



CII - National Award for Environment Best Practices 2024

 AB InBev

Anheuser Busch InBev India Limited, Unit – HBL Sonipat - Haryana

PROJECT 1 – Driving ZERO Waste through 4 R Framework

PROJECT 2 – Installation of Up Flow Anaerobic Sludge Blanket Reactor and Biogas Dome system to increase Biogas Production

PRESENTERS:-

Sunidhi Gupta – EHS

Chandra Prakash – EHS

Deepak Patel – Technical Services



 Budweiser

ABINBEV OVERVIEW

Bud APAC at a Glance



35+
Countries/territories



47
Breweries



50+
Brands



51
Distribution centers



41,450
hours of volunteering



29
Hope Schools in 14 provinces supported financially



Distributed over **2.5** million cans of emergency drinking water to communities in need since 2015



740,000 kg of limes sold through the "Corona Extra Lime" Project by the end of 2023

Pan - Asian Brewing Champion

Stock Code

1876

The year Budweiser was first brewed

We operate as Budweiser Brewing Company APAC Limited (the "Bud APAC"), a key subsidiary of Anheuser-Busch InBev SA/NV (the "ABI"), and are publicly listed on the Hong Kong stock exchange. Our portfolio of popular brands, combined with our skilled workforce, operational excellence, large-scale production, cutting-edge facilities and robust distribution channels, strategically positions us for sustained growth and competitiveness in the long run.



ABINBEV INDIA BREWERIES



HARYANA BREWERIES LIMITED, SONIPAT HARYANA



PALS AURANGABAD, MAHARASHTRA



FOSTERS AURANGABAD, MAHARASHTRA



SPR, MYSORE KARNATAKA



CDBL, MEERUT UP



CBL, HYDERABAD



CROWN, HYDERABAD



CELEBRITY, WEST BENGAL

1

Project - Driving ZERO Waste by Eliminating Waste & Maximizing Co Product through 4 R Framework in the Organization

TRIGGER – ABINBEV SG, VAVE Day & 100% Mindset

Our 10 Principles

Our 10 Principles shape how we make decisions and guide how we do business. They are at the core of our culture and align closely to our company purpose and strategy:

Dream big

Lead by example and take accountability

Attract and develop great people

Build brands consumers love

Grow with customers and communities

Prioritize simple and scalable solutions

Manage costs tightly

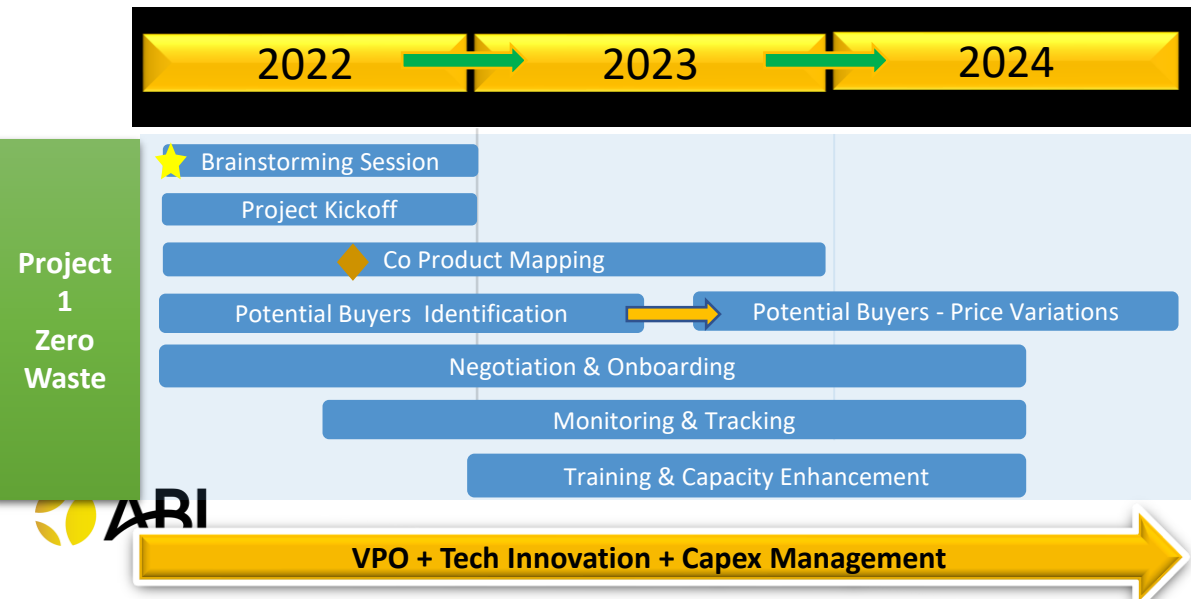
Think long-term

Strive for superior results

Never take shortcuts

Our Purpose - “We Dream Big to Create a Future With More Cheers.” For us, envisioning a future with more cheers means fostering shared prosperity for our communities, the planet, and our people. We are striving for a path that leads to a future that is more sustainable, inclusive, and fulfilling

PROJECT ROADMAP



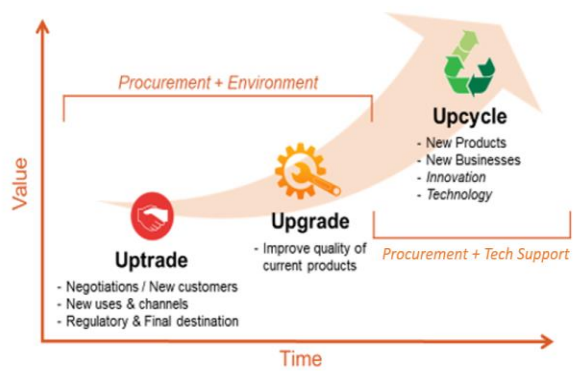
UNIQUENESS OF THE PROJECT

1. Blending Sustainability with Economic Viability - We are creating additional revenue streams by focusing on Co Products over By Products.



