recycling in our operating areas.

Upcoming 1.5 lakh MTPA Recycling Plant at Cheyyar, TN

Enhanced Secondary Lead as Input Material

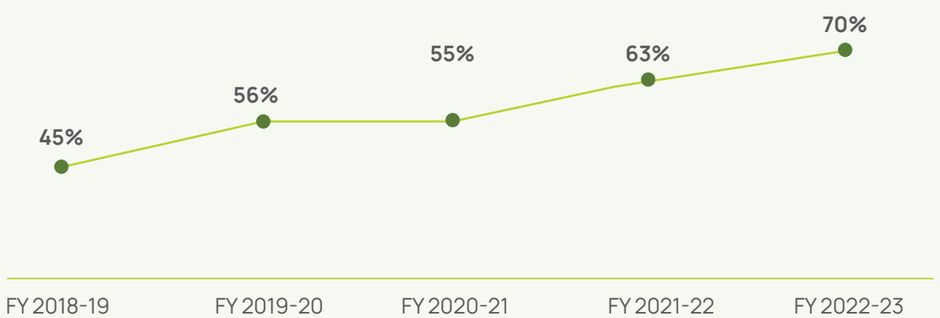
We are setting up Amara Raja Circular Solutions, a state-of-the-art battery recycling plant at Cheyyar, Tamil Nadu. Focused on recycling lead and plastics, this automated facility shall have India's largest green-field smelting and refining capacities up to 150,000 MT per annum at a single location.

This initiative bolsters our efforts to procure increasing quantities of secondary lead each year, in line with the mandates of the Battery Waste Management Rules (BWMR) 2022.

Impacts:

- Reduced CO_2 emissions
- Decrease in primary acquisition from mining operations
- Lower levels of sulfur oxide (SOx) and nitrogen oxide (NOx) emitted

Secondary Lead Usage YOY



Biodiversity

ARE&ML does not conduct any activities or operations in areas that are considered ecologically sensitive. We are not engaged in any activities that could harm or negatively impact the environment or the natural habitats of endangered species. However, we stay committed to preserving and enhancing the biodiversity around our operations .

Green Belt Development

In line with our commitment to environmental stewardship and vision for the future, we have embarked on a transformative initiative aimed at cultivating greenery and revitalizing barren land.

As part of the initiative, before planting saplings, levelling a hillock proved to be a challenge as it involved reshaping of the natural landscape. To resolve this, we decided to fill in external soil. ARE&ML's efforts and innovative approach have led to the transformation of a once unproductive, dry, and shale type barren land into fertile ground.

Impacts:

82,661 Saplings planted

55% of total area under green belt

Increased groundwater recharge

Reflecting our commitment to promoting biodiversity, we have conducted a biodiversity risk assessment and formulated a Biodiversity Management Plan. We have also implemented various initiatives and practices aimed at minimizing negative environmental impacts and fostering sustainable development.

- Commitment to plant 2 lakh + saplings by 2030
- Developing Green belt in barren lands
- Restoration and rejuvenation of water bodies and creation of an artificial lake
- Sustainable farming and top soil restoration; sustainable sourcing from local farmers
- Raising awareness within the organization and community on biodiversity conservation
- Reducing dependence on chemical fertilizers by using organic compost from food/ agricultural waste

Responsible Supply Chain

We source our primary raw materials such as lead and separators from reputable and reliable suppliers, both globally and domestically. Our Supplier Code of Conduct aligns with statutory requirements relating to environmental protection, minimum wages, child labor, anti-bribery, anti-corruption, and health and safety. It also addresses the principles laid out in international standards such as the Core Conventions of the International Labour Organization (ILO), among others.

In FY 2022-23, 32% of resources were directly procured from MSMEs/small producers. Additionally, 43% resources were sourced within the district and neighboring districts.

Logistics Optimization

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

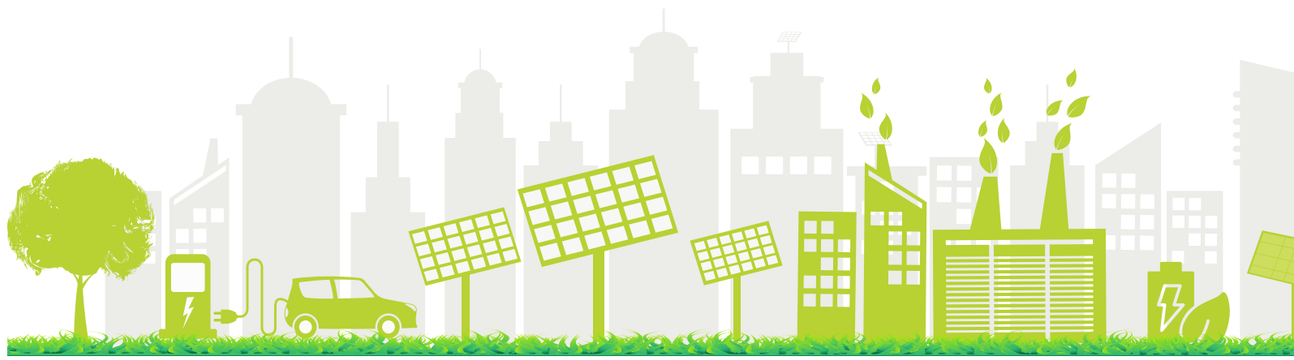
Impacts:

- 2% CO_2 reduction
- 25% Transit damages reduction
- Better customer satisfaction

Supplier Engagement

We have formulated a systematic, step wise process for responsible supplier management. This process pivots on digitalization, collaboration and incentivizing our supply partners to make their businesses more sustainable. Through this program, we aim to enhance the sustainability of our supply chain.

Supplier Sustainability Summit at Tirupati



Step 1

ESG Data and Targets: Online data collection via ESG data portal

Step 2

Capability Building: Training suppliers on ESG metrics, data collection and submission

Step 3

Collaboration: Agreeing on joint projects in Water, Energy, Carbon and Safety Improvements; subsequently supporting suppliers to identify gaps in their systems and draw up action plans in the focus areas

Step 4

Assessments: Supplier evaluation based on ARIBA and periodic re-assessment based on ESG criteria. This process includes physical audits for critical suppliers

Step 5

Rewards and Recognition: Supplier Sustainability Index and annual rewards for supplier sustainability

As of March 31, 2023, 50% of our critical suppliers underwent screening for various parameters, including environmental, social, health and safety, ethical, and legal compliance. Additionally, 13% of new suppliers were also assessed on these criteria .

Innovative Barter Solution for Recycled Lead

We have adopted an innovative barter system with Gravita India Limited, our authorized smelter partner, who operates plants in Jaipur, Mundra, Jammu, and Chittoor. As part of this innovative arrangement, we supply used battery scrap to Gravita's plants in the north and in turn, procure recycled material from their plant in Chittoor. This agreement streamlines operations and enables us to mitigate emissions as the input material does not require to be transported between Gravita's northern plants and ARE&ML's facilities in the south.

Impact:

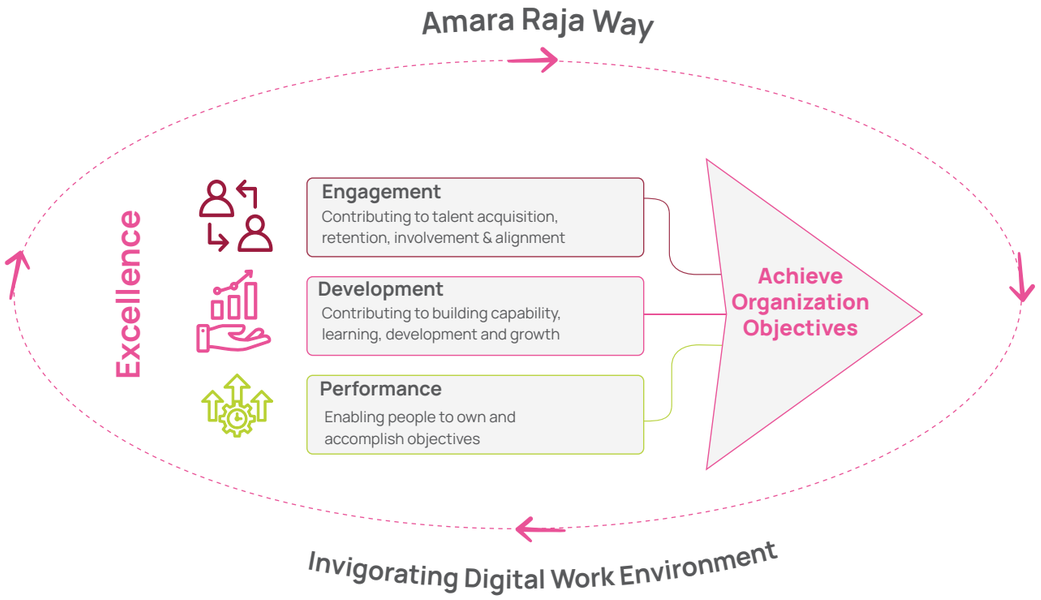
406 MT of CO_2 emissions mitigated

02

Powering Lives

At ARE&ML, we firmly believe that powering the transition to a sustainable tomorrow relies on the strength and commitment of our people. Our workforce plays a pivotal role in our strategic vision, inspiring us to overcome obstacles, forge new paths, and produce impactful outcomes. By leveraging our people's talents and passions, we aim to contribute to industry growth and set new sustainability trends that benefit both our business and society.

