


LITHIUM – MADE IN THE USA

Building an American Source of Lithium Hydroxide to
Power the Electric Vehicle Transition

 Nasdaq :PLL

 ASX :PLL

ARBN 647 286 360

June 2021

LiOH

PIEDMONT AT A GLANCE

Building an American Source of Lithium Hydroxide
to Power the Electric Vehicle Transition

| | |
|---|--|
|  | An American company – based in Gaston County, NC |
|  | Strategic location on historic Carolina Tin-Spodumene Belt |
|  | Only U.S. integrated spodumene-to-hydroxide project |
|  | Industry leading sustainability profile |
|  | Exceptional scale and economics |
|  | Strategic investment in Quebec via Sayona |
|  | Strong balance sheet to fund growth |

CORPORATE SNAPSHOT

PIEDMONT LITHIUM INC.



| | | |
|---------------------------------------|-----------|------------|
| Shares / CDIs (100 CDIs = 1 Share) | 15.75 M | 1,574.6 M |
| Price (@ 6/8/21) | \$68.64 | A\$0.90 |
| Average Daily Trading Volume (30-day) | \$29 M | A\$4 M |
| Market Cap (@ 6/8/21) | \$1,081 M | A\$1,397 M |
| Cash (@ 3/31/21) | \$167 M | A\$216 M |

BOARD OF DIRECTORS

| | | |
|-----------------|-----------|-----------------|
| Jeff Armstrong | USA | Chairman |
| Keith Phillips | USA | President & CEO |
| Jorge Beristain | USA | Director |
| Claude Demby | USA | Director |
| Todd Hannigan | Australia | Director |
| Susan Jones | Canada | Director |

RESEARCH COVERAGE

J.P.Morgan

EVERCORE ISI

CANACCORD Genuity

B RILEY Securities

ROTH Capital Partners

Loop Capital

BTIC

TUOHY BROTHERS
INVESTMENT RESEARCH

FOSTER STOCKBROKING

OUR PROJECTS



CAROLINA LITHIUM (100% OWNERSHIP)

| Key Project | Carolina Lithium Project |
|-------------------|----------------------------------|
| Project Stage | Scoping (DFS completion Q3 2021) |
| Mineral Resources | 39.2Mt @ 1.09% Li ₂ O |
| SC6 Production | 248,000 t/y |
| LiOH Production | 30,000 t/y |
| Project Life | 20 Years |



SAYONA QUEBEC (39.84% ECONOMIC INTEREST¹)

| Key Project | Authier Lithium Project |
|-------------------|------------------------------------|
| Project Stage | DFS (Definitive Feasibility Study) |
| Ore Reserves | 12.1Mt @ 1.00 Li ₂ O |
| Mineral Resources | 20.9Mt @ 1.01 Li ₂ O |
| SC6 Production | 113,000 t/y |
| LiOH Production | TBD |
| Project Life | 13 Years |

Note 1: Piedmont owns a 19.79% stake in Sayona Mining via common shares and convertibles, and a 25.0% interest in Sayona Quebec, resulting in an effective economic interest of 39.84%.