2. 100% of Co Products generated have received meticulous attention for recycling opportunities.

3. Upcycling Innovation through DVF Approach



UPTRADE UPGRADE UPCYCLE

DVF (Desirability, Feasibility, Viability)

Driving ZERO Waste by Eliminating Waste & Maximizing Co Product through 4 R Framework in the Organization



METHODOLOGY

Step 1



Area Wise Mapping of 100% Co Products

Step 2



Market Research to Identify Potential Buyers

Step 3



Mapping of Buyers/Recyclers based on audits, price negotiations

Step 4



Onboarding of Vendors with Contracts in place

Step 5



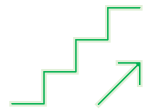
Continuous Tracking of Co Products for Quality

Step 6



Annual Final Destination Audits

Step 7

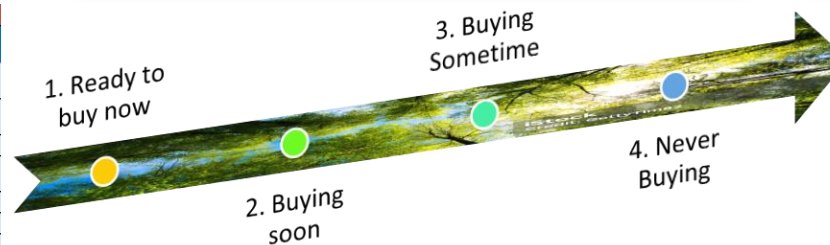


YOY Continual Improvement

ANALYSIS

CO-Product Revenue & Recycling %			
KPI Code	Recyclable	Category in SCFD	Description
PG-R5600	Recyclable	Packaging materials	Disposed quantity of broken glass in kg
PG-R5601	Recyclable	Packaging materials	Disposed quantity of metal can waste in kg
PG-R5602	Recyclable	Fixed Asset	Disposed quantity of crate waste in kg
PG-R5603	Recyclable	Packaging materials	Disposed quantity of plastic waste in kg
PG-R5604	Recyclable	Saved Grains	Disposed quantity of spent grains in kg wet matter
PG-R5605	Recyclable	Saved Yeast	Disposed quantity of spent yeast in kg wet matter
PG-R5606	Recyclable	Others	Disposed quantity of Malting Byproducts
PG-R5607	Recyclable	Others	Disposed quantity of sludge of WWTP in kg wet matter
PG-R5621	Recyclable	Saved Yeast	Disposed quantity of Spent yeast dried in kg wet matter
PG-R5622	Recyclable	Saved Grains	Disposed quantity of Spent Grain dried in kg wet matter
PG-R5624	Recyclable	Packaging materials	Disposed quantity of Carboard waste

IMPLEMENTATION



AGREEMENT FOR SAFELY DISPOSAL OF BIOLOGICAL SLUDGE & HUSK ASH

This Agreement is made and executed at Sonipat on 26.08.2022 and effective from 01st September, 2022 by and between:

- Local Network of Existing Vendors.
- Cross Brewery discussions to identify common vendors based on DVF approach.
- Working on Initiatives from VAVE day Best Practices from APAC ABI BREWERIES.
- Identified Potential leads in collaboration with Procurement team.

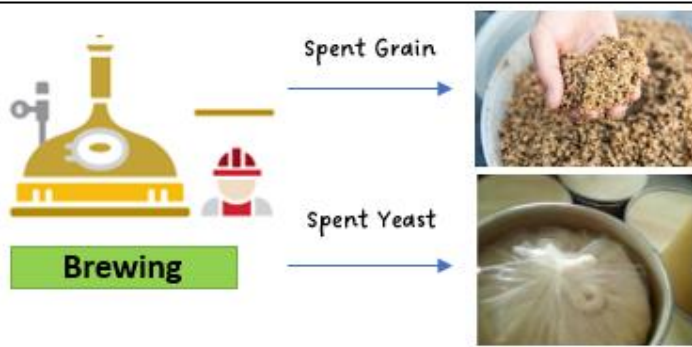
MONITORING



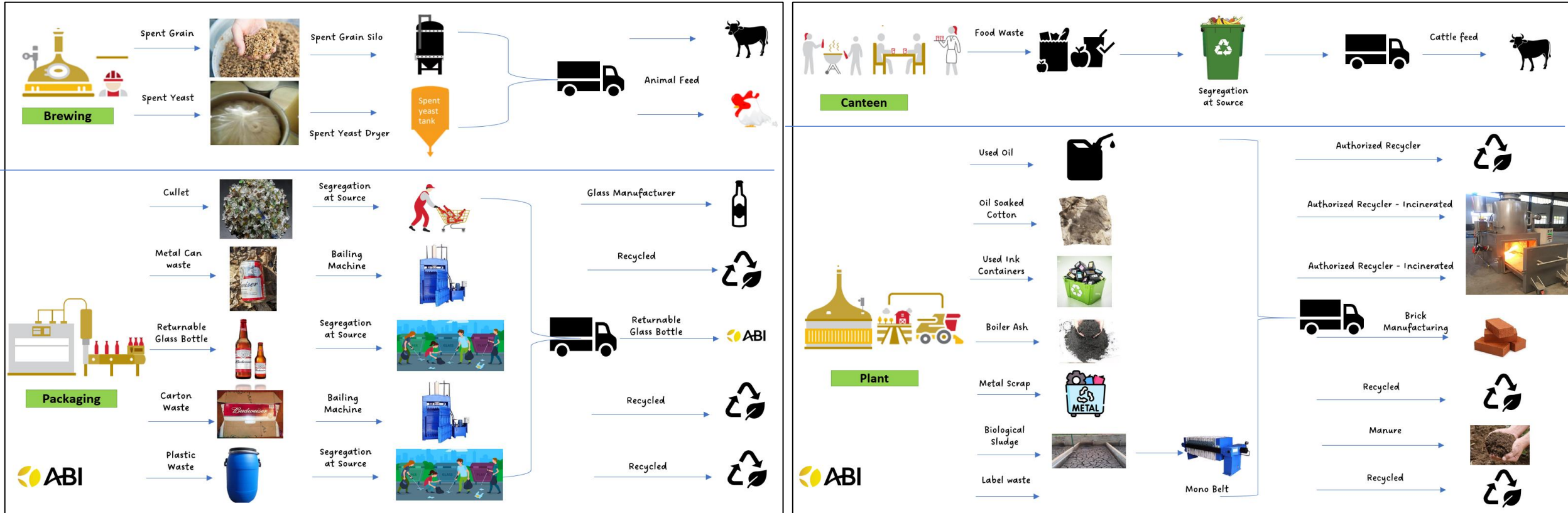
Boiler Ash – Vikas Bhatta (23.11.2023)