By leveraging the power of the Amara Raja Way®, we have created a dynamic and stimulating digital work environment that enables us to meet our organizational goals.



Digitisation through WE@AR

WE@AR is a 'one-stop people processes platform', a key component of our journey to becoming a digital enterprise. With a user-friendly interface, integrated applications, and customized setup, **WE@AR** is designed to combine several HR processes in a single platform and facilitate greater convenience, efficiency and freedom at work.

Key features include:

- **Alt Messenger:** Official messenger platform
- **Alt Recruit:** 100% online recruitment from beginning of the process to closing positions
- **Alt Worklife:** Enhanced productivity with dashboarding, data tracking, access to information; also comprises a centralized helpdesk to register queries and concerns.

Employee Welfare

Employment

We place great value on employees' abilities, aspirations, and experience, and to providing them with excellent career opportunities to advance within the company. Our team consists of 7,993 permanent individuals, who bring diverse perspectives that enrich our knowledge base. Our dedication to fostering an inclusive and empowering workplace ensures respect and active participation for all.

Indicators	FY 2021-22		FY 2022-23	
Category	Male	Female	Male	Female
<30	3,456	273	2,764	379
30-50	3,294	344	4,161	412
50	222	16	258	19
Total	**6,972**	**633**	**7,183**	**810**

Table: Workforce Classification

The process of hiring new employees and workers is an integral part of an organization's growth and success, as it allows for the acquisition of skilled and capable personnel who can help the company to meet its objectives. In FY 2022-23, we onboarded 1,178 people.

FY 2022-23		
Category	Male	Female
<30	761	175
30-50	176	60
50	6	0
Total	**943**	**235**

Table: New Hires

Employee and Worker turnover (Voluntary) by Age				
Category	**FY 2021-22**		**FY 2022-23**	
	Number	Rate	Number	Rate
<30	619	16%	528	15%
30-50	343	9%	272	6%
>50	18	8%	21	8%
Employee and Worker turnover (Voluntary) by Gender				
Male	920	13%	757	10%
Female	60	10%	64	8%
Total Turnover Voluntary	**980**	**13%**	**821**	**10%**

Table : Workforce turnover

NB: Zero Involuntary Turnover in last three Fiscal year

We further identified areas where employees were being overworked and implemented automation, and simultaneously boosted employee satisfaction by raising shift work allowance, night shift allowance, and attendance incentives. ARE&ML's Large Scale Interaction Process (LSIP) has also played an important role in employee retention.

Culture Building through Large Scale Interaction Process

Initiated in 2015, the LSIP addresses the company's frontline workers and is designed as a culture building initiative across the Amara Raja. It comprises various engaging activities that enable employees to imbibe the Amara Raja Way® and the values enshrined in it. The program is anchored by members of the middle and senior management, supported by the Human Resources (HR) team and others closely involved in its implementation.

Impacts:

22
programs

7,404
Participants

We periodically conduct living wages analysis to determine the income level necessary for individuals or families to meet their basic needs and maintain a decent standard of living in a particular geographic area or under specific circumstance.

Employee Engagement

We have been conducting company-wide online surveys since 2017, using diverse platforms to gather employee opinions, queries, and suggestions. Our annual employees' engagement and experiences survey called AR Speak is conducted across all locations and categories of the workforce. The outcomes of AR Speak and other initiatives such as workforce study and engagement programs are used to enhance employee engagement levels, elevate low scores and sustain high ones. In line with earlier performance that has surpassed industry standards the employee engagement score has been consistently maintained at 87% over the past two years.

Fostering Collaboration and Innovation: Amara Raja's Employee Communication Meet

The Employee Communication Meet recognizes the importance of providing employees from diverse teams a platform to engage with the company's leadership and voice their opinions and ideas. These sessions not only facilitate two-way communication about the company's plans and progress, they also foster innovation as ideas generated during these meets have positively impacted key aspects of our Strategic Business Plan, such as People processes, Branding, Product Development, Digital Initiatives, Quality, and Sustainability.

Impacts:

Increased cross-functional collaboration

Enhanced transparency and open communication

Tangible improvements in organizational processes

Family Day Celebration

Recognizing the importance of fostering a strong sense of community and family among our employees, we organized an annual Family Day Celebration at each of our plant/office locations. Led by an Apex leader and their family, the event is the cornerstone of our strategy as it contributes to work-life balance and unity, and reinforces the Amara Raja ethos of community, engagement, and shared growth.

Employee Wellbeing

ARE&ML provides extensive benefits beyond legal requirements, helping all employees and workers improve their families' lives. These include group personal accident insurance policy, retirement provision, superannuation scheme (SAS), benevolent fund, and group life cover policy.

As per the provisions of Maternity Benefit Act 2017, we ensure our female employees receive up to 26 weeks of paid maternity leave. Our male employees are given 5 days of paternity leave. The details of parental leave for FY 2022-23 are as follows

Return to Work rate		Retention Ratio	
Male	Female	Male	Female
100%	88%	100%	100%

Table: Parental leave details

AR-Buddy Wellness Program

Embracing the #WellnessFirst principle, ARE&ML is dedicated to fostering emotional wellness, happiness, and productivity among employees. Our comprehensive AR Buddy Wellness Program, developed, under the guidance of the Steercom Committee and Operating Committee has been devised and established to support the overall wellbeing and productivity of our people.

Wellness Structure

This network offers peer support across the organization, identifying and assisting distressed employees.

Wellness Champions and Guides

They drive regular initiatives, partnered with YourDOST, to promote emotional well-being.

AR-Buddy Wellness Calendar

Launched in 2020, this year-long program focuses on physical, mental, and emotional health.

Collaboration

The AR Buddy program collaborates with Your DOST Health Solutions Pvt. Ltd. for professional support.

Impact:

1,105 counselling sessions, including online, face-to-face, helpline, and floor walks

Wellness program

Amara Raja's Employee Creche Initiative

Reiterating our commitment to fostering a family-friendly workplace, we offer day-care services for children aged 1 to 6 years of all employees. This initiative promotes a supportive work environment and demonstrate our priority for putting the wellbeing of our people first.

Learning and Development

We believe that a well-structured and thorough induction and onboarding process is crucial to the development of our people. ARE&ML's comprehensive program, NAVA PRATHIBHA, is specifically designed for new hires and aims at providing a professional and nurturing environment that enables our people to harness their potential.

To identify areas for improvement in performance, we conduct skill gap analyses for all our employees and workers. Guided by the findings and our strategic workforce plans, we regularly review and update our training calendars and conduct periodic training sessions. This strategy has yielded positive results, enabling our business to maintain high standards of performance within the sector.

Our learning and development initiatives comprise a combination e-learning and classroom sessions.

FY 2022-23		
Category	**Male**	**Female**
Leadership Team	1,881	23
Middle Management	7,786	1,120
Other Employees	84,546	10,405
Total	**94,213**	**11,548**

Table: Training Hours

Average training duration for men: **13 hours**

Average training duration for women: **14 hours**

ARE&ML's investment in employee training: **INR 2.5 crores**

122% increase in training hours compared to FY 2021-22

We organize sessions on financial markets to educate our retired employees These programs provide support and training for employees during transitions, especially after retirement, helping them adjust to new roles and responsibilities.

Our learning and development initiatives encompass training on a wide range of sustainability topics such as resource efficiency, environmental sustainability, product lifecycle assessment, battery waste management, legislation, etc.

In FY 2022-23, a total of 671 of our people participated in these sessions

Capability Building Programs on ESG

- ESG workshop for senior leaders
- CII certified professional in resource efficiency and environmental sustainability
- Environment Legislations
- Waste water Management and ZLD's - Operating Experience and Best Practices
- Energy efficiency and audit
- ESG Software and SOP's for Data Reporting
- OH and Safety Legislations
- Water Stewardship and Risk Assessment
- Awareness Session on BRSR
- Sustainable Procurement
- Planning for diversity and inclusion (DEI) and best practices
- Workshop on global reporting initiative (GRI) framework
- Carbon Footprints and Product Life Cycle Assessment

Training on Environment and OHS Legislations

Supplier Assessments Auditor Training

Reflecting our priority to promote workforce growth and development, our performance management system motivates employees to set and achieve ambitious goals. The performance appraisal system is reviewed quarterly, ensuring that performance planning is aligned to the business's focus areas.

Amara Raja Talent UP (AR Talent UP)

Based on We@AR – Alt Worklife Platform, AR TalentUP is an automated skill and competence management process, for all employees across organizational levels. This initiative paves the way for a more productive and high-performing workforce.

