
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of Earliest Event Reported): June 27, 2022

5E ADVANCED MATERIALS, INC.
(Exact Name of Registrant as Specified in Charter)

DELAWARE
(State or Other Jurisdiction
of Incorporation)

001-41279
(Commission
File Number)

87-3426517
(IRS Employer
Identification Number)

19500 STATE HIGHWAY 249, SUITE 125, HOUSTON, TEXAS 77070
(Address of Principal Executive Offices)
(Zip Code)

(346) 439-9656
(Registrant's Telephone Number, Including Area Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock	FEAM	Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01 Regulation FD Disclosure.

5E Advanced Materials, Inc. (the “Company”) has updated its investor presentation, a copy of which is furnished as Exhibit 99.1 hereto. The investor presentation will also be available on the Company’s website located at www.5eadvancedmaterials.com under the Investors tab in the Events and Presentations section. None of the other information on our website is incorporated by reference into, or a part of, this Current Report on Form 8-K.

The investor presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and as described in securities legislation in Australia and other jurisdictions. Forward-looking statements generally are identified by the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “may,” “could,” and other similar expressions, although not all forward-looking statements contain these identifying words. All forward-looking statements reflect a number of assumptions, which are subject to numerous risks and uncertainties many of which are beyond the control of 5E, and which may cause actual results to be materially different from those described in the forward-looking statements. These risks and uncertainties include, but are not limited to, our limited operating history in the borates industry with no revenue from our properties; our need for substantial additional financing to execute our business plan and our ability to access capital and the financial markets; our status as an exploration stage company with no known mineral reserves and the inherent uncertainty in estimates of mineral resources; risks and uncertainties relating to the development of the Fort Cady project; risks related to the demand for end use applications that require borates and related minerals and compounds that we expect to produce; risks related to compliance with environmental and regulatory requirements; unanticipated costs or delays associated with our Small-Scale Boron Facility; and the completion and outcome of future technical and economic studies related to our project. For additional information regarding these various risks and uncertainties, you should carefully review the risk factors and other disclosures in our amended Form 10 filed with the U.S. Securities and Exchange Commission (SEC) on March 7, 2022, and our Form 10-Q filed with the SEC on May 12, 2022. Additional risks are also disclosed by 5E in its filings with the Securities and Exchange Commission (SEC) throughout the year, including its Form 10-K, Form 10-Qs and Form 8-Ks, as well as in its filings under the Australian Securities Exchange. Any forward-looking statements are given only as of the date hereof. Except as required by law, 5E expressly disclaims any obligation to update or revise any such forward-looking statements.

The information referenced herein is being furnished pursuant to Item 7.01 of Form 8-K and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of such Section.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Number</u>	<u>Exhibit</u>
99.1	Investor Presentation
104	Cover Page Interactive Data File (embedded with the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

Date: June 28, 2022

5E ADVANCED MATERIALS, INC.

/s/ Paul Weibel

Paul Weibel

Chief Financial Officer



ADVANCED
MATERIALS

Corporate Presentation

Pursuing Global Decarbonization with **BORON⁺**

June 2022



Cautionary Statements



FORWARD-LOOKING STATEMENTS

The information in this Presentation includes “forward looking statements.” All statements other than statements of historical fact included in this Presentation regarding our business strategy, plans, goals and objectives are forward looking statements. When used in this Presentation, the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “budget,” “target,” “aim,” “strategy,” “estimate,” “plan,” “guidance,” “outlook,” “intend,” “may,” “should,” “could,” “will,” “would,” “will be,” “will continue,” “will likely result” and similar expressions are intended to identify forward looking statements, although not all forward looking statements contain such identifying words. These forward looking statements are based on 5E’s current expectations and assumptions about future events and are based on currently available information as to the outcome and timing of future events. We caution you that these forward looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond our control, incident to the extraction of the critical materials we intend to produce and advanced materials production and development. These risks include, but are not limited to: our limited operating history in the borates and lithium industries and no revenue from our proposed extraction operations at our properties; our need for substantial additional financing to execute our business plan and our ability to access capital and the financial markets; our status as an exploration stage company dependent on a single project with no known mineral reserves and the inherent uncertainty in estimates of mineral resources; our lack of history in mineral production and the significant risks associated with achieving our business strategies, including our downstream processing ambitions; our incurrence of significant net operating losses to date and plans to incur continued losses for the foreseeable future; risks and uncertainties relating to the development of the Fort Cady Project (“Fort Cady”), including our ability to timely and successfully complete our Small Scale-Boron Facility; and other risks. Should one or more of these risks or uncertainties occur, or should underlying assumptions prove incorrect, our actual results and plans could differ materially from those expressed in any forward looking statements. No representation or warranty (express or implied) is made as to, and no reliance should be placed on, any information, including projections, estimates, targets and opinions contained herein, and no liability whatsoever is accepted as to any errors, omissions or misstatements contained herein.

You are cautioned not to place undue reliance on any forward looking statements, which speak only as of the date of this Presentation. Except as otherwise required by applicable law, we disclaim any duty to update and do not intend to update any forward looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this Presentation.

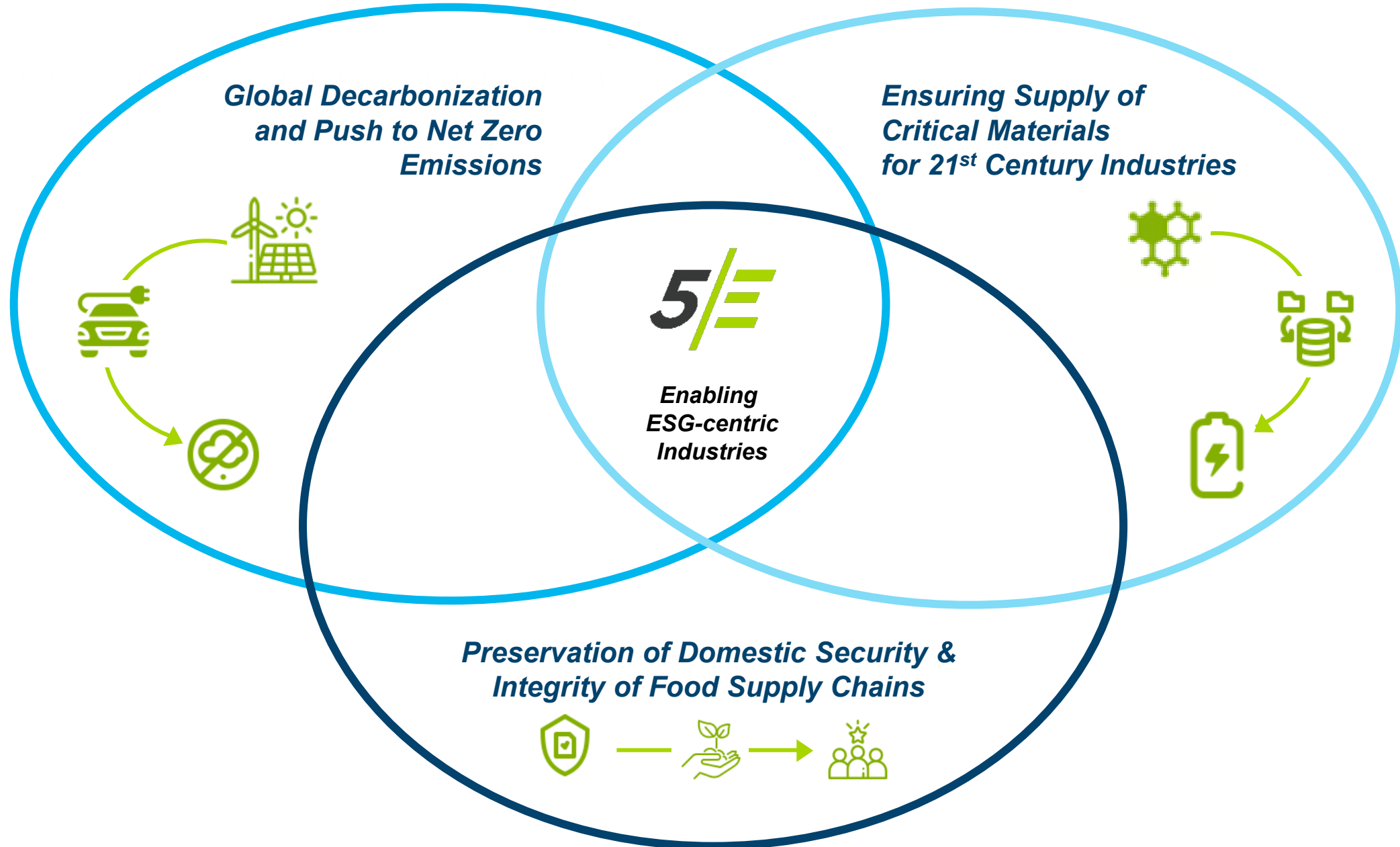
MARKET AND INDUSTRY DATA

This Presentation has been prepared by 5E and includes market data and other statistical information from third party sources, including independent industry publications, government publications or other published independent sources. Although 5E believes these third party sources are reliable as of their respective dates for the purposes used herein, neither the Company or any of its affiliates, directors, officers, employees, members, partners, shareholders or agents makes any representation or warranty with respect to the accuracy or completeness of such information. Although the Company believes the sources are reliable, it has not independently verified the accuracy or completeness of data from such sources. Some data is also based on 5E’s good faith estimates, which are derived from its review of internal sources as well as the third party sources described above. Additionally, descriptions herein of market conditions and opportunities are presented for informational purposes only there can be no assurance that such conditions will actually occur or result in positive returns.

