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.
Contents

1. About Us
2. Our Growth Strategy
3. Update on Sustainability
4. Shareholder Returns
5. Broad Capital Allocation
6. Summary

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

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

Revenue (FY21)
USD 18 bn

EBITDA (FY21)
USD 2.6 bn

Novelis | Largest aluminum FRP producer and recycler in the world
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 Kusnacht, 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

TTM FRP Shipments by Product Market
- **Automotive** 17%
- **Aerospace** 2%
- **Specialty** 23%
- **Beverage Packaging** 58%
- **North America** 37%
- **Europe** 27%
- **Asia** 20%
- **South America** 16%

TTM FRP Shipments by Geography
- **Global** 3,854kt
  - **North America** 37%
  - **Europe** 27%
  - **Asia** 20%
  - **South America** 16%

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

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

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

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

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

North America Can Sheet Market Supply/Demand Imbalance

Supply/Demand gap grows from 300kt 2022 to >500kt by 2030

Source: CRU Aluminum Can Sheet Market Outlook 2021

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

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

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

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

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

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

Coca-Cola

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% by 2025

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

Robust long-term growth rates in Auto Body Sheet

By 2026, BEVs will average ~75 lbs more aluminium ABS content per vehicle compared to ICE vehicles

Source: Ducker Frontier April 2020

Source: IHS February 21, 2022 Alternative Propulsion Production Forecast
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

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

Global Specialties Markets Demand (kt)

Source: CRU February 2022 Flat Rolled Products Aluminum Outlook
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 cyclicality 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

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

Source: AeroDynamic Advisory, August 2021
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

Delivering successful results | FY14 vis-à-vis FY20

Adj. EBITDA
$867 mn → $1.5 bn

Shipments
2,896kt → 3,273kt

Recycled Content
46% → 59%

Figures are legacy Novelis as reported
## Recently Completed Organic Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Region</th>
<th>Capacity (Kt)</th>
<th>Project Cost (US$)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Finishing Lines, Kentucky</td>
<td>US</td>
<td>200</td>
<td>$315 mn</td>
<td>In Production</td>
</tr>
<tr>
<td>Automotive Finishing Lines, Changzhou</td>
<td>China</td>
<td>100</td>
<td>$180 mn</td>
<td>In Production</td>
</tr>
<tr>
<td>Rolling, Casting &amp; Recycling, Pinda</td>
<td>Brazil</td>
<td>100</td>
<td>$160 mn</td>
<td>In Production</td>
</tr>
</tbody>
</table>

**TOTAL Completed CapEx FY19-22**: $655 mn

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### 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

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

- Adds 240kt automotive-focused sheet ingot capacity
- Advanced sorting technology and expanded automotive closed loop recycling
- Reduces Novelis’ carbon emissions by one million tons annually

$50 million investment in Ulsan, South Korea

- Reduces carbon emissions by 420k tons per year
- Annual casting capacity ~100kt

Automotive Aluminium Recycling Process
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

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**Directional Long-Term Capacity Evolution (MT)**

**Rolling**

- **FY21**
  - Pinda Optimization
  - China Debottlenecking
  - Previous LT Guidance
  - Greenfield US
  - Others
  - Novelis

- **Recycling**
  - **FY21**
    - Pinda Greenfield US
    - China Greenfield US
    - Guthrie Greenfield US
    - Others
    - Novelis

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21
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

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 & Domestic Specialty Alumina Consumption

<table>
<thead>
<tr>
<th></th>
<th>FY22</th>
<th>FY32</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced Ceramics &amp; Catalyst</strong></td>
<td>600 kt</td>
<td>888 kt</td>
</tr>
<tr>
<td><strong>Flame Retardants</strong></td>
<td>850 kt</td>
<td>1,385 kt</td>
</tr>
<tr>
<td><strong>Refractories</strong></td>
<td>2,175 kt</td>
<td>3,220 kt</td>
</tr>
<tr>
<td><strong>Electronics</strong></td>
<td>263 kt</td>
<td>471 kt</td>
</tr>
<tr>
<td><strong>Solid Surface</strong></td>
<td>151 kt</td>
<td>246 kt</td>
</tr>
</tbody>
</table>