AR Talent UP is designed to address the following objectives:

- Enhancing Efficiency and Effectiveness
- Seamless Superior Management
- Standardizing Skills and Competencies

Impacts:

Comprehensive skills assessment for 5,356 employees

Skills mapped to their respective roles and responsibilities in the organization

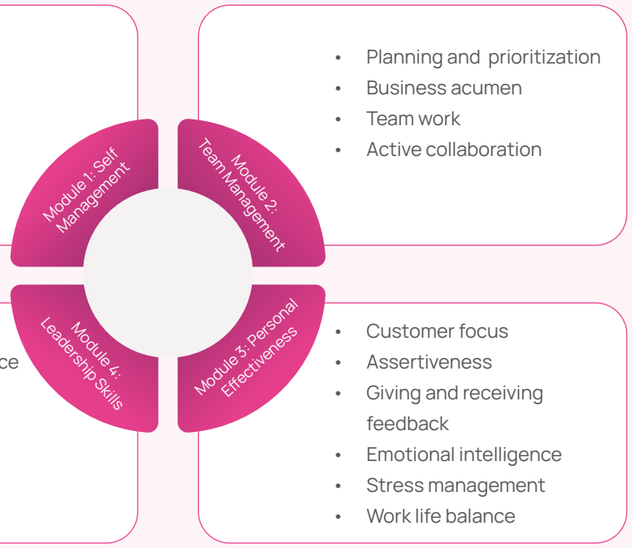
The AR ProPEL program, a collaborative effort with the Indian School of Business, Hyderabad, aimed at fostering comprehensive leadership and management development, achieved remarkable success. 27 leaders from Amara Raja Energy and Mobility Limited actively engaged in the program.

Amara Raja Supervisors Empowerment and Expertise Development Program (AR SEED)

Launched in FY 2022-23, this program is designed to equip supervisors, with the requisite knowledge, skills, and behaviors that will help them perform effectively in their current roles. A total of 161 supervisors from ARE&ML underwent the AR SEED training and received certification in the reporting year.

The AR SEED program, is designed to achieve the following objectives:

- **Enhance performance effectiveness**
- **Enable adapting to change**
- **Unleash individual potential**



- Demonstrate ownership
- Role clarity and personal effectiveness
- Communication skills
- Presentation skills

- Planning and prioritization
- Business acumen
- Team work
- Active collaboration

- Communicate and influence
- Negotiation skills
- People management
- Decision making skills
- Developing people

- Customer focus
- Assertiveness
- Giving and receiving feedback
- Emotional intelligence
- Stress management
- Work life balance

Diversity, Equity, Inclusion, and Belongingness (DEIB)

We actively promote diversity in recruitment and foster an inclusive workplace for all employees. To ensure a diverse talent pool and eliminate biases, we have revamped our policies and hiring practices. Further, DEIB is a key performance indicator in the People vertical of the Sustainability Committee's agenda. DEIB has been incorporated into the business balanced scorecard and leadership key result areas (KRAs). In FY 2022-23, ARE&ML employed a total of 7,993 individuals, of whom 10.13% are women.

ARE&ML is committed to providing equal employment opportunities to all individuals who meet the qualifications specified in our Human Resources recruitment policies.

Initiative	Objective	Impact
International Women's Day Celebration	Annual recognition and appreciation of women employees.	Fostering empowerment, support, and a positive atmosphere

Women's Forum

Acknowledging women's needs in managing their personal and professional commitments effectively, we have set up a Women's Forum. This initiative provides an avenue for women to come together to share and learn from one another's views and experiences, with the aim of providing assurance, instilling confidence, and fostering growth. The forum has witnessed active participation from several women in the organization, and it continues to make a positive impact on many lives by providing a supportive and empowering network that encourages them to flourish on the personal and professional fronts.

Human Rights

We nurture a deep respect for human rights throughout our operations and value chain. We have joined the UNGC as a member, pledging to integrate UNGC principles into our strategy and organizational ethos. We also utilize the UNGC protocol for human rights due diligence to identify and mitigate associated risks. Furthermore, we impart training to all employees and value chain partners to boost awareness and adherence to our Code of Conduct and human rights policies.

Workplace Conditions

We work to create a safe and healthy workplace environment for all our people across the organization.

Equal Opportunities and Non-discrimination

We actively discourage harassment based on gender or other forms of discrimination based on socio-economic and demographic factors. In line with the requirements of the Prevention of Sexual Harassment Act 2013, an Internal Complaints Committee has been set up to investigate complaints of sexual harassment.

Prevention of Child Labor and Forced Labor

We refrain from employing child labor and forced labor while mandating the same for our suppliers and the entire value chain.

Freedom of Association and Collective Bargaining

We appreciate the right of employees on freedom of association and collective bargaining. A single internal union represents all categories of employees across the company's locations to exercise freedom of association. The minimum notice period regarding significant operational changes given to workers is one month.

Compensation

We provide more than minimum wages for all employees.

Occupational Health & Safety

Leadership commitment to safety is crucial in creating a safe and healthy work environment. Organizational leadership lead by examples, set clear objectives, provide resources, investigate and implement learnings, and build capability on safety. We have defined leading indicators for all levels of management. The health and safety of our people and operations is a core focus area which we continuously update with the latest technologies and safety processes. In keeping with our approach based on prevention, intervention, and collaboration, we use a combination of frameworks, protocols, training, and awareness programs that embed safe practices and behavior across our operations. On National Safety Day, we reaffirm our commitment to work safely and responsibly.

National Safety Week


Photo sensors based safety interlock for access control

100% of ARE&ML sites are ISO 45001:2018 certified

All our facilities have been certified for this standard, which enables us to enhance and continuously improve the organization's safety performance. We also implement the Hazard Identification and Risk Assessment (HIRA) process to detect work-related hazards across all units. Additionally, we have put in place dedicated emergency plans.

We have established safety indicators to monitor and continuously improve workplace health and safety throughout the organization. The table below shows information of Leading & Lagging safety indicators for the previous two years.

Indicators	FY 2021-22	FY 2022-23
No. of unsafe condition or act	1242	1614
No. of near misses	241	2370
Lost Time Injury Frequency Rate (LTIFR)	0.78	0.67
Total recordable work-related injuries	12	10
No. of fatalities	0	0
High consequence work-related injury or ill-health (excluding fatalities)	0	0

Table: Safety Indicators

At group level, we have formulated HSE Council comprising of members from HSE functions of all group companies. The council meets every month to share details of monthly HSE performance, good practices implemented, learnings from incident investigations, and progress on corrective & preventive actions.

Addressing Lead Exposure Hazards

Staying true to our responsibility to protect the environment and people against the hazards of lead exposure, we hosted LEADCON, under the aegis of WHO and in collaboration with InSLAR. LEADCON aims to enhance awareness of the hazards of lead exposure, promote research on lead-related issues in India, and create a roadmap for lead usage in the country.

We have been recognised as “Best Industry in Lead awareness and Control” during the Leadcon.

Promoting Employee Health

The health and wellbeing of our employees is accorded high priority. This is reflected in our various efforts e.g., providing ergonomic workstations to minimize strain and fatigue, conducting annual medical checkups for all employees, organizing preventive health programs, providing access to medical services at the company’s Occupational Health Center (OHC), etc.

Annual Medical Checkups

24x7 ALS Ambulance Services

Advanced Life Support ambulance services are available round the clock to ensure access to medical care in the shortest time possible. The ambulances carry all equipment necessary for emergency care, including advanced medication, oxygen, and ventilators.

Doctor consultations

Qualified occupational health physicians provide occupational healthcare and address preventive and clinical health needs.

Operation theatre

The OHC’s operation theatre is equipped to conduct minor surgical procedures.

Laboratory for lead testing

This facility enables all ARE&ML employees to be screened for lead level in blood (LLB). The screening and analysis is conducted by a trained team, using the latest techniques and advanced equipment at different frequencies based on identified similar exposure groups (SEGs).

Pre-employment medical examination

Trained staff at the OHC carry out pre-employment health and fitness examinations for potential new hires, thus promoting health and productivity.

Mass health communication programs

As a preventive aspect, mass health communication is done by the trained medical team at the communication meets, tea points, amenities and women’s forum. Topics covered are, seasonal diseases, tobacco awareness, snakebite, etc.

Internal training programs

First aid refresher training, basic life support training and awareness programs about communicable & non-communicable diseases, women’s health, personal hygiene, nutritional health & tobacco usage.

External training program

Certified first aid training & basic life support & advance life support training for medical team.

Participation and Consultation

Employee participation and ownership is pivotal in creating a culture of safety at ARE&ML. The Health and Safety committees set up at each site contributes actively to formulating, implementing, and monitoring the organization's health and safety policy and procedures. They also play a key role in resolving workers' safety concerns and help to identify trainings to strengthen workplace safety. We organize following safety related activities:

- District level offsite emergency mock drill
- National Road Safety Week with the theme, 'Sadak Suraksha Jeevan Raksha'
- National Safety Week
- Mock drills across our sites to reinforce preparedness and response to emergencies
- Safety equipment exhibition organized to raise awareness on use of Personal Protective Equipment

Road Safety Training

Occupational Health Centre

Fire Protection

As battery manufacturing is hazardous, safety is built into the design of our sites. All our facilities are equipped with best – in - class fire detection and suppression systems. Additionally, an onsite emergency plan and systematic maintenance procedures bolster readiness. Systems and infrastructure implemented for fire protection :

- The fire hydrants network comprises of pumps, hydrant points, and hoses
- Transformers above 10 MVA or 2,000 L oil capacity have nitrogen-induced fire suppression
- Critical areas are equipped with clean agent fire protection systems and tubular fire suppression systems
- Aerosol-based fire suppression system and Lithex fire extinguishers are used at the lithium-ion battery unit
- Strategically placed fire balls enhance emergency response

Fire Control Training

Other Safety Initiatives

Protection against exposure to dust

Closed loop fume and dust extraction systems with scrubbers / bag filters at all plants Robotic floor cleaners prevent workers' exposure to process dust.