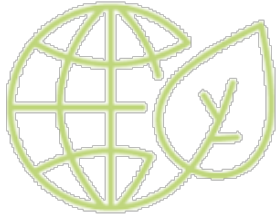
CAUTIONARY NOTE REGARDING RESERVES

Unless otherwise indicated, all mineral resource estimates included in this Presentation have been prepared in accordance with, and are based on the relevant definitions set forth in, the SEC’s Mining Disclosure Rules and Regulation S-K 1300 (each as defined below). Mining disclosure in the United States was previously required to comply with SEC Industry Guide 7 under the Exchange Act (“SEC Industry Guide 7”). In accordance with the SEC’s Final Rule 13-10570, Modernization of Property Disclosure for Mining Registrant, the SEC has adopted final rules, effective February 25, 2019, to replace SEC Industry Guide 7 with new mining disclosure rules (the “Mining Disclosure Rules”) under sub-part 1300 of Regulation S-K of the Securities Act of 1933, as amended (the “Securities Act”) (“Regulation S-K 1300”). Regulation S-K 1300 replaces the historical property disclosure requirements included in SEC Industry Guide 7. Regulation S-K 1300 uses the Committee for Mineral Reserves International Reporting Standards (“CRIRSCO”)-based classification system for mineral resources and mineral reserves and accordingly, under Regulation S-K 1300, the SEC now recognizes estimates of “Measured Mineral Resources,” “Indicated Mineral Resources” and “Inferred Mineral Resources,” and require SEC-registered mining companies to disclose in their SEC filings specified information concerning their mineral resources, in addition to mineral reserves. In addition, the SEC has amended its definitions of “Proven Mineral Reserves” and “Probable Mineral Reserves” to be substantially similar to international standards. The SEC Mining Disclosure Rules more closely align SEC disclosure requirements and policies for mining properties with current industry and global regulatory practices and standards, including the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, referred to as the “JORC Code.” While the SEC now recognizes “Measured Mineral Resources,” “Indicated Mineral Resources” and “Inferred Mineral Resources” under the SEC Mining Disclosure Rules, investors should not assume that any part or all of the mineral deposits in these categories will be converted into a higher category of mineral resources or into mineral reserves.

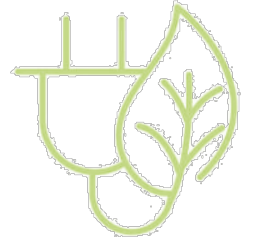
5E Sitting at the Crossroads of Major Emerging Themes



5E STRATEGIC VISION



Focused on becoming a **vertically integrated global leader** and supplier of boron specialty and advanced materials, complemented by lithium production capabilities



Our Plan

Commercialize our Fort Cady resource to secure boron and lithium supply, **build downstream value-add processing capabilities** and establish commercial partnerships

Our Impact

Pursue global decarbonization by developing innovative BORON+ applications, providing a **secure source of BORON+ advanced materials** to global supply chains, and supporting **food security**

We are in the Right Place, at the Right Time, with the Right Asset

BORON+ Fundamentals



Critical Material, Essential to Everyday Life

Advantaged elemental properties; essential across a wide range of applications with limited substitution



Enabler of Future ESG-centric Industries

Powering industries of the future with high end use applications including batteries, EVs and renewable energy infrastructure



Scarce Resource and Duopolistic Supply

85% of global supply controlled by two companies; downstream supply concentrated in China; governments taking action⁽¹⁾



Accelerating Demand Growth

Traditional and decarbonization-focused applications driving 10x consumption growth by 2050E creating undersupply scenario⁽²⁾

**Critical Material with
Significant Growth Potential**

Why 5E Advanced Materials



Rare and Large Resource Asset

Access to a rare boron and lithium resource; strategic U.S. location; Critical Infrastructure designation by U.S. government



Aiming to Build Vertically Integrated Model

Proposed differentiated model with a focus on access to inputs, downstream partnerships, and target intellectual property



Advancing Commercialization Plan

Key initial permits in place; targeting completion of SSBF construction around the end of CY 2022; proposed large-scale initial commercial production targeted for 2025



Experienced Leadership Team

Proven team with deep project execution and operational experience, including in advanced materials

**Differentiated Platform
and Opportunity**

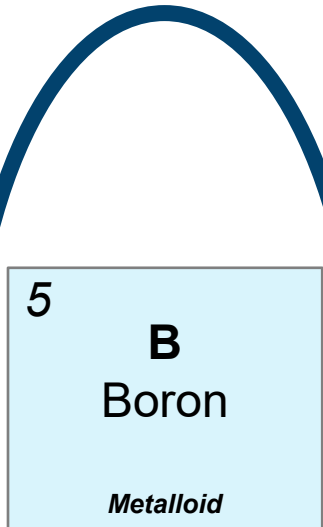
(1) U.S. Department of Energy establishment of the Critical Minerals Strategy, President of the United States executive order to ensure secure and reliable supplies of critical materials, and EU designation of boron as "high" critical status in their Critical Raw Materials for Strategic Technologies and Sectors policy.

(2) Per Credit Suisse equity research – upside demand case.

BORON+

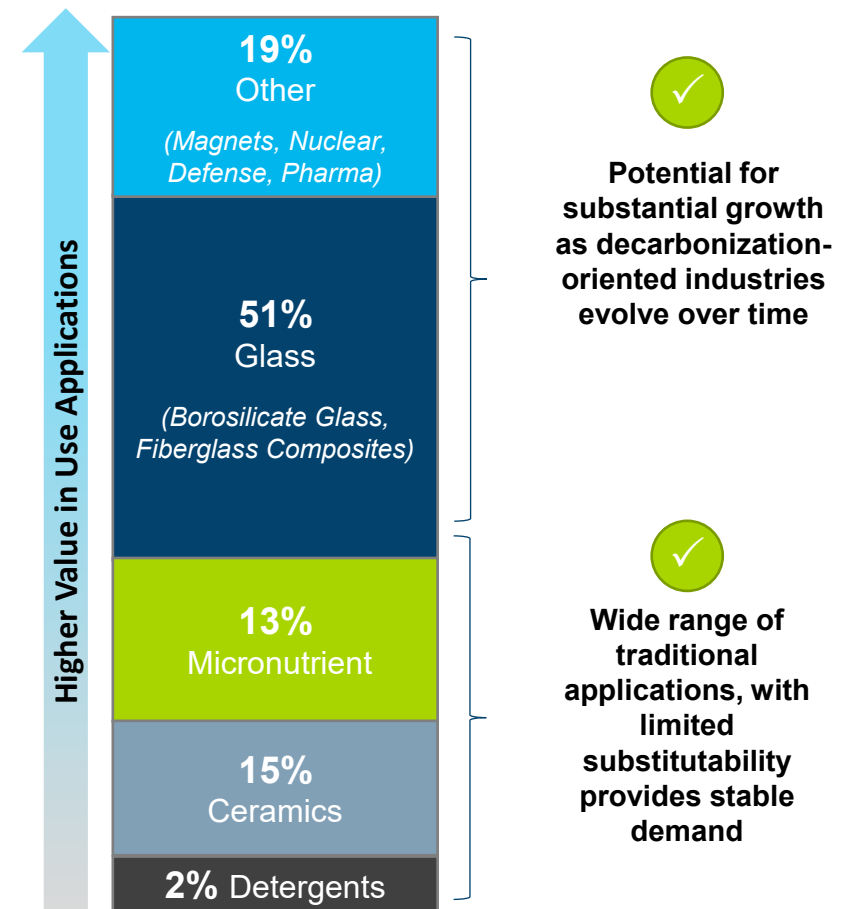
BORON+ Fundamentals

Superior Physical Properties Enhance Critical Applications



	Hardness	<i>Only Carbon (diamond) is harder than Boron composites</i>
	Light Weight	<i>5th lightest of all elements after Lithium and Beryllium</i>
	Heat Resistant	<i>Only 11 elements have higher melting points (3,771°F)</i>
	Anti-Microbial	<i>Boron clusters have anti-biofilm activity and are less prone to drug resistance</i>
	Corrosion Resistant	<i>Boron-infused metals and specialty ceramics reduce corrosion propensity</i>