- ✓ Destination Audit – SOP & Checklist
- ✓ ORS – One Report System – Monthly Tracking
- ✓ Control Register
- ✓ Power BI
- ✓ VAVE Day - Initiatives
- ✓ BP Sharing – Zone & Global
- ✓ TSC – Annual Variable Payout
- ✓ Environment KPI & PI's



MAPPING OF CO-PRODUCTS



Transformation from Old Glass Bottles to Cadillac Bottles



Total Cadillac Bottles used in 2023	8975052
Non Cadillac Bottle Weight (gm)	407.5
Cadillac Bottle Weight (gm)	393.3
Weight Saving (gm)	14.2
Total Bottle Weight Saving (Ton)	127

- ✓ Light Weight
- ✓ Easier Handling
- ✓ Energy & Fluids Saving

REDUCE

Utilized Technological advancements and redesign to minimize material consumption at source. (Shrink wrap Elimination, Shift to Cadillac bottle)



REUSE

Enhance the reusability of our products to extend its lifespan. (Returnable Glass Bottles reused in packaging)



RECYCLE

Promoted recycled packaging material to support circular economy. Most of the Co products generated at site are recycled back.



REINVENT

Foster collaboration with local vendors to use our Co Products in different verticals (Spent Grain, Spent Yeast, Boiler ash, Biological sludge)



2 TANGIBLE BENEFITS

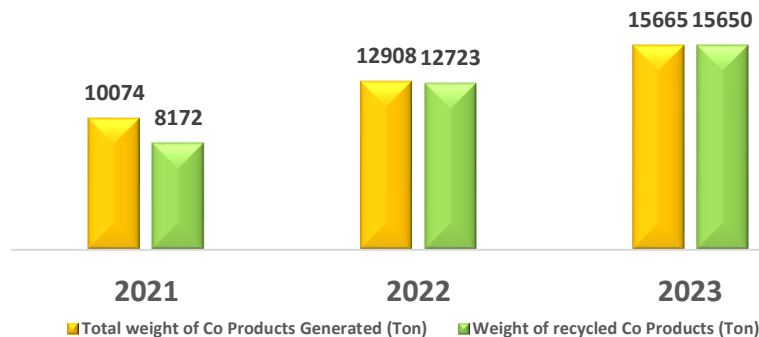
INITIATIVES

VPO+ Tech Innovation + Skill Enhancement)

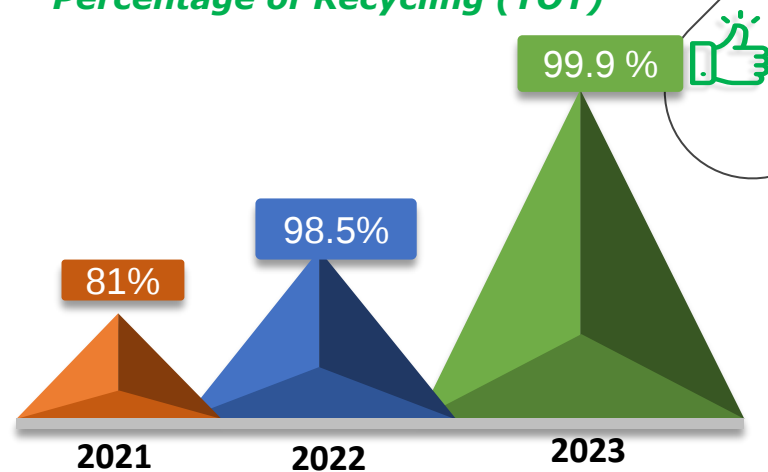
-  Mapping of 100% Co Products irrespective of quantity generated.
-  Identification of Vendors for all the Co Products not considered previously.
-  Technology Driven Methods for Co Product Recycling based on 4R Framework.
-  Continuous running and monitoring of Spent Yeast Plant allowing real-time adjustments, ensuring the process operates smoothly
-  Implementing quality control measures to ensure product consistency on YOY basis.
-  Initiated Final Destination audits to ensure compliance to agreement and regulatory norms.