Prevention of accidents with moving parts

Machine safety interlocks across all assembly lines to prevent interaction with moving parts

Behavior based safety (BBS) trainings

Promoting a safer work environment through employee awareness and behavior modification.Video analytics to enforce PPE compliance and enhance workplace safety.

Implementation of Gemba Walk

Observing operations, gaining insights, and fostering continuous improvement through workplace visits.

Dust Protection System

Technology Initiative

ARE&ML employees can now report unsafe acts, conditions and near miss in real time on their mobile phones through AR ESG App. The area owner are informed, the closure actions are tracked and discussed in HSE performance reviews. We encourage employees to take time off during their work hours and conduct safety walks and identify hazards to improve workplace safety.

Corporate Social Responsibility

Rajanna Foundation is a registered NGO, fully supported by the Amara Raja Group, serving as a vehicle to channelize the Group's contributions towards it's social responsibility.

Social development is foundational to our corporate philosophy and stems from the belief that the scope of business must include the progress of the communities we engage. A large part of our workforce comprises rural citizens from around our operations and we continuously assess the impact of our actions on the near by communities. We also emphasize employee volunteering and work with external stakeholders to promote the sustainable development of rural communities.

CSR Framework

CSR vision

We seek to create vibrant, self-reliant communities, guided by innovation, excellence, and responsibility. Our commitment to the socio-economic development of communities spans numerous issues, including village transformation via education, employability, infrastructure, health care, women's empowerment, and environmental care.

CSR Approach

Relentless determination to transform, improving the quality of life and providing better opportunities to more people all the time.

Our Thematic Areas

Through our CSR initiatives, we focus on Education, Primary Health, Water, Rural Development Social Forestry, and Skilling India.

Education

We value quality education as a pathway to a better life and firmly believe in providing each child with a conducive learning environment and the tools for a brighter future.

Primary Health

The PHC provides medical services for 81 villages with Rajanna Trust. We provide all the necessary infrastructure for these Medical Centers.These PHCs has been established under the PPP model (Public Private Partnership Program) with the Government of Andhra Pradesh.

Water

We support community water resource augmentation to ensure water availability in regions where agriculture is dependent on rainfall along with farmer sensitization on resource-efficient and sustainable agriculture practices.

Rural Development

Our focus is on funding and maintenance support for infrastructure that enhances the quality of life for village residents and promotes socio-economic progress in the region.

Social Forestry

Recognizing the vital role forests play for local communities and their positive effects on rainfall and soil quality, we have partnered with the Division of Social Forestry to implement several social forestry initiatives.

Committed to Skilling India

The objective is to improve the socio-economic conditions of the community by upskilling the students with necessary technical expertise and life skills.

Transforming Rural Education - Our Journey Towards Affordable School Education

Access to quality education for rural students is hampered by lack of schools in the vicinity, limited transport options to attend those farther away, unaffordable fees, and inadequate infrastructure.

The Amara Raja Vidyalayam Karakambadi (ARVK) was established in 1995, followed by Mangal Vidyalayam (MV) Petamitta in 2001 and Amara Raja Vidyalayam Diguvamagham (ARVD) in 2016. These schools offered affordable, high-quality education and transportation services, benefiting over 240+ villages. Skilled educators were appointed, and smart classrooms and technology were provided to elevate the learning experience.

Impacts:

Over 4620 students benefitted

80% of the beneficiaries come from marginalized communities

Enhancing Rural Health: The Rajanna Primary Health Center

The lack of doctors and primary health facilities posed significant challenges for rural communities surrounding our operations. With the aim to bridge healthcare disparities, the Rajanna Primary Health Center (PHC) was established in 2012, in Petamitta village. The PHC has 30 beds and 5 sub-centers and caters to the medical needs of 12 panchayats and 81 associated villages, supported by monthly outreach programs.

At present, the PHC staff includes 2 doctors, 1 lab technician, 1 pharmacist, 2 nurses, and 5 field staff. Medical advice is also provided by doctors of Indian origin residing abroad, on a voluntary basis. Additionally, a lady doctor makes village visits to serve women at the sub-centers.

Impacts:

Over 20,230 outpatients served

Approximately 16,336 laboratory tests conducted

Provided universal health coverage

On average of 150+ outpatients are served through monthly outreach

Reduced health disparities and improved the overall physical and mental well-being of the community

Empowering Villages through Check Dams and Water Management

Erratic rainfall and insufficient water resources hampered agricultural output and livelihoods in the Petamitta village area. We initiated efforts to address them through the Rajanna Jalasayamu Program. While the program was initially launched between 1999 and 2012, we have continued to perform regular maintenance on the check dams. Our intervention focused on harnessing rainwater through:

Construction of **23** check dams and supply channels

Deepening **6** existing lakes, ponds etc., including desilting tanks

Impacts:

Increased groundwater level

Expanded cultivable area

Improved water availability for farmers from about 60 villages

Enhanced agricultural productivity, and improved livelihoods

Rural Development Initiatives

- Ongoing support provided to adopted panchayats in the 3 villages
- Funding allocated for the construction of connecting roads, RO water plants, street lighting, leisure parks with internet access, and libraries in Chittoor and Tirupati districts.
- Community outreach initiatives which have led to establishing civic amenities such as a marriage hall in Chowdepalli, a bus shelter in Chenganapalli, toilet facilities, and an auditorium in two government schools, public roads, and an electric crematorium in Tirupati.

Our Green Initiative in Petamitta

Witnessing the challenges created by barren lands, lack of vegetation, and soil erosion for residents of Petamitta, and near by villages, we undertook environmental conservation and sustainable forest management in the vicinity of the village.

In collaboration with the Department of Social Forestry, our Foundation secured 250 hectare of barren hillock at Pemmugutta, near Petamitta, in 2007. The aim was to implement Soil Conservation and Vegetative Regeneration. To this end, the Foundation has planted 71,000+ saplings in the hillock's vicinity and plans to continue this effort in the future. The Foundation also purchased and donated an adjacent 30-acre plot to the government.

Impacts:

Prevented soil erosion

Promoted sustainable forest management

Employment generated for 40 tribal families

Empowering Rural Youth through Skill Development

Among the critical challenges encountered by rural youth, is a disparity between industry requirements and available skills, which limits employment opportunities. There is clearly a need for comprehensive training for full employability of these young citizens.

To bridge these gaps, in 2014, we established the Amara Raja Skill Development Center (ARSDC) in Petamitta village. Targeting students with education up to the 10th or 12th grade, the curriculum encompasses technical, non-technical, and life skills, aligning with industry demands. Students are required to undergo theory and practical training at ARSDC for 3 months, followed by 21 months of on-the-job training at AR Group companies.

Encouraged by the impact of this initiative, a second skill development center is being set up in Diguvamagham to train rural youth in Electronics and Construction (MEP).

Impacts:

- IN FY 2022-23, 1,050 students including 300 women trained
- Improved employment opportunities

We conduct impact assessment study for our CSR projects. For details of the impact assessment and its findings, please refer to page 84 of our Annual Report.

09

Fostering Growth

Corporate Governance

At ARE&ML we recognize that effective corporate governance is crucial to sustainable business growth. Our commitment to the highest standards of corporate governance is reflected in transparent accounting policies, robust internal control systems, an ethical framework for decision-making, and our focus on timely and comprehensive disclosures. In keeping with this commitment, we strive to uphold high ethical standards across our operations, ensuring accountability, transparency, and fairness in all interactions.

The governance of ARE&ML rests with the Board of Directors, which comprises a balanced combination of Executive Directors and Non-Executive Directors, including Independent Directors. This composition is essential to maintaining independence and ensures a diverse range of expertise, specialized skills, and experience among Board Members.

Board of Directors

Jayadev Galla
Chairman, Managing Director, and CEO
C C M

Harshavardhana Gourineni
Executive Director
M M

Vikramadithya Gourineni
Executive Director
M M

N Sri Vishnu Raju
Independent Director
C C C M M

T R Narayanaswamy
Independent Director
C M M M M

Bhairavi Tushar Jani
Independent Director
M M

Annush Ramasamy
Independent Director
M M

For more details about Board of Directors, please refer to our corporate website:
Amara Raja Energy & Mobility Ltd.

C **Chairperson**
M **Member**

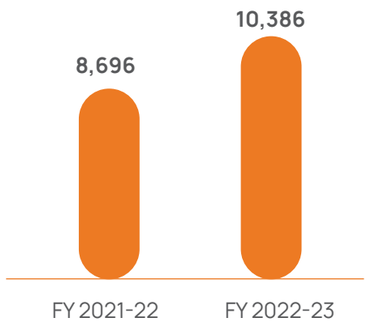
- Audit Committee
- Nomination and Remuneration Committee
- Risk Management Committee
- Stakeholders Relationship Committee
- Loan and Investment committee
- Corporate Social Responsibility Committee

Economic Contribution and Value Creation

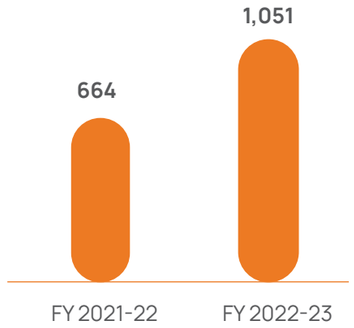
As a responsible corporate, we recognize that distributing wealth in a fair and balanced manner is essential to the long-term socio-economic progress of the country. Therefore, we are committed to creating value not only for our business but also for those in our value chain, local industrial clusters, and the communities our work impacts directly and indirectly.