Attractive Use Profile



Usage and Value in the Market Shifting Towards Future Facing Applications



Materials

Applications

Industrial-Oriented

\$

Ulexite



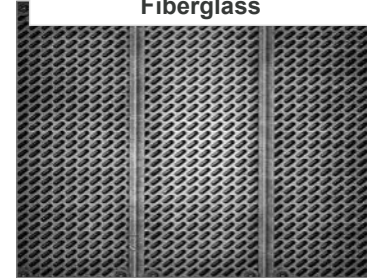
Colemanite



Micronutrients



Fiberglass



Ceramics



Value-Add Applications

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Boric Acid



Boron Oxide



Solar Glass



EV Magnets / Panels / Glass



Wind Turbine Blades



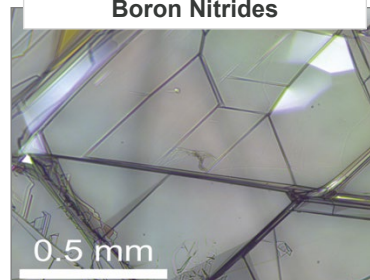
Specialized End Uses

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Boron Carbides



Boron Nitrides



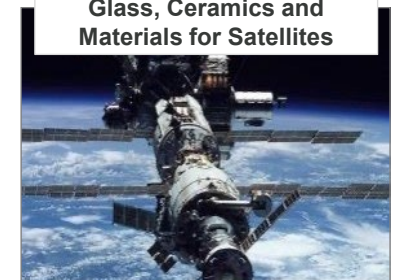
Aerospace Ceramics



Borosilicate Glass for Fiber Optic Networks



Glass, Ceramics and Materials for Satellites



BORON+ a Critical Building Block in Enabling Decarbonization & Security; Supporting UN Sustainable Development Goals



Electric Vehicles

~30% CAGR

Global Electric Vehicles Growth (2020-2030)

~145m

Global Electric Vehicle Growth (2020–2030)



Green Energy

~6% CAGR

Global Installed Wind & Solar Capacity (2019-2050)

~\$55 Trillion

Global “Green” Energy Infrastructure Investment (2016-2050)¹



Food Security

~1.9 Billion

Increase in Global Population (2020-2050)

>40%

Lands Experiencing Severe Yield Reductions by 2050



Domestic Security

~5% CAGR

U.S. Defense Expenditure (1999-2019)

>\$2 Trillion

Global Spending on Defense (2021)



Accelerating a Net-Zero Future



Promoting Sustainable and Resilient Infrastructure



Improving Global Nutrition and Health



Promoting Innovation and Human Security

BORON+ the “Enabler Mineral”



Electric Vehicles & Transportation

High Strength Boron Steel
Boron Magnets for Drivetrains



Solar PV and Wind Infrastructure

Borosilicate Glass & Coatings
Light-Weight Boron Fiberglass



Fertilizers & Nutrients

Boron Micronutrients
Super Fertilizers



Advanced Military Applications

Boron-Infused Tank Armor Plating
Boron Rods for Nuclear Reactors

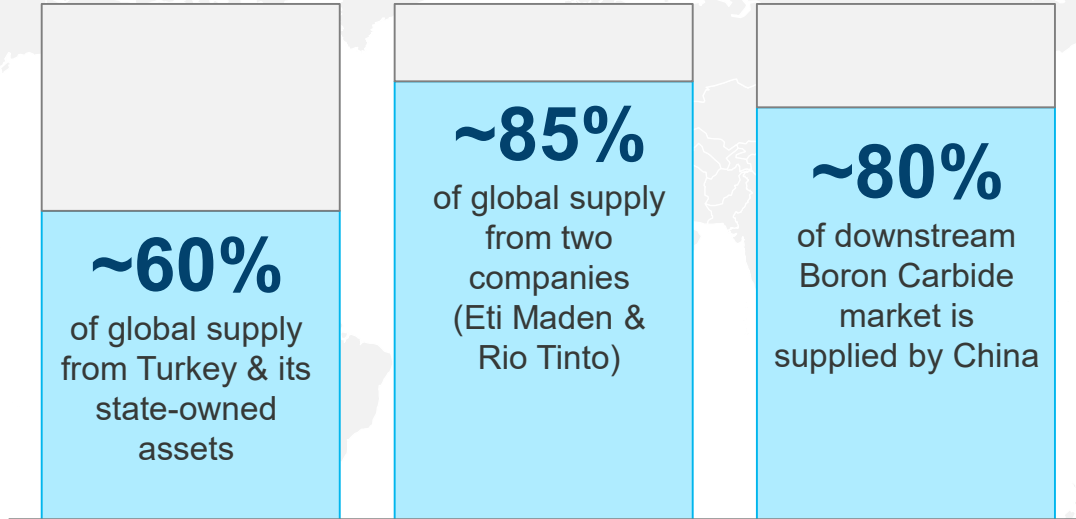
Source: EIA, IEA, United Nations, PGFP, Congressional Budget Office and Stockholm International Peace Research Institute. Images courtesy of Pixabay.

1) Reflects cumulative global renewable, electrification and infrastructure, and energy efficiency investment under the International Renewable Energy Agency’s Planned Energy Scenario.

Global Supply Duopoly and Downstream Concentration; Governments Taking Action



Global Supply Dynamics



Supply Concentration in Geopolitically Challenged Areas

Global Duopoly Challenges Supply Chains & Access

Diversification of Advanced Material Supply is Needed



Establishment of the Critical Minerals Strategy
Establishing that **Several Clean Energy Technologies Materials are at Risk of Supply Disruptions**

December 2010



Executive Order 13817 – “A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Materials”

December 2017



Designation of Boron as “High” Critical Status in their Critical Raw Materials for Strategic Technologies and Sectors in the EU

2020

Fort Cady – Critical Domestic Infrastructure



Fort Cady designated as Critical Infrastructure by the Cybersecurity and Infrastructure Security Agency (“CISA”)

- Designation confirmed in February 2022
- Supported by U.S. Congress and California State Legislature
- Supports our goal of having an important role in providing critical and strategic materials to the challenged global supply chain

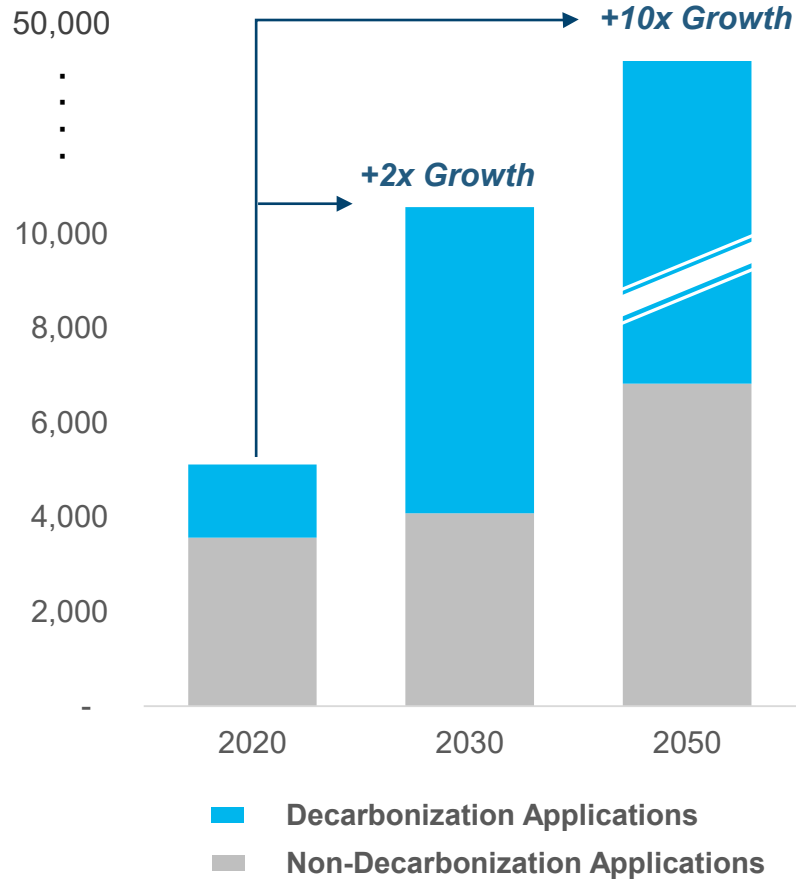
The Global Supply Chain Demands a New, Stable Source to Deliver Critical BORON+ Advanced Materials

