

# Hindalco Industries Limited, Renukoot



We manufacture materials that make the world -  
**Greener - Stronger - Smarter**

Team Members :

Vivek Agrawal (Asst. Gen Manager)

Niraj Raj (Manager)



# About the Company :



- A Flagship Company of Aditya Birla Group
- Established in 1962 with “Kaiser Technology”
- A pioneer Non-ferrous Metals Powerhouse– : Industry leader in both segments of Aluminium and Copper
- Renukoot Operations include:
  - Alumina Refinery, Co-generation Unit, Smelter Plant
  - Fabrication (Down Stream Production) & Captive Power Plant (35 km away)
- Commenced its operations with initial capacity of 20,000 TPA metal and 40,000 TPA Alumina.
- Emerged as the largest integrated Aluminium manufacturing company in India.
- Globally 12th largest Aluminium and Alumina producer.
- Has been, strategically, a healthy mix of Organic and Inorganic Growth.
- Capacity Enhancement through modernization of the plants, upgrading the processes and incorporating energy efficient latest technologies.

# Group Purpose, Vision & Mission

## Group Purpose:

"To enrich lives, by building dynamic and responsible businesses and institutions, that inspire trust," provides us with a unique lens to measure our every action and its consequent impact on our stakeholders, community, and the world at large.

## Vision :

To be a Premium Metals Major, Global in size and reach, Excelling in everything we do, and creating value for its stack holders.

## Mission :

To relentlessly pursue the creation of superior shareholder value by exceeding customer expectations profitably, unleashing employee potential and being a responsible corporate citizen adhering to our values.

## A Force for Good :

We commit to being a force for good. Our belief in business as a driver of positive change shapes our vision of a world where prosperity, social welfare, and environmental responsibility coexist.



## **“Values” - We value**

**Integrity** : Honesty in Every Action

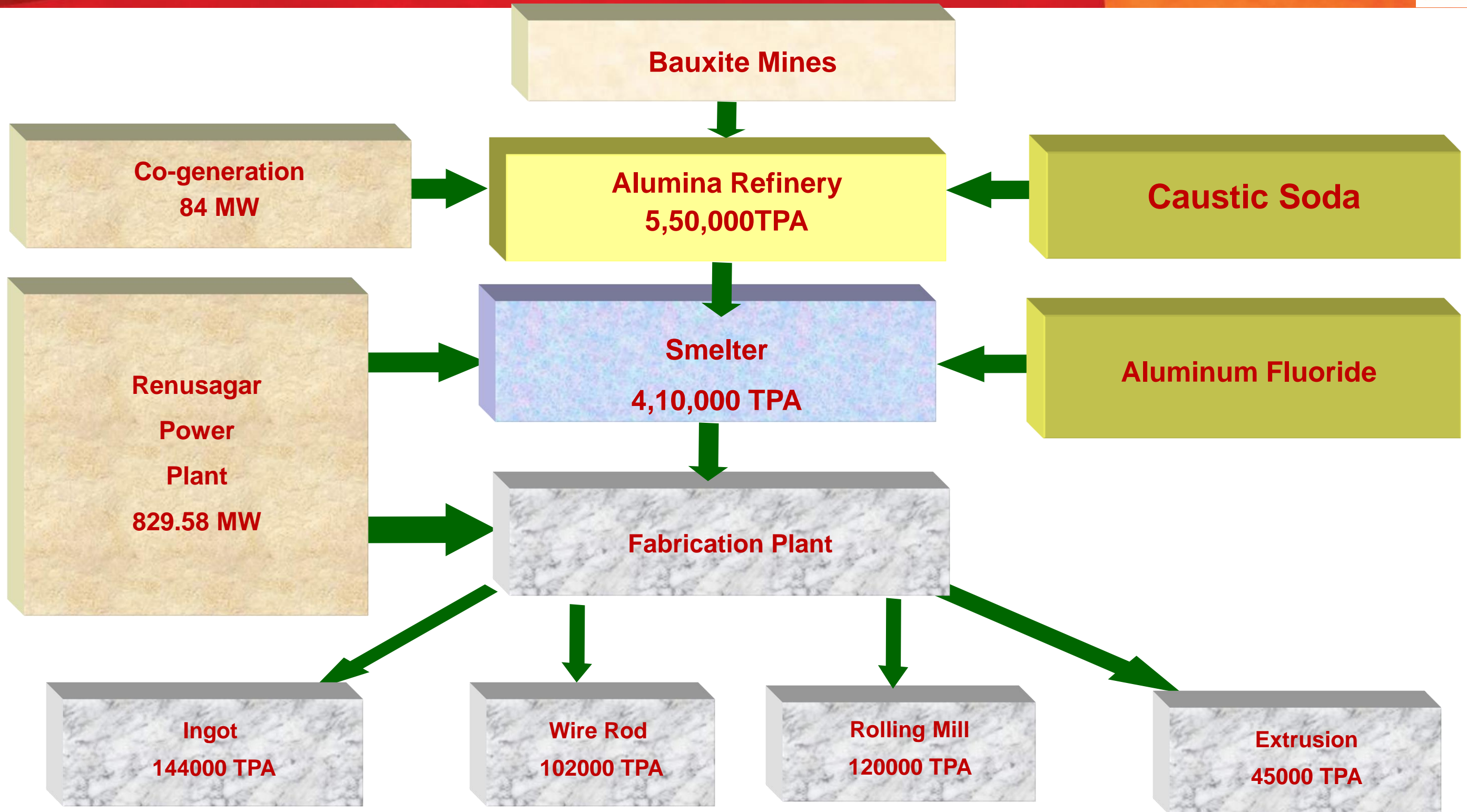
**Commitment** : Deliver On The Promise

**Passion** : Energized action

**Seamlessness** : Boundary less in letter and spirit

**Speed** : One step ahead always

# Capacities Overview & Salient Features of Hindalco Pot Lines





# HIL's Energy Policy Focuses on...

- ❖ Reduction of specific energy consumption in all operations and activities.
- ❖ Adopt energy efficient technologies /equipment for all new projects.
- ❖ Replace old equipment and technologies with latest energy efficient technologies / equipment continually.
- ❖ Ensure control over energy consumption by periodic Management Reviews.
- ❖ Creating awareness amongst employees and Society.

**Honest Adherence to Policy's Themes**



## ENERGY AND CARBON POLICY

We, at Hindalco Industries Limited, operating across the value chain in non-ferrous metals, understand that energy consumption and carbon emission are two most important issues that currently concern the country and the planet. We shall take responsible actions within the company for prudent and efficient use of energy sources to achieve continual improvement in our energy and carbon performance.

To achieve this and in consonance with the organization's purpose, we shall:

- Meet legal compliance and other requirements related to energy and carbon across all our operating units.
- Raise awareness on the responsible use of energy resources at all levels of our operations and encourage efficient utilization of such resources with focus on reducing the energy and carbon intensity of our operations.
- Ensure the availability of information and necessary resources to achieve objectives and targets on Energy & Carbon.
- Allocate sufficient resource such as organizational structure, technology and finance for implementation of the policy and for regular monitoring of performance.
- Support design activities that consider energy & carbon performance improvement.
- Explore and utilize renewable energy, waste heat and clean fuel wherever techno-economically feasible across our operations.
- Adopt economically viable new/efficient clean technologies and best practices for improving energy efficiency and for emitting less carbon.
- Continually improve energy performance and carbon management in our units by adopting nationally/internationally accepted management systems, including setting and reviewing targets and monitoring, measuring and reporting their progress.
- Support the procurement of energy efficient products and services that impact energy & carbon performance.
- Work in partnership with regulatory service authorities, relevant suppliers, contractors and all stakeholders, as applicable, to understand and initiate improvement projects.
- Measure, monitor and report direct and indirect energy usage and carbon emissions in accordance with internationally recognized protocols and set up systems for comparison and benchmarking across our units and operations.

This policy shall be made available to all employees, suppliers, customers, community, other stakeholders, as appropriate and shall be reviewed every 3 years for its suitability and updated as necessary.

