



Investor Day

30th March 2022

Safe Harbor Statement

Forward-looking statements

Statements made in this presentation which describe the company's intentions, expectations, beliefs or predictions may be forward-looking statements within the meaning of securities laws. Forward-looking statements include statements preceded by, followed by, or including the words "believes," "expects," "anticipates," "plans," "targets", "estimates," "projects," "forecasts," or similar expressions. Forward looking statements generally can be identified by the fact that they do not relate strictly to historical or current facts and are based on our management's beliefs, as well as assumptions made by, and information currently available to our management as well as other factors that we believe are appropriate and reasonable under the circumstances. Examples of forward looking statements in this presentation are statements about our expectations about strengthening and growing the business with expansion projects or achieving synergies associated with the acquisition. The company cautions that, by their nature, forward-looking statements involve risk and uncertainty and the company's actual results could differ materially from those expressed or implied in such statements. We do not intend, and we disclaim any obligation, to update any forward-looking statements, whether as a result of new information, actual performance, future events or otherwise. Factors that could cause actual results or outcomes to differ from the results expressed or implied by forward-looking statements include, among other things: changes in the prices and availability of aluminum (or premiums associated with such prices) or other materials and raw materials we use; the capacity and effectiveness of our hedging activities; relationships with, and financial and operating conditions of, our customers, suppliers and other stakeholders; fluctuations in the supply of, and prices for, energy in the areas in which we maintain production facilities; our ability to access financing including in connection with potential acquisitions and investments; risks relating to, and our ability to consummate, pending and future acquisitions, investments or divestitures; changes in the relative values of various currencies and the effectiveness of our currency hedging activities; factors affecting our operations, such as litigation, environmental remediation and clean-up costs, labor relations and negotiations; breakdown of equipment and other events; economic, regulatory and political factors within the countries in which we operate or sell our products, including changes in duties or tariffs; competition from other aluminum rolled products producers as well as from substitute materials such as steel, glass, plastic and composite materials; changes in general economic conditions including deterioration in the global economy; the risks of pandemics or other public health emergencies, including the continued spread and impact of, and the governmental and third-party responses to risks arising out of our acquisition of Aleris Corporation including risks associated with related divestiture requirements and uncertainties inherent in the acquisition method of accounting; disruption to our global aluminum production and supply chain as a result of COVID-19; changes in government regulations, particularly those affecting taxes, derivative instruments, environmental, health or safety compliance; changes in interest rates that have the effect of increasing the amounts we pay under our credit facilities and other financing agreements; and our ability to generate cash. The above list of factors is not exhaustive. Other important risk factors are included under the caption "Risk Factors" in the Company's Integrated Annual Report of FY2020-21 and form 10K of FY2020-21.

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Q&A

Hindalco is a leading global industry player

India Ops

Aluminium Capacity

Alumina
3.5 MT

Primary Metal
1.3 MT

VAP
350 KT

Copper Capacity

Copper Cathode
421 KT

Copper Rods
540 KT

Novelis

Aluminium Flat Rolled Products (FRP)

Beverage Can Sheets

Automotive Sheets

Specialities (B&C)

Aerospace Sheets

Rolling Capacity
4.0 MT

Revenue (FY21)
USD 18 bn

EBITDA (FY21)
USD 2.6 bn

Novelis | Largest aluminum FRP producer and recycler in the world

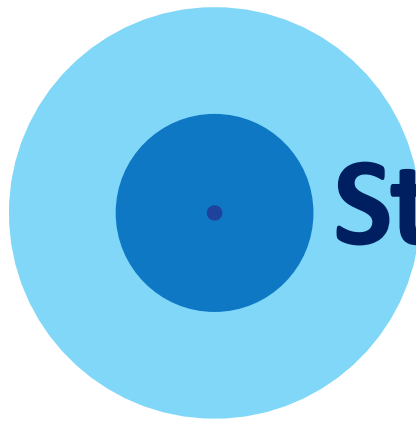
Hindalco | Largest fully integrated aluminum player in India

Utkal Alumina among the lowest cost producers of alumina in the world

One of the **largest custom copper smelters** at a single location in Asia

Global operations across **10 countries**

40,000 employees worldwide



Strategic Priorities | Way Forward



Deleveraging

Achievement of Net Debt to EBITDA ratio of 1.62x in nine months of FY22 against a target of 2.5x in 2 years



Growth

Strong focus on expanding capacities in various business segments aimed at product mix enhancements



ESG

Sustainability Initiatives across entire value chain with clear roadmap for achievement of our ESG commitments



Shareholder Value Enhancement

Enhance Shareholder value with return based allocation of capital, net debt reduction and shareholder returns



Novelis Growth Strategy



- **Market Overview**
Novelis Business
Segments

Novelis : The world's largest aluminium FRP producer and recycler

Global HQ Atlanta, US

33 operating locations

~4MT global rolling capacity

North America

HQ Atlanta, US

17 operating locations

1.5MT rolling capacity

Produces cans, automotive and specialty FRP

Europe

HQ Kusunacht, Switzerland

11 operating locations

1.2MT rolling capacity

Produces cans, automotive, aerospace and specialty FRP

South America

HQ São Paulo, Brazil

2 operating locations

0.7MT rolling capacity

Produces cans & specialty FRP

Asia

HQ Seoul, South Korea

4 operating locations

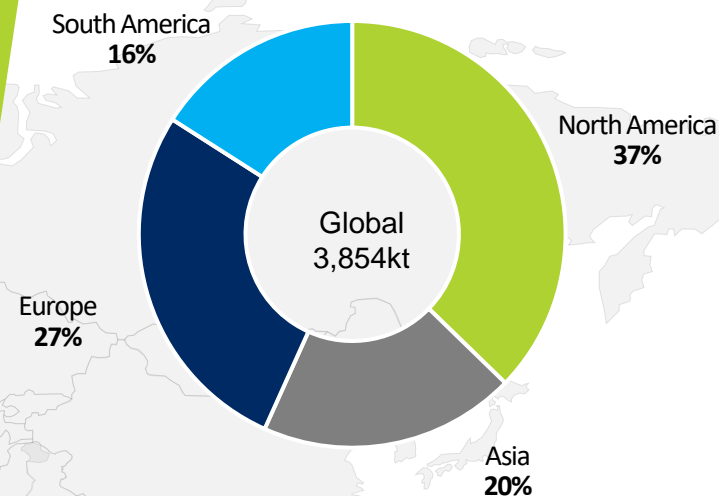
0.6MT rolling capacity

Produces cans, automotive, aerospace and specialty FRP

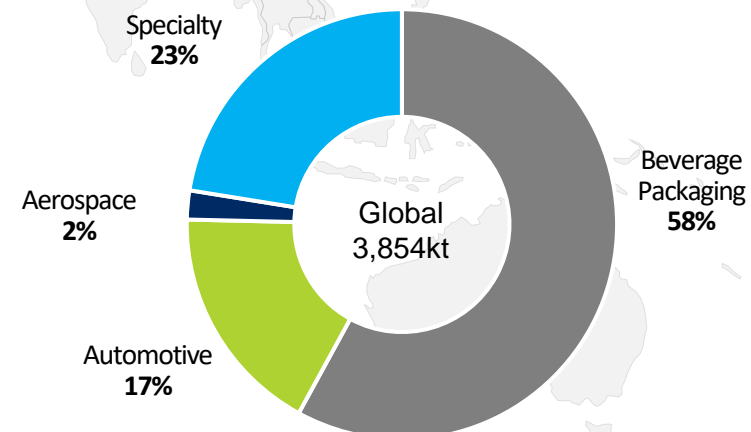
Vision

To lead the aluminium industry as the partner of choice for innovative solutions

TTM FRP Shipments by Geography



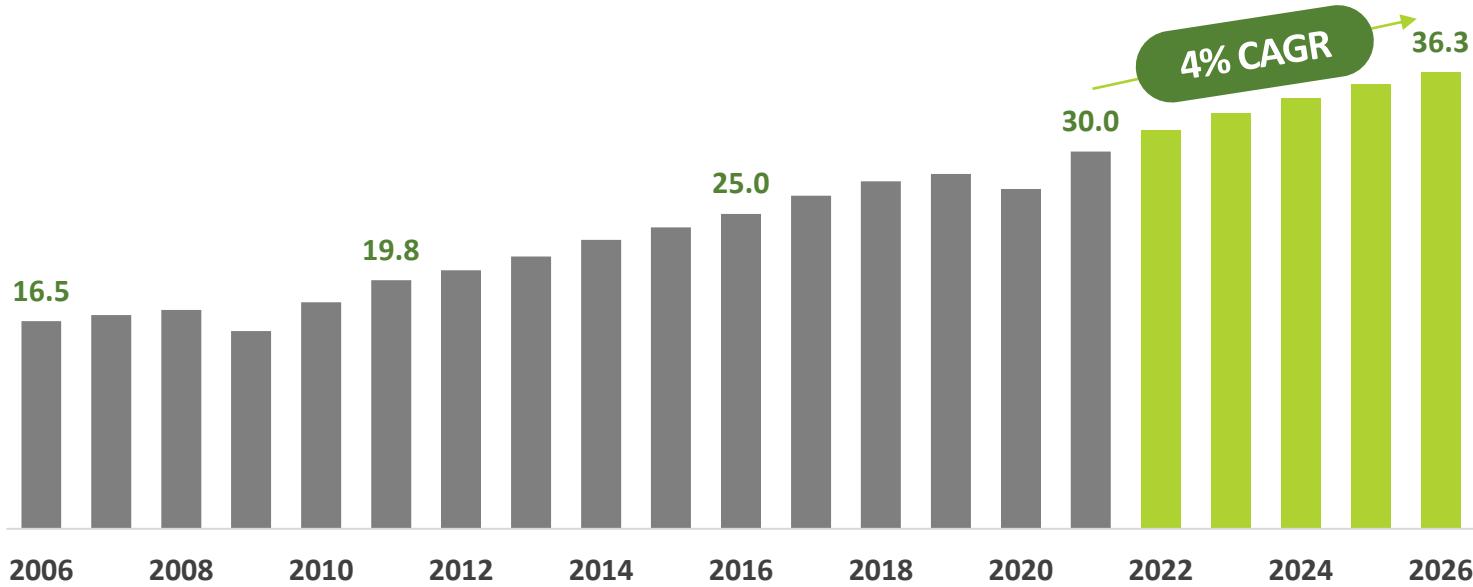
TTM FRP Shipments by Product Market



TTM (Trailing Twelve Months) through December 31, 2021

Growing Global Aluminium FRP Industry

20-Year Global FRP Aluminum Consumption (million tonnes)



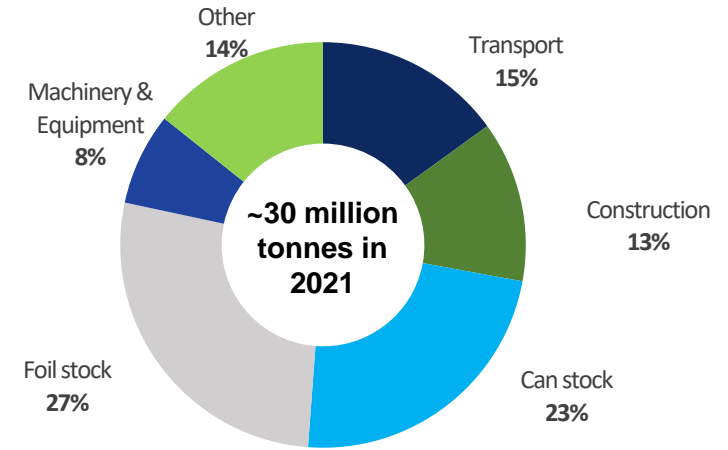
Global FRP market grew over 80% in 15 years to ~30MT in 2021

Forecast to grow ~6% in 2022 vs 2021 to 31.6MT

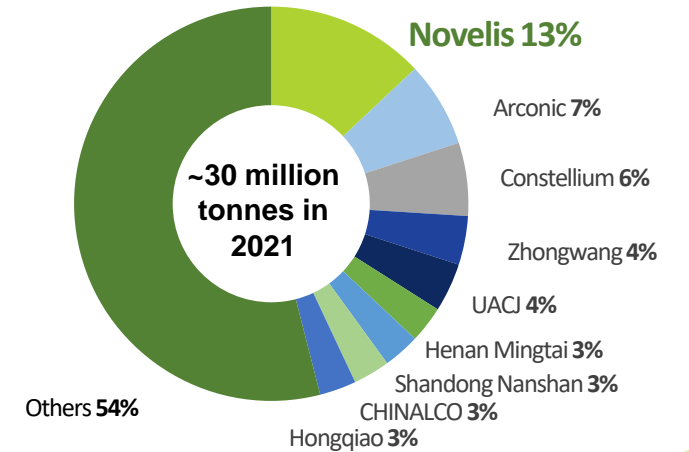
Robust growth forecast in all end-markets
Novelis participates: Can, Automotive, Specialty & Aerospace