Confluence of Demand Growth and Growing Supply Shortfall



Boron Demand Growth⁽¹⁾

(k tons; boric acid equivalent)

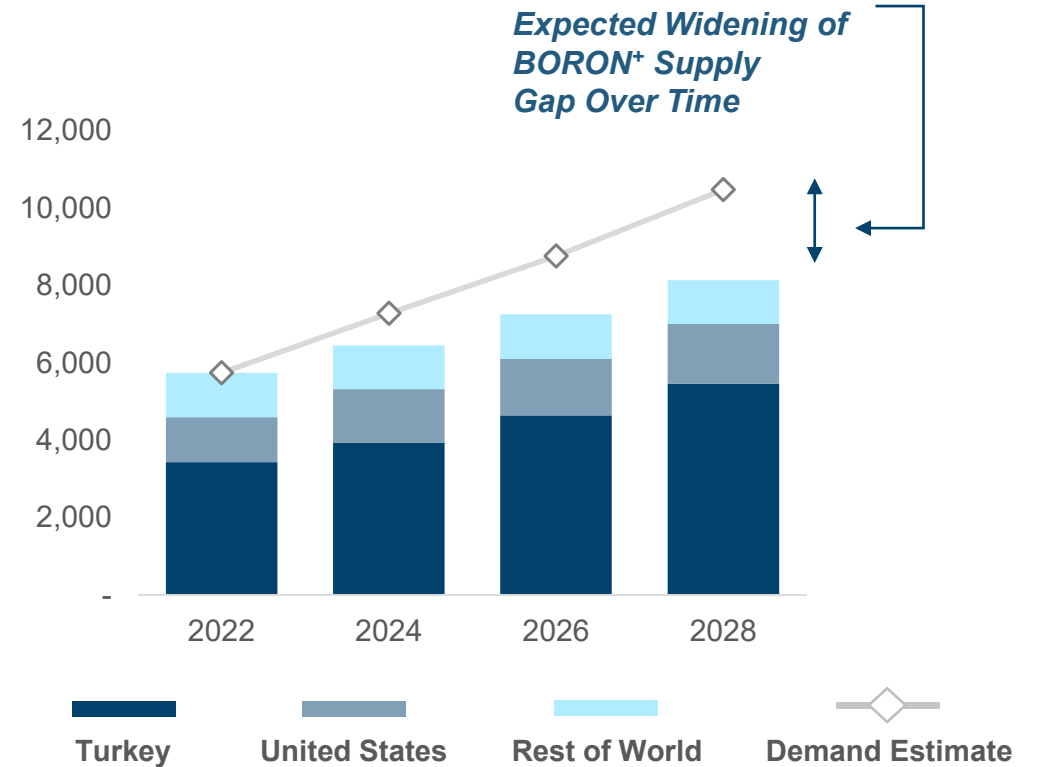


Expected Demand Growth Driven by Key Decarbonization Sectors

Supply / Demand Imbalance⁽¹⁾

(k tons; boric acid equivalent)

Emerging strength in boric acid prices observed in 2022; up >50% in CQ1 2022 vs. 2020-2021



Continued Supply Pressures Bringing the BORON+ Supply Gap into Focus

Source: Credit Suisse Equity Research.

Note: Elemental boron figures converted to boric acid equivalent at a ratio of 1-to-5.72.

(1) Displayed data based on the "High Demand" case. Alternatively, under the "Low Demand" case, boron demand growth is expected to increase by ~2x in 2030 and ~4x in 2050 relative to 2020.

Few Near-Term Supply Alternatives Potentially Entering Service Besides 5E



Production: Up to 500k tons per year⁽¹⁾

Timing: SSBF Expected to be in Production in 2023⁽²⁾

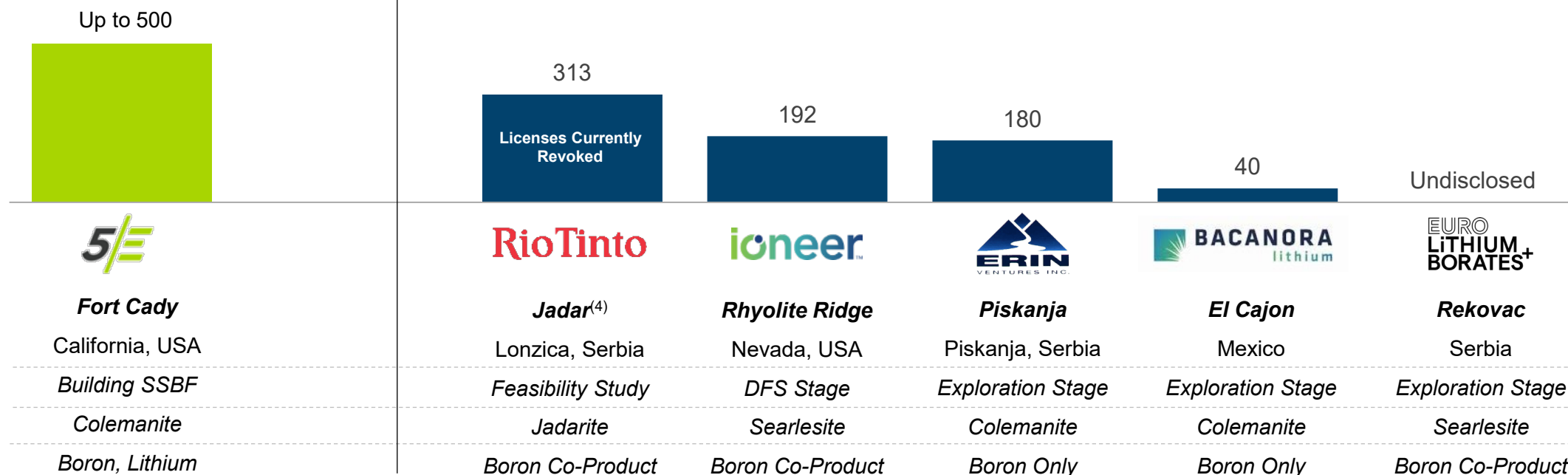
Location: United States (Domestic)

Production: Excluding Jadar, balance of projects will fail to satisfy anticipated future total demand growth at current production rates⁽³⁾

Timing: Multi-year development timelines given competing projects are in exploration and feasibility study stage

Location: Both domestic and international (Europe, LatAm)

(k tons per year; boric acid equivalent)



Source: Company materials, Credit Suisse Equity Research, and publicly available information.

(1) Initial target production at Fort Cady of 250,000 tons per year of boric acid. Based on the project update from May 2022, long-term production potential estimated at up to 500,000 tons per year of boric acid.

(2) SSBF is currently under construction with completion targeted for around the end of 2022, with production expected to begin in 2023.

(3) According to Credit Suisse report on Boron, traditional and decarbonization-focused applications will drive 10x demand growth by 2050E. Excluding Rio Tinto Jadar project, balance of projects currently produce a total of 412k tons of boric acid equivalent per year.

(4) In January 2022, the Serbian government revoked Rio Tinto's project licenses for the Jadar project following protests by various environmental groups.