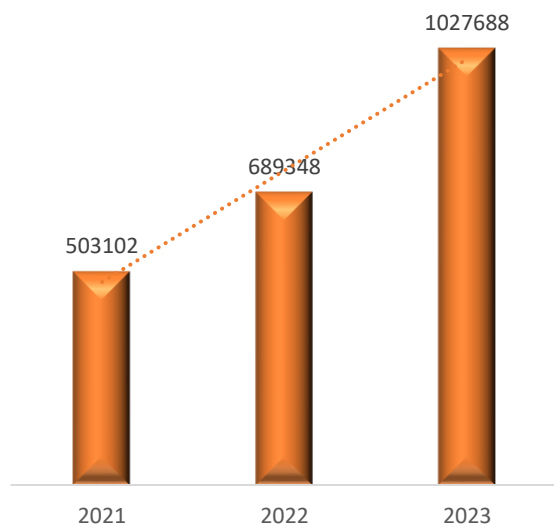
Co-Product Generation & Recycling (TON)



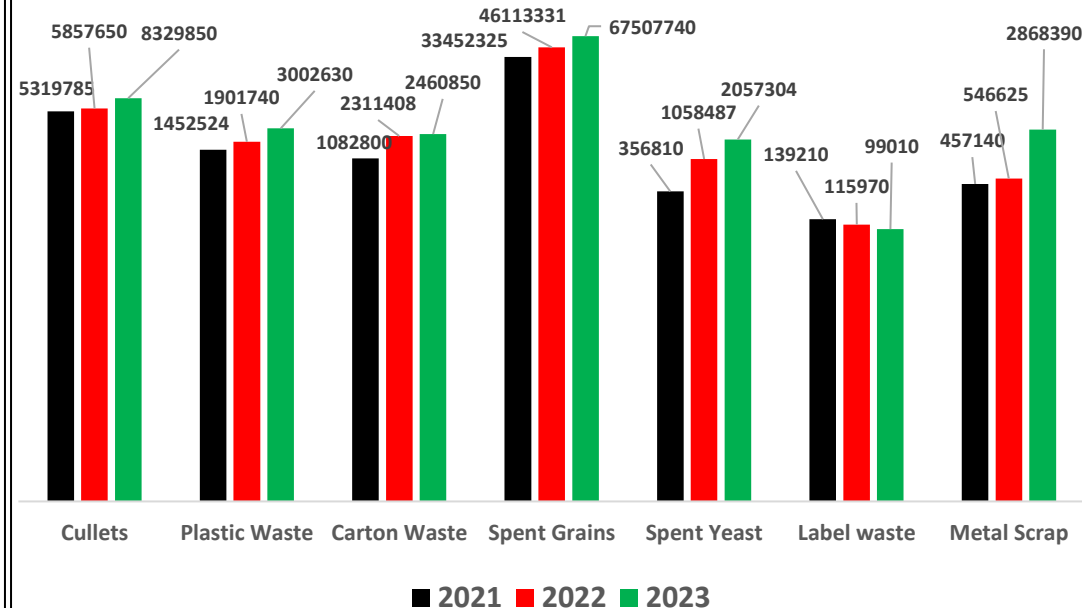
Percentage of Recycling (YOY)