Novelis has the leadership position in a diverse & growing market

Global FRP Aluminum 2021 Consumption



Global FRP Aluminum 2021 Production



Source: CRU February 2022 Flat Rolled Products Aluminum Outlook

Global FRP Leader in Beverage Can Sheet

Maintaining **global leadership position** as world's largest aluminium recycler and largest supplier of beverage can sheets

North America

Strong customer demand and preference for domestic supply drives urgency for capacity expansion

Europe

Demand remains strong as market remains relatively in balance

South America

Novelis new capacity to meet growing market demand driven by material substitution to aluminum

Asia

Growing market with significant improvement in pricing due to ex-China market tightness, while also supplementing North America via direct sales and imports

75%+

Recycled Can Content

40%

Global market share (2021 ex-China)

58%

of Novelis FRP shipment portfolio is Bev Can



Maintain Recycling and Sustainability Leadership



Partner of Choice to support growth



Leverage Global Footprint to Maximize Regional Results



Sustainability, Innovation, & Digital Collaborations

Strong Beverage Packaging Market

Global demand for can stock forecasted to increase 4% by CAGR 2028 mainly driven by Sustainability trends

Can market strongly supported by growth in beverage markets and substitution against glass and PET

New products such as energy drinks, hard seltzers and mixed cocktails support growth with further potential in CSDs and water

Can Makers And Fillers Seek Growth Through Innovation, Partnerships And Acquisitions



In early 2021, Coca-Cola launched its first alcoholic beverage, Topo-Chico



Ball recently announced a \$383m facility to support Red Bull

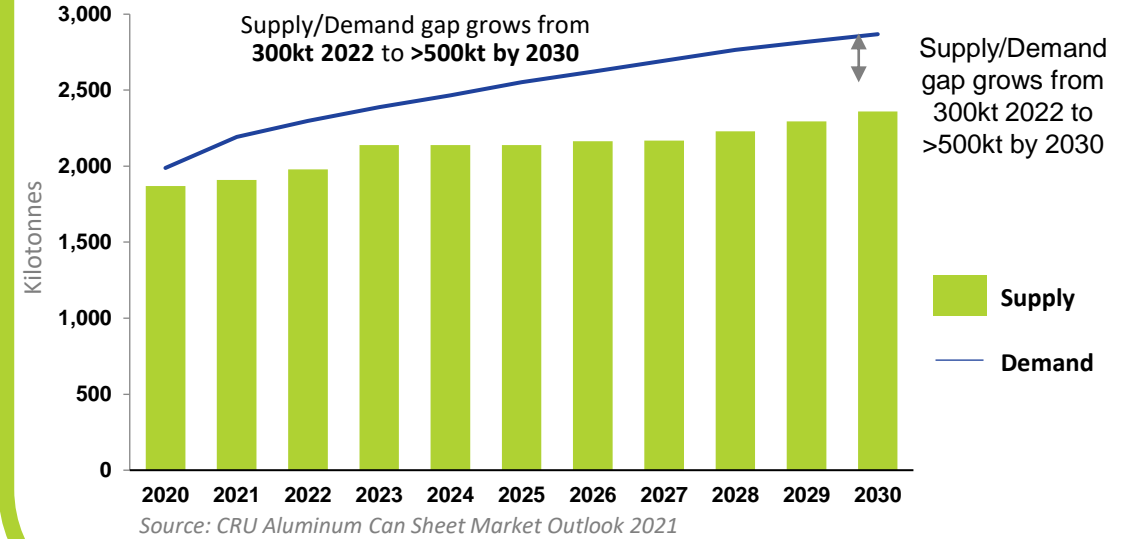


In 2018, Anheuser Busch established the Beyond Beer Business Unit to focus on new growth categories

North American can makers have invested \$4.1 bn since 2018 on new capacity requiring +680kt of additional can sheet

Domestic supply preferred can makers prefer reliable, logistically sustainable domestic supply over imports

North America Can Sheet Market Supply/Demand Imbalance



Sustainability push is driving corporations to adopt aluminum and commit to reducing virgin PET usage



Sustain 100% recyclable packaging by 2025

Reduce virgin plastic content by 20% by 2025

≥50% recycled material by 2030

Collect and recycle a bottle/can for each sold by 2030



PEPSICO

100% recyclable/ compostable/ biodegradable by 2025

Reduce virgin plastic content by 35% 2025

25% recycled content (33% for PET bottles) by 2025

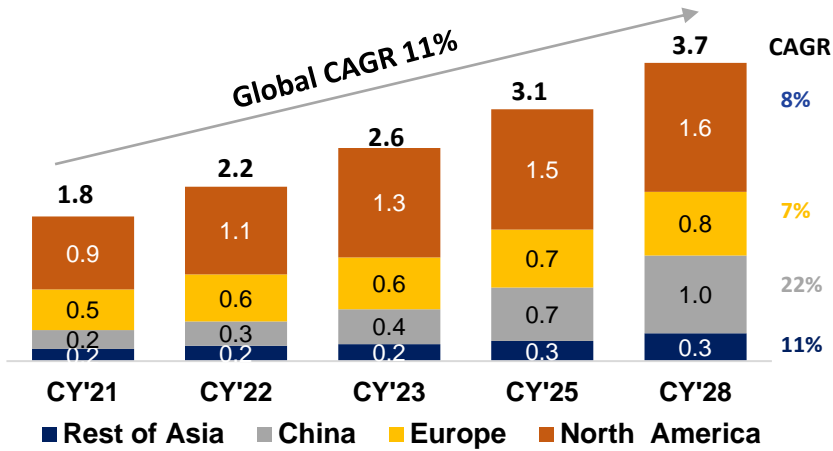
Robust long-term growth rates in Auto Body Sheet

COVID and semi-conductor shortage not systemic to future automobile demand; production volumes to recover quickly to satisfy pent-up replacement demand

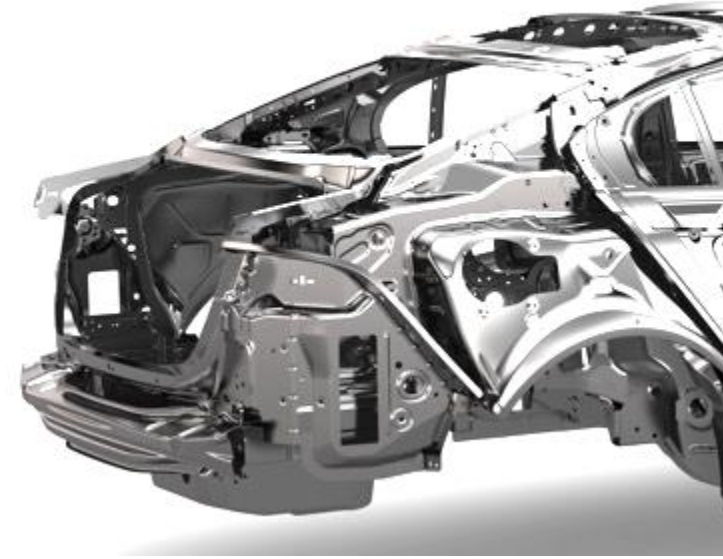
Stringent global tail pipe emissions and incentives to promote switch to electrification will drive higher aluminum content in vehicles and new systems like battery enclosures

Manufacturers make material choices to meet tougher performance requirements and achieve lower LCA through recycling strategies and low CO2 materials

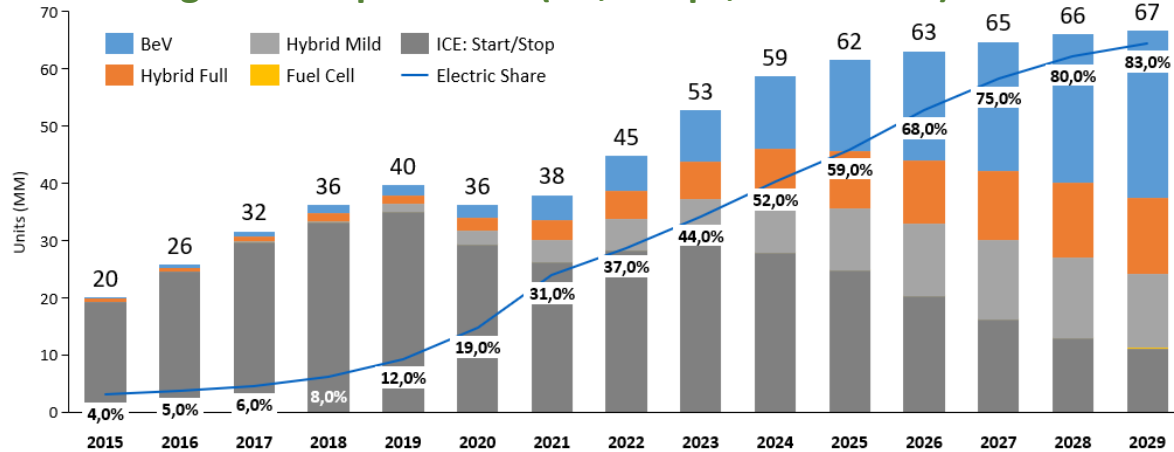
Global Automotive Aluminium FRP Demand (MT)



Source: Ducker Frontier April 2020

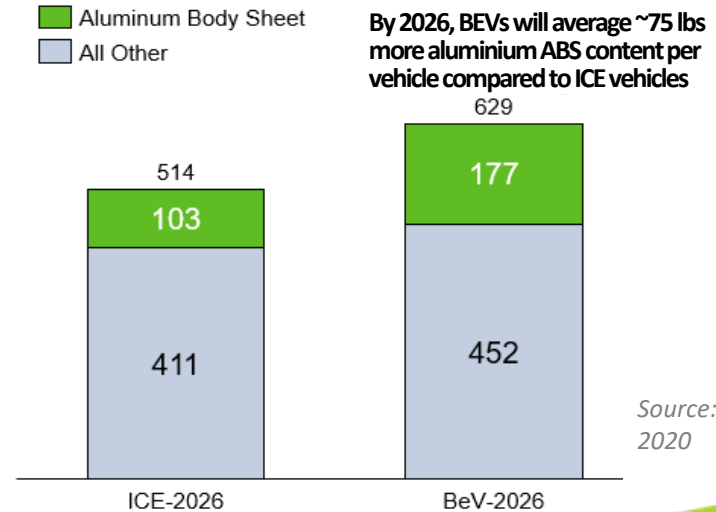


Global light vehicle production (NA, Europe, Greater Asia) million units



Source: IHS February 21, 2022 Alternative Propulsion Production Forecast

Aluminum Pounds per Vehicle



Source: Ducker Frontier April 2020

Opportunities across Specialties Markets

Novelis Specialties Portfolio is Diverse & High-End Focused

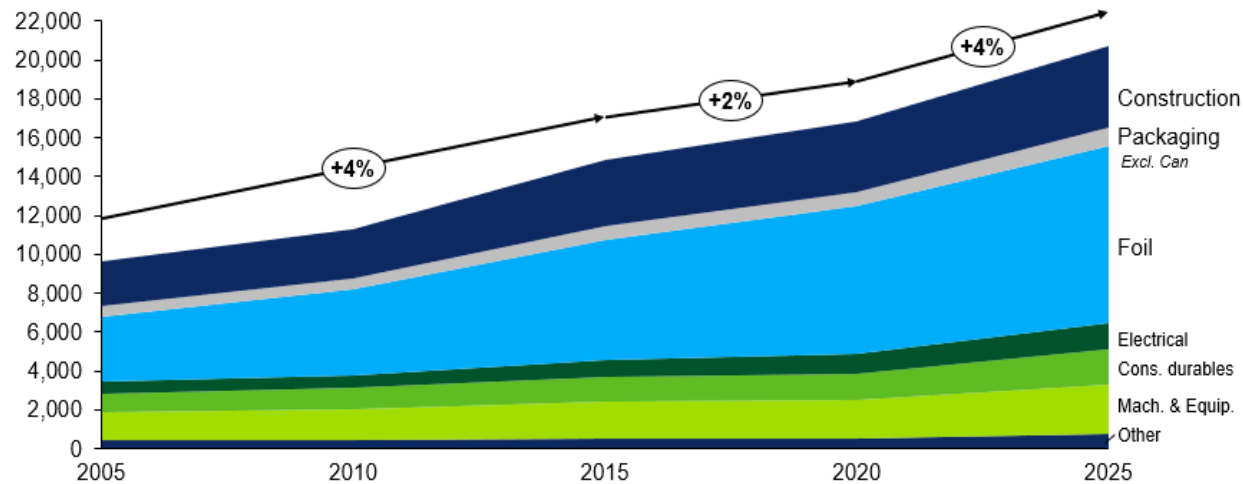
Flexible capabilities enable portfolio optimization