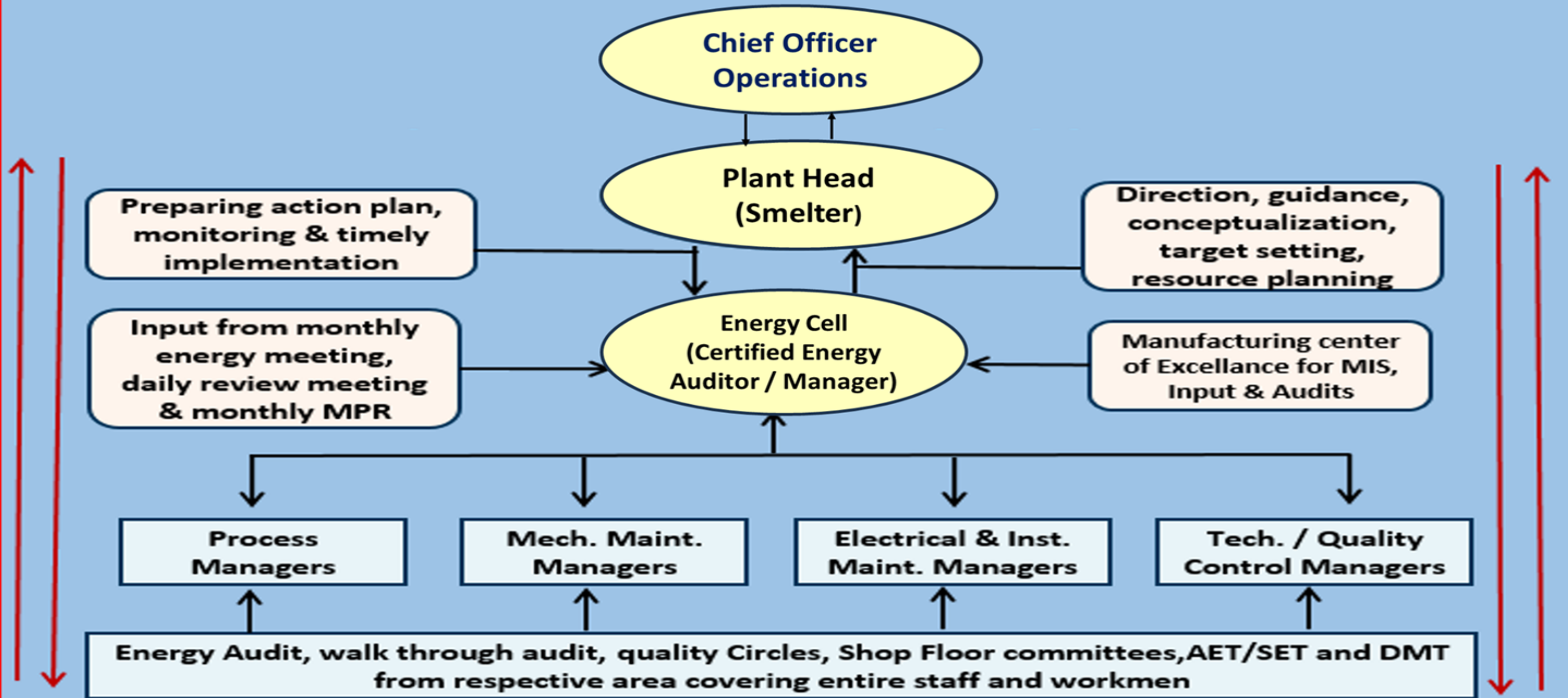
  
SATISH PAI  
MANAGING DIRECTOR

Date : 30 June 2020

HINDALCO INDUSTRIES LIMITED

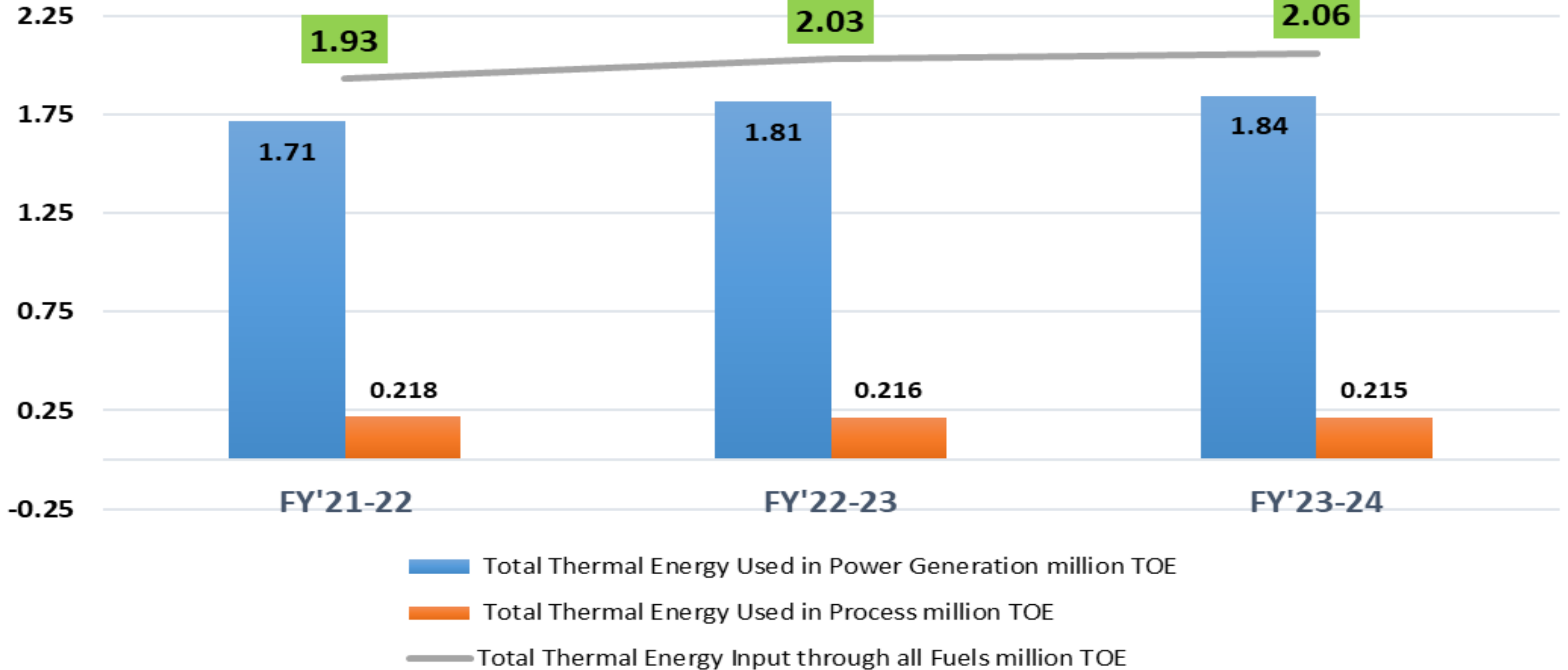
# Our Approach

## Top-Down Bottom-Up Approach

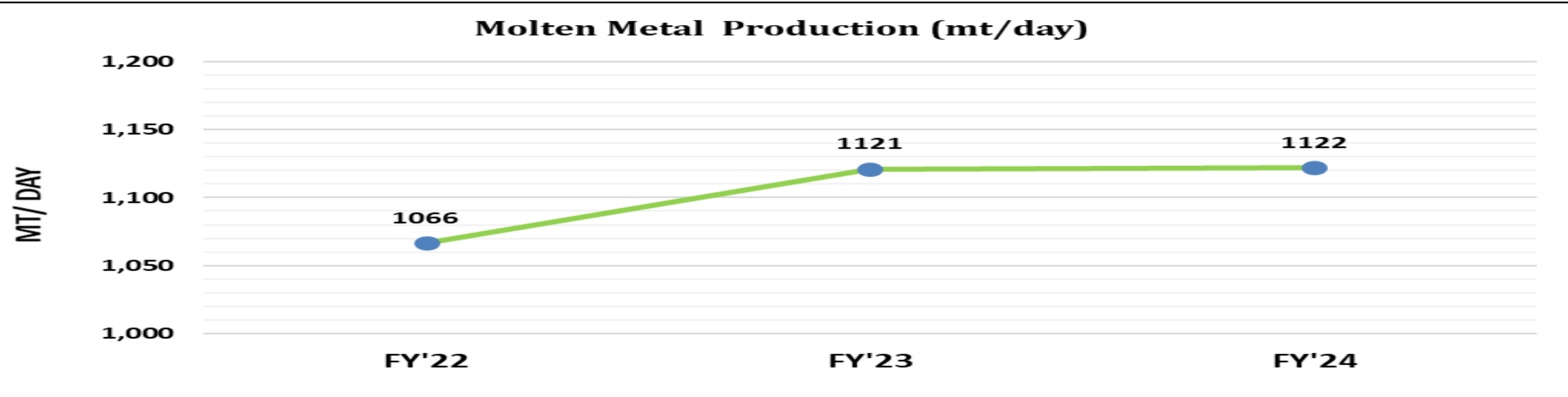
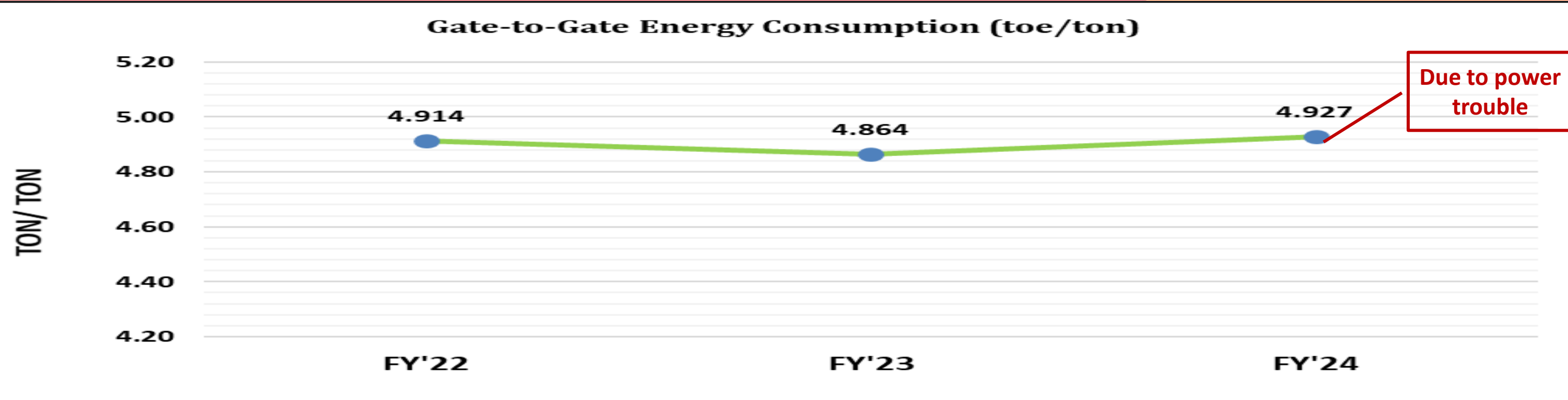


# Total Thermal Energy Consumption( FY'23-24)

**Total Thermal Energy input through all fuels in million TOE**



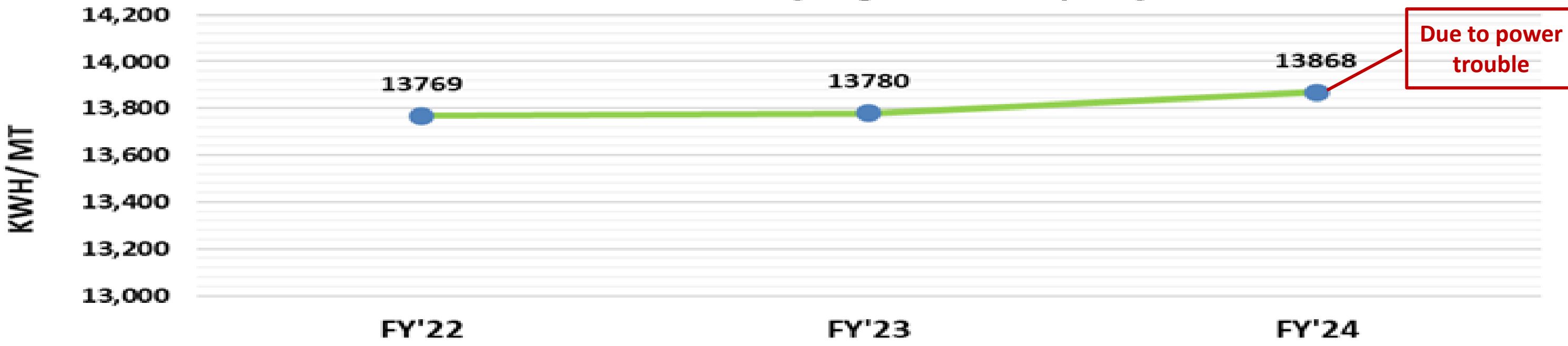
# Trend : Raw Energy Consumption @ GtG basis