In FY 2022-23 we delivered a robust performance, with an increase in revenue of 19% over the previous financial year.

Economic Value Generated - Revenues (INR Crores)



Economic Value Retained (INR Crores)



Our wealth creation initiatives benefit a wide range of internal and external stakeholders, resulting in a mutually enriching network. The wealth generated is distributed through several avenues as below

All values in INR Crores

Economic Value Distributed	FY 2021-22	FY 2022-23
Operating costs	7,158	8,422
Employee wages and benefits	499	591
Payment to providers of capital	171	58
Payments to governments by country	188	248
Community investments	16	16

Table: Economic Value Distributed

Risk Management

At ARE&ML, we vigilantly monitor our operational environment to proactively identify and address potential risks that could affect our business. To manage these risks effectively, we implement a robust risk management framework with involvement from the Board's Risk Management Committee and senior management personnel

In line with the requirements of the Taskforce on Climate Related Financial Disclosures (TCFD), we have further identified climate related risks. These include transition risks emanating from emerging regulations and adoption of a carbon pricing framework, as well as physical risks associated with heavy precipitation and heat stress.

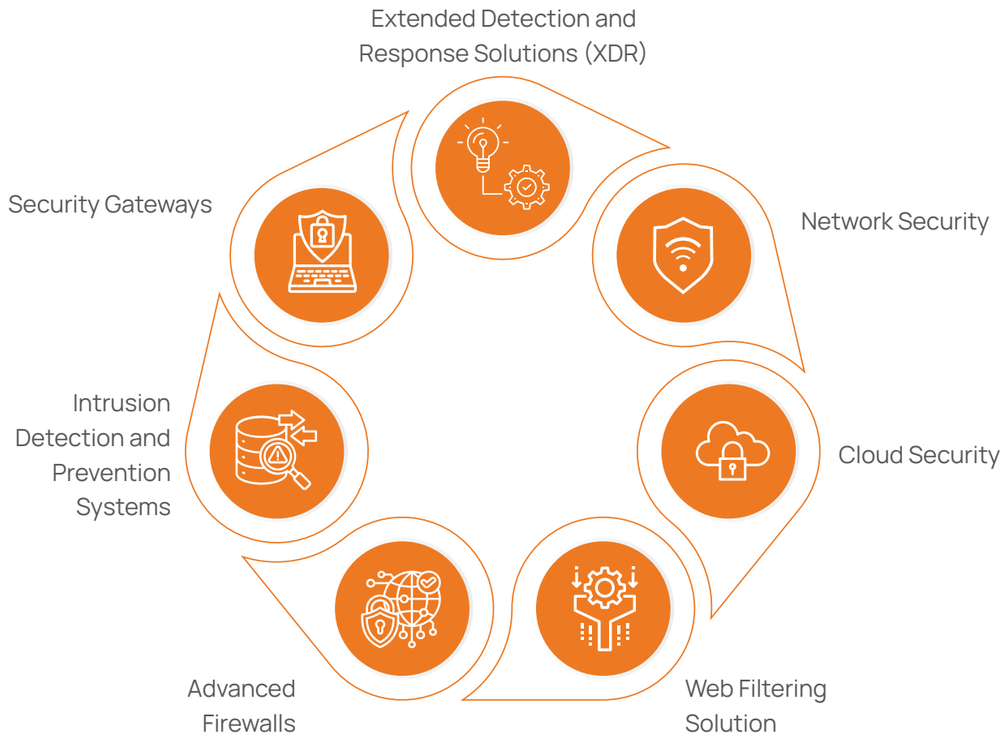
who oversee the process of risk identification, prioritization, and mitigation.

In response to identified risks, we have implemented various measures designed to mitigate their potential impact and ensure business continuity. For more details about our risk management, kindly refer page no. 25 and 32 of the annual report.

Upon risk identification, a scenario analysis was conducted in which transition risks were assessed using the IEA Net Zero Emissions 2050 (NZE 2050) scenario, while the RCP 8.5 scenario was referred to in assessing physical risks. We then examined the impacts of these risks for our operations and followed this up with devising plans for risk mitigation.

Data Privacy

Protecting the organization's and stakeholders' information and data from internal and external threats is core to our operational strategy. We invest in the latest tools to strengthen our ability to detect and avert cyber threats, protect our employees against phishing attacks and malware, and minimize the risk of unauthorized access and network breaches.



Additionally, we conduct periodic audits and vulnerability assessments for all applications. The observations from our audits are used to modify policy and processes to create a robust ecosystem for data protection and information security.

Our Information Security Management System (ISMS) and policies for Information Security and Data Protection are aligned with the latest ISO 27001 requirements for Information Technology and Security techniques. This enables us to implement a risk-based approach to cyber security across the organization. In the reporting year, we received no substantiated complaints concerning breaches of customer data privacy.

Customer Centricity

At ARE&ML, engagement with customers and consumers is a process that starts well before and continues well after the purchase of our products. This is underpinned by the conviction that successful customer and consumer engagement enables retaining their attention after they have made a purchase, strengthens their emotional connection with our brand, and fosters lasting relationships. At ARE&ML we engage with customers and consumers through several mechanisms. Some of these are described below:

Amaron Konnekt: An app developed exclusively for our channel partners and consumers, it provides several attributes for a better consumer experience, as well as a seamless platform for digitizing and managing product records.

01 **Product Registration**
Prompt and hassle-free registration with generation of a digital warranty card

02 **Number plate scanning**
Scanning of vehicle numbers to map automotive batteries being used by our customers

03 **Product status**
Information about registration and product warranty coverage

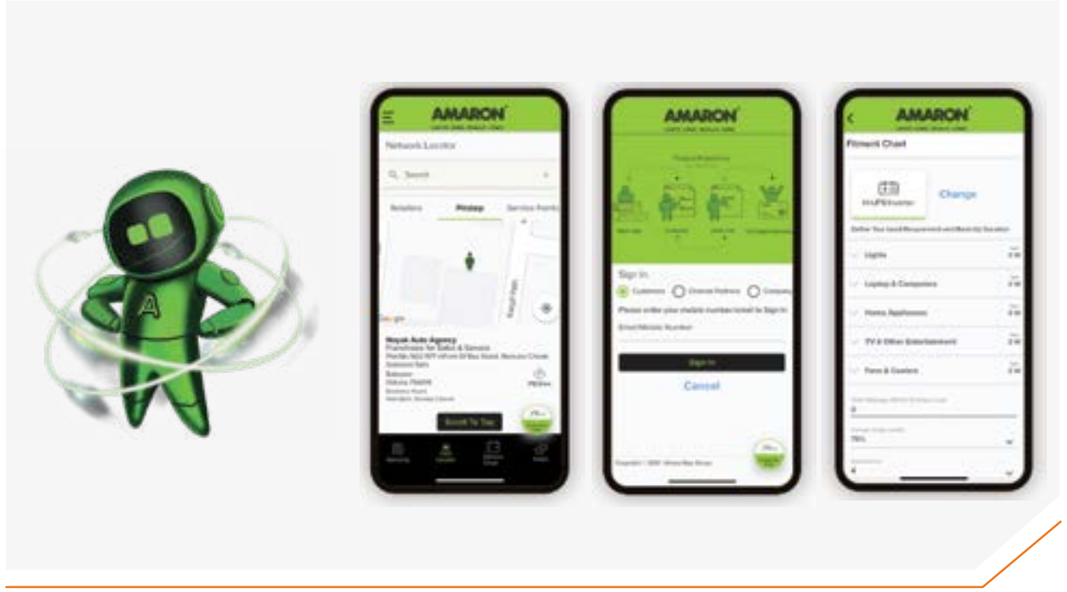
04 **Fitment chart**
Suggestions for suitable AMARON battery model for customer's vehicle type

05 **Network Locator**
Navigation enabled interface to locate nearest AMARON pitstop or retailer in case of battery breakdown

06 **Care Tips**
Access to latest maintenance tips and informative content on AMARON battery care through FAQs

07 **Customer Engagement**
Notifications on products, upcoming events, offers, customer query resolution, and much more

08 **Loyalty points**
Our channel partners are entitled to enjoy incentives on product registrations in line with our internal incentive policy



AMCARE: We support our customers every mile of the way and at every moment. Our 24x7 service centers ensure that our customers face zero difficulty with replacements, installations, and servicing of batteries. We facilitate free battery inspections to get health reports of batteries that are in use by our customers. Additionally, customers can call a toll-free number at any time to resolve queries and register complaints.