Strong demand & favorable trade case dynamics support pricing

Consumer demand for sustainable products driving Innovation with high-recycled content alloys



Global Specialties Markets Demand (kt)



Source: CRU February 2022 Flat Rolled Products Aluminum Outlook



Building & Construction benefits from pent-up demand for US single-family housing driving high housing starts; remodel market also continuing to grow

Thick Gauge



Transportation/Commercial Truck conversion to lightweight aluminum, high backlog levels, growing medium-duty van production



Electronics & Batteries growth in EV/ESS batteries and electronic displays

Light Gauge



Container & Foil Packaging demand due to consumer sustainability demands in coffee capsule & container packaging



Automotive fin stock benefitting from shift to sustainable products & EVs

Recovering Aerospace Market

Global coordination, regional execution

Novelis Aerospace Portfolio and Manufacturing Sites

Koblenz, Germany

Zhenjiang, China

1. Plate Products

2. Contoured plates & wingskins

3. Sheet Products

4. Special Surface Quality Sheet

Commercial plate helps manage cyclicity in aerospace; strong demand leading to pricing power

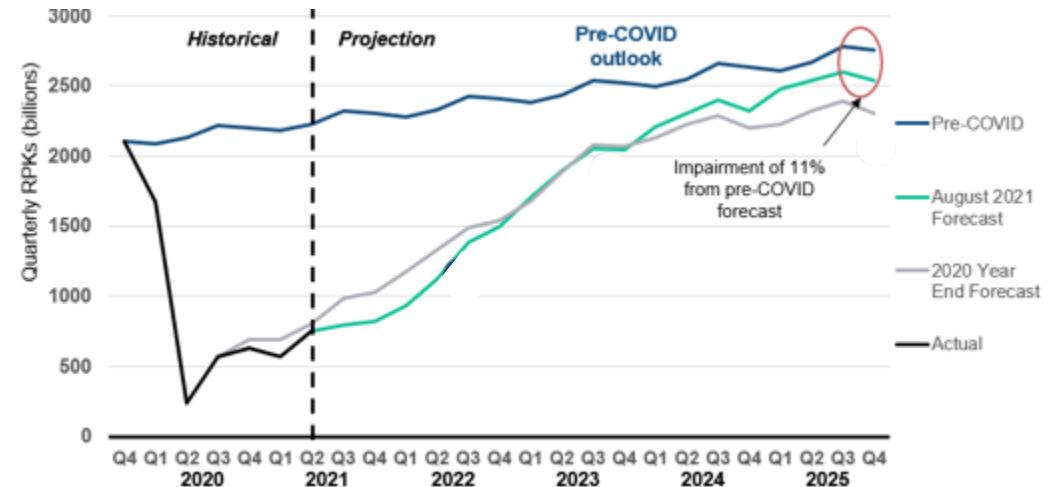
Aerospace market is shifting toward Asia as China and India becoming increasingly important for all OEMs

Leverage recycling experience in the industry to establish closed loop and increase recycled content

Local-for-local desire a competitive advantage for Novelis with Zhenjiang, China plant



Improved Air Travel Recovery Projections



Source : AeroDynamic Advisory, August 2021

Moderate recovery for Aero changed into rapid recovery during FY22 driven by rapid improvement in domestic, regional & business jet market

Single aisle planes recovering even faster as domestic travel outpaces intercontinental



• **Novelis**

Updates on Growth Capex

Transformational Investments Phase I (FY11-18)

Adding global FRP rolling & recycling capacity, and expanding automotive

Novelis invested over **\$2 billion strategic growth capex** in a transformational investment period between Fiscal 2011-2016

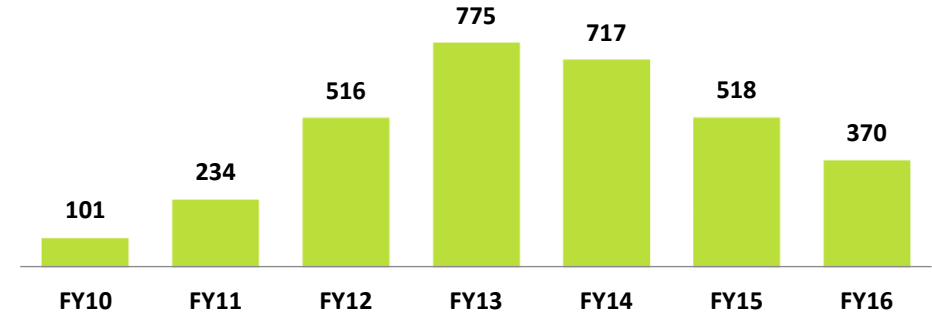
Expanded Cold Rolling and Recycling capacity in Pinda, Brazil

Expanded Hot & Cold Rolling and Recycling capacity in Ulsan & Yeongju, South Korea

Built world's largest aluminum recycling center in Nacterstedt, Germany

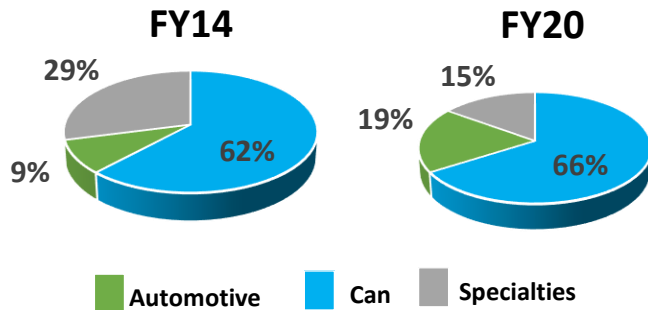
Became world leader in Automotive Aluminum FRP, adding 500kt of new finishing capacity in the US, Germany and China

Total Capital Expenditure (\$ mn)



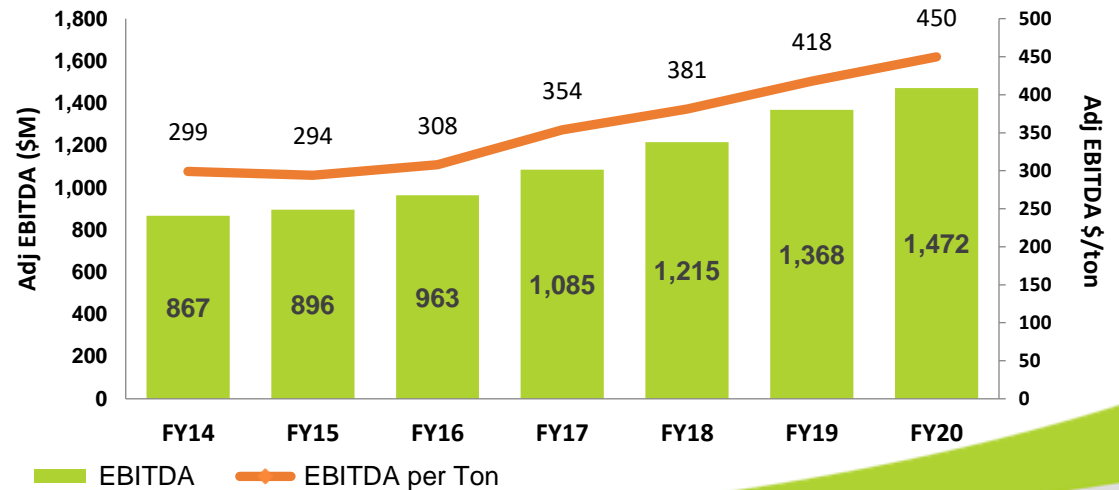
Delivering successful results | FY14 vis-à-vis FY20

Expanded Automotive Portfolio



Figures are legacy Novelis as reported

Adj. EBITDA Evolution



Adj. EBITDA
\$867 mn → \$1.5 bn

Shipments
2,896kt → 3,273kt

Recycled Content
46% → 59%



Transformational Investments Phase II (FY19-22)

Organic and Inorganic Investment in Capacity & Diversification

Recently Completed Organic Projects	Region	Capacity (Kt)	Project Cost (US\$)	Status
Automotive Finishing Lines, Kentucky	US	200	\$315 mn	In Production
Automotive Finishing Lines, Changzhou	China	100	\$180 mn	In Production
Rolling, Casting & Recycling, Pinda	Brazil	100	\$160 mn	In Production
TOTAL Completed CapEx FY19-22			\$655 mn	

Inorganic Acquisition of Aleris



Acquired global aluminum flat rolled producer, Aleris, in April 2020 for \$2.8 billion

Strong strategic rationale for transaction

Diversify product portfolio with entry into high-value aerospace

Fully integrate automotive business in Asia

Enhances sustainability focus with high recycled content B&C business

Strong financial profile and synergy value capture

Investment Opportunities (FY23-27)

Facilitated by Stable Cashflows and Reduced Leverage

Identified Projects	Location	Primary Product Markets Supported	Capacity (Kt)	Cost (US\$)	Expected completion
North America				\$3.0 Bn	
Hot mill debottlenecking & automotive upgrades	Oswego, US	Specialties, Auto	124	\$130 mn	FY2024
Recycling expansion & upgrades	Greensboro, US	Can	30	\$30 mn	FY2023
State-of-the art Automotive Recycling & Casting Centre	Guthrie, US	Auto	240	\$365 mn	FY2026
<i>Under Appraisal : Fully Integrated Greenfield Rolling & Recycling Mill</i>	<i>US</i>	<i>Can, Auto</i>	<i>600</i>	<i>\$2.5 bn</i>	<i>FY2026</i>
Asia				\$0.4 Bn	
Integrated cold mill and closed loop recycling	Zhenjiang, China	Auto	200	\$375 mn	FY2026
Recycling and Casting Centre at UAL	UAL, S. Korea	All	100	\$50 mn	FY2026
<i>Under Appraisal: Brownfield rolling capacity</i>	<i>S. Korea</i>	<i>Can</i>	<i>50</i>	<i>\$20-30 mn</i>	<i>Est. FY2024</i>
Europe				\$0.3-0.4 Bn	
<i>Under Appraisal: Brownfield rolling capacity</i>	<i>Germany</i>	<i>Can</i>	<i>200</i>	<i>\$200-\$300 mn</i>	<i>Est. FY2026</i>
<i>Under Appraisal: Brownfield recycling capacity</i>	<i>Germany</i>	<i>Automotive</i>	<i>150</i>	<i>\$100-\$150 mn</i>	<i>Est. FY2027</i>
South America				\$0.8-0.9 Bn	
Rolling Debottlenecking	Pinda, Brazil	Can	70	\$50 mn	FY2024
<i>Under Appraisal: Brownfield rolling & Recycling capacity</i>	<i>Brazil</i>	<i>Can</i>	<i>450</i>	<i>\$800mn-\$1.0 bn</i>	<i>Est. FY2027</i>
			TOTAL	\$4.5-4.8 Bn	

US Rolling Mill Capacity Addition - Strategic Rationale



Step-change in global **can market growth** driven by macro trends and validated by can maker investments



Customers willingness to commit volume, price and terms that support investment



Seize **first mover advantage** and support customer growth ambitions in North America



Leverage **successful track record** in recycling, quality and innovation to add capacity and maintain market leadership



Highly-profitable automotive business contributes significantly to the investment rationale despite just a minority allocation of the capacity generated