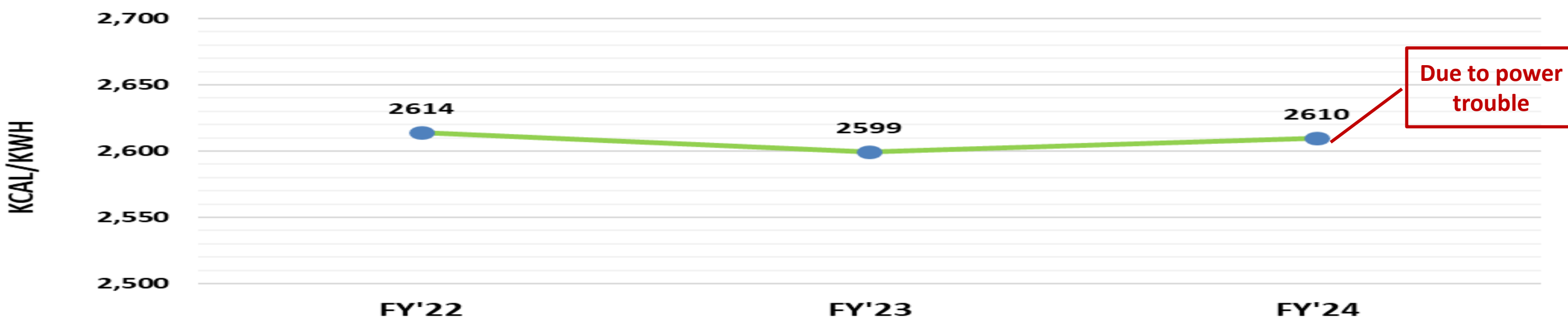


# Trend : Raw Energy Consumption @ GtG basis

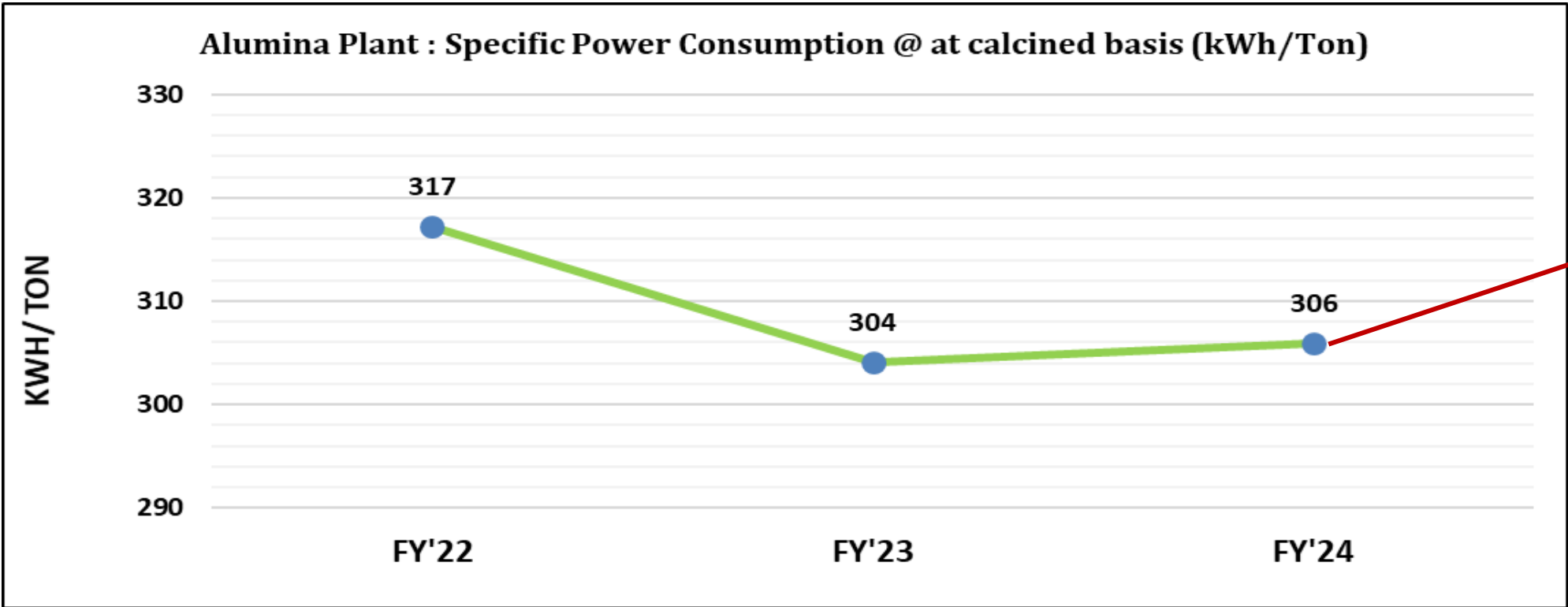
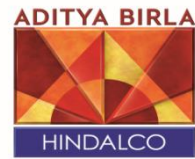
### Reduction Plant : SPC (DC power-kWh/MT)



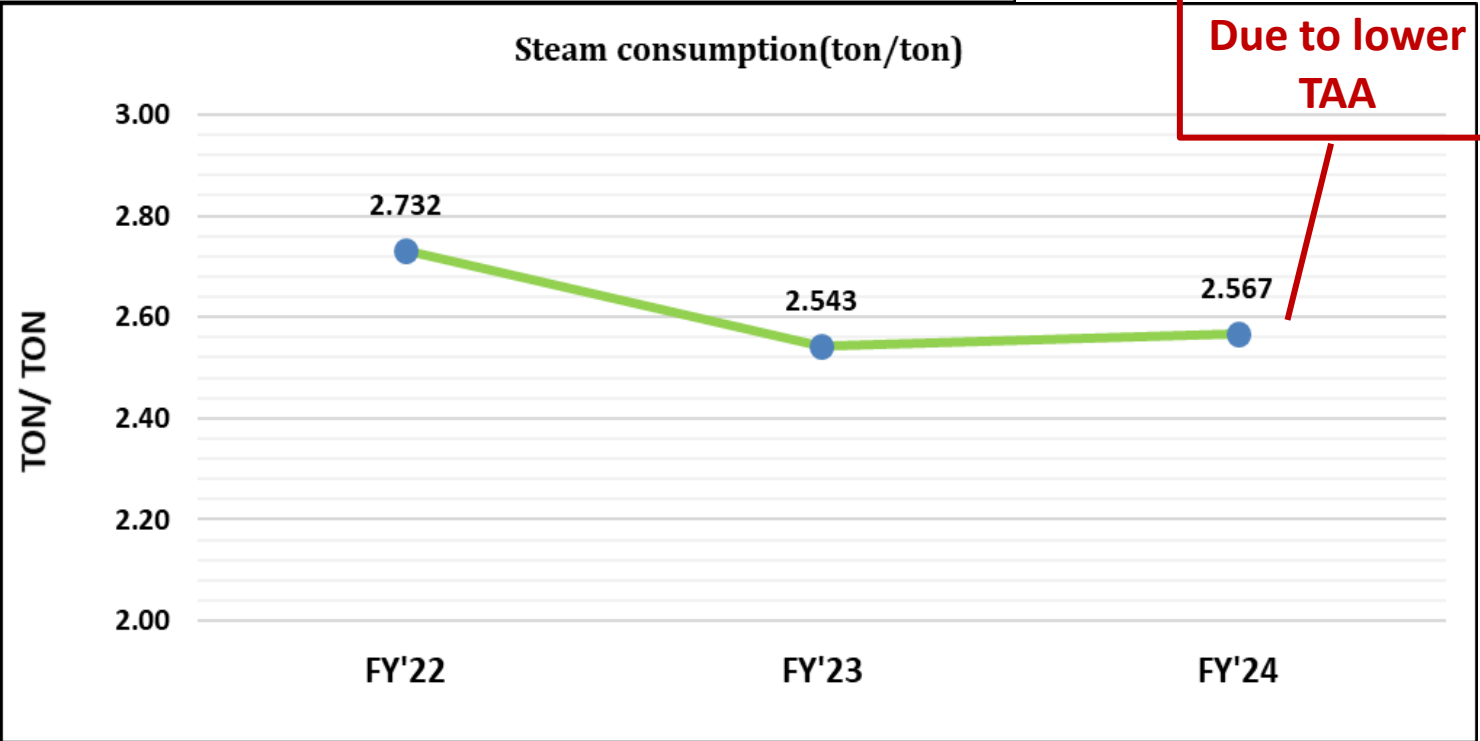
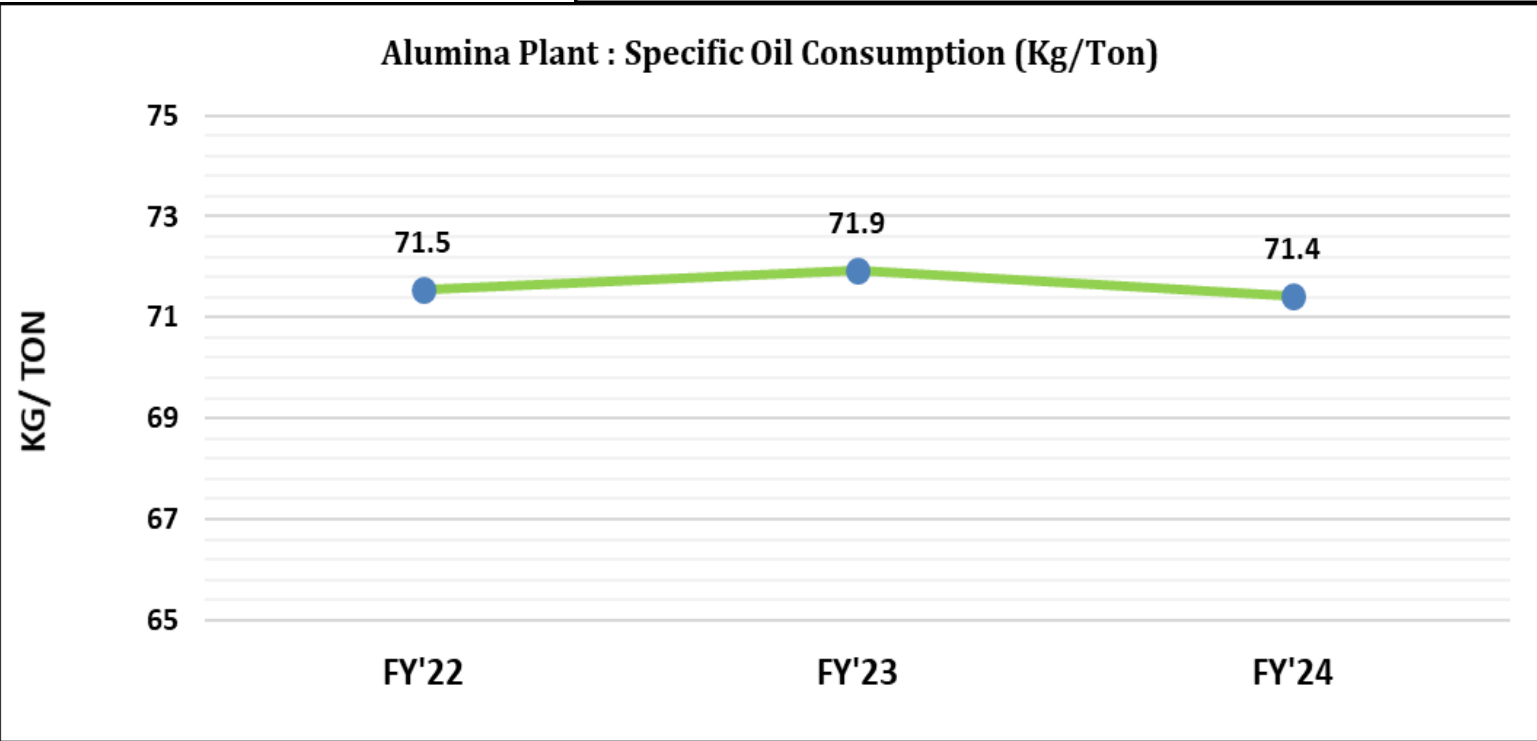
### Gross Heat Rate (RPD) : kcal/ kWh