BORON⁺

Why 5E Advanced Materials

Significant Resource in Strategic Location with Accessible Infrastructure



Significant Resource & Processes

- Rare and large colemanite borate deposit, which we believe is one of the largest known new conventional deposits globally
- Develop and commercialize Fort Cady to produce an economical and secure supply of boron and lithium by focusing on a more environmentally friendly in-situ extraction process as compared to traditional mining
- Co-product benefits (Lithium, SOP, Gypsum)

324ppm
*Lithium
Concentration*

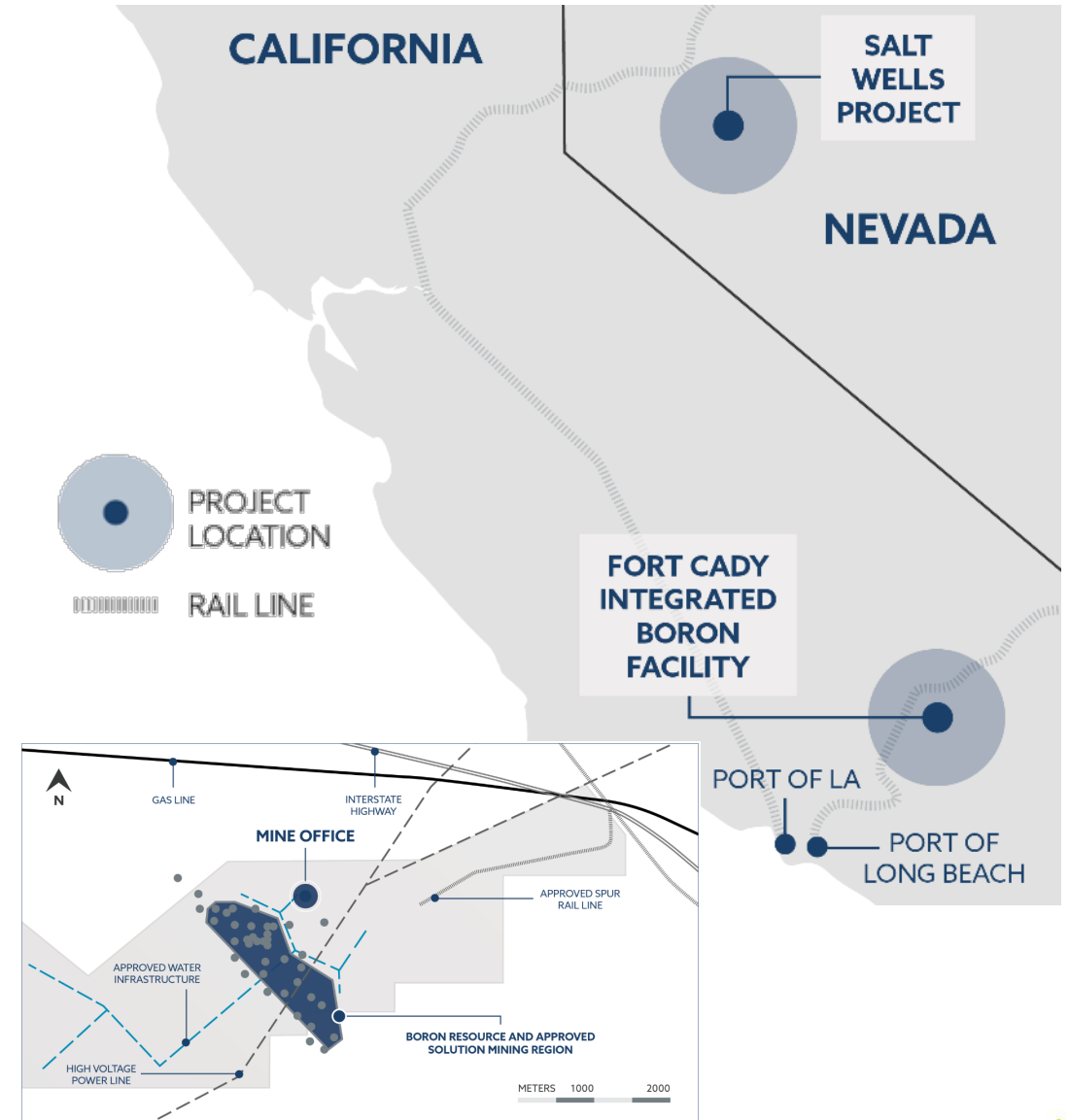
6.52%
*Boric Acid
Grade*

109MsT
*Total
Resource*

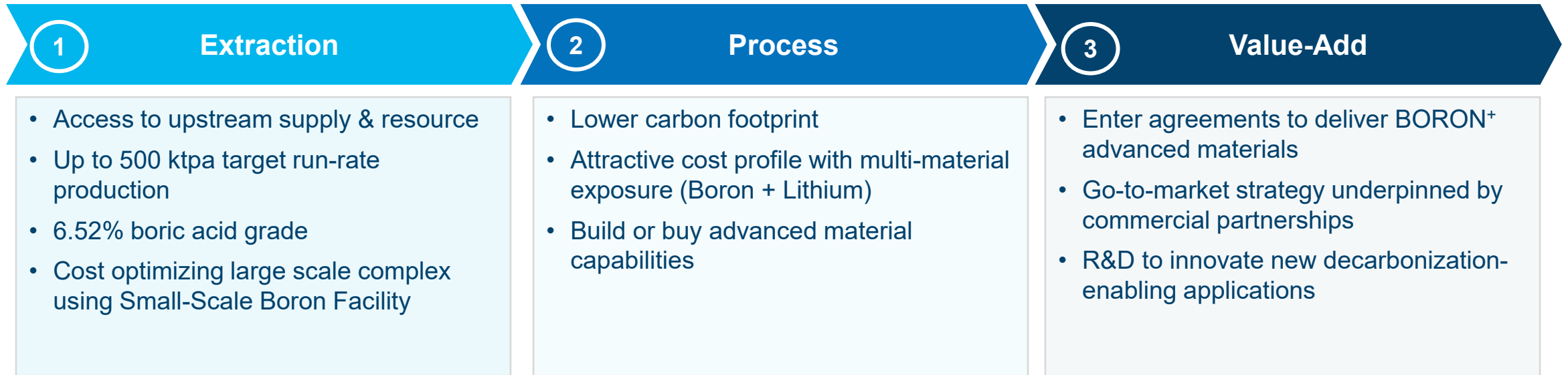


Strategic Location with Accessible Infrastructure

- Accessible infrastructure (water, utilities, rail)
- Logistics advantaged, with close proximity to two ports for potential future transportation and distribution to market
- Proximity and access to reagents



Building a Fully Integrated BORON+ Advanced Materials Business



Building Our Competitive Strategic Advantage



Critical Infrastructure Supports Key Sectors

- Focus on green end uses that enable decarbonization
- Build diversified portfolio of leading, value-add BORON+ products
- Position 5E as thought leader and important U.S. supplier of lithium

Innovation & Intellectual Property

- Build proprietary processes and capabilities
- Continuous focus on R&D to identify new product opportunities and develop IP portfolio
- Leverage partnerships with research institutions

Long-Term Agreements

- Advancing customer discussions for boron advanced materials
- Future delivery of product via mutually beneficial commercial agreements
- Embedding 5E in supply chains to drive earnings durability
- Partnership feedback to drive product development & innovation

Momentum for Fort Cady and our Advanced Materials Business



Fort Cady designated Critical Infrastructure by Department of Homeland Security's Cybersecurity and Infrastructure Security Agency