**Source:** IBEF, Hindalco estimates

**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%
India Business

Updates on Growth Capex
## Inorganic Projects

<table>
<thead>
<tr>
<th>Products</th>
<th>Capacity</th>
<th>EV</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper CCR</td>
<td>225Kt</td>
<td>$46 Mn</td>
<td>Completed</td>
</tr>
<tr>
<td>Aluminium Extrusions</td>
<td>15Kt</td>
<td>$33 Mn</td>
<td>Completed</td>
</tr>
</tbody>
</table>

| TOTAL               | 340 Kt   | $79 Mn |

**India Business | Recent Acquisitions in VAP**
## Identified Projects

<table>
<thead>
<tr>
<th>Identified Projects</th>
<th>Plant/ Region</th>
<th>Capacity (Kt)</th>
<th>Estimated Cost (US$)</th>
<th>Expected Year of Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aluminium - Upstream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumina Expansion (via Debottlenecking)</td>
<td>Utkal</td>
<td>350</td>
<td>$40 mn</td>
<td>FY2024</td>
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<tr>
<td>Under Appraisal : Alumina Expansion (Greenfield)</td>
<td>Odisha</td>
<td>1000</td>
<td>$850 mn</td>
<td>FY2026</td>
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<tr>
<td>Brownfield Smelter Expansion (via Debottlenecking)</td>
<td>Aditya/Mahan</td>
<td>50</td>
<td>$135 mn</td>
<td>FY2024</td>
</tr>
<tr>
<td>Under Appraisal : Brownfield Smelter Expansion (with 3rd Party renewable power)</td>
<td>Aditya/Mahan</td>
<td>180</td>
<td>$685 mn</td>
<td>FY2026</td>
</tr>
<tr>
<td><strong>Aluminium - Downstream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrusions</td>
<td>Silvassa</td>
<td>34</td>
<td>$97 mn</td>
<td>FY2025</td>
</tr>
<tr>
<td>FRP –Casting &amp; Cold Rolling</td>
<td>Aditya/ Hirakud</td>
<td>170</td>
<td>$400 mn</td>
<td>FY2025</td>
</tr>
<tr>
<td>Coated AC Fins (under PLI)</td>
<td>Taloja</td>
<td>26</td>
<td>$50 mn</td>
<td>FY2025</td>
</tr>
<tr>
<td>Under Appraisal : Can Recycling</td>
<td>Aditya</td>
<td>100</td>
<td>$67 mn</td>
<td>FY2027</td>
</tr>
<tr>
<td>Under Appraisal : Battery Foil Mill</td>
<td>Aditya</td>
<td>24</td>
<td>$105 mn</td>
<td>FY2026</td>
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<tr>
<td><strong>Total Spends</strong></td>
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<tr>
<td><strong>$2.43 bn</strong></td>
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## India Business | Segment-wise Allocation of Growth Capex (FY23-27)

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

### Expansion Projects
- **Brownfield Expansion** 350 Kt
- **Greenfield Expansion** 1000 Kt

### Alumina Capacity* (in KT)

<table>
<thead>
<tr>
<th>Current</th>
<th>FY27P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Metal Capacity (in KT)</td>
<td>1300</td>
</tr>
<tr>
<td>350</td>
<td>600</td>
</tr>
</tbody>
</table>

*includes capacity for third party sales

## 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)

### Expansion Projects
- **Brownfield Expansion** 350 Kt
- **Greenfield Expansion** 1000 Kt

### Copper VAP Projects

<table>
<thead>
<tr>
<th>Current</th>
<th>FY27P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathode Capacity (in KT)</td>
<td>540</td>
</tr>
<tr>
<td>421</td>
<td>521</td>
</tr>
</tbody>
</table>

## Specialty Alumina VAP# (in KT)

**VAP Projects**
- **Precipitate** Hydrate
- **Fused** Alumina
- **High Crystalline Alumina**
- **Tabular** Alumina
- **White** Hydrate
- **Activated** Alumina

### Expansion Projects
- **350 Kt**
- **1000 Kt**

### Specialty Alumina VAP Projects

<table>
<thead>
<tr>
<th>Current</th>
<th>FY27P</th>
</tr>
</thead>
<tbody>
<tr>
<td>361</td>
<td>676</td>
</tr>
</tbody>
</table>

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

*includes capacity for third party sales
Update on Sustainability

Our ESG initiatives to create a sustainable world together
Our commitment to ESG

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.