New Recycling & Casting Centers in US & South Korea

\$365 million investment in Guthrie, Kentucky



Reduces Novelis' carbon emissions by **one million tons** annually

Adds **240kt** automotive-focused sheet ingot capacity

Advanced sorting technology and expanded automotive closed loop recycling

\$50 million investment in Ulsan, South Korea



Reduces carbon emissions by 420k tons per year

Annual casting capacity ~100kt

Automotive Aluminium Recycling Process

The Ultimate Aim:
A Circular Business Model for Aluminium



Novelis | Projected Capacity Evolution

Phase 2 completed investments now in production

Pinda, Brazil, rolling & recycling

Automotive finishing in China and Guthrie

Rolling & integrated plant expansions

China, US, and other expansions under appraisal

Recycling & Sustainability related projects

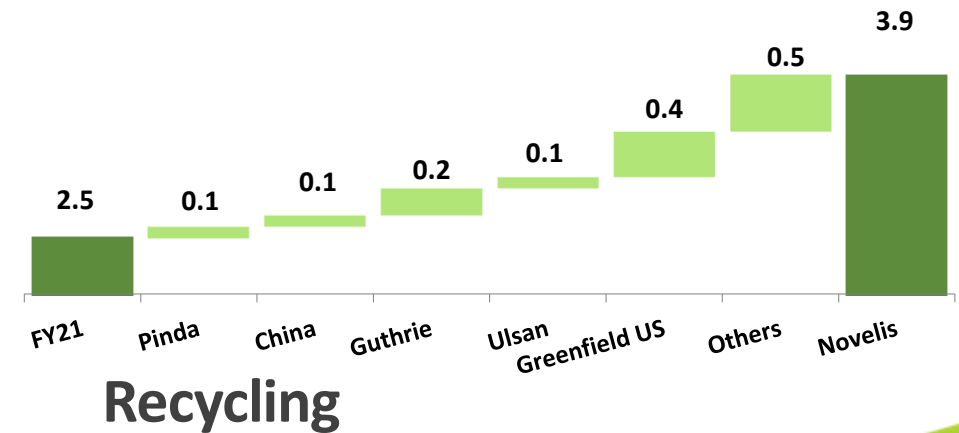
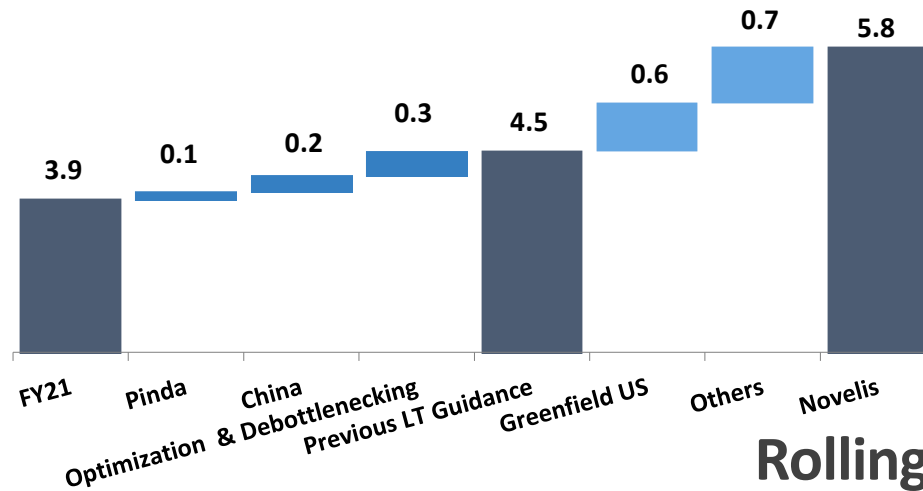
US, China, South Korea, and other expansions under appraisal

Digital, EHS, Reliability and Quality and Other Optimization projects

Digitalization and World Class Manufacturing programs to create Plant of the Future

Multiple large and smaller projects aiming to improve the safety of the production operations, focused on bringing legacy Aleris plants in compliance with Novelis standards

Directional Long-Term Capacity Evolution (MT)



India Business Growth Strategy



- **Market Overview**

Business Segments – Indian Operations

Domestic Aluminium Consumption Expected to Double from ~4 MT in FY22 to ~8 MT in FY32



Building & Construction

Expected To be 3rd largest market in the World by FY32

Increase in urban housing demand, premium urban projects to further drive the demand

Applications: Door & windows, roofing, cladding, curtain walling/structural glazing, prefabricated buildings, hardware etc.



Transport/Automotive

Focus on light weighting and increasing share of EVs to further drive demand

Applications: Engine castings, power train parts, cylinder blocks & heads, alloy wheels, steering wheels, CMS etc.

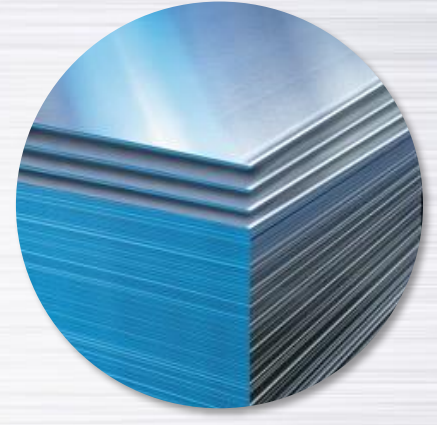


Packaging

Driven by growing pharmaceutical, liquor, food & beverage and FMCG industry

Ban on plastics; online food delivery to further drive the demand

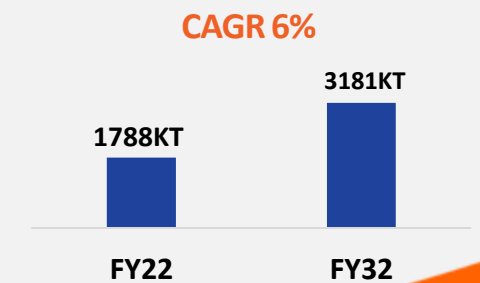
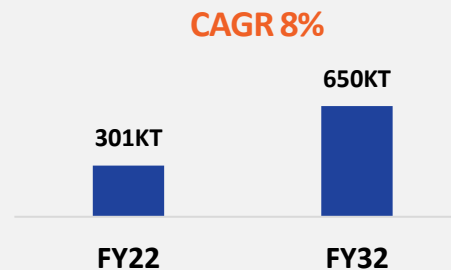
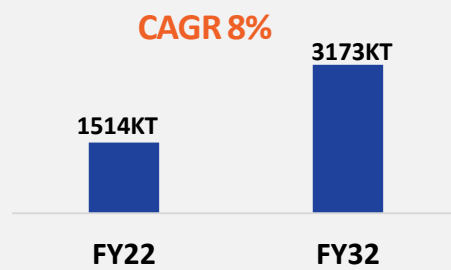
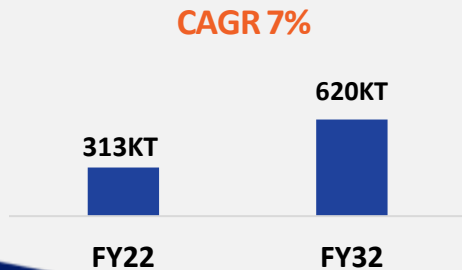
Applications: Foils (flexible, pharmaceutical, household foils, Semi Rigid Containers), closures/caps and cans for beverages.



Other

Other industries include Electrical, Consumer durable, Aluminium cookware, machinery and equipment, railways, ship & boat building

Applications: Wire, Frames & mounting structures for solar modules, cables / conductors, lugs, heat sinks, transformers, consumer durable, etc.



Source : CRISIL Research & Internal Estimates

Domestic Copper Consumption is expected to more than double in a decade



E-Mobility

India's focus is shifting towards EVs and in reducing emissions.

Applications: Electric motors, batteries, inverters, wiring and in charging stations



Urbanization & Smart Cities

GOI focus on infra investments in India

Applications: Wires & Cables, Pipes, tubing, and smart systems



IoT Enabled Industry

With growing population India's machinery sector will witness growth in heavy engineering and power equipment.

Applications: Electrical motors & sensors, electronics & cables



New Age Lifestyle

Industry is estimated to grow by a faster rate driven by growing population & increasing spending habits.

Applications: Copper tubes in ACs, Refrigerators, wiring systems, micro processors & copper alloys etc



Reliable Clean Energy Infra

Because of high conductivity & corrosion free nature, copper finds numerable applications in the utility industry

Applications: Renewable energy systems, T&D systems, and hydro/thermal power systems

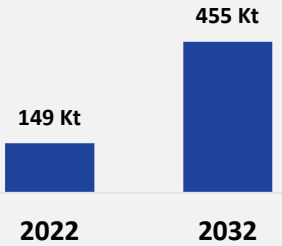


Others

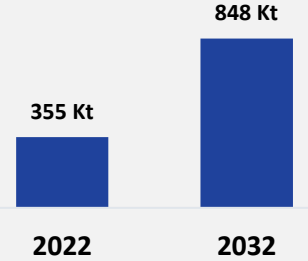
Other articles of Copper like kitchen ware, utensils, brass and other copper alloys.

Applications: Kitchenware/cookware, copper films/sheets, Copper Alloy articles

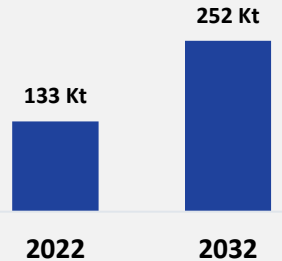
CAGR : 12%



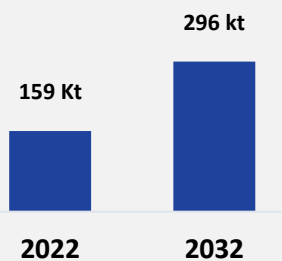
CAGR : 9%



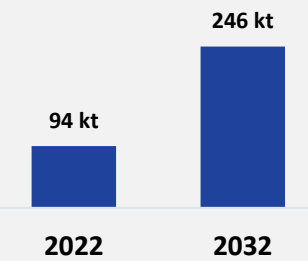
CAGR : 6%



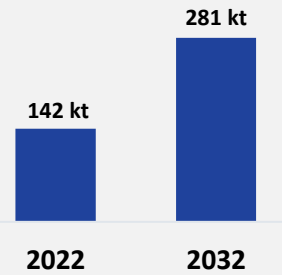
CAGR : 6%



CAGR : 10%



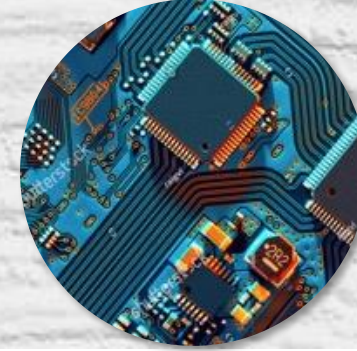
CAGR : 7%



Source: IBEF, Internal estimates



Global & Domestic Specialty Alumina Consumption



Advanced Ceramics & Catalyst

Increasing demand for high crystalline alumina and activated alumina products.

Driven by growing automotive and petrochemical industry.

Applications: Automotive, Defense, Chemical, Petrochemical, and Medical sectors.

Flame Retardants

Demand for specialty aluminium hydroxide is increasing due to stringent regulatory, fire and safety standards.

Applications: Wire & Cables, Electrical & Electronics, Transport and Building & constructions.

Refractories

Increase in global demand for high-quality refractories for cleaner steel manufacturing.

Urbanization development leading to the growth of cement consumption.

Applications: Steel Industry, Cement, Glass and non-ferrous.

Electronics

Increasing trends in miniaturization of consumer electronics.

Disruptive growth is expected in the EV vehicles segment.

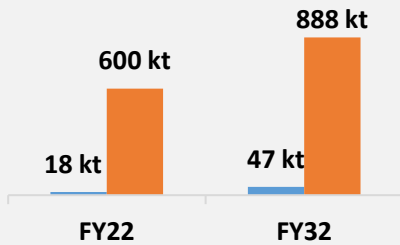
Applications: Automotive, Medical, Aerospace

Solid Surface

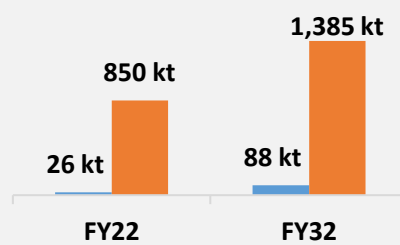
Industry is expected to grow at a faster rate due to rapid urbanization and increasing construction activities globally.

Applications: Building, Constructions, Home interiors and Countertops

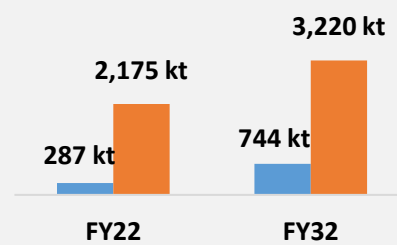
Global CAGR : 4%
Domestic CAGR : 10%



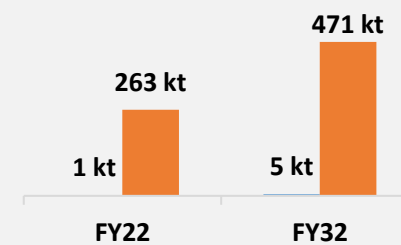
Global CAGR : 5%
Domestic CAGR : 13%



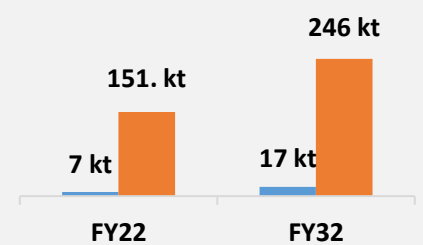
Global CAGR : 4%
Domestic CAGR : 10%



Global CAGR : 6%
Domestic CAGR : 18%



Global CAGR : 5%
Domestic CAGR : 9%



Source: IBEF, Hindalco estimates



- **India Business**
Updates on Growth Capex

India Business | Recent Acquisitions in VAP

Inorganic Projects	Products	Capacity	EV	Status
Ryker CCR	Copper CCR	225Kt	\$46 Mn	Completed
SAPA Extrusions	Aluminium Extrusions	15Kt	\$33 Mn	Completed
TOTAL		340 Kt	\$79 Mn	



India Business | Segment-wise Allocation of Growth Capex (FY23-27)