February 2022



Georgetown University

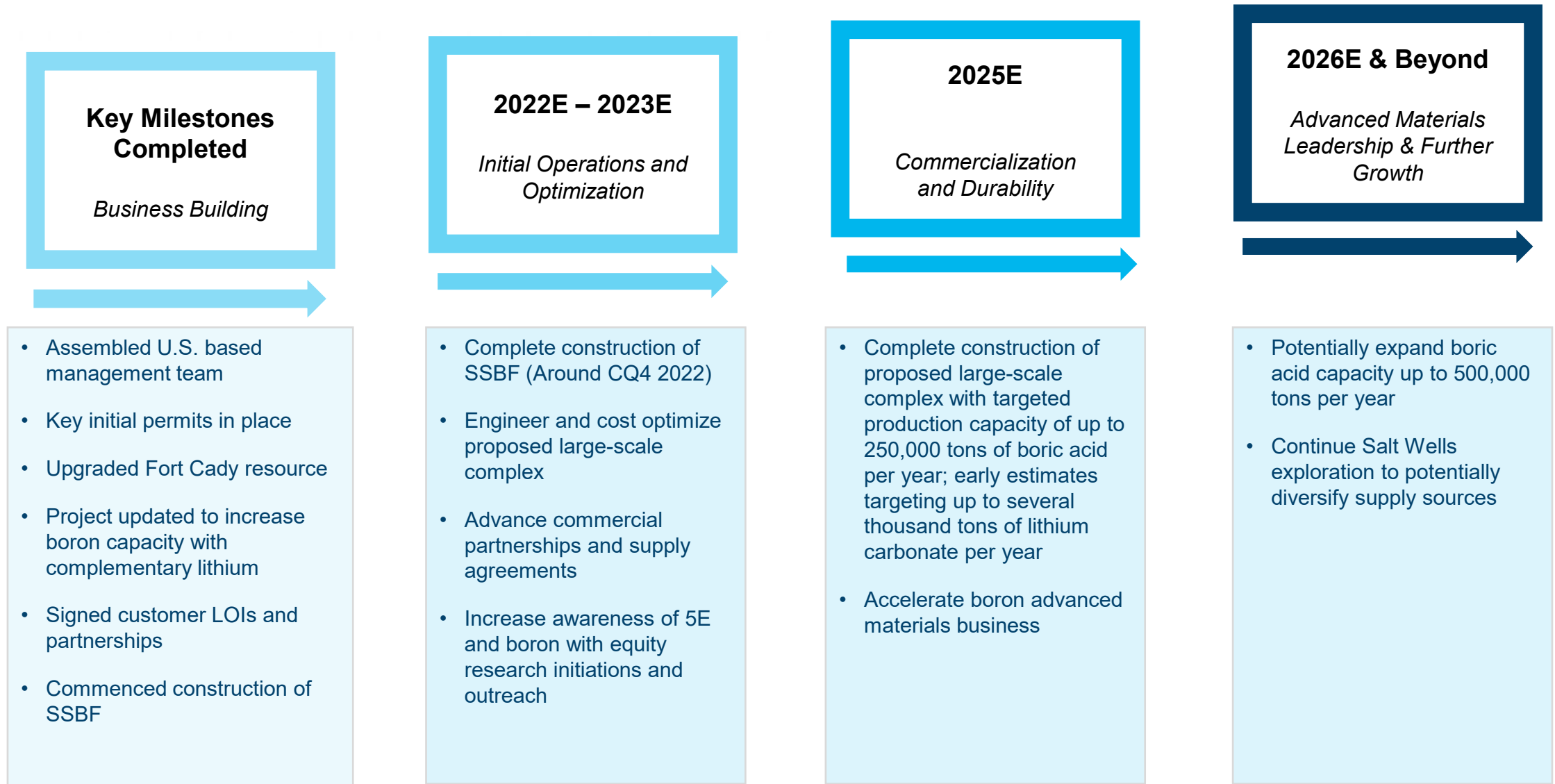
Research agreement aims to enhance the performance of permanent magnets through increased usage of boron

March 2022

CORNING Non-binding letter of intent for boron specialty and advanced materials to be potentially used in Corning's specialty glass products

June 2022

Pragmatic Approach to Commercializing our Fort Cady Project and Building the Business



Note: Timelines are estimates and targets only and subject to change. Investors are cautioned not to place any undue reliance or make investment decisions based on this timeline, which is inherently uncertain. For further information, please see "Risk Factors" in our public filings.

Project Update & Timeline



Early 2022: Procured long-lead time equipment; major equipment on-site or scheduled for delivery

March 2022: Substantially completed detailed engineering, structural and foundation design work

April 2022: Awarded construction contract and broke ground on construction

May 2022: Completed four injection recovery wells that will support extraction and feedstock for Small-Scale Boron Facility

Balance of 2022: Advance construction activities towards completion around CQ4 2022

Target First Production of Boric Acid in 2023

Project Highlights

- ✓ No lost time injuries, with heightened focus on safety and well-being of site personnel
- ✓ Under construction; injection wells completed and majority of major equipment secured
- ✓ Key initial permits in place for operation at initial target production levels
- ✓ Production output will be used to potentially support customer contracting and downstream advanced materials activities
- ✓ SSBF intended to demonstrate operational capabilities and provide for cost optimization of our proposed large-scale complex

Path to Commercialization and Growth of our Proposed Large-Scale Boron and Lithium Complex



Initial Commercial Production

- Small-Scale Boron Facility used to detail engineer and cost optimize our proposed large-scale complex
- Targeting 250,000 tons per year of boric acid production and up to several thousand tons of lithium carbonate per year (based on early estimates)
- Deliver secure supply into the market and position 5E as an important domestic supplier of lithium

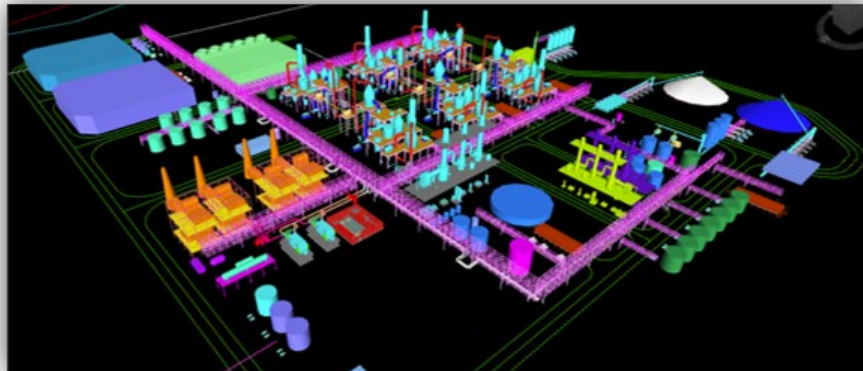
Targeting Commercial Production in 2025

Long-Term Growth Potential

- Targeting incremental capacity increases over time to continue scaling the proposed large-scale complex
- Estimated potential for up to 500,000 tons per year of boric acid production; engineering for flexibility to opportunistically expand capacity to take advantage of market and pricing dynamics
- Develop boron advanced materials capabilities, transitioning into higher value-in-use product mix

Long-Term Growth Opportunity

Preliminary Design of Proposed Large-Scale Boron and Lithium Complex (Targeting 250 ktpa)



- ✓ Ongoing virtual design and site layout work, including lithium processing unit
- ✓ Process flow, water management, product storage, transportation and power supply optimization

Sustainability is an Important Focus of our Business



Building Blocks of 5E's Sustainability Strategy



PRODUCTION IMPACTS

Consume fewer resources...

- In-situ extraction
- Closed loop water use
- Pre-heated solution
- Process energy management
- Integrated derivative production



COMMUNITY IMPACTS

Community prosperity...

- Growing workforce
- Specialized training
- Local procurement and investment



ENERGY TRANSITION

Applications enable decarbonization...

- Emissions reduction
- UN Sustainable Development Goals (SDG's)



BUILT-IN SUSTAINABILITY

'Clean sheet' advantage...

- Board engaged
- Sustainability work underway
- Diverse Board and leadership
- Culture and mindset



FOCUS ON INNOVATION

New applications...

- University research agreement
- Joint Development Agreements with customers
- Technical / research collaborations

Leadership Team With Diverse Skillsets and Proven Execution Capabilities



Leadership Team



Henri Tausch
President, CEO,
Director



Paul Weibel
CFO



Chance Pipitone
SVP,
Corp Dev & IR



Tyson Hall
COO



**Dr Dinakar
(Dino)
Gnanamgari**
CCO & CTO



Chantel Jordan
SVP, General
Counsel and CPO



5E Board of Directors



David Salisbury
Non-Executive
Chair



Jimmy Lim
Non-Executive
Director



Palvi Mehta
Non-Executive
Director



Henri Tausch
President, CEO &
Director



Stephen Hunt
Non-Executive
Director



Why BORON+

- ✓ Critical Material, Essential to Everyday Life
- ✓ Enabler of Future ESG-centric Industries
- ✓ Scarce Resource and Duopolistic Supply
- ✓ Accelerating Demand Growth

**Critical Material with
Significant Growth Potential**

Why 5E Advanced Materials

- ✓ Rare and Large Resource Asset
- ✓ Aiming to Build Vertically Integrated Model
- ✓ Advancing Commercialization Plan
- ✓ Experienced Leadership Team