# Trend : Alumina Plant Energy Consumption



Due to lower TAA

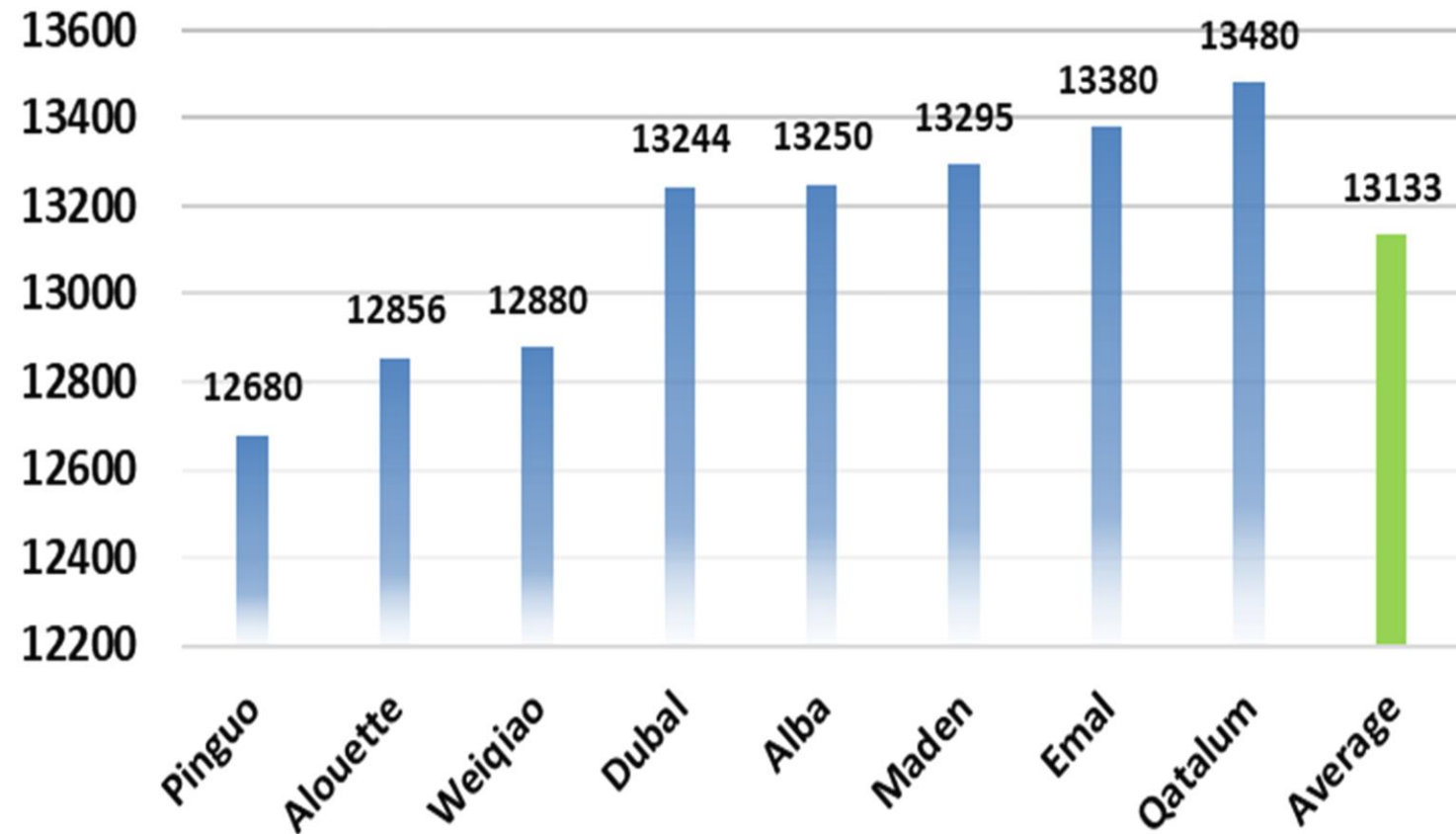


Due to lower TAA



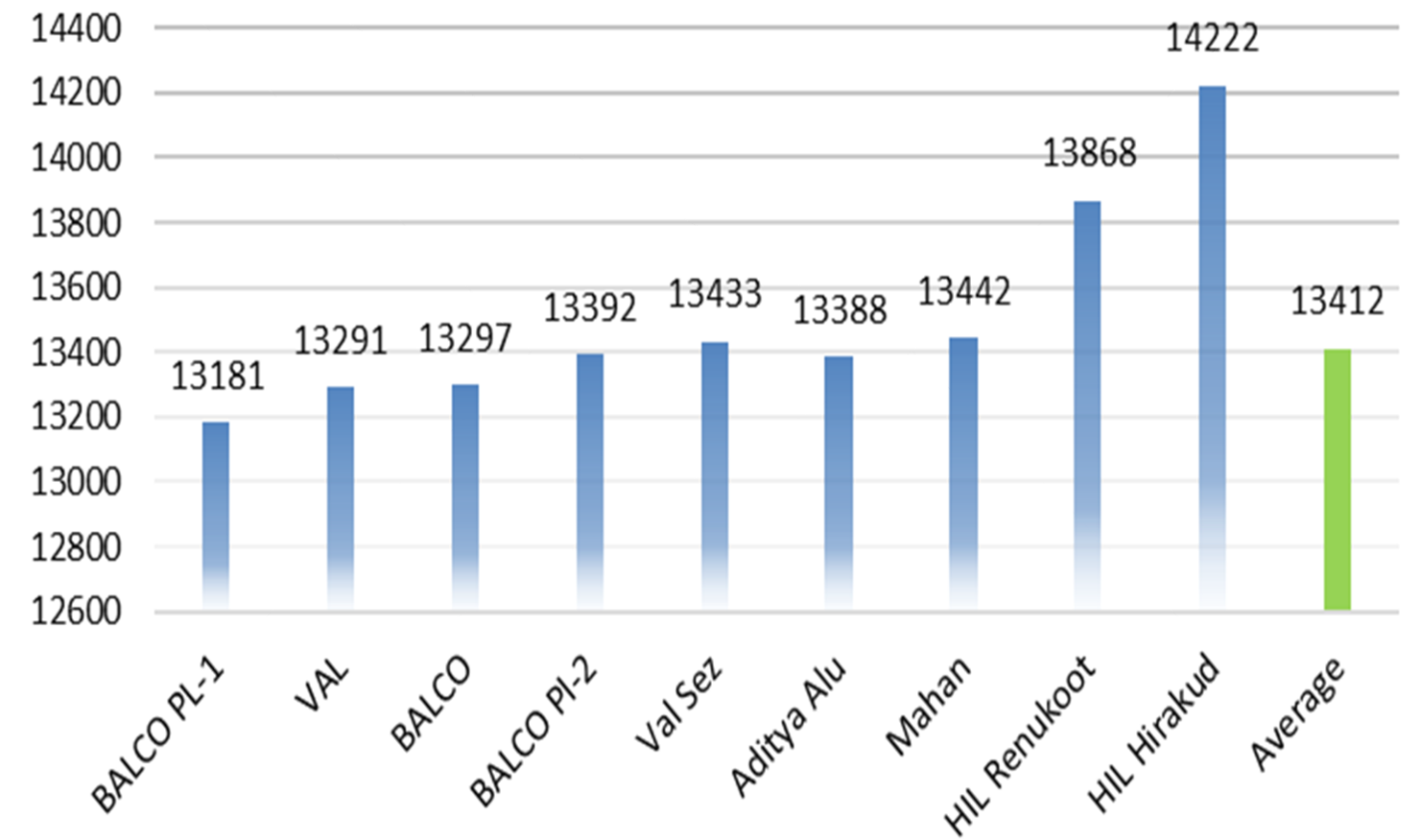
# National and International bench marking of DC power