Identified Projects	Plant/ Region	Capacity (Kt)	Estimated Cost (US\$)	Expected Year of Completion
Aluminium - Upstream			\$1.71 bn	
Alumina Expansion (via Debottlenecking)	Utkal	350	\$40 mn	FY2024
<i>Under Appraisal : Alumina Expansion (Greenfield)</i>	<i>Odisha</i>	<i>1000</i>	<i>\$850 mn</i>	<i>FY2026</i>
Brownfield Smelter Expansion (via Debottlenecking)	Aditya/Mahan	50	\$135 mn	FY2024
<i>Under Appraisal : Brownfield Smelter Expansion (with 3rd Party renewable power)</i>	<i>Aditya/Mahan</i>	<i>180</i>	<i>\$685 mn</i>	<i>FY2026</i>
Aluminium - Downstream			\$719 mn	
Extrusions	Silvassa	34	\$97 mn	FY2025
FRP –Casting & Cold Rolling	Aditya/ Hirakud	170	\$400 mn	FY2025
Coated AC Fins (under PLI)	Taloja	26	\$50 mn	FY2025
<i>Under Appraisal : Can Recycling</i>	<i>Aditya</i>	<i>100</i>	<i>\$67 mn</i>	<i>FY2027</i>
<i>Under Appraisal : Battery Foil Mill</i>	<i>Aditya</i>	<i>24</i>	<i>\$105 mn</i>	<i>FY2026</i>
Total Spends			\$2.43 bn	

India Business | Segment-wise Allocation of Growth Capex (FY23-27)

Identified Projects	Plant/ Region	Capacity (Kt)	Estimated Cost (US\$)	Expected Year of Completion
Copper Business			\$286 mn	
<i>Under Appraisal : Recycling + E-Waste</i>	TBD	100	\$220 mn	FY2025
Inner Grove Tubes (PLI Scheme) & Alloy Rods	Dahej	25	\$66 mn	FY2025
Speciality Alumina			\$194 mn	
Precipitate Hydrate & White Hydrate	Belagavi	60	\$45 mn	FY2025
Synthetic Aggregates (Fused & Tabular Alumina)	Aditya/TBD	90	\$55 mn	FY2025
<i>Under Appraisal : Other Specialty Alumina Products and Brownfield Expansions</i>	Belagavi/TBD	165	\$94 mn	FY2027
Energy			\$459 mn	
Chakla Coal Mine (For Mahan & Renukoot)	Odisha	4-4.5 MTPA	\$186 Mn	FY2025
Meenakshi Coal Mine (For Aditya & Hirakud)	Odisha	10-12 MTPA	\$273 Mn	FY2027
India Business Total Spends			\$3.37Bn	

India Business | Projected Capacity Evolution

Aluminium VAP (in KT)

VAP Projects

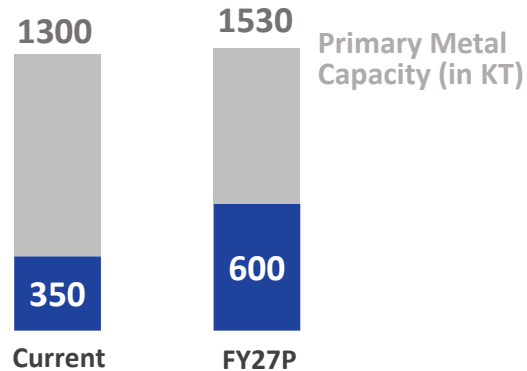
New Silvassa fully automated Extrusions facility (34Kt)

State-of-the-art Hirakud-Aditya FRP rolling mill (170Kt)

Acquisition of Hydro's high-end Extrusion facility (15Kt)

Coated AC Fins under PLI scheme (26kt)

Battery Foil Mill (24kt)

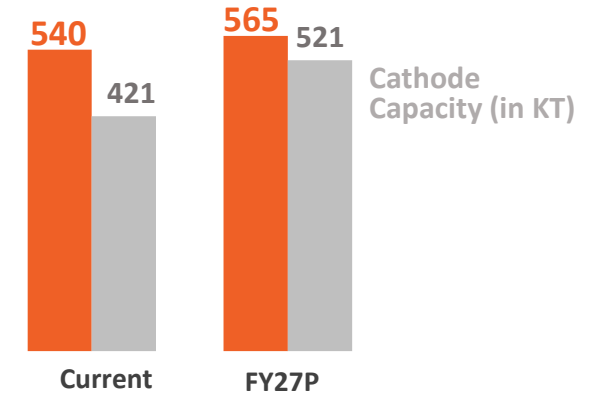


Copper VAP (in KT)

VAP Projects

Acquisition of Ryker Base, a wholly owned subsidiary of Polycab, a cast and rolled copper wire rods facility (225Kt)

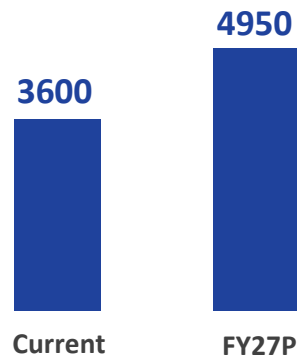
IGT and Alloy Rods (25Kt)



Alumina Capacity* (in KT)

Expansion Projects

Brownfield Expansion 350 Kt
Greenfield Expansion 1000 kt



Specialty Alumina VAP# (in KT)

VAP Projects

Precipitate Hydrate

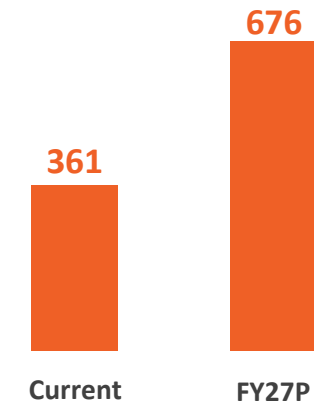
Fused Alumina

High Crystalline Alumina

Tabular Alumina

White Hydrate

Activated Alumina



*includes capacity for third party sales

#VAP includes speciality hydrates/alumina and other variants of special alumina for non metallurgical applications



Update on Sustainability

Our ESG initiatives to
create a sustainable
world together

Our commitment to



Continued Emphasis On Recycled Content
Net Carbon Neutrality By 2050
Zero Waste To Landfill By 2050
Water Positive In Mining Locations By 2050
No Net Loss On Biodiversity By 2050



Zero Harm-occupational Health And Safety
Diversity And Inclusion
Commitment To Community And Society
With Creation Of Sustainable Livelihoods
Human Rights Affirmation



Highest Level of Values & Transparency
Strict Adherence of Code Of Conduct
Best in class in Corporate Governance
Highest Levels of Information & Cybersecurity
Customer Centricity & Supplier centricity

The Sustainability Yearbook 2022

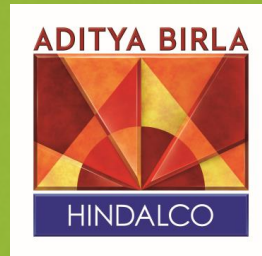


Sustainability Award
Gold Class 2022

S&P Global

ESG Score

73

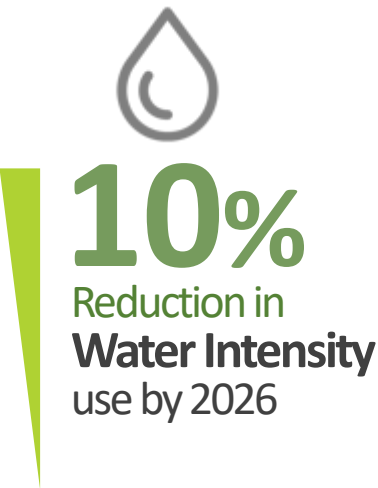
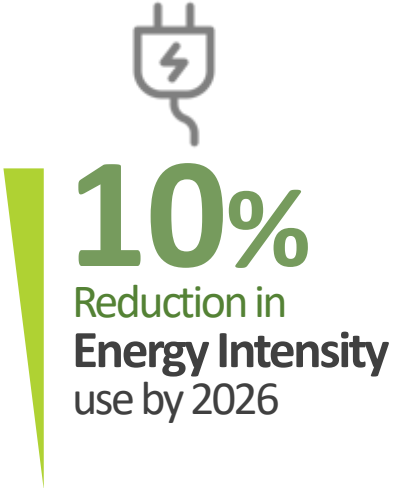
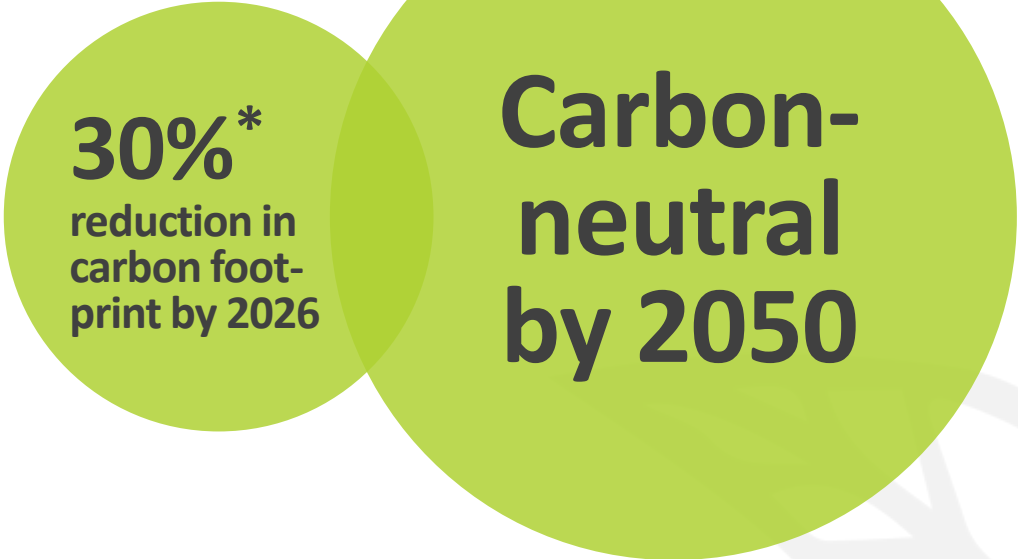


One of only 5 Indian
companies in the DJSI
World Index

Industry leader, ranked
no. 1 in the Materials
Sector – Aluminium

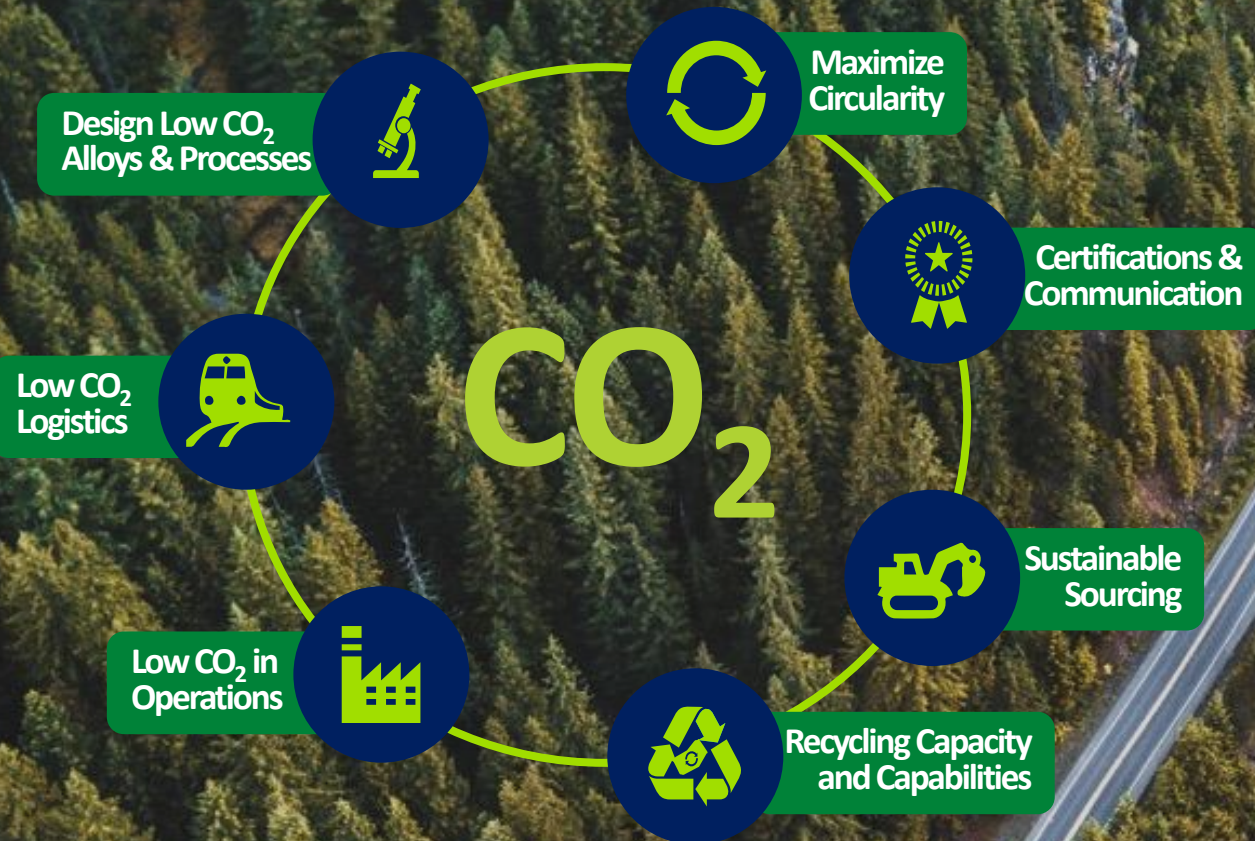
Novelis' ESG Ambitions

To be the world's leading provider of low-carbon, sustainable aluminium solutions that advance our business, industry, and society toward the benefits of a circular economy