During the reporting year, we implemented initiatives that support an enhanced sales and service experience for our customers and consumers. These include our flagship app which enables dealers to register warranties digitally and ensures consumers receive predictable in-warranty service. We also piloted a solution that promotes auto replenishment of batteries, ensuring that franchisees are never out of stock and can serve consumers more efficiently. As we advance, we are working to roll out the following initiatives to transform our sales and service:

SalesForce based Customer Relationship Management solution that will elevate relationship management and provide insights to better addressing the needs of our franchisees, dealers, and OEMs.

Leverage **SalesForce Service** Cloud for quicker turnaround of batteries and servicing warranty requirements to serve existing customers better.

Enhance the buying and service experience by strengthening the franchisee core **platform ATS.**

This year, we received 9 customer complaints which were promptly addressed and resolved. Also, there have been no incidents of non-compliance with regulations, and/or voluntary codes concerning the health and safety impacts of products and services.

ARE&ML was platinum sponsor and actively participated in the India Energy Storage Week 2023, a premier B2B networking event focused on renewable energy, advanced batteries, and electric vehicles. We showcased a variety of EV battery packs and chargers while members of our senior management participated in panel discussions for the inaugural plenary session (advanced battery manufacturing), and safe battery pack design, assembling, thermal management & customization.

Transforming Tomorrow

Product Stewardship

At ARE&ML, we manage the impacts of our diverse products throughout their lifecycle by following a systematic approach, right from procurement through processing, waste management, and recovery. Our established protocols ensure authorized recyclers handle end-of-life batteries, while our circular economy strategy involves reusing lead recovered from spent batteries to minimize raw lead consumption.

Currently, 70% of lead used in our manufacturing processes comes from recycled sources and we aim to increase 80%+ by setting up robust end-of-life battery collection infrastructures across our sales regions.

130
Technology Team

1,085
Man Years of Cumulative expertise in battery industry

44
Patents/Design Registrations field over the years

24
Patents/Design Registrations Approved

23
New Product Launches were made during FY 23

Life-Cycle Assessment

The life cycle of a lead acid battery can be divided into five main stages: material extraction, production, use, recycling, and disposal. Each stage involves different processes as well as inputs, such as materials, energy, water, and emissions.

Applying Life-Cycle Assessment (LCA) principles to our products we aim to reduce the environmental impact of our products. LCA also enables comparing different types of batteries or alternative technologies that may have lower environmental impacts, thus enabling us to channel our R&D efforts in the right direction.

We conducted LCA for two of our flagship products, one each in the automotive battery and industrial battery segments. After reviewing the identified risks and concerns that emerged, we determined that our production processes already incorporate measures that effectively mitigate adverse impacts across the product lifecycle. These measures include the increased use of resources like renewable energy, and recycled lead. They also encompass energy conservation projects, use of harvested rainwater, and zero liquid discharge systems. The LCA has also helped us to track lifecycle GHG emissions of our products thus allowing us to reduce their carbon footprint.

The Department of Scientific and Industrial Research (DSIR) initiated a program to boost corporate R&D efforts. This program acknowledges and encourages R&D units, highlighting their contribution to innovative ideas and technological progress. DSIR recognition is highly esteemed, affirming an organization's commitment to advancing technology, promoting innovation, and benefiting industry and society. ARE&ML has held DSIR recognition since 1996.

Off - board Chargers for EV Applications

High power off-board chargers are essential to supporting battery pack solutions. ARE&ML has designed and developed 2KW and 3KW off-board chargers for EV applications.

- Reliable
- Efficient
- Digital controller protection
- High EMC performance

2kW and 3kW Off-board charger

Impact:

Powering over 750 million green kilo metres run and counting

Innovation and R&D

At ARE&ML, we believe innovation is about "proactively rebelling for better ways of doing things leading to newer possibilities". This belief, embedded in the organization's DNA, drives our pursuit of new technologies that help us create world class products.

Staying ahead in a dynamic energy and mobility solutions market requires continuous focus on innovation and significant investment in R&D. We also emphasize sustainability and focus on building technologies that systematically minimize our environmental footprint as we continue to grow. These efforts include:

Innovation for a greener future

We have forayed into developing low cost, fast charging, next generation lithium-ion batteries for electric mobility.

Optimizing lead usage sustainably

Lead continues to remain an indispensable component in vehicles of the present and the future. Our R&D teams have enabled us to optimize the weight of lead in batteries, resulting in dual benefits of improved efficiency in material usage and lower environmental pollution.

Promoting circularity

While we strengthen processes for safe and responsible disposal of batteries, we also use increasing quantities of recycled lead and plastic from batteries in our manufacturing processes. In addition, we have plans to commission state – of - the – art technologies for our upcoming 1.5 lakh MTPA captive lead recycling facility.

Reducing lifecycle impacts

As active advocates for product stewardship, we will continue to strengthen our interventions to minimize the lifecycle impacts of our products.

Our upcoming world-class manufacturing facility, the Amara Raja Giga Corridor shall be by high-speed automation for advanced lithium-ion cells for electric vehicles and stationary energy storage systems. The facility will manufacture lithium cells with a capacity of up to 16 GWh and battery packs of up to 5 GWh. It will feature advanced fire safety, NMP solvent recovery, solar rooftops, and work towards Net Zero Plan.

We have performed the groundbreaking of our Advanced Energy Research and Innovation Center, known as the E-hub, at the GMR Aerocity in Hyderabad. The first of its kind in India, the E-hub will carry out cutting - edge research and innovation in clean energy technologies for mobility and energy storage. The facility's e + Energy labs will house state-of-the art R&D infrastructure for advanced material research, as well as analytical laboratories and a start-up incubation center. It will focus on multiple cell chemistries and pioneer the development of new materials and processes to improve battery performance, safety, durability, and cost. The E-hub is envisaged to catalyze collaboration among multiple stakeholders and foster entrepreneurship in clean energy technologies and energy storage.

Our inaugural conclave, Evolve, aimed to uncover insights in energy and mobility and sharpen our focus in these emerging areas. Attended by the best minds from industry, academia, research, and policy, the conclave provided a platform for robust discussions on the advances, challenges, and potential of battery technologies in energy storage and mobility. We envision Evolve to be an annual event, inviting wider participation and benefitting the entire industry.

ARE&ML, in partnership with Tirupati Municipal Corporation, established electric vehicle (EV) battery charging and swapping stations, accompanied by the introduction of a fleet of e-Autos in Tirupati. The cutting-edge R&D centers of Amara Raja played a pivotal role in the design and development of both the Lithium-Ion battery packs and the EV battery charging/ swapping infrastructure. We expanded its Tirupati manufacturing facility to include a state-of-the-art Lithium-Ion battery pack production unit, boasting a capacity of 500MWH.

Some of our key initiatives and the associated impacts are listed below:

Initiative	Impact
Development of cost-effective batteries for UPS application by using Value Engineering Concept	• 4.5% Material cost advantage • High specific energy (same performance with optimal weight)
Advanced AGM batteries development for automotive start-stop / hybrid vehicle application	• 3 X Endurance - longer life (compared to sli flooded battery) • 2 X Dynamic charge acceptance • Extremely low water consumption • High vibration resistance • Spill proof- environment friendly
Energy conservation through oven cycle time optimization – small battery plates	• Plates throughput increased by 5% • Energy-saving by 0.364 million KWh/Year
Design & development of high wattage series batteries in Amaron Quanta range footprint	• Provides a maximum of 25% additional power compared to current Quanta models, all within the same physical dimensions • Achieves a 10% faster recharge due to lower IR values • Offers a high volumetric energy density, necessitating 10% less space for storage
Process cycle time optimization by enhancing the formation algorithm of 2V – VRLA Battery	• Reduced energy consumption by 80,000 units each year • Annual cost savings of Rs 0.49 Million

Advanced Continuous Plate Making Technology for Automotive Batteries

The evolving automotive industry demands batteries with superior performance. Staying ahead in technology, ARE&ML has introduced advanced continuous plate-making for automotive batteries to support innovations in autonomous driving.

Impacts:

3* more corrosion resistance

Optimized grid profile - 40% superior electrical flow

Elimination of Flame Retardants Causing Environmental and Health Concerns

Fire retardant (FR) attributes are required for the poly covers and containers of batteries. A common flame retardant, bromine-bisphenol, has been employed in a variety of industries, including battery covers. However, mounting concerns about the potential environmental and health consequences have driven us to look for alternatives.

At ARE&ML, we acknowledge the significance of lead-acid batteries in energy storage applications. Hence, we initiated comprehensive R&D efforts to identify alternative flame retardants, well ahead of the announcement of regulatory restrictions. Thus, when the material was added to REACH's candidate list in 2023, we had already made good progress. Through internal formulations, we successfully adopted stable, safe, and effective alternatives to uphold stringent fire safety standards for battery applications.

Impacts:

Bromine-bisphenol flame retardant with safer alternatives

Enhanced material consumption efficiency by 5%

Boosted customer satisfaction levels

This approach showcases our dedication to environmental well-being, material innovation, and maintaining high safety standards in our products.

Automation Transformation for Enhanced Efficiency

Automation of COS Group Loading Process

In a transformative move, we introduced robots to replace manual loading and unloading of lead-strapped groups in the COS process.

Battery Online Conveying System Implementation

To address challenges in battery handling, we implemented an advanced auto online conveying system which enables seamless battery transfer across various processes using conveyors.