## INTERNATIONAL BENCHMARK



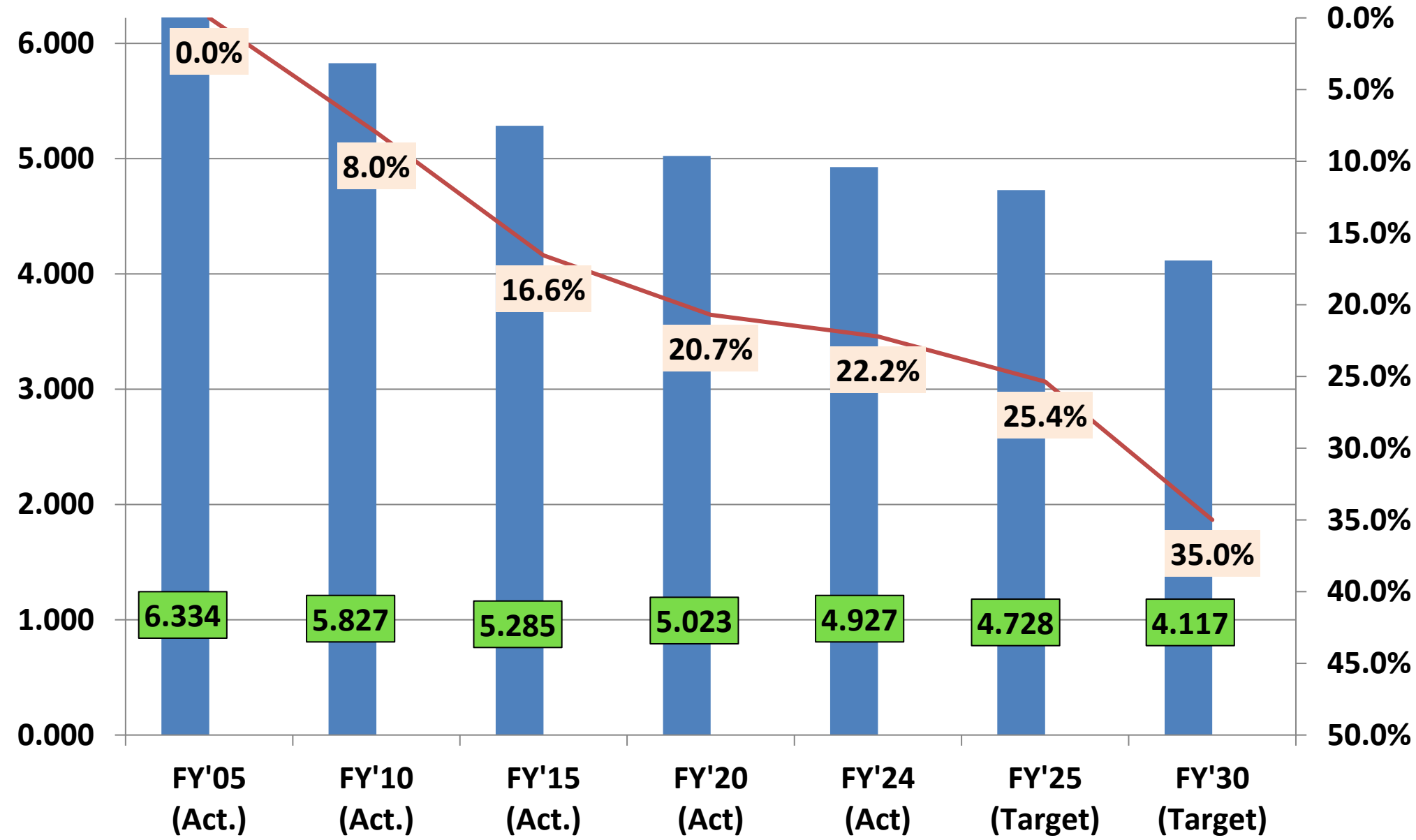
Source of Data- IAI

## NATIONAL BENCHMARK



Source of Data- BEE

# Road map : Specific Energy consumption trend and target @ integrated basis



- **Achieved 22.2 % reduction till FY'24**
- **Projects Identified to reach 25.4 % reduction upto FY'25**
- **More ideas being generated for remaining 10 %**

\* Specific Energy Consumption data upto FY'24 is Audited/Reported

**Long Term Objective : 35% reduction from FY'05 (base line) to FY'30**



## Ongoing Power Reduction Projects:

By Implementation of Solid Bus bar (Projected SPC reduction) : 150 kWh / MT of Metal

By Implementation of Cu onsert (Projected SPC reduction) : 213 kWh / MT of Metal

**Total Projected impact on SPC reduction : 363 kWh / Mt of Metal**

**With the implementation of above projects, SPC will be 13505.0 kWh / MT of Metal**

# Encon Projects for FY'2024-25



## Energy Projects Plan for FY'2024-25

Sr. No.	Plant	Energy Initiatives	Capex (Rs Lakh)	Annual Energy Saving				
				Electricity (MWh)	Oil (Ton)	Coal (MT)	Steam (MT)	Energy saving (GJ)
1	RPD	Revamping of TG#9 to reduce Plant Heat Rate	9751	0.0		18261.9		292149.9
2	RPD	Revamping of TG #10 to reduce Plant Heat Rate		0.0		18261.9		292149.9
3	RPD	Partial Retubing of Condenser tubes (4500 Nos.) of TG #3.	194	0.0		2228.9		35657.3
4	RPD	Installation and commissioning of CEP VFD in Unit 4	20	173.8				625.7
5	Boiler & Cogen	Vapour Absorption Heat Pump for reduction in fuel consumption & steam saving by utilizing low grade waste heat source	450			3278.9		49420.9
6	Boiler & Cogen	Installation of APH advance profile basket for efficiency improvement in Boiler # 3	100			1318.0		19866.2
7	Boiler & Cogen	Installation of Boiler#2 energy efficient feed pump	30	286.2				1030.3
8	Boiler & Cogen	Installation Of VFD in Id Fan Of Boiler # 1	95	499.0				1796.3
9	Boiler & Cogen	Install VFD in bad condensate transfer Pump in place of control valve to regulate pump flow based on tank level	-	26.6				95.9



# Encon Projects for FY'2024-25




## Energy Projects Plan for FY'2024-25


Sr. No.	Plant	Energy Initiatives	Capex (Rs Lakh)	Annual Energy Saving				
				Electricity (MWh)	Oil (Ton)	Coal (MT)	Steam (MT)	Energy saving (GJ)
10	Smelter	Replacement of cooling tower#3 at Rectifier-I with fanless cooling tower	100	121.0				435.6
11	Smelter	Installation of VFD at Cooling Tower #3 pumps (1 No.) at Rectifier-II		482.0				1735.2
12	Smelter	Implementation of Cu Insert collector bars	409	2368.3				8525.7
13	Smelter	Implementation of Solid Bus bar installation in Pots	1000	35115.0				126413.9
14	Smelter	Replacement of Central/Package Ac unit and Crane cabin AC units having R- 22/R-124 refrigerant (ODS being phase out from HIL by ODS free refrigerant units)	550	640.0				2304.0
15	Smelter	Replacement of Water Cooler, ACs, Refrigerator, Water Heater, New Water Heaters for E type Qtrs.	30	50.0				180.0
16	Smelter	Installation of BLDC ceiling fan, cabin fan, exhaust fan and energy efficient pumps in colony	35	76.7				275.9
17	Smelter	Replacement of 2 nos. obsolete Reciprocating compressor with new IR Screw compressor	97					
18	Alumina	Installation of VFD Compressor	70	172.8				622.1
19	Alumina	Evaporation 1 Circulation Pump VFD Installation	60	172.8				622.1
20	Alumina	Installation of Closed Loop Cooling Tower	90	66.7				240.3
21	Alumina	VT Overflow heating from Dig II condensate	-				23004.0	80.3
22	Alumina	Installation of ISH for Dig III	2400				14644.8	51.1

# Summary of last three years Project :


S.N	Year	No. of Energy saving Project	Investment (INR million)	Electrical Saving (in million kWh)	Thermal Saving (in million Kcal)	Saving (INR Million)	Impact on SEC w.r.t Previous Year
1	FY'21-22	28	1592.8	105.853	770453.42	935.70	-2.13%
2	FY'22-23	28	324.07	20.83	128505.022	333.59	-1.02%
3	FY'23-24	25	67.10	437.942	19201.66	180.22	+1.30%
	Total	81	1983.97	564.62	918160.11	1449.51	-1.85%



Energy Saving Project FY2021-22



Energy Saving Project FY2022-23



Energy saving Project FY'2023-24



# Innovative Project



## **Problem Description:**

The Aluminium Industry is one of the most energy-intensive sectors globally. This process accounts for about 14% of the global electricity consumption and generates significant amounts of greenhouse gas emissions, mainly carbon dioxide (CO<sub>2</sub>). Due to very old technology (Kaizer technology) the energy consumption for Renukoot smelter is notably higher than global industry benchmarks. This makes it less competitive and more vulnerable to the volatility of energy prices and environmental regulations. In light of these challenges and opportunities, it is imperative to implement energy efficient technologies and optimize the process parameters to reduce the energy consumption and CO<sub>2</sub> emissions of the plant.

## **Approach, Process and Methodology:**

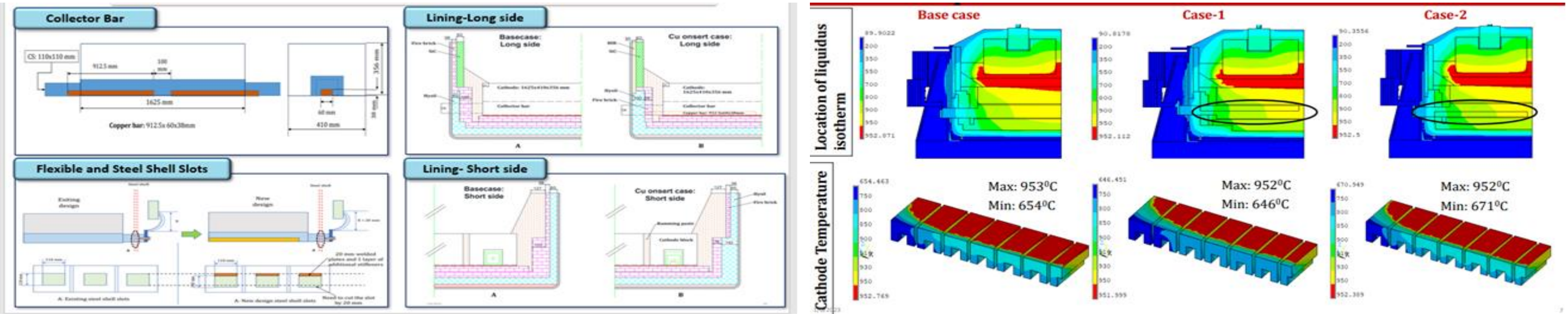
Since the pot has thermally balanced cathode construction, any change in the pot design requires pot simulation and modelling for stable pot operation as well as attaining warmer cathode profile to reduce voltage drop. The approach of our project encompasses a holistic strategy, integrating meticulous pot modelling and lining design for heat balance to create robust solution. Innovation is at the core of our approach as we have in house developed unique methodology for pouring of cast iron on copper collector bar. On waste reduction front, we have also taken into consideration the recycling of copper bars after pot failures.

A series of brainstorming sessions/discussions were organized for design finalization. It was very challenging to pour copper onsert collector bar with molten cast iron. The main challenge was to prevent the molten cast iron to come in contact with copper. Melting point of copper is 1083 Deg Cen and that of cast iron is 1450 Deg Cen. If we pour cast iron directly, Copper will get melted.

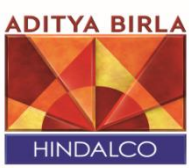
# Project Title : Innovative way of reducing energy consumption through implementation of Copper Onsert Collector Bar

## Actions taken:

A series of trials with different materials were taken to pour copper onsert collector bars but finally, use of ceramic sheet became successful. After several trials with different thickness of ceramic sheet, we finalized 3mm ceramic sheet as we were able to protect the copper bar from molten cast iron as well as uniform pouring was achieved.



# Project Title : Innovative way of reducing energy consumption through implementation of Copper Onsert Collector Bar



## Result:

The utilization of Cu Onsert collector bars in the pots holds the potential to decrease the pot voltage by 67 mV, leading to a substantial reduction of **213 DC kWh/MT of power, with IRR of 23.02% (Power saving – 75 lac/yr.)**. We are planning to implement this design modification in 50 pots during the FY 24-25.