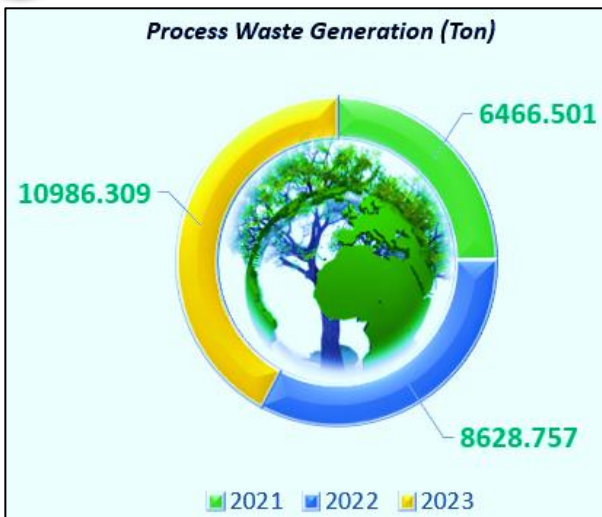
Total Revenue (USD) YOY



Co Product - Sold



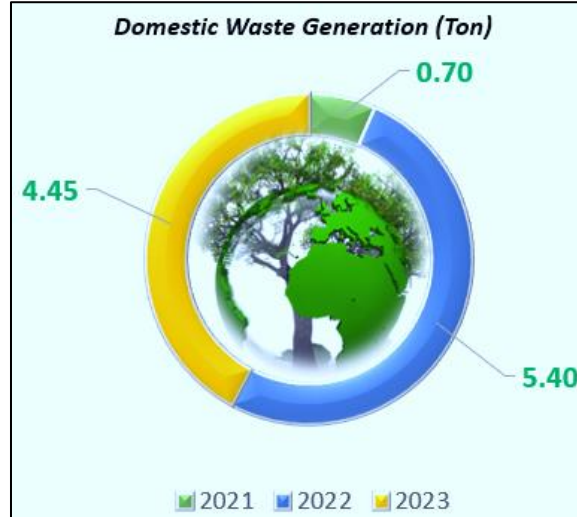
2 TANGIBLE BENEFITS



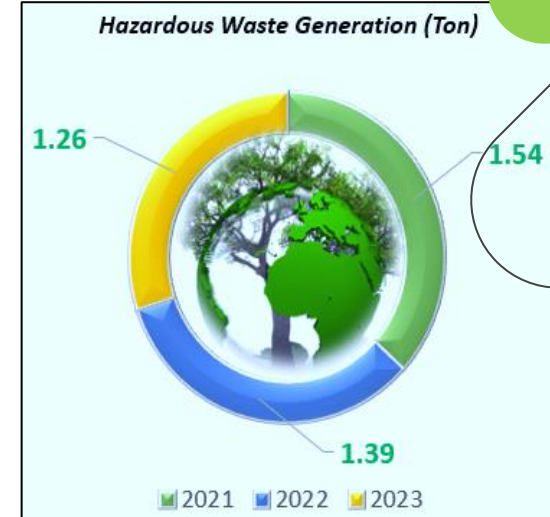
Brew House – Milling, Fermentation



Packaging – Bottle + Canline



Admin + Plant

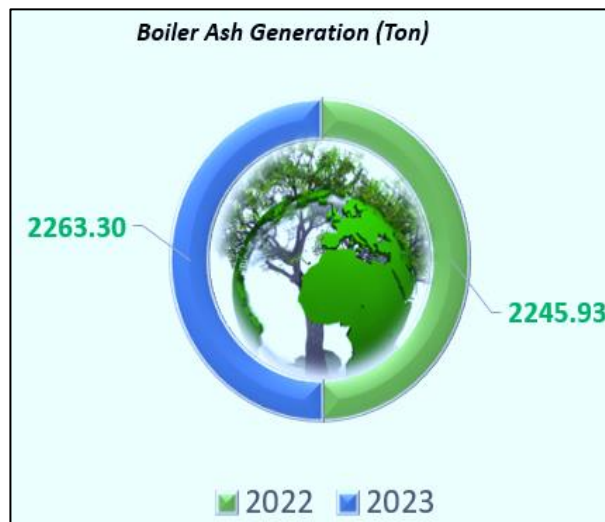


Process + Packaging + Utilities

YOY Tracking
of Co Product
Generation



Packaging



Utilities – Boiler



Plant

↑
• GENERATION
• RECYCLE
• REVENUE





Sustainability Gains

- ✓ Achieved Zero Harm to environment by **waste reduction** at source.
- ✓ Reduced **Carbon Emissions** by maximizing Recycling percentage
- ✓ One step closer to achieving **Sustainability Goals** by enhancing circularity of our raw materials and co products.

Skill Enhancement

- ✓ Developed expertise in waste reduction strategies, resource management, innovative **recycling techniques**.
- ✓ Acquired skills in data analysis, **stakeholder management**.

Community Gains

- ✓ Socially Responsible benefitting society at large to **promote circularity**
- ✓ **Lucrative returns** to Vendors/ Buyers
- ✓ Curbed Environment Degradation leading to societal improvements

Paradigm Shift

- ✓ Shift towards having a 100% Mindset for achieving **maximum recycling** of co products.
- ✓ Shift in attitude towards embracing **sustainable practices** at all levels.
- ✓ Encouraged the team to recognize long-term benefits, both personally and globally.



Sustainability Gains

Paradigm Shift

Skill Enhancement

Community Gains



4

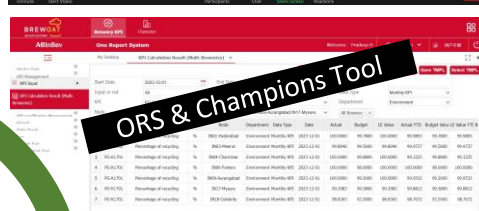
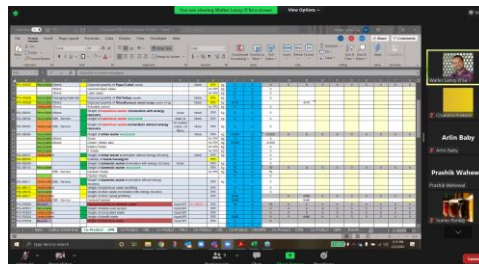
REPLICATION POTENTIAL within Group Companies

Within ABINBEV

For Industries sharing common waste streams, Co-product management project holds immense potential for widespread adoption.

Outside the Company

For industries similar to ours, Co Product management Project can be implemented with full potential as 100% of the Co Products generated from processes are alike



VA Target (M USD)		India		
Type	Package	Price Total (PI/VE Price)	Perf Total (VPO/DPO/VE Perf./Footprint)	Total
VIC	Raw materials	0.5	0.3	0.8
	Packaging materials	0.6	0.5	1.1
	Direct Energy & Fluids	0.1	0.4	0.4
	Direct Wages and Salaries	0.0	0.0	0.0
	Auxiliary materials	0.1	0.1	0.2
	Co-Products	0.0	0.0	0.1
	Maintenance-RCM	0.0	0.0	0.0
	Other VIC (Operational)	0.0	0.0	0.0
	VIC Total	1.3	1.3	2.6
VLC	T1	0.4	0.4	0.8
	T2	0.0	0.1	0.1
	VLC Total	0.4	0.5	0.9
	VILC Total	1.7	1.8	3.5

5

NATIONAL/INTERNATIONAL BENCHMARKS

International Standards

Sustainability Ratings, Key Awards & Certifications

As of 2023, Bud APAC received an MSCI Sustainability Rating of AA¹



A Rating in Water Security and A- Rating in Climate Change



Excellence in Diversity & Women Empowerment



Top Employer Certification

China, South Korea, and India have been certified as Top Employer for the third consecutive year by the Top Employer Institute.



Morningstar Sustainability Risk Rating



Constituent of Sustainability Indices The Dow Jones Sustainability Indices FTSE4Good Developed Index



The Hong Kong Corporate Governance and ESG Excellence Awards

Excellence in Corporate Governance Excellence in ESG under the Hang Seng Index Constituent Companies division



Standard Chartered Corporate Achievement Awards (Leadership)

Sustainable Corporate (Environmental) Digital Transformation Corporate



FMCG Asia Awards BEES platform was awarded Digitalization Initiative of the Year- China



Corona Extra Lime Project won the first Titanium Lion for China across all industries at 2023 Cannes Lions of Creativity

CANNES LIONS

Titanium Lion - Game-changing Creativity Silver Lion - Creative Business Transformation



Signatory of



National Standards

1. Plastic Waste Management Rules, 2022
2. Hazardous Waste Management Rules 2016
3. Battery Waste Management Rules, 2022
4. THE ENVIRONMENT (PROTECTION) ACT, 1986
5. Solid Waste Management Rules, 2016
6. National Green Tribunal Act, 2010

01

Implementation of Co-Product Management in ABI's Indian Breweries.