EXCEPTIONAL ECONOMICS

\$401MM

Run-rate EBITDA

\$1.9B

After-tax NPV

31%

After-tax IRR

30,000t/y

LiOH Production

\$2,943/t

LiOH Cash Cost

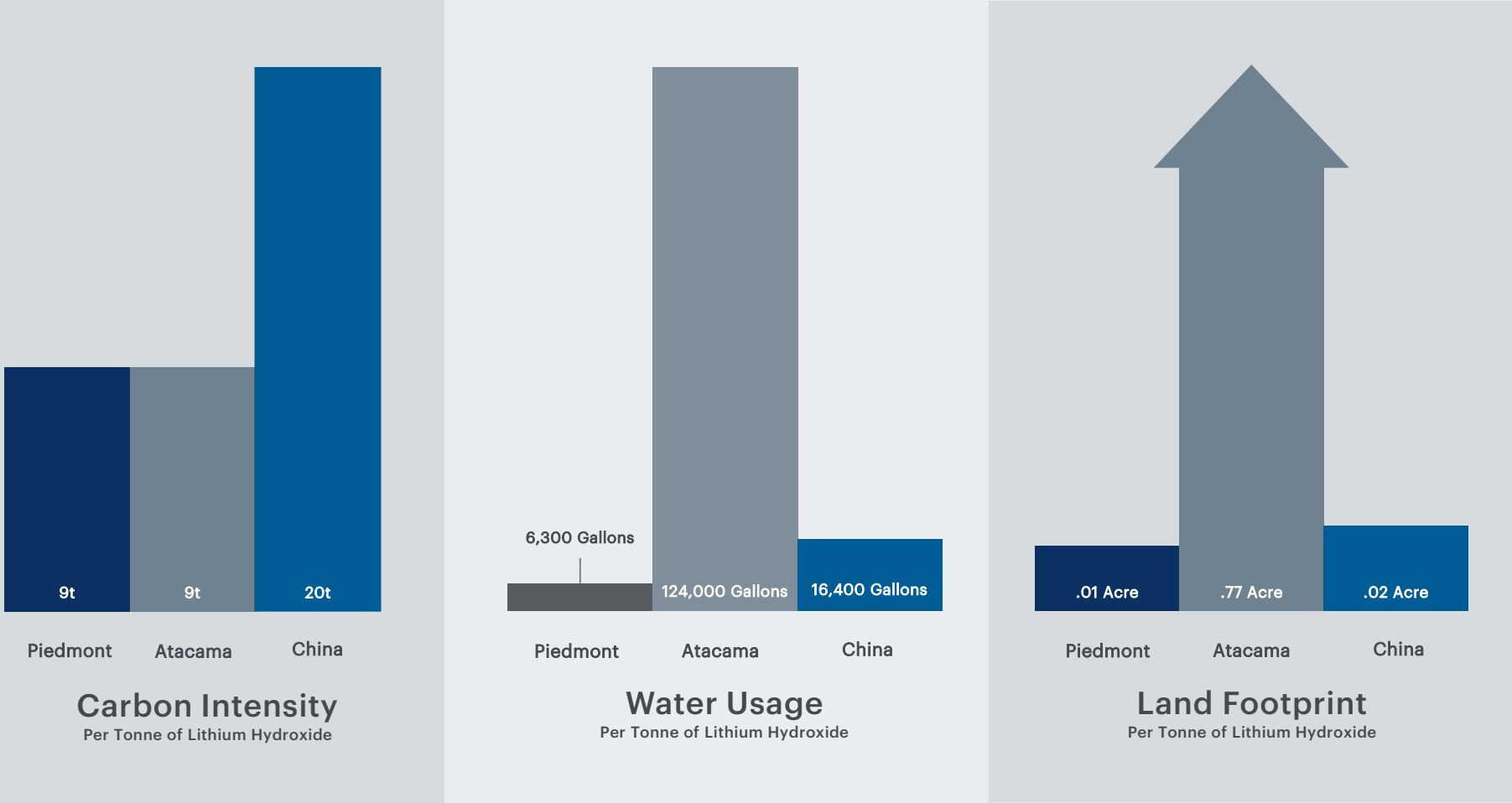
20 year

Project Life

ECONOMIC BENEFITS OF NORTH CAROLINA LOCATION

- Ideal infrastructure
- Short transport distances
- Deep local talent pool
- Low-cost energy
- Integrated SC6-to-LiOH on a single site
- Proximity to local by-product markets
- Low royalties and taxes