Implementation of Auto Label Applicator

Manual brand sticker pasting caused inconsistencies and reduced appearance quality of our batteries. To improve this, we automated accurate sticker placement on with the Auto Label Applicator machine.

Impacts:

- Reducing workers exposure to lead
- Minimising worker fatigue
- Operating efficiency improved

The Kanyakumari to Kashmir EV ride, in partnership between Mr. Sushil Reddy of The SunPedal Ride, coursed through 28 cities and traversed 11,000 + kms over 82 days, This journey enabled us to engage with and excite students at 15+ premier educational institutes such as IIM Kozhikode, IIT Hyderabad, and BITS Hyderabad, about the potential of electric mobility in India.

Independent Assurance Statement

Introduction

DNV represented by DNV Business Assurance India Private Limited ('DNV') was appointed by Amara Raja Energy & Mobility Limited formerly known as Amara Raja Batteries Limited ('ARE&ML' or 'the Company', Corporate Identification Number L31402AP1985PLC005305) to undertake an independent assurance of the Company's sustainability/non-financial performance disclosures in its Sustainability Report FY 2022-23 ('the Report'). The disclosures are prepared based on the reporting requirements of the Global Reporting Initiative's ('GRI's') Sustainability Reporting Standards 2021 ('GRI Standards') and the report is in reference to GRI Standards 2021. The intended user of this Assurance Statement is the management of the Company. Our assurance engagement was planned and carried out in April 2023 - October 2023.

We planned and performed our work using DNV's assurance methodology VeriSustain™[1] for providing a limited level of assurance. The agreed scope of work included assurance on information of non- financial performance which were disclosed in the Report prepared by ARE&ML based on GRI Topic-specific Standards for the identified material topics for the activities undertaken by the Company during the reporting period 1st April 2022 to 31st March 2023. The reported topic boundaries of non-financial performance are based on the risks and opportunities analysis conducted and stakeholder's inputs on company's material ESG issues as brought out in the sections *'Stakeholder Engagement & Materiality'* and *'Sustainability Strategy'* section of the report.

Responsibilities of the Management of ARE&ML and of the Assurance Provider

The Management of ARE&ML has the sole responsibility for the preparation of the Report and are responsible for all information disclosed in the Report as well as the processes for collecting, analyzing and reporting the information presented in the Report. ARE&ML is also responsible for ensuring the maintenance and integrity of its website and any referenced disclosures on sustainability performance. In performing this assurance work, DNV's responsibility is to the Management of the Company; however, this statement represents our independent opinion and is intended to inform the outcome of the assurance to the stakeholders of the Company.

DNV's assurance engagements are based on the assumption that the information provided by the Company to us as part of our review have been provided in good faith and free from misstatement. We were not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. We expressly disclaim any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

The reporting scope and boundary encompasses environmental, social and governance performance of ARE&ML's operations in India (battery manufacturing units & a head office located at Karakambadi, Amara Raja Growth Corridor (ARGC), located in Chittoor district, Andhra Pradesh and Corporate office located in Hyderabad) as brought out in the section 'About the Report' of the Report for the non-financial activities undertaken by the Company during the reporting period.

We did not come across limitations to the scope of the agreed assurance engagement during our assurance process. We understand that the reported data on economic performance and other financial data are based on and data from ARE&ML's audited financial statements presented in its Annual Report 2022-23, which is subjected to a separate independent statutory audit process and is not included in our scope of work. We were not involved in the review of financial information within the Report. The review of financial and production-related data was not within the scope of our assurance engagement.

Basis of our opinion

A multi-disciplinary team of sustainability and assurance specialists performed limited level of assurance work of ARE&ML using DNV's assessment guidance. We adopted a risk-based approach, that is, we concentrated our assurance efforts on the issues of high material relevance to the Company's business and its key stakeholders. We carried out the following activities:

- Conducted on-site assessment & interaction with key internal stakeholders at Company's manufacturing unit located at Karakambadi and management interaction on data management system at Corporate Office, Hyderabad to review the processes and systems for aggregating site-level and overall aggregation and consolidation of sustainability information from sites by the sustainability team. Corporate office is shared with Amara Raja Group and sustainability performance of corporate office is not included in the reporting.

[1] *The VeriSustain™ protocol is available on request from www.dnv.com .The protocol is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) Revised (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and the Global Reporting Initiative's (GRI's) Principles for Defining Report Content and Quality.*

- Interviewed selected senior managers responsible for management of sustainability issues, implementation of sustainability strategy and review of selected evidence to support topics disclosed in the Report. We were free to choose interviewees and interviewed those with overall responsibility to deliver the Company's sustainability objectives.
- Reviewed the non-financial performance disclosure of identified material topics reported by ARE&ML based on chosen GRI topic-specific Standards; that is, carried out an assessment of the processes for gathering and consolidating performance related to identified material issues.
- Performed sample-based checks of the processes for generating, gathering, and managing the quantitative and qualitative information included in the Report based on the selected GRI Topic Disclosures.
- Verification of the consolidated reported performance disclosures in context to the Principle of Completeness as per VeriSustain™ for a limited level of verification.

Opinion and Observations

Based on the assurance work undertaken, nothing has come to our attention that causes us to believe that the Report does not properly describe ARE&ML's adherence to the GRI Standards 2021, including the assurance of the following material non-financial performance/key performance indicators (KPIs) disclosed in the Report.

- GRI 201: Economic Performance 2016 – 201-1.
- GRI 204: Procurement Practices 2016 – 204-1.
- GRI 302: Energy 2016 – 302-1, 302-3, 302-4.
- GRI 303: Water and Effluents 2018– 303-1, 303-2, 303-3, 303-4, 303-5.
- GRI 304: Biodiversity 2016- 304-1, 304-2.
- GRI 305: Emissions 2016 – 305-1, 305-2, 305-3 (Partial disclosure: 8 categories*), 305-4, 305-5.
- GRI 306: Waste 2020 – 306-1, 306-2, 306-3, 306-4, 306-5.
- GRI 308: Supplier Environmental Assessment 2016- 308-1, 308-2.
- GRI 401: Employment 2016 – 401-1, 401-2, 401-3.
- GRI 402: Labor/Management Relations 2016- 402-1.
- GRI 403: Occupational Health & Safety 2018 – 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10.
- GRI 404: Training and Education 2016 – 404-1, 404-2.
- GRI 407: Freedom of Association and Collective Bargaining 2016 – 407-1.
- GRI 408: Child Labor 2016 - 408-1.
- GRI 409: Forced or Compulsory Labor 2016 – 409-1.
- GRI 413: Local Communities 2016 – 413-1.
- GRI 414: Supplier Social Assessment 2016 – 414-1, 414-2.
- GRI 416: Customer Health and Safety 2016 – 416-2.
- GRI 417: Marketing and Labeling 2016 – 417-1, 417-2, 417-3.
- GRI 418: Customer Privacy 2016 – 418-1.

*ARE&ML has disclosed 8 Categories viz., 1, 4, 5, 6, 7, 9, 12, 13 out of 15 categories (as listed in the GHG protocol).

Without affecting our assurance opinion, we provided the following observations against the principles of VeriSustain™.

Materiality

The process of determining the issues that is most relevant to an organization and its stakeholders.

The Report brings out the materiality assessment process carried out by the Company which has considered concerns of key stakeholders, and inputs from peers and the industry, as well as issues of relevance in terms of impact for Company's business... The list of topics has been prioritized, reviewed and validated, and the Company has indicated that there is no significant change in material topics from the previous reporting period based on the internal materiality review process.

Nothing has come to our attention to suggest that the Report does not meet the requirements related to the principle of Materiality.

Stakeholder Inclusiveness

The participation of stakeholders in developing and achieving an accountable and strategic response to Sustainability.

ARE&ML identifies stakeholders that Company can control and influence viz., investors and shareholders, employees, customers, local communities and suppliers as key stakeholder groups. The key issues relevant to these stakeholder groups and the engagement platforms used to identify and respond to these issues are brought out within the Report.

Nothing has come to our attention to suggest that the Report does not meet the requirements related to the principle of Stakeholder Inclusiveness.

Responsiveness
The extent to which an organization responds to stakeholder issues.
The Report adequately brings out the Company's policies, strategies, management systems, goals & targets and governance mechanisms in place to respond to topics identified as material and significant concerns of key stakeholder groups. Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Responsiveness. However, going forward ARE&ML may, based on its strategic priorities, identify and articulate its medium and long-term sustainability targets and report its performance against these targets.
Nothing has come to our attention to believe that the Report does not meet the requirements related to the principle of Responsiveness.

Reliability
The accuracy and comparability of information presented in the Report, as well as the quality of underlying data management systems.
The Report brings out the processes established by ARE&ML towards capturing and reporting its performance related to identified material matters/topics considering the principles of Reliability and Accuracy. The majority of data and information verified through our assessments with the Company's management teams and data owners at the sampled operational sites were found to be fairly accurate and reliable. Some of the data inaccuracies identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors. These inaccuracies have been communicated for correction and the related disclosures were reviewed post correction.
Nothing has come to our attention to believe that the Report does not meet the principle of Reliability.

Completeness
How much of all the information that has been identified as material to the organisation and its stakeholders is reported?
The Report brings out the descriptions of the value creation, management approach and strategy along with selected performance highlights linked to its identified material topics, reflecting the sustainability performance of the Company over its chosen reporting boundary spanning operational sites in India for the reporting period FY 2022-23.
Nothing has come to our attention to suggest that the Report does not meet the principle of Completeness with respect to scope, boundary and time.