**Includes Scopes 1-3 Greenhouse Gas Emissions and based on Fiscal Year 2016 Baseline*

Low-Carbon Action Plan



Recycling Capacity

Expanding recycling capacity through investments in every region



Low CO₂ in Operations

Established Net Zero Lab Valais at Sierre to develop Carbon-Neutral Solutions for Aluminum Manufacturing



Design Low CO₂ Alloys and Processes

RC alloy in Europe for Specialties



Maximize Circularity

Novelis is global leader in Closed Loop Recycling Systems



Certifications and communications

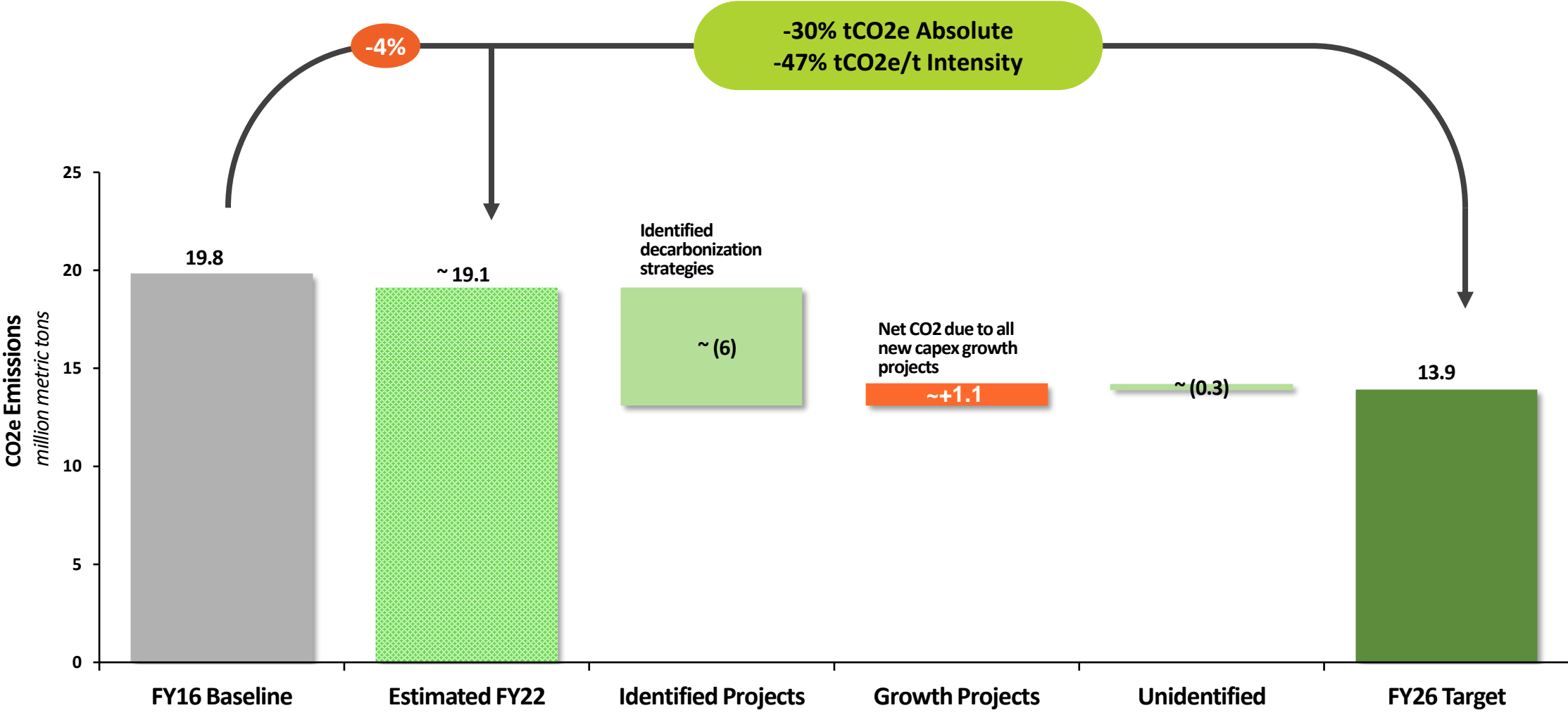
ASI certified at 14 plants; GreenCircle™ Certified high recycled content alloys for North America Specialties markets



Sustainable Sourcing

Balanced approach to sourcing lower carbon prime

Novelis : Decarbonization Progress and Roadmap



Sustainability at Hindalco | Awards in FY22



GreenPro Certification
for Eternia and Everlast product lines



India Green Manufacturing Challenge

Aditya Aluminum won **Gold** for Energy Conservation

Samri mine won **Silver**



ICAI-SRSB Silver Shield
for Integrated Report, New Entrant category



CII Appreciation Award
under Waste-3R category for the Belagavi and Aditya Aluminium plants



ASI Certification
for Mouda factory



Sustainable Corporate of the Year – Runner-Up
at the Frost & Sullivan and TERI Sustainability 4.0 Awards 2021

Journey Towards Net Zero Carbon

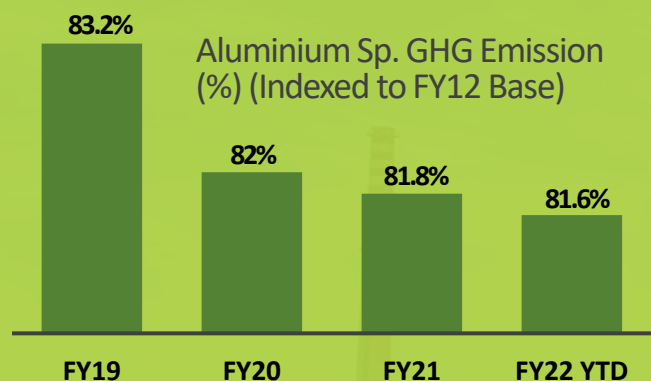
Efficiency Improvement

Aluminium Smelter

Continuous improvement through Innovation

Copper insert collector Bar, Magnetic Compensation, Cathode lining improvement etc.

Introduction of Digital twin



Renewables

Reached 100 MW (as Targeted) Installed Capacity in Q3-22
50 MW Solar capacity installed in this FY at Renukoot, Renusagar, Mahan, Mouda & Taloja

Under Execution

20 MW Renewable Hybrid (Solar + Wind) for Dahej
4 MW Biomass based power plus process steam for Belagavi

Under Finalisation

25 MW Floating Solar for Mahan & Aditya
10 MW Renewable Hybrid (Solar + Wind) for Belagavi
5 MW Wind Project for Taloja
Solar with Battery storage at Mines totaling 15 MW

Large Scale Renewable Hybrid (3rd Party)

Renewable Hybrid (Pumped Hydro) with CUF>85-90% for RTC power | **Planned 100-300 MW** for Aditya | **Connectivity to 400 KV Grid** taken up. Target completion Sep'23

Other Initiatives

Fuel Switching

Liquid Fuel to LNG & trial for 50% LNG in one Coal fired Boiler at Aditya (FY24)

Carbon Capture Storage & Utilisation (CCUS)

Pilot project being planned
Low cost capture Technologies being explored
Utilisation options being explored incl research work with IIT Bombay on Red mud neutralisation

Green Hydrogen

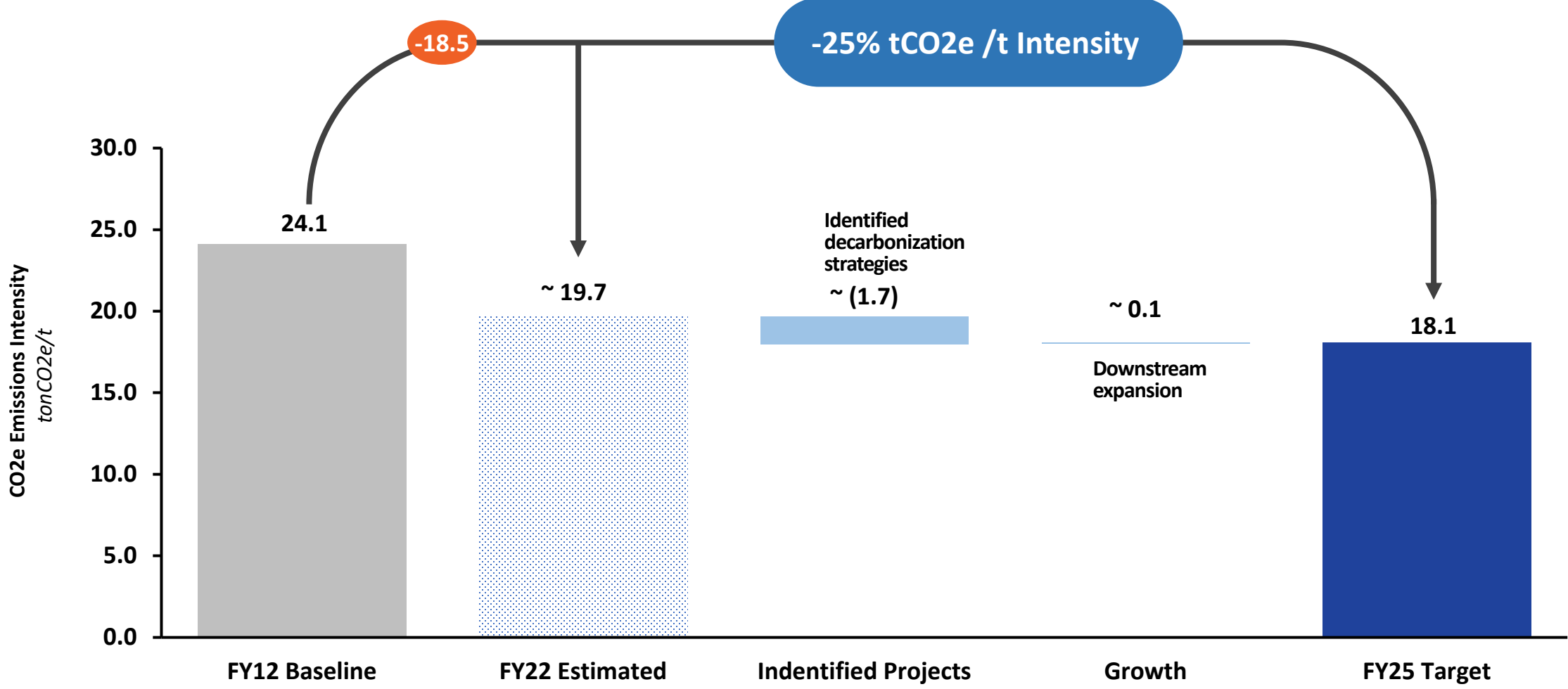
Keeping close watch on Technological advancement.
Green Hydrogen Policy issued by GOI recently.
Assessment for probable Green H2 ecosystem for HIL sites to be taken up

Biomass - Feasibility study to be taken up for Dahej

FY25 Target :
RE : 200 MW w/o storage) + 100 MW (w/storage)