**Voltage Saving Calculation Sheet**

Month	Feb-24	Jan-24	Dec-23	Nov-23	Average	Remarks
Cu Onsert	4.166	4.176	4.157	4.155	4.163	
Plant-2 (<400days and >90 days)	4.229	4.242	4.273	4.228	4.243	
Diff	0.063	0.066		0.073	0.067	Power Trouble- Dec'23

Description	Nos	FY'27	FY'28	FY'29	FY'30	FY'31	FY'32
No of Pots	50						
Current	72						
Efficiency	94.2						
Year.	FY26	FY27	FY28	FY29	FY30	FY31	FY32
No of days	365	365	366	365	365	365	365
Production(MT)	9968	9968	9995	9968	9968	9968	9968
DC power-Saving-Dc kwh/Mt	213	213	213	213	213	213	213
DC power-Saving-Dc kwh	2125543	2125543	2131367	2125543	2125543	2125543	2125543
Saving in Power-KWH	2125543	2125543	2131367	2125543	2125543	2125543	2125543
Cost of power Per unit-rupees/unit	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Power Saving-Lacs per Year	74.6	74.6	74.8	74.6	74.6	74.6	74.6



## Monitoring & review System

- **Dedicated Energy Cell**
- **Established Energy Management System for capturing live data and analysis.**
- **Daily review through Standing committee meeting  
Chaired by COO**
- **Daily performance review meeting Chaired by Plant heads**
- **Performance assessment of Energy Intensive Equipment i.e. Air Compressors, cooling Towers, Pump and fan etc.**
- **Monthly Energy review meeting Chaired by Plant heads**
- **Monthly Energy webinar @ metal business level**
- **MPR Chaired by COO**
- **MBR Chaired by MD**

## Employee Involvement-

**Projects completed through kaizen in FY'24 :**

- **No. of implemented project : 17338**
- **No. of Employee participation : 6030**
- **Investment : 9.96 million Rs**
- **Expected saving : 20.53 million Rs**

## Onsite Generation

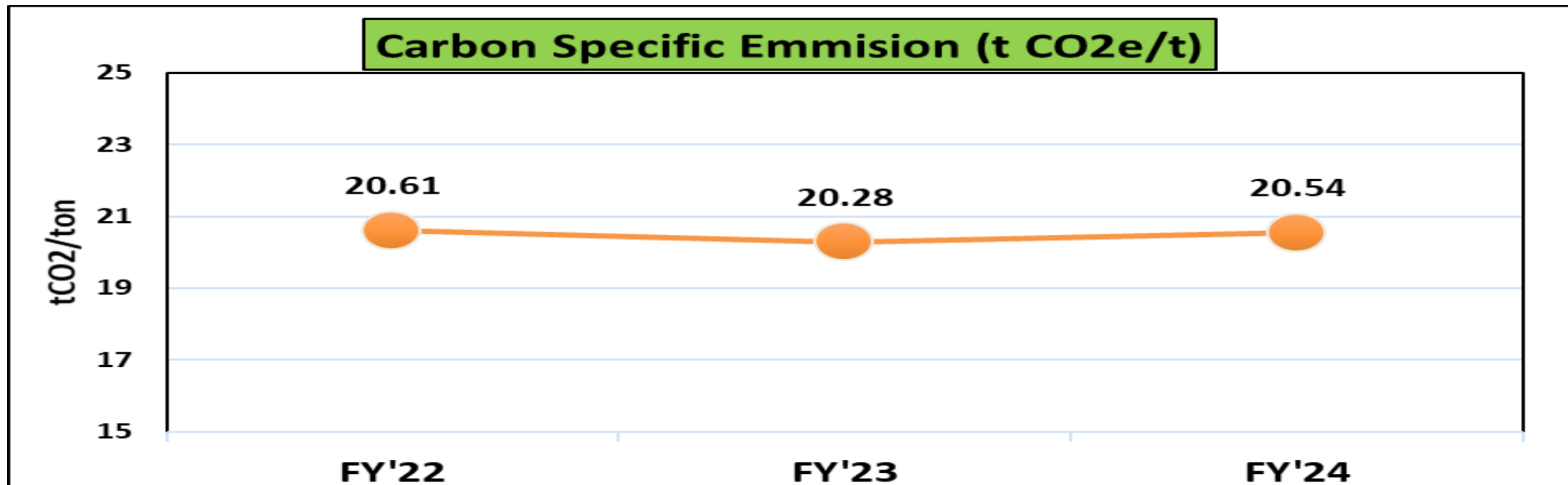
Year	Technology(Solar/Wind/Biomass etc)	Installed Capacity (MW)	Consumption (million kWh)	% of Overall Electrical Energy Consumption
FY 2021-22	Solar	3.0	2.033	0.03%
FY 2022-23	Solar	3.0	4.046	0.06%
FY 2023-24	Solar	3.0	3.912	0.07%

## Offsite Generation

Year	Technology(Solar/Wind/Biomass etc)	Installed Capacity (MW)	Consumption (million kWh)	% of Overall Electrical Energy Consumption
FY 2021-22	-	-	-	-
FY 2022-23	-	-	-	-
FY 2023-24	-	-	-	-
		<b>Investment Made</b>	<b>11.1 Crore</b>	
		<b>RPO Obligation</b>	<b>No</b>	
		<b>Solar &amp; Wind Energy Installed in Group*</b>	<b>173 MW</b>	
		<b>Sharing % of Plant</b>	<b>1.734%</b>	

# GHG Inventorisation

- **Information on GHG Inventorisation and public disclosure** – Its consolidated data reported in sustainability report of Hindalco
- **Scope of Emission** – I and II
- **Short term Target and action Plan for CO<sub>2</sub> emission reduction** – Our target is to produce 30 % Green aluminium by FY'30 by Identified Major Project i.e. Solar Power Plant, uses of Biomass, 400kV Grid connectivity, Smelter & Power Plant Project etc..
- **Initiative on carbon capture and other reduction Measures** – It is already in process to Exploring the Vendor under feasibility study from C to M, C to E etc.





- **LCA (Life Cycle assessment Assessment) conducted in FY'17 by M/s Thinkstep Sustainability Solutions Pvt Limited**
- **ISO 50001: 2018 Certification—**
  - ✓ **ISO 50001:2018- Certified by DNV-GL in 2019**
  - ✓ **ISO 50001:2018- Re-certified by LRQA in 2022**
- **% Investment of Energy saving Project on Total turnover of the company in FY'23-24 : 0.073 %**

**(Annual Sales Turn Over-91842.58 million Rs & Energy Capex -67.01 million Rs)**

- **Learning of new developments / initiatives implemented in different plants i.e. Nano water convertor, X-Plate technology, E-glass epoxy blade, etc.**
- **Interaction with different plant's participants.**
- **Interaction with Technology supplier for new developments.**
- **Platform for show casing of our Energy Excellence.**
- **Procured portable air leak detector, air flow meter etc.**
- **Procured low pressure compressor for loading / unloading of alumina.**
- **Procured E-glass epoxy blade in place of normal FRP blade in our cooling towers**
- **Motivation & recognition.**

# Mandatory Energy Audit & PAT status

PAT Cycle	Year	Base line SEC	Target SEC	Required Reduction	Achieved SEC	Achieved Reduction in %	E-certificate claimed & issued
				in %			
PAT Cycle-1	FY'2012-15	5.858	5.512	5.91%	5.374	8.26%	53664
PAT Cycle-2	FY'2016-19	5.221	5.044	3.40%	4.875	6.63%	70835
PAT Cycle-3	FY'2022-25	4.951	4.728	4.50%	<b>Assessment Year FY'2024-25</b>		

Description	Duration	Conducted by	Report submitted to BEE
MEA # 1	10 <sup>th</sup> Nov'14 to 24 <sup>th</sup> Nov'14	CTES Team	5 <sup>th</sup> Sep'15
MEA # 2	2 <sup>nd</sup> May'18 to 21 <sup>st</sup> May'18	Mott MacDonald	10 <sup>th</sup> Oct'18
MEA # 3	20 <sup>th</sup> July'21 to 31 <sup>st</sup> July'21	Mott MacDonald	1 <sup>st</sup> Nov'21

# Status of Energy saving certificate trading

Description	Base line SEC	Target SEC	Required reduction in %	Achieved SEC	Achieved Reduction in %	Base line production	E-certificate required	E-certificate claimed & received	Balance till date
PAT Cycle-1	5.858	5.512	5.91%	5.374	8.26%	420534.14	-	53664	53664
PAT Cycle-2	5.2212	5.044	3.40%	4.8752	6.63%	420876.92	-	70835	70835

<b>Total issued ECerts for PAT Cycle # 1 ( ESC 16-19)</b>	<b>: 53664</b>
<b>Total issued ECerts for PAT Cycle # 2</b>	<b>: 70835</b>
<b>Sold before this trading 2023</b>	<b>: 16166</b>
<b>Total sold till date</b>	<b>: 5020</b>
<b>Total available ECerts till date (Jul'24)</b>	<b>: 103313</b>



# Net Zero commitment & Road map :

- Installation of solar power plant
- Installation of solar roof top panels
- Power purchase agreement from Green Energy Suppliers.
- Use of biomass in our boilers
- 400 KVA connectivity
- Use of battery-operated forklifts / trolleys.
- Deployment of shutter buses in plant.
- Working on pumped hydro projects.
- Working on recycling
- Working on Xtra green diesel.

***Our target to produce 30% green aluminium by FY'30***

## FY 2021 – 22

- Platinum Award – SEEM – National Energy Management Award
- 1st Prize in State Level Energy Conservation Award

## FY 2022 – 23

- CII – Excellent Energy Efficient Unit
- Topmost Award in State Level Energy Conservation by UPNEDA
- India Manufacturing Excellence Award - Gold
- Top Performer in PAT Cycle-2 in Aluminium sector

## FY 2023 – 24

- **National Energy Conservation Award : 1st in Aluminium (Smelter) Integrated**
- CII –Energy Efficient Unit
- India Manufacturing Excellence Award - Platinum



# Energy Award in FY'2023-24

National Energy Conservation Award : 1<sup>st</sup> in Aluminium (Smelter) Integrated

**INDUSTRIES**  
**Aluminium (Smelter)**

First Prize

ADITYA BIRLA  
HINDALCO

Hindalco Industries Ltd.  
Unit - Bokoto  
(Raipur, Chhattisgarh Pradesh)

## National Energy Conservation Awards 2023

Thermal Savings  
5678 Million kcal

Electrical Savings  
79 Lakhs

The image shows an award ceremony on a stage. A large screen in the background displays the award details for Hindalco Industries Ltd. The screen is divided into sections: the left side shows the award category 'INDUSTRIES Aluminium (Smelter)' and 'First Prize' with a gold medal icon and the Hindalco logo; the center features an aerial photograph of the smelter; the right side lists 'Thermal Savings 5678 Million kcal' and 'Electrical Savings 79 Lakhs'. In the foreground, several men in suits and one woman in a pink and orange sari are on stage. One man is presenting a trophy to another man, while others stand by, some clapping. The stage is decorated with floral arrangements.