Neutrality
The extent to which a Report provides a balanced account of an organization's performance, delivered in a neutral tone.
The Report brings out ARE&ML's performance during the reporting period in a neutral manner in terms of content and presentation, along with descriptions of key risks, operational context, focus areas, and challenges faced during the reporting period.
Nothing has come to our attention to suggest that the Report does not meet the requirements related to the principle of Neutrality.

Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the DNV Code of Conduct[2] during the assurance engagement and maintain independence where required by relevant ethical requirements including the ISAE 3000 (Revised) Code of Ethics as set out in VeriSustain™. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement and related reports for internal use of ARE&ML. DNV maintains complete impartiality toward stakeholders interviewed during the assurance process. We did not provide any services to ARE&ML in the scope of assurance for the reporting period that could compromise the independence or impartiality of our work.

[2] *DNV Corporate Governance & Code of Conduct - https://www.dnv.com/about/in-brief/corporate-governance.html*

Purpose and Restriction on Distribution and Use

This assurance statement, including our conclusion has been prepared solely for the Company in accordance with the agreement between us. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company for our work or this report.

For DNV Business Assurance India Private Limited

Kakaraparthi, Venkata Raman Digitally signed by Kakaraparthi, Venkata Raman Date: 2023.10.10 19:05:17 +05'30'	Sharma, Anjana Digitally signed by Sharma, Anjana Date: 2023.10.11 10:20:07 +05'30'	Karthik Ramaswamy Digitally signed by Karthik Ramaswamy Date: 2023.10.11 10:32:20 +05'30'
Kakaraparthi Venkata Raman Lead Verifier, Sustainability Services, DNV Business Assurance India Private Limited, India.	Anjana Sharma Head – Regional Sustainability Operations, Sustainability Services, DNV Business Assurance India Private Limited, India.	Karthik Ramaswamy Assurance Reviewer, Sustainability Services, DNV Business Assurance India Private Limited, India.
Ankita Parab (Verifier)		

10th October 2023, Mumbai, India.

Independent Assurance Statement

Introduction

DNV represented by DNV Business Assurance India Private Limited ('DNV') has been commissioned by the management of Amara Raja Batteries Limited (ARBL) – (CIN:L31402AP1985PLC005305) to carry out an independent verification of its Greenhouse Gas inventory assertions ('the GHG Inventory') i.e. Scope 1, Scope 2 and selected categories of Scope 3 emissions data as defined by the ISO 14064: Part 1 standard and covering the Company's emissions over the period 1st April 2022 to 31st March 2023 which forms part of the Company's response to the Carbon Disclosure Project (CDP), disclosure for BRSR report of FY 2022-23 and its Sustainability report for FY 2022-23.

The verification provides a limited level of engagement as per DNV GL VeriSustainTM1 protocol, which is based on our professional experience and international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) Revised* and the Global Reporting Principle's (GRI's) Principles for reporting sustainability performance. This verification applies a ±5% uncertainty threshold towards errors and omissions.'

ARBL is responsible for the collection, analysis, aggregation and presentation of GHG data and related information presented to us as it's GHG Inventory, including the conversion factors. Our responsibility of performing this work is to the management of ARBL only and in accordance with terms of reference agreed with the Company. The verification engagement is based on the assumption that the data provided to us is complete, sufficient, true and free from material misstatements. DNV disclaims any liability or co-responsibility for any decision a person or entity would make based on this verification statement. The verification was carried out during April – July 2023 by a team of qualified sustainability and GHG assessors.

Scope, Boundary and Limitations of Verification

The scope of work agreed upon with ARBL includes verification of its GHG emissions (Scope 1, Scope 2 and selected categories of Scope 3) as listed below:

- Scope 1 emissions arising from
  - consumption of diesel (in DG sets, boilers and internal transportation),
  - LPG consumption (in furnaces and ETP-ZLD process) and
  - Usage (topping up) of different refrigerant gases:
- Scope 2 emissions arising from
  - Use of purchased electricity from grid.
- Scope 3 emissions from categories (GHG Protocol) of
  - Category 1 - Purchased Goods & Services (Primary & Secondary Lead, Sulphuric acid & Polypropylene)
  - Category 4 - Upstream transport & Distribution of raw materials (Raw Material transportation by Road & Sea)
  - Category 5 - Waste generated in operations (Plastic waste, E-waste, Hazardous wastes, non-hazardous wastes, waste recycled, landfilled and incinerated)
  - Category 6 - Business travel (employee commute, business travel by road and air and product transportation).
  - Category 7 - Employee commuting
  - Category 9 - Downstream transport & distribution
  - Category 12 - End-of-life treatment of sold products
  - Category 13 - Downstream leased assets.

The organizational boundary for the GHG inventory covers the two battery manufacturing units located at a) Karakambadi and b) Amara Raja Growth Corridor (ARGC) both in Chittoor District, Andhra Pradesh, India and c) Head Office located in Hyderabad.

We did not come across any limitations to the agreed scope of work.

Verification Methodology

The verification was conducted by DNV in accordance with the requirements set out in VeriSustain, for a limited level of verification. We carried out the following activities:

- Desk review of ARBL emissions provided to us in spreadsheets.

[1] *The VeriSustain protocol is available on request from www.dnvgl.com*
** Assurance Engagements other than Audits or Reviews of Historical Financial Information.*
DNV Business Assurance India Private Limited is part of DNV – Business Assurance, a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance. www.dnv.com
Project Number: PRJN-525134-2023

- Onsite assessment on 12-13 April 2023 for the data monitoring and reporting at the battery manufacturing site at Karakambadi in Chittoor District, Andhra Pradesh.
- Management interaction on data management systems at ARBL Head office including review of emission factors and assumptions.
- Reporting and technical review of the assessment at DNV's office.

The data has been viewed with respect to its principles of the ISO 14064: Part 1 standard, i.e. the data conformance to the principles of Relevance, Completeness, consistency, accuracy and transparency to ensure that the GHG-related information is a true and fair account.

Conclusion

On the basis of our verification methodology and scope of work agreed upon, nothing has come to our attention to believe that the GHG data as below is not correct and is not a fair representation of Amara Raja Batteries Limited's GHG emissions – inventory for FY 2022-23:

Scope	Source	GHG Emissions* (Tonnes of CO_2e)
Scope 1	Emissions arising from the consumption of fuels like diesel, and use of refrigerant gases	6,159
Scope 2	Emissions from consumption of grid electricity	2,42,867
Scope 3	Under Categories (GHG Protocol) of 1, 4, 5, 6, 7, 9, 12, 13	4,00,948
Total		6,49,974

*Above emission figures are calculated by ARBL using the following emission factors of 74100 kg CO_2/TJ and Net calorific value a) Diesel (emission factor at 2.697 Te CO2e/Lit), b) LPG (2.94 Te CO2e/Kg) c) Acetylene (3.92 TCO2e/M3) d) Grid emission factor for electricity at 0.71 kg CO_2e/KWh for India (weighted average including renewable energy sources, e) GWP of refrigerants of R134a - 1300 kg CO_2/Kg, R22 - 1760 kg CO_2/Kg, R407C – 1774 kg CO_2/Kg, R404A- 3922 kg CO_2/Kg, R32- 677 kg CO_2/Kg, R410A- 2088 kg CO_2/Kg, with all figures sourced from verified sources. The emission factors for the scope 3 are provided in the GHG calculation worksheet.

Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements

.

We have complied with the DNV Code of Conduct[2] during the assurance engagement and maintain independence as required by relevant ethical requirements relevant ethical requirements including the ISAE 3000 (Revised) Code of Ethics. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement and Management Report. DNV maintains complete impartiality toward stakeholders interviewed during the assurance process.

For DNV

Kakaraparthi, Venkata Raman Digitally signed by Kakaraparthi, Venkata Raman Date: 2023.07.05 14:35:50 +05'30'	Chaudhari, Tushar Digitally signed by Chaudhari, Tushar Date: 2023.07.05 15:54:07 +05'30'
Kakaraparthi Venkata Raman Lead Verifier DNV Business Assurance India Private Limited, India.	Tushar Chaudhari Assurance Reviewer DNV Business Assurance India Private Limited, India

India, 5th July 2023.

[2] *The DNV Code of Conduct is available on request from www.dnv.com (https://www.dnv.com/about/in-brief/corporate-governance.html)*
DNV Business Assurance India Private Limited is part of DNV – Business Assurance, a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance. www.dnv.com
Project Number: PRJN-525134-2023

GRI Index

GRI Disclosure Number	Disclosure Title	Location
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GRI 2-4	Restatements of information	Not Applicable
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GRI 2-6	Activities, value chain and other business relationships	SR - 28-30
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SR : Sustainability Report;
AR : Annual Report & BRSR

GRI Disclosure Number	Disclosure Title	Location
Stakeholder Engagement		
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GRI Disclosure Number	Disclosure Title	Location
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GRI 414-2	Negative social impacts in the supply chain and actions taken	SR - 66
GRI 416: Customer Health and Safety		
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AMARA RAJA
Gotta be a better way

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