30%* reduction in carbon footprint by 2026

Carbon-neutral by 2050

10% Reduction in Energy Intensity use by 2026

10% Reduction in Water Intensity use by 2026

20% Reduction in Waste to Landfill by 2026

*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

-30% tCO2e Absolute
-47% tCO2e/t Intensity

19.8
~ 19.1
~ (6)
~ +1.1
~ (0.3)
13.9

CO2e Emissions million metric tons

FY16 Baseline
Estimated FY22
Identified Projects
Growth Projects
Unidentified
FY26 Target

Identified decarbonization strategies
Net CO2 due to all new capex growth projects

-4%
Sustainability at Hindalco | Awards in FY22

GreenPro Certification for Eternia and Everlast product lines

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

ASI Certification for Mouda factory

India Green Manufacturing Challenge
Aditya Aluminum won Gold for Energy Conservation
Samri mine won Silver

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

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

Aluminium Sp. GHG Emission (%)(Indexed to FY12 Base)

- FY19: 83.2%
- FY20: 82%
- FY21: 81.8%
- FY22 YTD: 81.6%

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

CO$_2e$ Emissions Intensity (tonCO$_2e$/t)

- FY12 Baseline: 24.1
- FY22 Estimated: ~19.7
- Identified decarbonization strategies: ~1.7
- Downstream expansion: ~0.1
- FY25 Target: 18.1

-25% tCO$_2e$ /t Intensity

-18.5
Four Pronged Approach Towards Water Positivity

1. Water credit estimation and water positivity for Mines by M/S DNV GL in FY23 Assessment underway for mines of Chhattisgarh and Jharkhand.

2. Increasing rainwater harvesting in plant locations and achieving water positivity by 2025. Aditya, Mahan, Muri, Alupuram, Mouda, Belur, Taloja, Utkal-Rainwater storage and usage.

Hindalco has additional 2.7 Mn KL water storage capacity built through CSR.

3. Hindalco wide ZLD implementation for enhancing Recycled Water by 2025. 1.17 Mn KLP A worth projects implemented.

2.2 mn KLP A worth recycling projects under implementation.

4. Sp. Freshwater (KLD/MT) reduction of 20% by 2025 from a baseline of 2019. Units wise targets and projects identified for the goal. 9.7% reduction achieved YTD.

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, Taloja 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.

Water Consumed & Recycled (million m³)

<table>
<thead>
<tr>
<th></th>
<th>FY 19</th>
<th>FY 20</th>
<th>FY 21</th>
<th>FY 22 - YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption</td>
<td>79.7</td>
<td>78.4</td>
<td>71.7</td>
<td>60.4</td>
</tr>
<tr>
<td>Recycled</td>
<td>18.6</td>
<td>18.9</td>
<td>16.0</td>
<td>13.3</td>
</tr>
</tbody>
</table>

**Water Positivity by 2050**

Units: KLP A - Thousand liters per day, FY - Financial Year, ZLD - Zero Liquid Discharge, KLD - Thousand liters per day, KLP A - Thousand liters per annum.
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.

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.
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 FY23.

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

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 19</th>
<th>FY 20</th>
<th>FY 21</th>
<th>FY 22-YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bauxite Residue (%) Recycled from 3/4 Refineries</td>
<td>16%</td>
<td>67%</td>
<td>100%</td>
<td>98%</td>
</tr>
</tbody>
</table>

**Fly Ash Recycling**

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

- 18% of waste goes for secured storage
- 82% of total waste recycled and reused in YTD-FY22

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 19</th>
<th>FY 20</th>
<th>FY 21</th>
<th>FY 22-YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fly Ash Recycling (%)</td>
<td>76.7%</td>
<td>77.6%</td>
<td>83.1%</td>
<td>112.0%</td>
</tr>
</tbody>
</table>

**Total Bauxite Residue**

- FY 19: 16%
- FY 20: 67%
- FY 21: 100%
- FY 22-YTD: 98%

**Target to reduce landfill by 5% YoY**
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)**

- 30-Jun-20: 3.79
- 30-Sep-20: 3.70
- 30-Dec-20: 3.30
- 31-Mar-21: 2.90
- 31-Dec-21: 2.29

**India Business: Net Debt to EBITDA (x)**

- 30-Jun-20: 3.34
- 30-Sep-20: 3.43
- 30-Dec-20: 2.90
- 31-Mar-21: 2.03
- 31-Dec-21: 0.69

**Consolidated: Net Debt to EBITDA (x)**

- 30-Jun-20: 3.83
- 30-Sep-20: 3.52
- 30-Dec-20: 3.09
- 31-Mar-21: 2.59
- 31-Dec-21: 1.62
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%
ESG commitments to become ‘the Industry Leader in Sustainability’

Value Enhancing Growth

Portfolio Enrichment
Annexures
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 Weltch, 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
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.

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**Domestic IGT Market (KT)**

<table>
<thead>
<tr>
<th>FY</th>
<th>2015</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 22</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>FY 23</td>
<td>31</td>
<td>34</td>
</tr>
<tr>
<td>FY 24</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td>FY 25</td>
<td>47</td>
<td>53</td>
</tr>
</tbody>
</table>

CAGR 6% 14 20

CAGR 11% 23 28 31 34 38 42 47 53