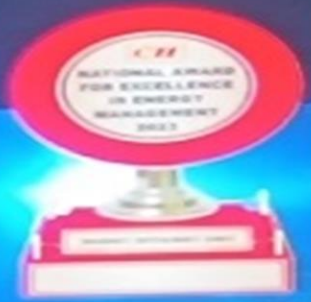


# Energy Award in FY'2023-24



CII Energy Efficient Unit Award

Award for 2023  
Management  
at HICC, Hyderabad



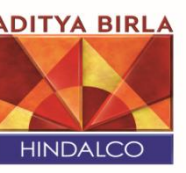
## Energy Efficient Unit METALS

# Hindalco Industries Limited, Renukoot





# Energy Award in FY'2023-24



"India Manufacturing Excellence Award" in Platinum Category

# Future Ready Factory of the Year





# Awareness on Energy Conservation & Efficiency :

Date	Program
8th Dec'23 (Day 1)	Message of COO to all users through mail for launching of Energy Conservation Week.
	Energy saving tips sharing through communication mail in Hindi & English (RKT & RPD)
	Display of energy saving banners at prominent locations.
	Display of Energy banners on dash board
	Display of energy saving pamphlet to entire notice boards and prominent location.
9th Dec'23 (Day 2)	Online quiz competition.
	On line slogan competition.
	Pep talk, quiz & Energy conservation Audit in Smelter Plant # 1
	Pep talk, quiz & Energy conservation Audit in Extrusion
10th Dec'23 (Day 3) Sunday	Energy saving Seminar for Colony Ladies in Auditorium (Through Club Hindalco & Vanita Club)
11th Dec'23 (Day 4)	Drawing Competition in ABPS
	Pep talk, quiz & Energy conservation Audit in Extrusion PBU
	Pep talk, quiz & Energy conservation Audit in Smelter Plant # 1
	Pep talk, quiz & Energy conservation Audit in FRP
12th Dec'23 (Day 5)	Drawing Competition in ABIC
	Pep talk, quiz & Energy conservation Audit in Smelter Plant # 2
	Pep talk, quiz & Energy conservation Audit in Cast House
	Pep talk, quiz & Energy conservation Audit in Alumina plant
13th Dec'23 (Day 6)	Drawing Competition in Mahila mandal School
	Drawing Competition in Unit # 2
	Pep talk, quiz & Energy conservation Audit in Utilities i.e HR, Security, Accounts etc
	Energy Pamphlet distribution in Lower colony (L/H/I Type)
14th Dec'23 (Day 7)	Energy Pamphlet distribution in Jr / E / D/C/b/A type residential blocks
	Energy Pledge in Alumina
	Energy Pledge in Smelter Plant # 1
	Energy Pledge in Smelter Plant # 2
	Energy Pledge in Extrusion (PI # 1)
	Energy Pledge in Extrusion (PI # 2)
	Energy Pledge in Rolled (PI # 1)
	Energy Pledge in Rolled (PI # 2)
	Energy Pledge in Alumina
	Energy Pledge in Cast house (PI # 1)
Energy Pledge in Cast house (PI # 2)	
Energy Pledge in Accounts & HR & Security	
Energy Pledge in Utilities	
Energy Pledge in Project	
Drawing competition in Auditorium for selected students	
20th Dec'23	Concluding Ceremony



# Glimpses of Awareness on Energy Conservation :

## Inauguration of Energy Conservation week



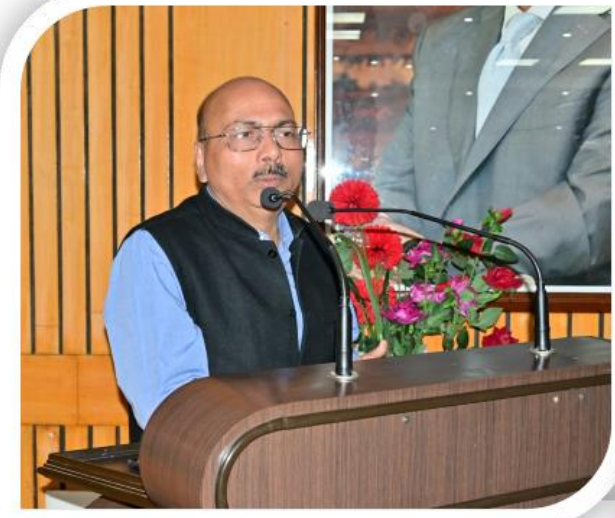
## Launching of Energy Saving pamphlet





# Glimpses of Awareness on Energy Conservation :

Launching of Energy Saving badges



Energy Pledge by Senior Management





# Glimpses of Awareness on Energy Conservation :

Energy Pledge by plant professionals



Energy conservation day celebration



Energy conservation day celebration



Energy Pledge by plant professionals

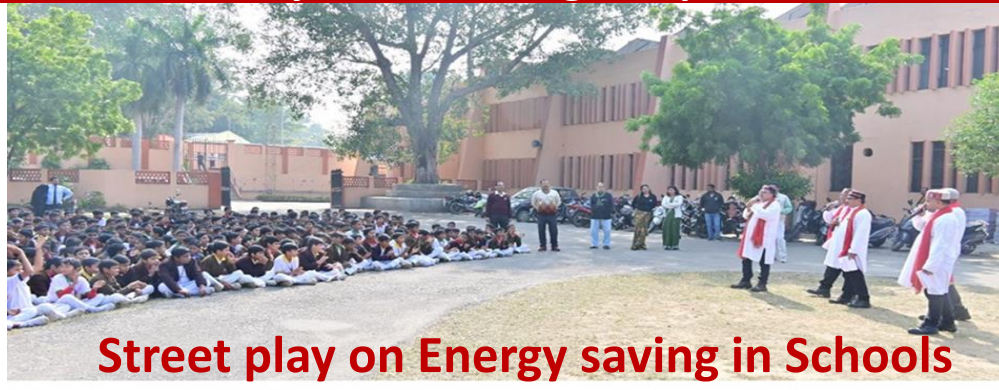




# Glimpses of Awareness on Energy Conservation :

Street Play and Drawing competition in all the schools of Renukoot

Street Play and awareness sessions for housewives of Renukoot



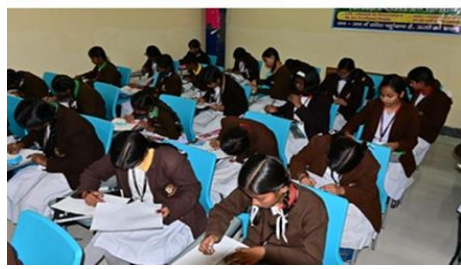
Street play on Energy saving in Schools



Drawing competition on in schools

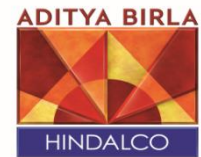


Awareness session for housewives





# Glimpses of Awareness on Energy Conservation :



## Energy Conservation Week launched at Hindalco with Energy Conservation Pledge

Several Competitions and awareness programs will be organized for employees, children and housewives throughout the week

**JEEVAN EXPRESS BUREAU**

**SONBHADRA/RENUKOOT:** Energy Conservation Week is being organized from 8th to 14th December with the aim of motivating the Hindalco employees and their families and people of Renukoot to conserve energy. Under the direction of the Cluster head, N. Nagesh, the energy cell of the company started the program by administering the Energy Pledge to the senior officers and employees present in the administrative building lawn.

In this sequence, detailed information was given about various programs going to organize throughout the week



like painting competition related to energy conservation for children in schools, quiz competition based on energy conservation for employees and slogan competition, for housewives and employees, street plays and energy awareness pep talk at various places in the plant for employees. Head of Reduction Plant J.P. Nayak highlighted the need for energy conservation and asked everyone to be aware of it. Alumina Plant Head N.N. Rai inspired all the officers and employees to contribute enthusiastically in various activities by releasing a bunch of colorful balloons carrying slogans related to energy conservation. A large number of officers and employees from various departments and plants were present in the program.

## ऊर्जा संरक्षण शपथ के साथ हिण्डाल्को में ऊर्जा संरक्षण सप्ताह का शुभारंभ



**रेणुकूट (जागरूक एक्सप्रेस)।** हिण्डाल्को में कार्यरत कर्मचारियों एवं उनके परिवारों को तथा रेणुकूट वासियों को ऊर्जा संरक्षण के लिए प्रेरित करने के उद्देश्य से दिनांक 8 से 14 दिसम्बर तक ऊर्जा संरक्षण सप्ताह का आयोजन किया जा रहा है। प्रशासनिक भवन लान में संस्थान के मुखिया एन. नागेश के निर्देशन में ऊर्जा संरक्षण के एनर्जी सेल द्वारा उपस्थित वरिष्ठ अधिकारियों एवं कर्मचारियों को ऊर्जा शपथ दिलाकर कार्यक्रम का शुभारंभ किया गया। इसी क्रम में पूरे सप्ताह के दौरान आयोजित होने वाले विभिन्न कार्यक्रमों जैसे विद्यालयों में बच्चों के लिए ऊर्जा संरक्षण से सम्बन्धित पेंटिंग प्रतियोगिता, कर्मचारियों एवं गृहणियों के लिए ऊर्जा संरक्षण आधारित

विजय प्रतियोगिता, स्लोगन प्रतियोगिता, नुक्कड़ नाटक तथा प्लांट में विभिन्न स्थानों पर एनर्जी अवेयरनेस पेपटाक आदि कार्यक्रमों के बारे में विस्तार से जानकारी दी गई। रिडक्शन प्लांट के हेड जे.पी. नायक ने ऊर्जा संरक्षण की आवश्यकताओं पर प्रकाश डाला और इसके संरक्षण के प्रति सभी को जागरूक होने की बात कही। अल्युमिना प्लांट हेड एन.एन. राय ने ऊर्जा संरक्षण सम्बन्धित स्लोगन की तख्ती लगी रंग-बिरंगी गुब्बारों का गुच्छा उड़ा कर उपस्थित सभी अधिकारियों एवं कर्मचारियों को पूरे सप्ताह चलने वाले ऊर्जा संरक्षण सम्बन्धित विभिन्न गतिविधियों में प्रेरित किया।