INDUSTRY LEADING SUSTAINABILITY

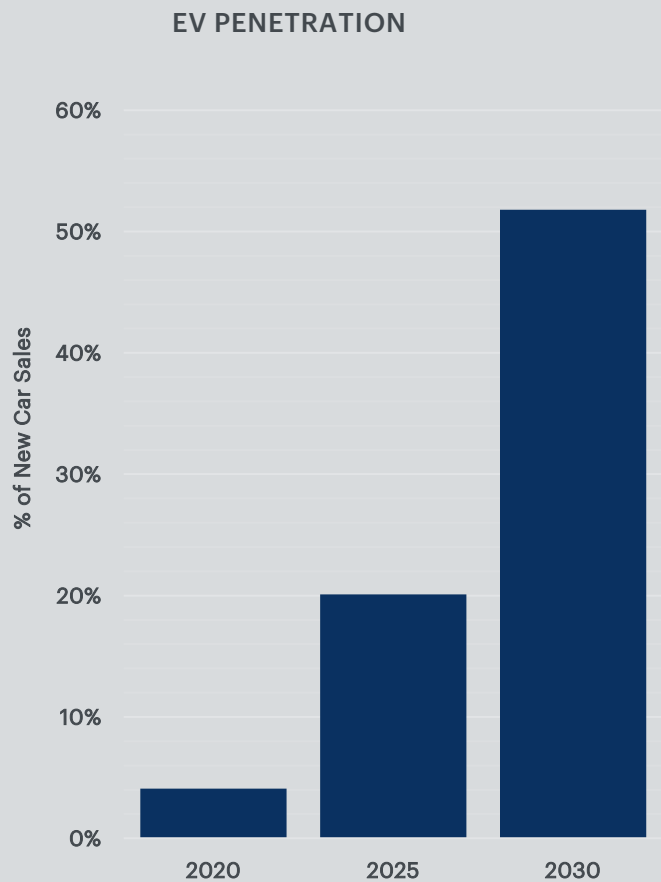


SUSTAINABILITY BENEFITS OF CAROLINA LITHIUM PROJECT

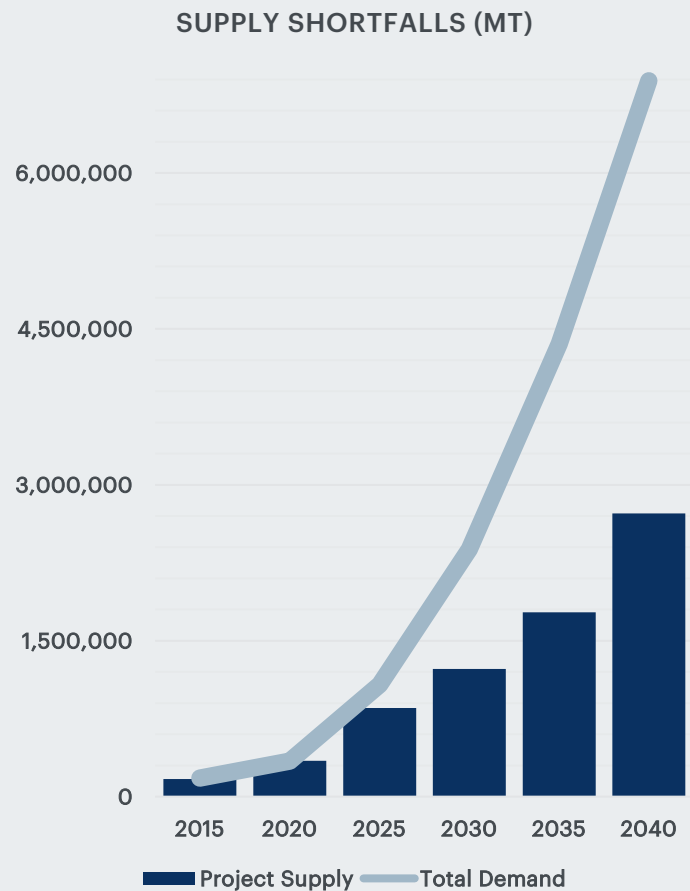
- Vastly diminished ‘quarry-to-EV’ supply chain distances
- Captive solar to power most operations
- In-pit crushing and electric conveying to reduce emissions
- By-product recovery minimizes waste
- Metso-Outotec flowsheet reduces CO₂ emissions and reagent usage
- Relatively low water usage and land footprint

Sources: Minviro Reports and Company estimates

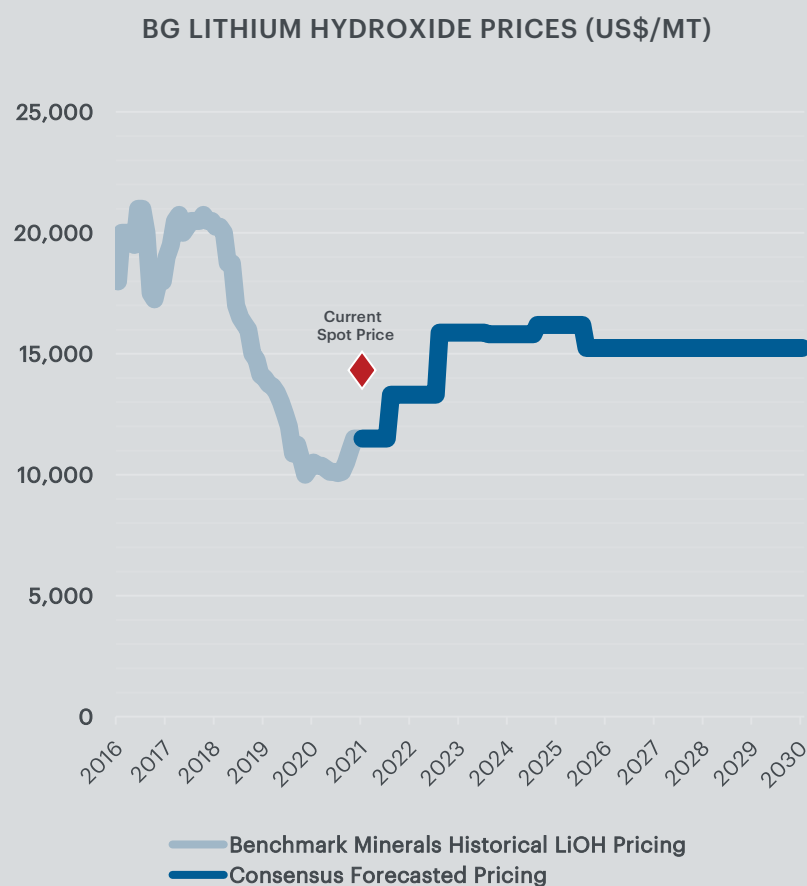
STRONG LITHIUM MARKET OUTLOOK



Source: Bloomberg New Energy Finance
<https://about.bnef.com/blog/behind-scenes-take-lithium-ion-battery-prices>