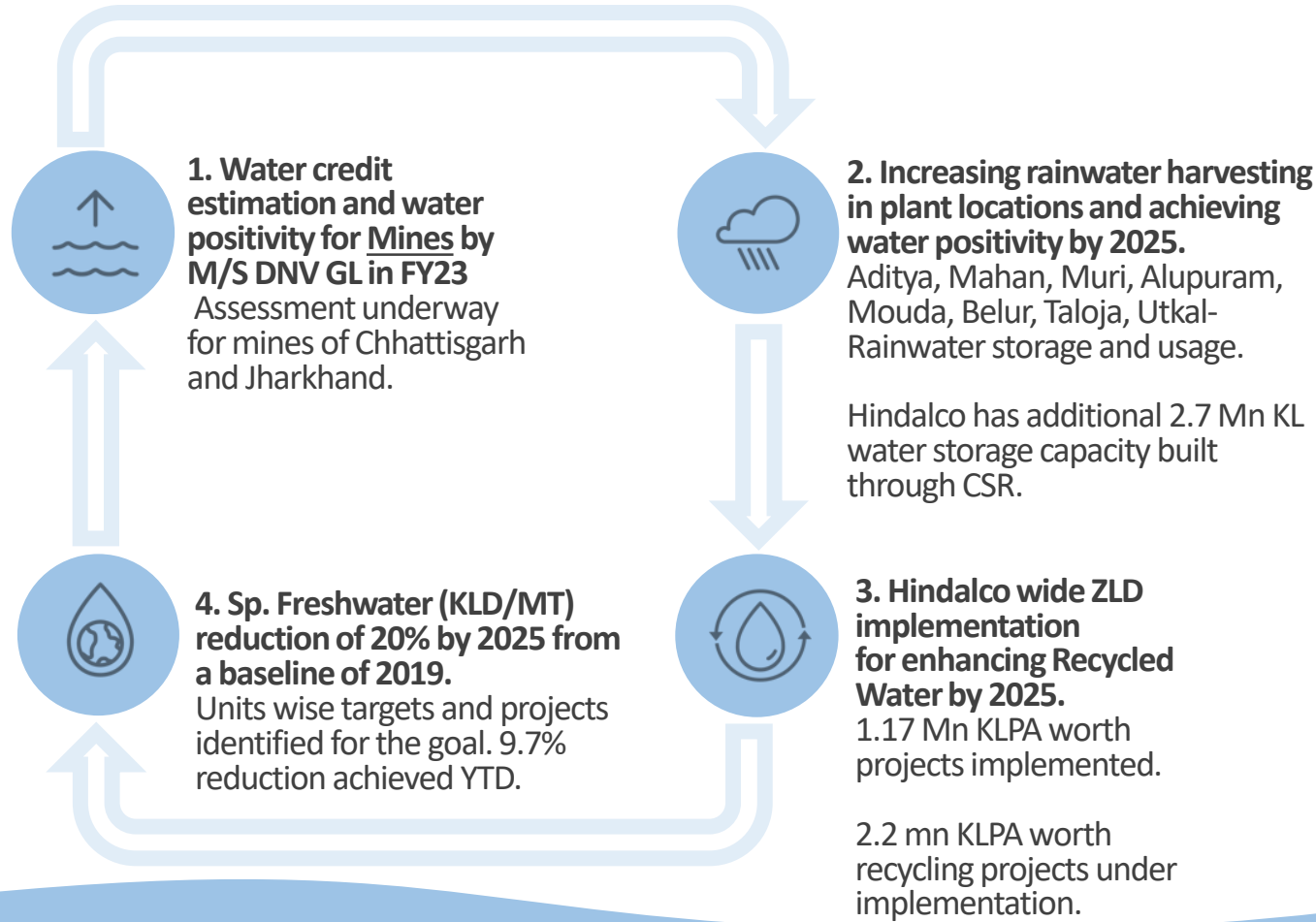
Hindalco : Decarbonization Progress and Roadmap

Primary Aluminum + Downstream

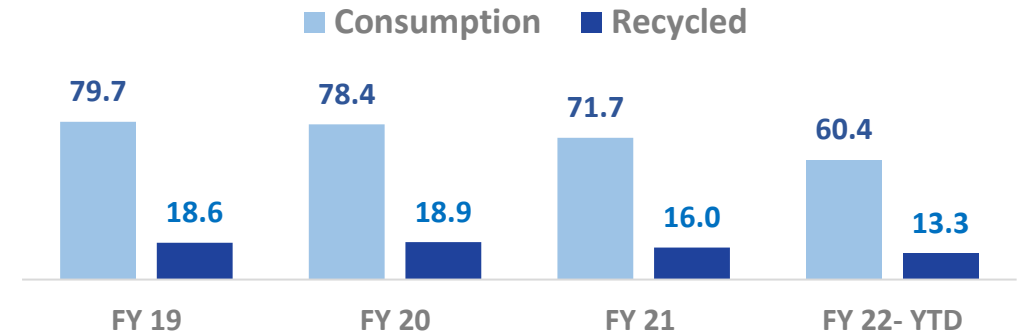


Water Positivity by 2050

Four Pronged Approach Towards Water Positivity



Water Consumed & Recycled (million m³)



FY22 Initiatives

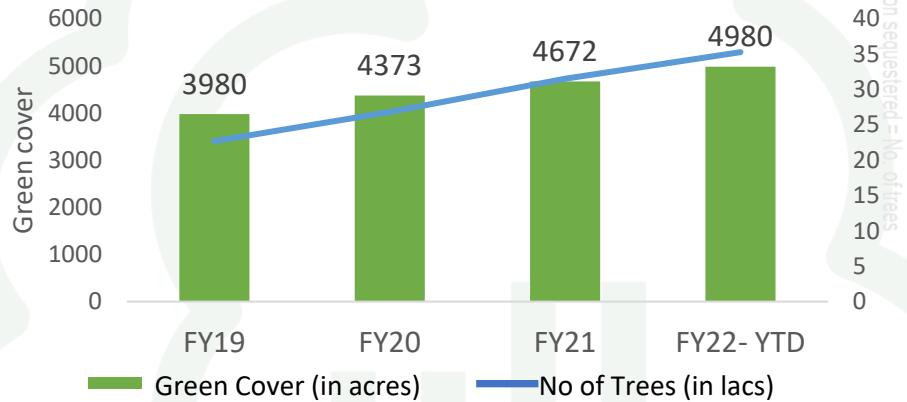
- Dahej TWRU (ZLD)** of 750 KLD unit ready for commissioning
- PWRP & cooled condensate recovery unit** at Renukoot of 4000 KLD
- Taloja ETP** project with Emulsion cracking unit and Electrocoagulation technology to be completed in Q4-FY22
- New STPs** are commissioned at Hirakud, Talaja and Alupuram. Hirakud has commissioned new ETP of 350 KLD.
- Renukoot** has assessed its groundwater recharge through CSR to be over 1.3 lakh KLPA.

Journey Towards No Net Loss on Biodiversity



BMP Implementation at Sites

GREEN COVER AND CARBON SEQUESTERED



FY22 Initiatives

Developed 4 BMP with 4 season study in partnership with IUCN and 4 more BMPs are under preparation for 9 mine leases.

Developed sustainable mining charter alongside with Xynteo with site wise KPIs and targets for implementation under seven thematic areas. The same has been appreciated by Indian Ministries and even the Prime Minister's office and now being looked into Nation wide implementation.

Greenbelt development is a regulatory requirement in India, in line with this Hindalco developed 10 greenbelt development plans with specific focus on native species of flora and fauna at the non-IUCN sites. Dahej Greenbelt is now being assessed for species diversity and carbon sequestration for a constant improvement.

Utkal Alumina

20% addition in number of species from FY 21 to FY 22.
Seed Collection from Local Forest to developed indigenous Species.
52 nest boxes installed in YTD FY22 .

Aditya Aluminium

28 New Species added from FY 21 to FY 22.
Butterfly conservation: 2000 SQM area developed in FY22.
25 nest boxes installed in YTD FY22 .

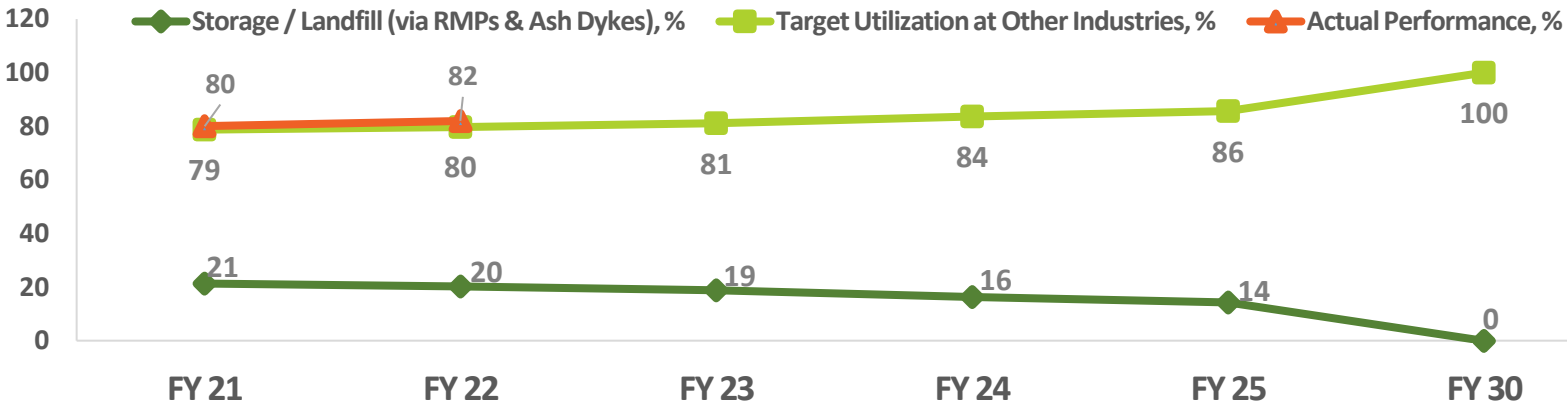
GarePalma

Increase in green cover area by 5.7% in FY 22.
10025 saplings planted 4 Ha in FY 21-22.
Offset efforts – 20 Ha under WADI Project (Outside boundary).

Baphlimali

50% addition in number of species from FY 20 to FY 22.
15 Ha of area for rehabilitation will be completed by FY22.
20 Ha of slope plantation will be completed by FY22 end.

Zero Waste to Landfill (ZWTL) by 2050 | Interim targets up to 2030



82% waste recycled/ reused from total waste generated in FY22 for various applications in line with our focus on value from waste for circular economy

Currently 20% is going to landfill; at this rate ZWTL shall be achieved by 2030

Hirakud FRP is now ZWTL site; Zero Landfill at Mouda, Taloja, Belur to be achieved in FY 23

Initiatives in FY22

Long Term Agreement with Cement Industries for Co-processing of wastes like Red Mud, Fly Ash, Pond Ash, Other Hazardous Waste

Collaborative Study with expert institutions like NEERI, IIT Mumbai, IIT BHU, JNARDDC, NMT, IMMT on

Development of new applications for wastes, SCM- supplementary cementitious materials

Development of composite/ value added products from multiple wastes, FGD waste

Suitability Study for Mine Backfilling for Bauxite Residue

Suitability Study for stone quarry backfilling with Fly Ash, Bauxite Residue and Composite

Extraction of valuables from Waste like Rare earths- project by Aluminium Association

Development of plastic-free packaging material, utilization of FGD waste for fertilizer and cement

Circular Economy | Waste Management

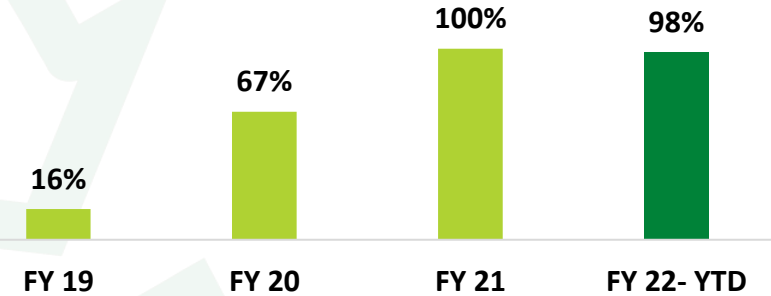
Bauxite Residue Recycling

98% of Bauxite Residue from three refineries is re-used in Cement making

Utkal refinery is conducting pilot projects for mines backfilling using 2 pilot pits spanning 50x50m; Pilot pit-one 1 is ready and pit-2 is under construction

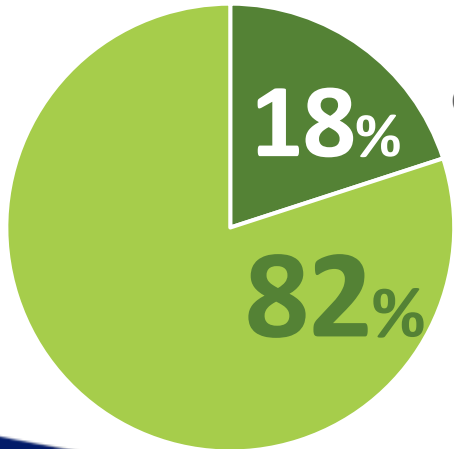
Applied to IRC (Indian Road Congress) for accreditation of bauxite residue as a replacement of natural material for road subgrade and embankment construction

Total Bauxite Residue (% Recycled from 3/4 Refineries)