**Differentiated Platform
and Opportunity**

BORON⁺

Appendix

BORON+ is an Essential Input in the Electrification of Transport



Governments



50% Share by 2030



20% Share by 2025



7mm+ EVs by 2030



End Gasoline Sales by 2035

Government Policies Mandating EV Market Share

Manufacturers



Fully Electric



30 New Models by 2025



40 New Models by 2022

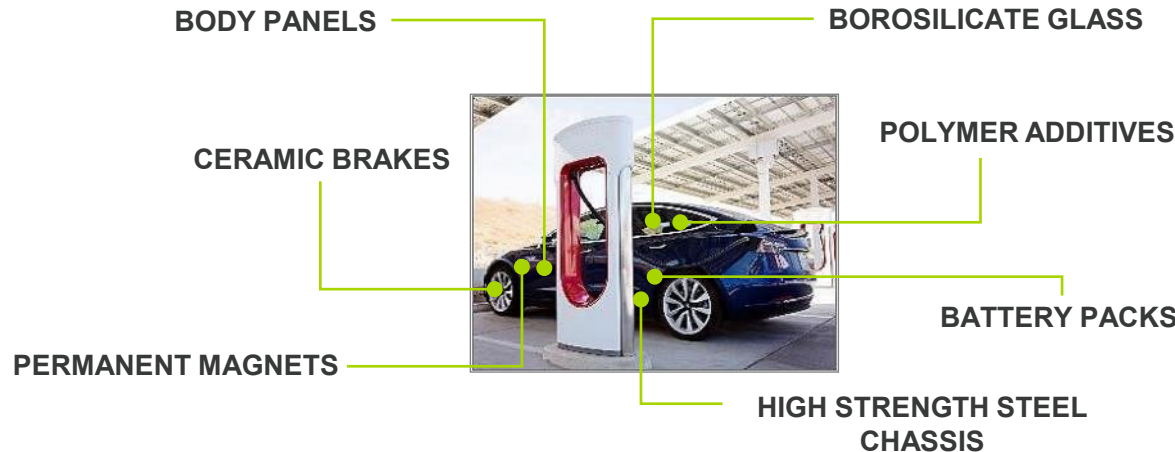


25 New Models by 2023

Billions of Investment in Research by OEMs

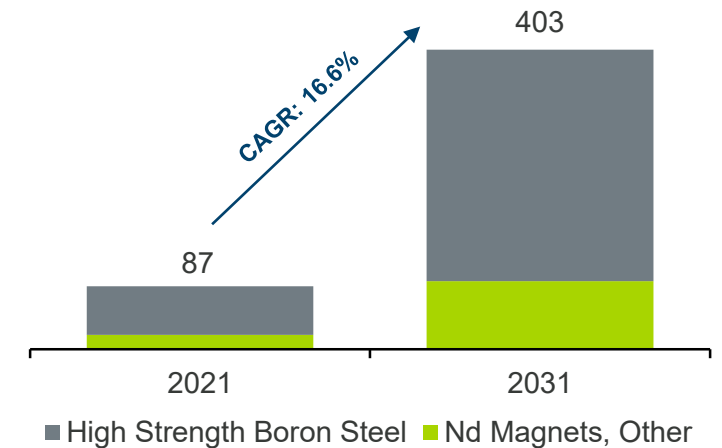
Boron Applications in Electric Vehicles

~13Kg of Boric Acid equivalent weight per electric vehicle



Boric Acid Demand from EVs

(k tons per year)



Source: Kline Report, SAI Industrial LLC, CNN and GlobalData Power Intelligence Center. EIA and U.S. government.
Note: Usage of volumes presented on a Boric Acid equivalent basis.

BORON+ Helps Power the Clean Energy Revolution



- ✓
Biden Infrastructure Bill (2021)
\$73 billion to improve U.S. infrastructure, including electrical infrastructure & power

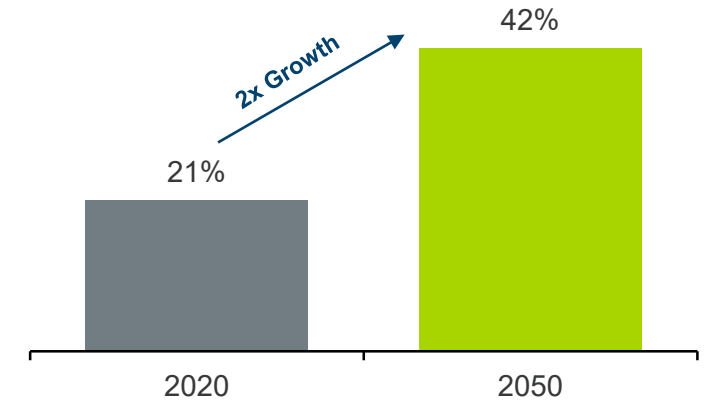
- ✓
Methane Emission Reduction Plan (2021)
EPA proposal to reduce methane by 74%; programs designed to promote clean energy infrastructure

- ✓
Net Zero World Initiative (2021)
Accelerate global decarbonization to achieve net zero by 2050E

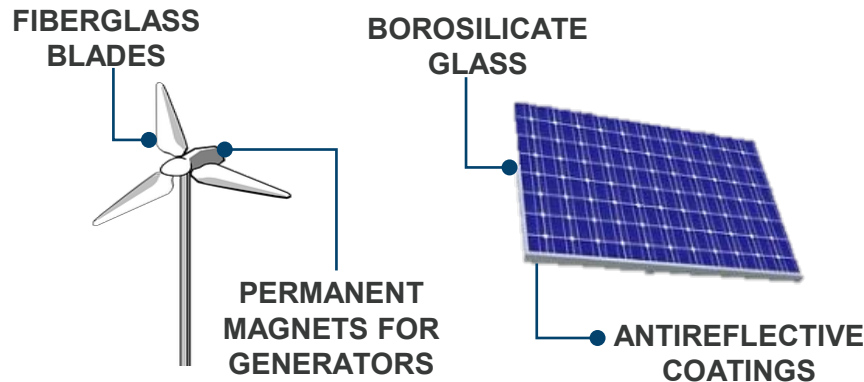
U.S. Renewables Generation Mix (%)

(%)

EIA projects renewables share of U.S. electricity generation mix will double by 2050



Boron Applications in Renewable Energy Production & Downstream Energy Efficiency

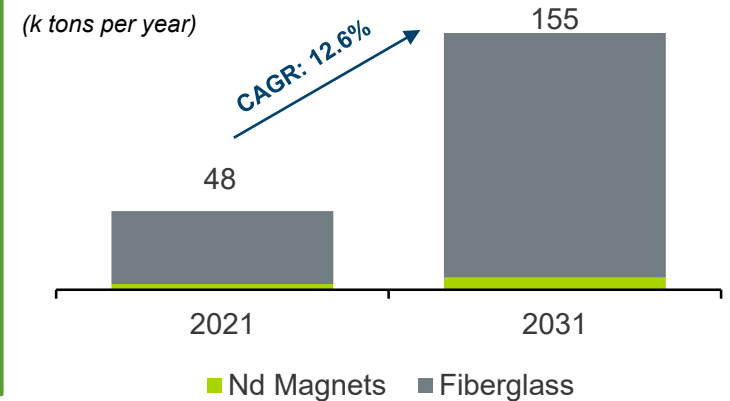


DOWNSTREAM ENERGY EFFICIENCY

- ✓ Ceramic Tiles
- ✓ Cellulose Insulation
- ✓ Storage (Batteries & Capacitors)

Boric Acid Demand from Wind Turbines (k tons per year)

(k tons per year)



Fort Cady Mineral Resource Estimate



S-K 1300 Compliant Mineral Resource Estimate						
Resources	MsT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MsT	H ₃ BO ₃ MsT
Measured	35.96	6.57	11.67	330	2.36	4.2
Indicated	61.59	6.51	11.55	318	4.01	7.12
Total M&I	97.55	6.53	11.61	324	6.37	11.31
Inferred	11.43	6.40	11.37	324	0.74	1.31
Total M, I&I	108.98	6.52	11.60	324	7.11	12.62

Total S-K 1300 and Uncontrolled Mineral Resource Estimate at 2% cut-Off Grade						
Resources	MsT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MsT	H ₃ BO ₃ MsT
Total M, I&I	326.55	4.62	8.22	323	15.09	26.85

Project Update Focused on Boron and Lithium; Aligned with Long-term Objectives



- Update to the Fort Cady project plan announced in May 2022 to **focus primarily on developing boron and lithium production**
- Strategy aligned with our mission** to become a global leader in enabling industries addressing decarbonization
- Reinforced by favorable market conditions** and **growing importance of critical materials** such as Boron and Lithium



Importance of Critical Materials

Fort Cady designated **critical infrastructure**, strategically positioned to support domestic critical material security