02

Tech & Innovation - Spent Yeast Plant (4 Breweries)

03

Mapping & Tracking of Co Products generation vs Recycling (HL/HL) on monthly basis through ORS (One Report System), TSC (Target Setting & Cascading), Champions Tool.

04

Technology Enhancement - Installation of Can Bailing Machine

05

Skill Enhancement & Development - Bi- Annually VAVE Initiatives Drive to discuss & identify best practices replications from Zone & Global.



TECHNICAL

Lack of OEM Support - SY Plant
↓
Planning Onsite visits to identify gaps & AMC

Lack of Skilled Manpower
↓
Capacity Building at Shop Floor

Upgradation from Traditional to Digital Reporting
↓
Training & Effective Communication



ADMINISTRATIVE

Sourcing of Local Vendors
↓
Extensive market Research & Networking

Price Finalization
↓
Negotiations

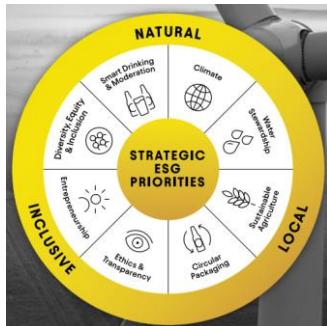
Vendors meeting ABI & Regulatory standards
↓
Statutory (Legal) and Destination Audits



MAINTENANCE

100% Utilization of Double Drum Dryer
↓
OEM Support

Unplanned Maintenance/ Reactive Maintenance
↓
Planned Maintenance - Link all Co Product equipment with COSWIN



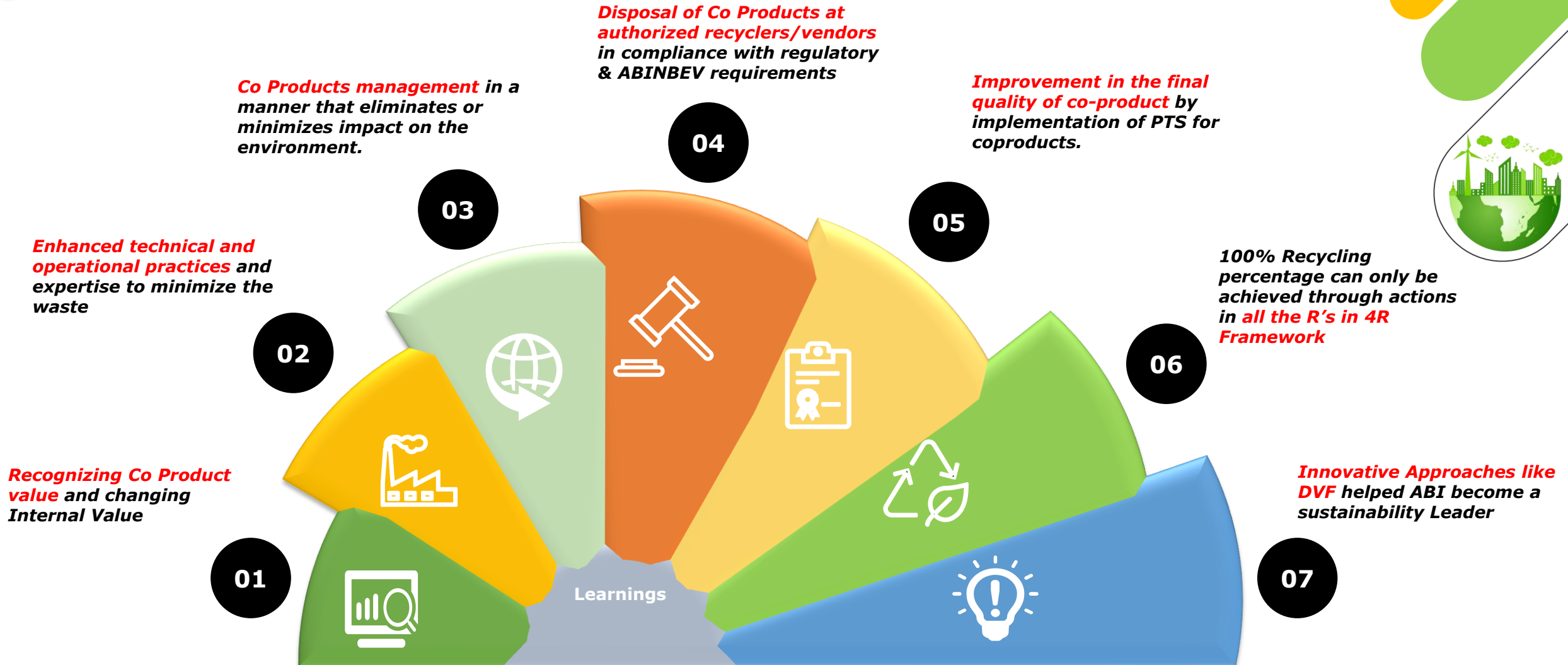
2025

2026

2027

Opportunities:-

1. Installation of Spent Grain Dryer.
2. Efficiency & Capacity Enhancement of Yeast Plant.
3. Potential Buyer at local area for dry spent yeast.
4. Identification of new buyers for boiler ASH to maximize revenue.
5. Opportunity to re-invent products produced from co products. (Glass Fibres, PET Biscuits, Yeast Powder)



I am proud that our team remains focused on what we do best: brewing high-quality beers, actively engaging with consumers, supporting our partners, and making a positive impact on the communities that we serve.