Fly Ash Recycling

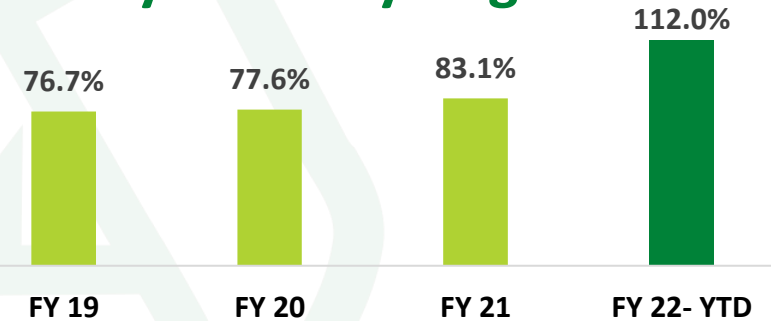
112% of Fly Ash from Power Plants and storages re-used in YTD-FY22



of waste goes for secured storage

of total waste recycled and reused in YTD-FY22

Fly Ash Recycling



Target to reduce landfill by 5% YoY

Shareholder Returns

Enhanced All Round Performance

**Consistent
Operational
Performance**

**Additional Returns
from Completed
Projects**

**Synergies
From Aleris
Acquisition**

**Supportive
Macros**

**Outstanding
Financial Results**

**Stable
Cash Flows**

**Reduced
Leverage**

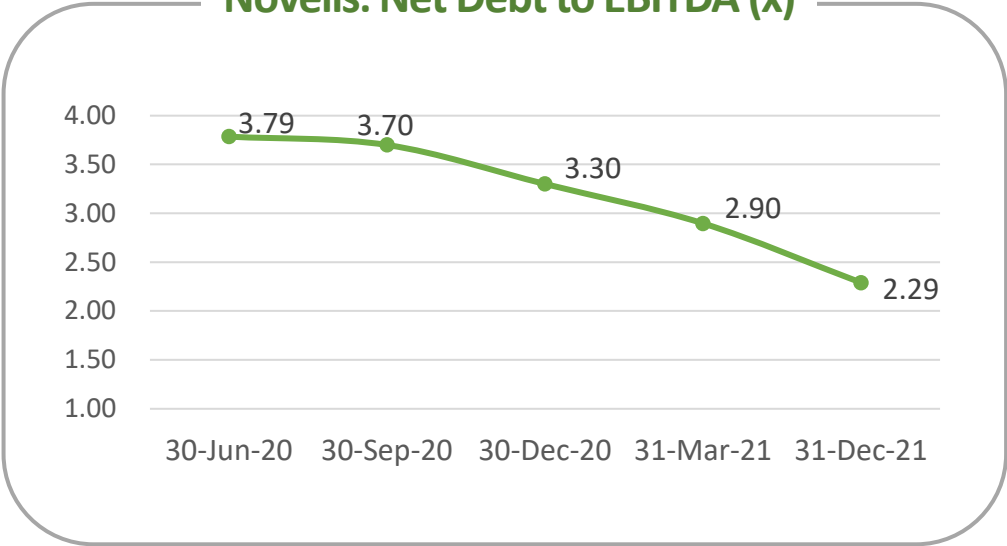
**Stronger
Balance Sheet**

**Improved
ROE and ROCE**

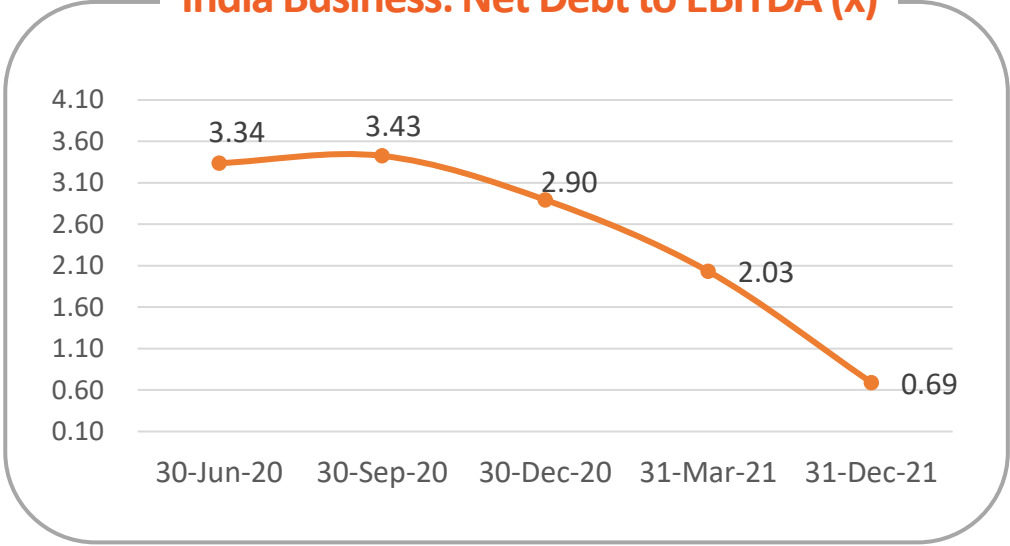
**Higher
Shareholder Returns**

Deleveraging Target Achieved

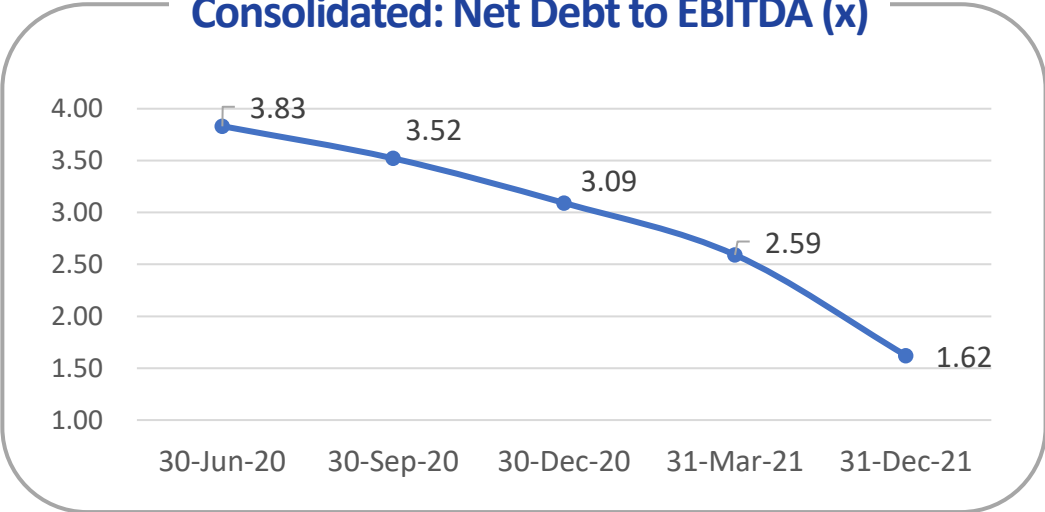
Novelis: Net Debt to EBITDA (x)



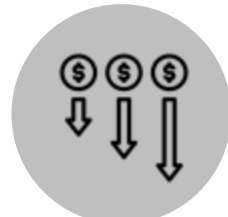
India Business: Net Debt to EBITDA (x)



Consolidated: Net Debt to EBITDA (x)



Broad Capital Allocation



Deleveraging targets achieved well ahead of time



Strong Balance Sheet – An enabler for sustainable growth



Enhanced focus on shareholder returns through profitable growth and optimum capital structure



Broad outlook on utilization of Cash Flow after meeting normal working capital & maintenance capex requirements:

Growth capex

~75%

Net Debt Reduction

~15%

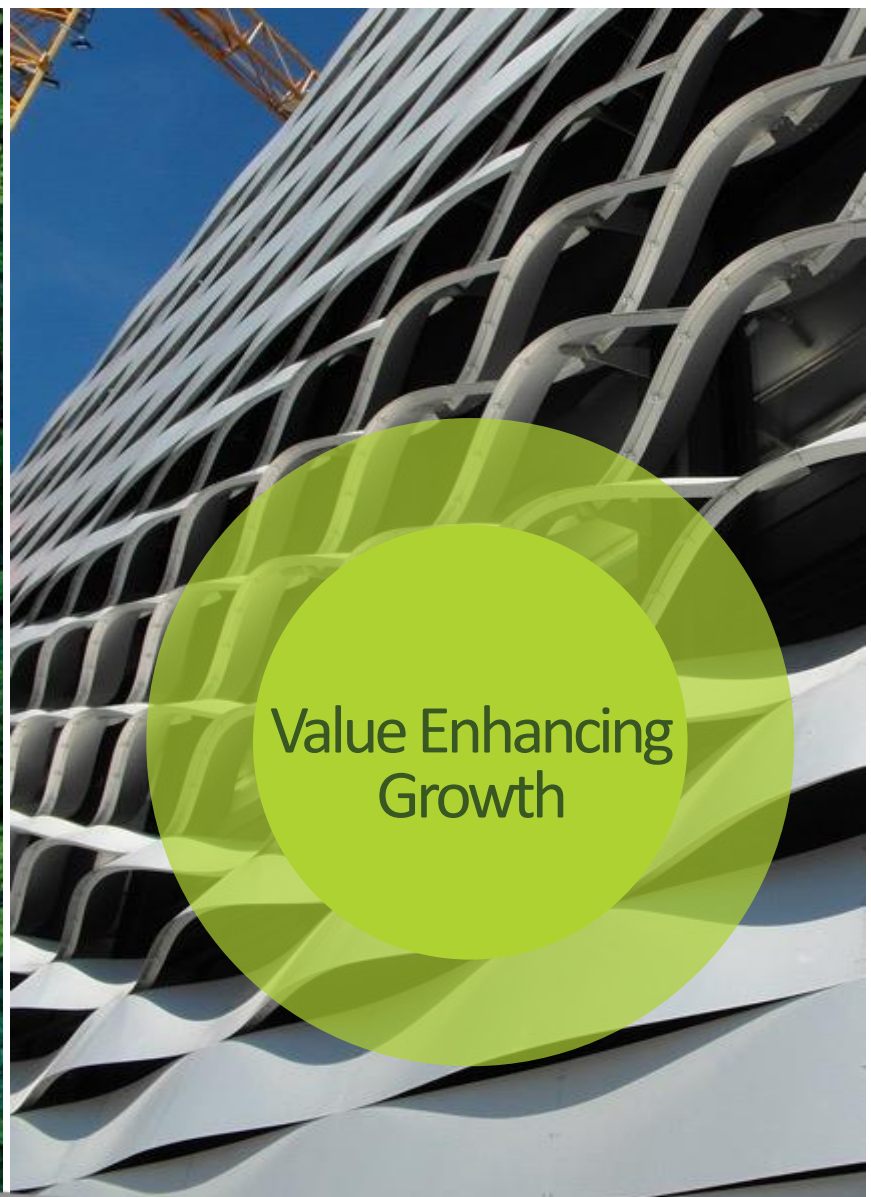
Amount available for Shareholder Returns

~8-10%

Summary | Shareholder Value Creation through



ESG commitments to become 'the Industry Leader in Sustainability'



Value Enhancing Growth



Portfolio Enrichment



Thank You

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Annexures

Air Emissions | Flue Gas Desulphurization (FGD) installation for DeSOXing

● **Installing one unit of pilot FGD** at Mahan, Aditya and Renusagar locations

● **DeSox-** Installing automatic lime feeding system for lime dosing at Hirakud & Muri

● **Mahan and Aditya will use Semi dry tech** from Black and Welch, first time in India with less water consumption. Renusagar is using catalyst based tech from WL Gore, US; first time in large scale globally.

● **Tendering for 1 unit of FGD** at Utkal in progress.

● **~₹400.00 crore committed** and another ₹2500 crore to be committed for DESOX.

● **DENOX pilots-** Mahan & Aditya have already been completed- two different technologies

FGD unit erection at Mahan



Pilot Study on Mine Backfilling with Red Mud & Eco Restoration of Mine Voids

Pit number 1 ready for backfilling, Pit number 2 under design with IIT and NEERI as designers



Breakthrough Technology for SPL (Spend Potline) Waste Recycling and Re-use Crusher

in collaboration with M/s Geocycle



Copper Inner Groove Tubes (IGT): Domestic IGT market is expected to grow to 53 KT by FY29



Atma Nirbhar Bharat

Building Domestic Capabilities to reduce dependency on Imports to become self-sufficient



Increasing Urbanization

Growing urbanization (34% in FY21 to 38% in FY30), and nuclearization driving AC demand



Increasing Per Capita Income

Increase in per-capita income is expected to increase investment on luxury products like ACs



Low Penetration

Current household penetration is ~5% in India compared to 30% global.

Domestic IGT market demand is largely driven by more than 90% consumption by the AC industry.

Currently, Domestic AC manufacturing capacity around 10 million units with an additional capacity of ~5 million units coming in next 5 years boosting IGT demand

Currently, entire IGT demand in India is met through imports, IGT market potential to reach 53 Kt by FY2029 from 23 Kt in FY22

Domestic demand of IGT is expected to grow at a CAGR (FY22-FY29) of around 11% with growing domestic AC market and recent ban of imports of Refrigerated Gas by the Govt of India.

Domestic IGT Market (KT)