Small-Scale Boron Facility

Commenced construction on facility to deliver engineered capacity of 2,000 tons (CQ4 2022); **foundation for design, engineering and cost optimization of proposed large-scale complex, customer qualification and R&D**



Boron & Lithium Definition

Large and rare resource substantiated by SK-1300 report; opportunity to efficiently **commercialize both materials**



Proposed Large-Scale Complex

Target initial boric acid capacity of 250,000 tons per year, with early estimates targeting up to several thousand tons of lithium per year (2025); **potential for up to 500,000 tons boric acid**

Boron

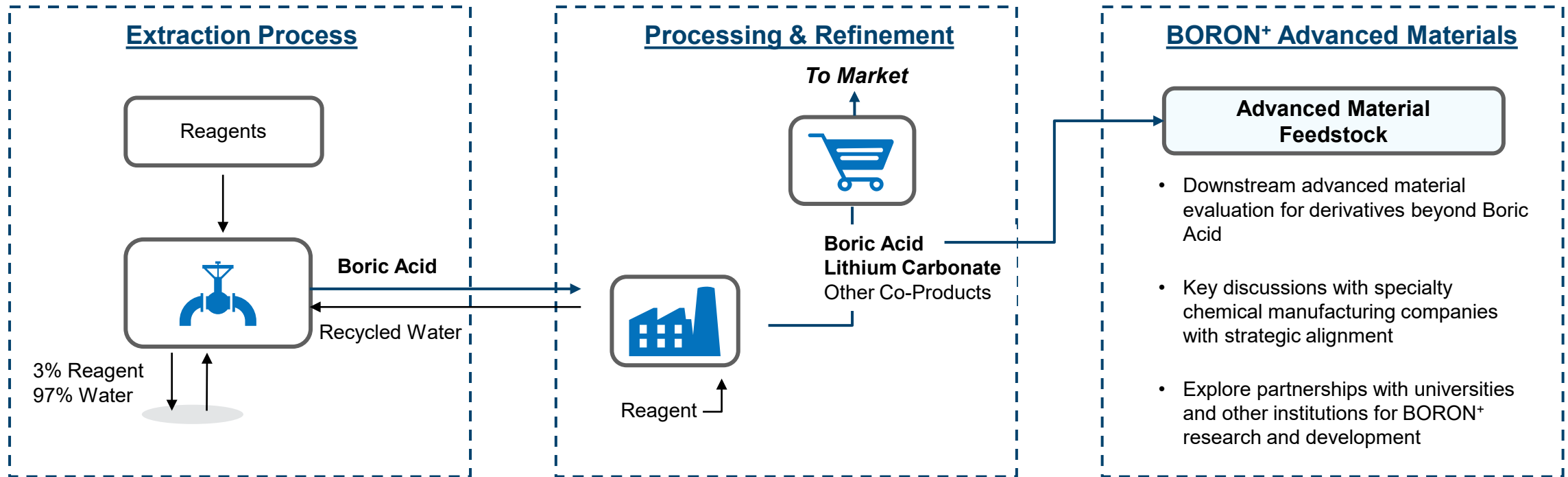
- Stable demand with growing application set
- Nascent market awareness; runway to grow
- Proprietary materials and high barriers to entry



Lithium

- Widely recognized critical material with significant EV market opportunity
- Enabler of EVs and decarbonization
- Potential to become important participant in U.S. lithium market

Integrated Processes to Maximize Clean BORON+ Extraction & Processing



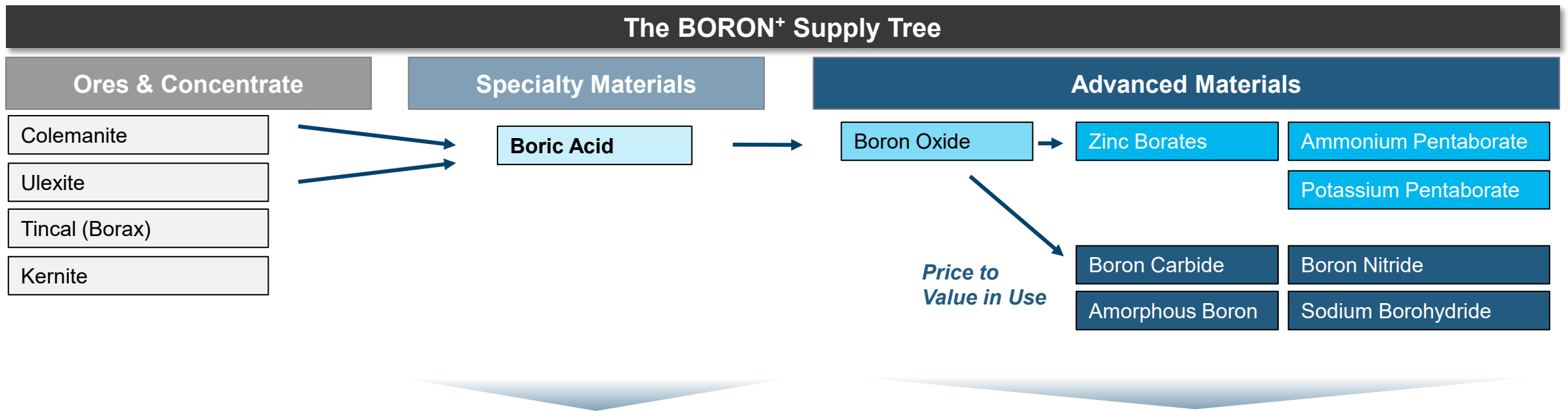
Environmentally-Friendly In-Situ Extraction Process (Compared to Traditional Mining) Expected to Produce an Economical and Secure Supply of Boron and Lithium

Sell Boric Acid & Lithium Carbonate Specialty Materials Direct into Established Markets; Boric Acid Feed for Downstream Business

Develop Downstream BORON+ Advanced Material Capabilities for Higher-Value Applications

Processing and Extraction Centered Around Recyclability (“Closed Loop”), Low Carbon Intensity, and Integration to Maximize Extraction of Co-Products

Extracting Greater Value in Downstream Advanced and Specialty Materials



Established Market / Price













- ✓ Option to sell specialty into established market with growing demand
- ✓ Provides cash flow base

Significant Value in Advanced Materials

- ✓ Specialization enables superior value extraction
- ✓ Opportunity to build significant intellectual property portfolio
- ✓ Customer partnerships to drive product-market alignment, and embed 5E in critical supply chains

Contribution to the UN Sustainable Development Goals



5E Operations Focused On:	UN SDG	5E Potential Products:	5E Operations Focused On:	UN SDG	5E Potential Products:
		<ul style="list-style-type: none"> Insulation adds climate resilience and reduces energy use and costs 			<ul style="list-style-type: none"> Micronutrients help counter climate change effects on agriculture in poorer countries
		<ul style="list-style-type: none"> Micronutrients generate higher yields and support soil quality preservation 			<ul style="list-style-type: none"> Visual displays and devices advance electrification Fiber optics enable access to services
<ul style="list-style-type: none"> Safe and healthy work environment 		<ul style="list-style-type: none"> EVs lower carbon emissions and reduce air pollution Pharmaceuticals support well-being 	<ul style="list-style-type: none"> Local derivatives processing Closed loop water recycling 		<ul style="list-style-type: none"> Boron enhances strength, durability, and life of products Cellulose insulation products use recycled material
<ul style="list-style-type: none"> Process energy efficiency 		<ul style="list-style-type: none"> Renewable infrastructure accelerates transition to a net-zero future 	<ul style="list-style-type: none"> Pre-heated solution reduces energy use 		<ul style="list-style-type: none"> Permanent magnets and battery units improve EV performance and range Protective materials reduce resource use and extend asset life
<ul style="list-style-type: none"> Job creation and skills training 			<ul style="list-style-type: none"> In-situ extraction reduces land disturbance and eliminates overburden 		
<ul style="list-style-type: none"> Local economic activity and infrastructure investment 		<ul style="list-style-type: none"> Composites improve performance and lifespan of sustainable infrastructure 	<ul style="list-style-type: none"> University research and technical collaboration 		



**ADVANCED
MATERIALS**

For Additional Information Please Contact:

Chance Pipitone
Investor Relations – U.S.
cpipitone@5advancedmaterials.com

Elvis Jurcevic
Investor Relations – Australia
ej@irxadvisors.com

Chris Sullivan
Media
chris@macmillancom.com

BORON⁺