Jan Craps, Chief Executive Officer and Co-Chair of the Board





CII - National Award for Environment Best Practices 2024



Anheuser Busch InBev India Limited, Unit – HBL Sonipat - Haryana

PROJECT 2 – Installation of Up Flow Anaerobic Sludge Blanket Reactor and Biogas Dome system to increase Biogas Production

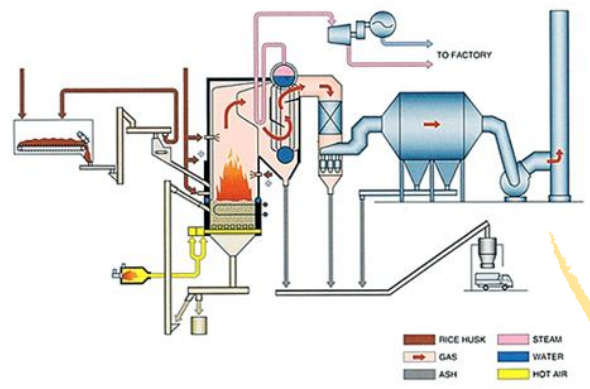


PROJECT – Strategic Modification and Upgradation of Up Flow Anaerobic Sludge Blanket Reactor and Biogas Dome system to unlock enhanced Biogas Production driving lucrative returns while safeguarding the Planet

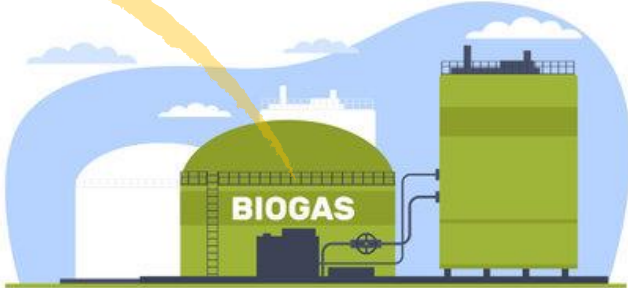
TRIGGER: ABINBEV Sustainability Goal – Climate Action, Statutory Regulations, Net Zero across Value chain by 2040

UNIQUENESS: Holistic approach to sustainability and its dual focus on **Environmental Stewardship and Economic Viability.** Utilization of 100% Renewable energy resources.

Biomass Based Boiler (Rice Husk)



Strategic Integration of Biogas as an additional fuel source.



This integration has been pivotal in advancing our sustainability agenda, augmenting our ongoing endeavors.



PROJECT ROADMAP

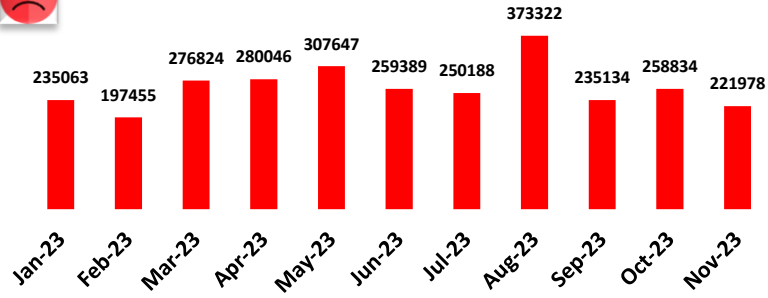
2023				2024
Jan – Feb	Mar – Sept	Sep – Nov	Dec	Jan
★ Vendor Onboarding	Project Execution	◆ UASBR Commissioning	UASBR & Biogas Balloon taken in Line	Monitoring & Tracking



UASBR & Biogas Balloon

TANGIBLE BENEFITS

BIOGAS GENERATION (M3)

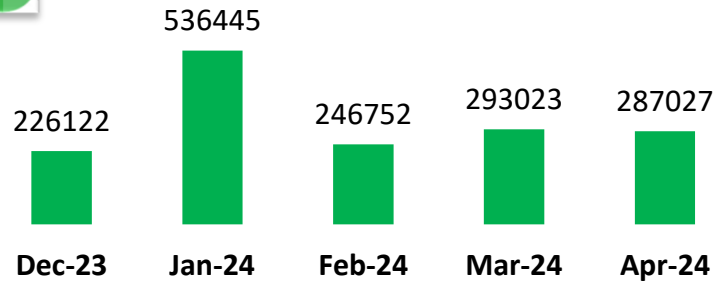


Biogas released to atmosphere via.