## हिण्डाल्को में ऊर्जा संरक्षण सप्ताह का शुभारंभ



**रेणुकूट (जागरूक एक्सप्रेस)।** हिण्डाल्को में कार्यरत कर्मचारियों एवं उनके परिवारों को तथा रेणुकूट वासियों को ऊर्जा संरक्षण के लिए प्रेरित करने के उद्देश्य से दिनांक 8 से 14 दिसम्बर तक ऊर्जा संरक्षण सप्ताह का आयोजन किया जा रहा है। प्रशासनिक भवन लान में संस्थान के मुखिया एन. नागेश के निर्देशन में संस्थान के एनर्जी सेल द्वारा उपस्थित वरिष्ठ अधिकारियों एवं कर्मचारियों को ऊर्जा शपथ दिलाकर कार्यक्रम का शुभारंभ किया गया। इसी क्रम में पूरे सप्ताह के दौरान आयोजित होने वाले विभिन्न कार्यक्रमों जैसे विद्यालयों में बच्चों के लिए ऊर्जा संरक्षण से सम्बन्धित पेंटिंग प्रतियोगिता, कर्मचारियों एवं गृहणियों के लिए ऊर्जा संरक्षण आधारित विजय प्रतियोगिता, स्लोगन प्रतियोगिता, नुक्कड़ नाटक तथा प्लांट में विभिन्न स्थानों पर एनर्जी अवेयरनेस पेपटाक आदि कार्यक्रमों के बारे में विस्तार से जानकारी दी गई।

## शपथ के साथ हिण्डाल्को में ऊर्जा संरक्षण सप्ताह का हुआ शुभारंभ



**सोनभद्र।** हिण्डाल्को में कार्यरत कर्मचारियों एवं उनके परिवारों को तथा रेणुकूट वासियों को ऊर्जा संरक्षण के लिए प्रेरित करने के उद्देश्य से दिनांक 8 से 14 दिसम्बर तक ऊर्जा संरक्षण सप्ताह का आयोजन किया जा रहा है। प्रशासनिक भवन लान में संस्थान के मुखिया एन. नागेश के निर्देशन में संस्थान के एनर्जी सेल द्वारा उपस्थित वरिष्ठ अधिकारियों एवं कर्मचारियों को ऊर्जा शपथ दिलाकर कार्यक्रम का शुभारंभ किया गया। पूरे सप्ताह के दौरान आयोजित होने वाले विभिन्न कार्यक्रमों जैसे विद्यालयों में बच्चों के लिए ऊर्जा संरक्षण से सम्बन्धित पेंटिंग प्रतियोगिता, कर्मचारियों एवं गृहणियों के लिए ऊर्जा संरक्षण आधारित विजय प्रतियोगिता, स्लोगन प्रतियोगिता, नुक्कड़ नाटक तथा प्लांट में विभिन्न स्थानों पर एनर्जी अवेयरनेस पेपटाक आदि कार्यक्रमों के बारे में विस्तार से जानकारी दी गई। रिडक्शन प्लांट के हेड जे.पी. नायक ने ऊर्जा संरक्षण की आवश्यकताओं पर प्रकाश डाला और इसके संरक्षण के प्रति सभी को जागरूक होने की बात कही। अल्युमिना प्लांट हेड एन.एन. राय ने ऊर्जा संरक्षण सम्बन्धित स्लोगन की तख्ती लगी रंग-बिरंगी गुब्बारों का गुच्छा उड़ा कर उपस्थित सभी अधिकारियों एवं कर्मचारियों को पूरे सप्ताह चलने वाले ऊर्जा संरक्षण सम्बन्धित विभिन्न गतिविधियों में प्रेरित किया।

## ऊर्जा संरक्षण सप्ताह का शुभारंभ



**हिण्डाल्को में ऊर्जा संरक्षण सप्ताह का शुभारंभ**  
रेणुकूट (सोनभद्र), 08 दिसम्बर (तरुणमित्र)। हिण्डाल्को में कार्यरत कर्मचारियों एवं उनके परिवारों को तथा रेणुकूट वासियों को ऊर्जा संरक्षण के लिए प्रेरित करने के उद्देश्य से दिनांक 8 से 14 दिसम्बर तक ऊर्जा संरक्षण सप्ताह का आयोजन किया जा रहा है। प्रशासनिक भवन लान में संस्थान के मुखिया एन. नागेश के निर्देशन में संस्थान के एनर्जी सेल द्वारा उपस्थित वरिष्ठ अधिकारियों एवं कर्मचारियों को ऊर्जा शपथ दिलाकर कार्यक्रम का शुभारंभ किया गया। इसी क्रम में पूरे सप्ताह के दौरान आयोजित होने वाले विभिन्न कार्यक्रमों जैसे विद्यालयों में बच्चों के लिए ऊर्जा संरक्षण से सम्बन्धित पेंटिंग प्रतियोगिता, कर्मचारियों एवं गृहणियों के लिए ऊर्जा संरक्षण आधारित विजय प्रतियोगिता, स्लोगन प्रतियोगिता, नुक्कड़ नाटक तथा प्लांट में विभिन्न स्थानों पर एनर्जी अवेयरनेस पेपटाक आदि कार्यक्रमों के बारे में विस्तार से जानकारी दी गई।

## राष्ट्रपति द्वारा हिण्डाल्को को मिला प्रतिष्ठित राष्ट्रीय ऊर्जा संरक्षण पुरस्कार



**अध्वन्याया संवाददाता**  
एकोकृत) के सर्वश्रेष्ठ पुरस्कार के नवाजा गया। इस अवसर पर नगेत ने कहा कि यह पुरस्कार संघर्ष के प्रत्येक कर्मचारी के समर्थन, कठोर मेहनत और नवाचार का परिणाम है जो इस उत्कृष्टतम यात्रा का अभिन्न अंग रहे है। हिण्डाल्को रेणुकूट के ऊर्जा संरक्षण के प्रयास का ही परिणाम है कि पिछले तीन वित्तीय वर्षों 2021-23 तक 5678 मिलियन किलोवॉटघंटे की बचत हुई है। यह सुधार मुख्य रूप से एल्युमिनियम इलेक्ट्रोलीसिस में फेरेटेटिड सेल्स के रख रखाव, सीलिंग फैब्रिकेशन व राइजर बस बार का उपयोग, कैपेसिटर एल्यूमिना प्लांट में इन्वोल्टर के स्टैम इकाई और लिक्विड प्रोड्यूसरों में सुधार, रेणुकूट में सफ मोटर पंप, रेणुकूट में मोटर फायर प्लंट तथा हेल्थ रेगुलेशन फीस प्लंट के बेकअप प्लांट के लिए एनर्जी को संचयन से अरोपण कर, ऊर्जा कुशल एल्यूमीनियम ट्यूब लवट, बीएलसीसी सीलिंग फैन, फेनलैस कुलिंग टॉवर, प्लॉट और कॉलेजों में स्टार रेटेड (ओईएस) मुक्त एयर कंडीशनर के स्थापना विभिन्न अन्य ऊर्जा कुशल टेक्नोलॉजी, प्रक्रियाओं और को अपनाने, इन तीनों उत्कृष्टतम प्रयासों में शामिल है।

## लखनऊ, 19 दिसम्बर 2023

## हिण्डाल्को को राष्ट्रपति ने किया पुरस्कृत



**रेणुकूट, 18 दिसम्बर (तरुणमित्र)।** ऊर्जा के विभिन्न कुशल उपयोगों को अपनाने तथा संयंत्रों में विद्युत व थर्मल ऊर्जा की खपत में निरंतर कमी लाने हेतु किये गए प्रयासों के लिए हिण्डाल्को भारत की राष्ट्रपति द्रौपदी मुर्मू द्वारा राष्ट्रीय ऊर्जा संरक्षण-2023 के प्रथम पुरस्कार से सम्मानित किया गया। हिण्डाल्को रेणुकूट के स्मेल्टर हेड जे.पी. नायक ने यह प्रतिष्ठित पुरस्कार, राष्ट्रीय ऊर्जा

## Hindalco Renukoot clinches Top Honor: National Energy Conservation Award-2023



**OUR CORRESPONDENT**  
RENUKOOT. In recognition of its unwavering commitment to energy efficiency and the consistent reduction of electrical and thermal energy consumption in its plants, Hindalco Industries Limited, Renukoot, has been conferred with the prestigious National Energy Conservation Award-2023. The first prize was presented by the Hon'ble President of India, Smt. Draupadi Murmu, during a ceremony held at Vigyan Bhawan on National Energy Conservation Day. The accolade was accepted by Mr. N. Nagesh, Chief Operating Officer of Hindalco Renukoot, and Mr. J.P. Nayak, Head of Renukoot Smelter, among representatives from 517 companies across various sectors. Expressing gratitude for the award, Mr. Nagesh attributed the achievement to the dedication, hard work, and innovation of every employee at the plant. Notably, the energy conservation initiatives at Hindalco Renukoot have resulted in savings of 5678 million kilocalories of thermal energy and 79 lakh units of electricity over the last three financial years (2021-23). Key measures contributing to this success include the implementation of patented technologies in alumina electrolysis, adoption of solar power solutions, and the integration of energy-efficient technologies such as LED tube lights, BLED ceiling fans, and star-rated air conditioners across the Indian industrial landscape.

## हिण्डाल्को को मिला राष्ट्रीय ऊर्जा संरक्षण पुरस्कार-2023



**लखनऊ, 19 दिसम्बर 2023।** ऊर्जा के विभिन्न कुशल उपयोगों को अपनाने तथा संयंत्रों में विद्युत व थर्मल ऊर्जा की खपत में निरंतर कमी लाने हेतु किये गए प्रयासों के लिए हिण्डाल्को भारत की राष्ट्रपति द्रौपदी मुर्मू द्वारा राष्ट्रीय ऊर्जा संरक्षण-2023 के प्रथम पुरस्कार से सम्मानित किया गया। हिण्डाल्को रेणुकूट के स्मेल्टर हेड जे.पी. नायक ने यह प्रतिष्ठित पुरस्कार, राष्ट्रीय ऊर्जा



# INDUSTRIES

Aluminium (Smelter)

## National Energy Conservation Awards

2023

First Prize



Hindalco Industries Ltd.

Unit - Bokaro  
(Bokaro, Jharkhand)

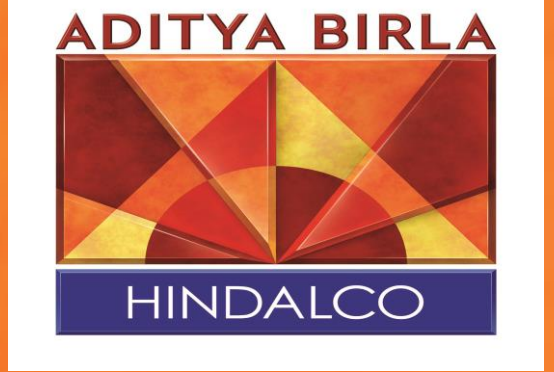


Thermal Savings

5678 Million kcal

Electrical Savings

79 Lakhs U



# Thank You

### Contact Person

<u>Name</u>	<u>Mobile</u>	<u>Mail ID</u>
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