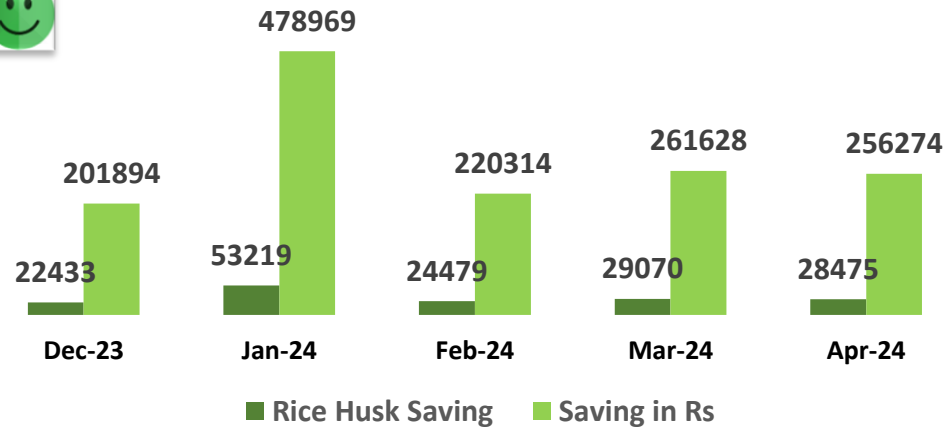
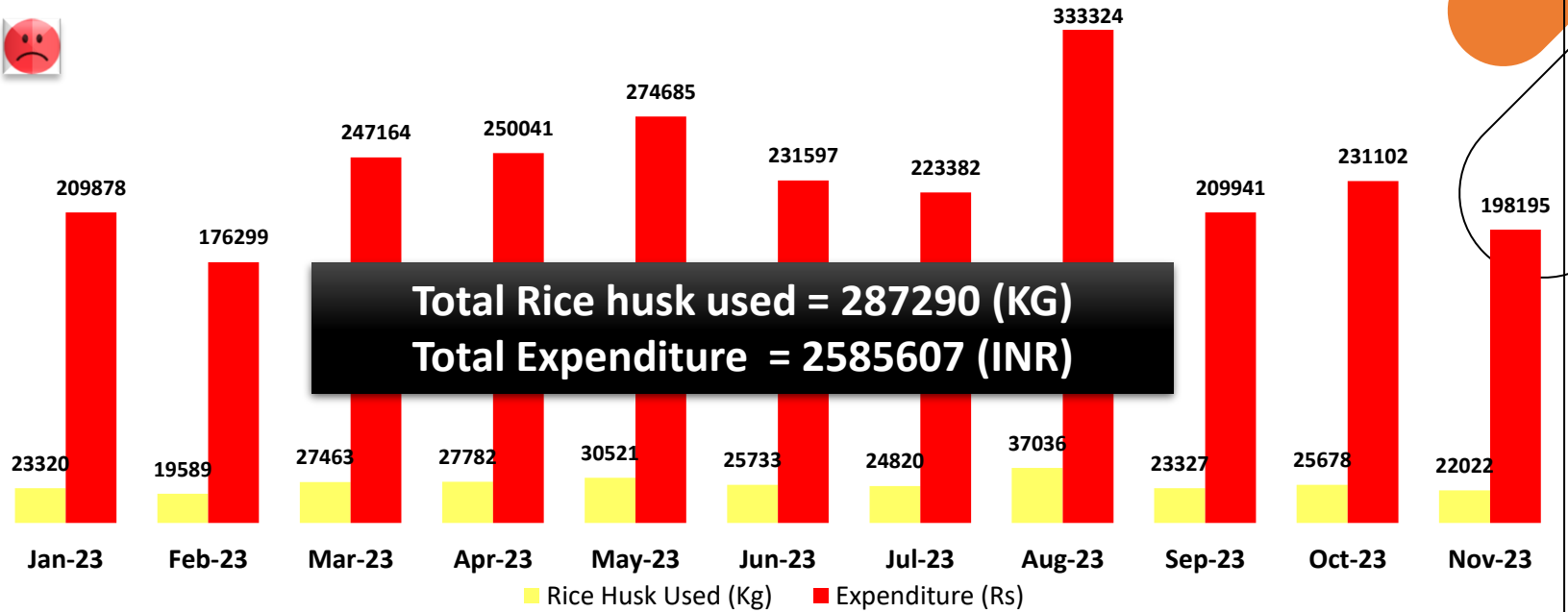
FLARING SYSTEM



BIOGAS GENERATION (M3)



100% Biogas
Utilization in Boiler



Total Rice husk saved = 157675 (KG's)
Total Saving = Rs 1419078 (INR)

SAVINGS -
Rs. 37 Lacs
Approx.
Yearly
(2024)

INTANGIBLE BENEFITS

SUSTAINABILITY ADVANCEMENT

- Incorporated low-carbon energy sources.
- Encouraging energy-efficient and low-emission practices.
- Exploring nature-based solutions to eliminate any remaining GHG emissions.

PARADIGM SHIFT

- Promoting circularity initiatives.
- Encouraged the team to recognize long-term benefits.

SKILL UPGRADATION

- Technical expertise enhanced for the team on sustainability Goals.

EFFICIENCY GAINS

- Increased Capacity of UASBR to generated Biogas.
- Increased longevity of UASBR and Biogas balloon System.



LEARNINGS



- ✓ Green Fuel Utilization in Boiler depicting 100% Mindset to achieve **Net Zero** emissions SG.
- ✓ Legal measures to assure compliance with local & ABINBEV **regulatory** requirements.
- ✓ **Reduced carbon emissions** across our operations by using renewable energy resources.
- ✓ Gained technical expertise to run an upgraded version of **Biogas balloon** system.
- ✓ Understanding the relationship between project implementation and contribution to **UN SDG's**.

REPLICATION POTENTIAL



ABINBEV - HBL Haryana



ABINBEV – CBL, Hyderabad



ABINBEV - PALS, Aurangabad

WITHIN ABINBEV

- ❑ Implemented in all ABI'S Breweries in India.
- ❑ All Breweries have UASBR's operational and functioning well.
- ❑ Biogas from UASBR is used as an additional fuel in Boilers. However, the Primary fuel varies – Briquettes, Rice Husk.

OUTSIDE ABINBEV

- ❑ Captured Biogas can be used for Electricity Generation, Heat Production, and even Conversion into Transport fuels and Renewable Natural Gas.
- ❑ Industries grappling with high incoming Organic Load in wastewater.
- ❑ Industries lacking systems for capturing the biogas produced.
- ❑ Facilities in Delhi NCR, struggling with adopting Greener fuels for Boilers.

WORKING TOWARD
OUR NET ZERO AMBITION

CHALLENGES

TECHNICAL

Machine Compatibility & Design

Sludge Seeding from existing UASBR

Project Management & GTS

Slow feeding to new UASBR basis parameter at outlet



ADMINISTRATIVE

Contractor & Project Management

Lack of Technical Expertise

Continues checks and monitoring on Site

Trainings & Capacity Building at Shopfloor



MAINTENANCE

Isolation of Old UASBR

Drained the UASBR and ceased its utilization



NATIONAL/INTERNATIONAL BECHMARKS

1. **ENVIRONMENT (PROTECTION) ACT, 1986**
2. **NATIONAL ENVIRONMENTAL POLICY GUIDELINES**
3. **NATIONAL GREEN TRIBUNAL ACT, 2010**
4. **The Air (Prevention and Control of Pollution) Act, 1981**

UN Sustainable Development Goals (SDGs)





To a Future with More Cheers

HBL Team - 2023



THANK YOU