Source: Benchmark Mineral Intelligence – Lithium Forecast, Q1 2021



Source: Historical prices - Benchmark Mineral Intelligence
Forecasted prices – Consensus estimates
Current spot price \$14,200/Tonne

SUPPORTIVE INDUSTRY BACKDROP

Department of Energy Takes Immediate Action to Shore Up Battery Supply Chain, U.S. Competitiveness and Spur Job Creation

Ford plans to invest \$29B toward electric vehicles

Biden infrastructure plan proposes spending \$174B to boost America's EV market

Energy Secretary Granholm says U.S. needs to produce more EV minerals

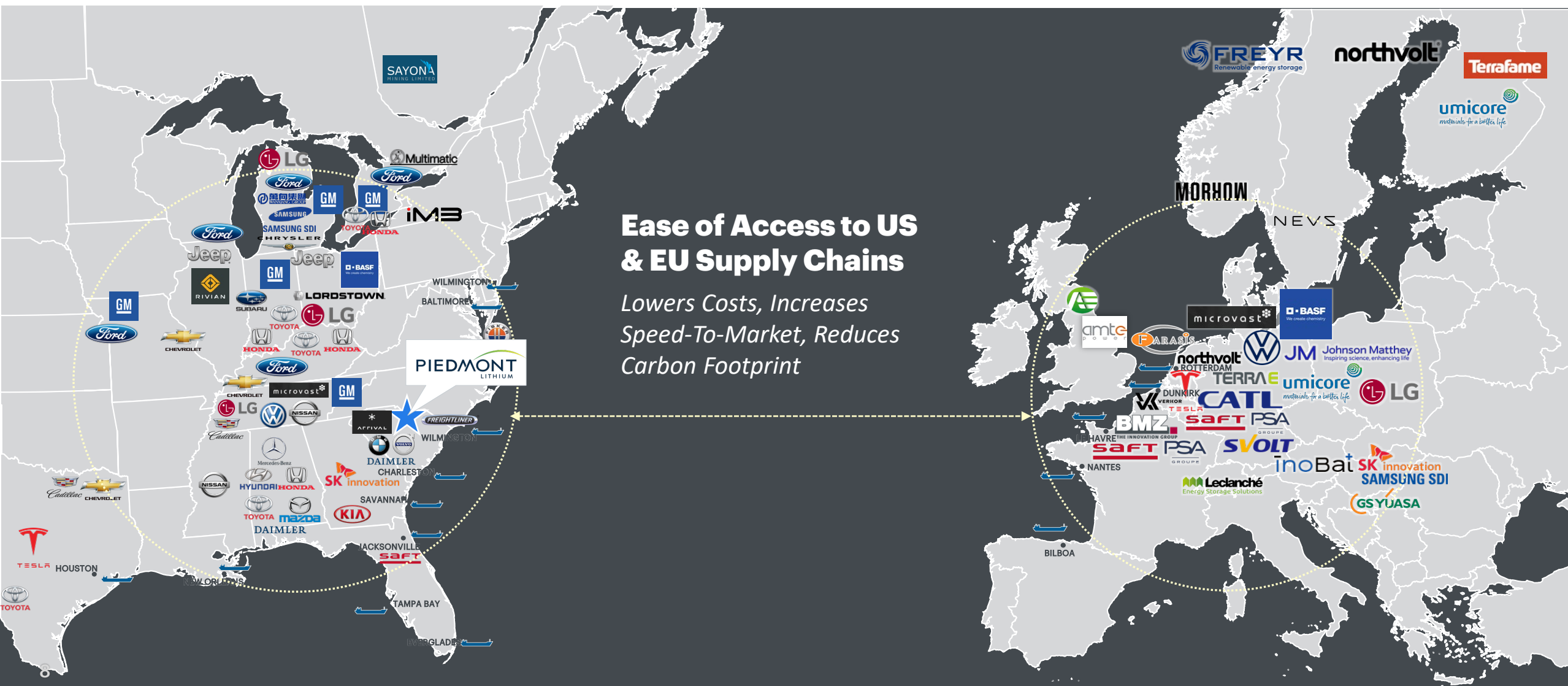
GM Aims to Go All Electric by 2035

Biden Aims To Jolt Lagging Supply Chains

EVs Shifting into Overdrive: can commodity supply keep pace?

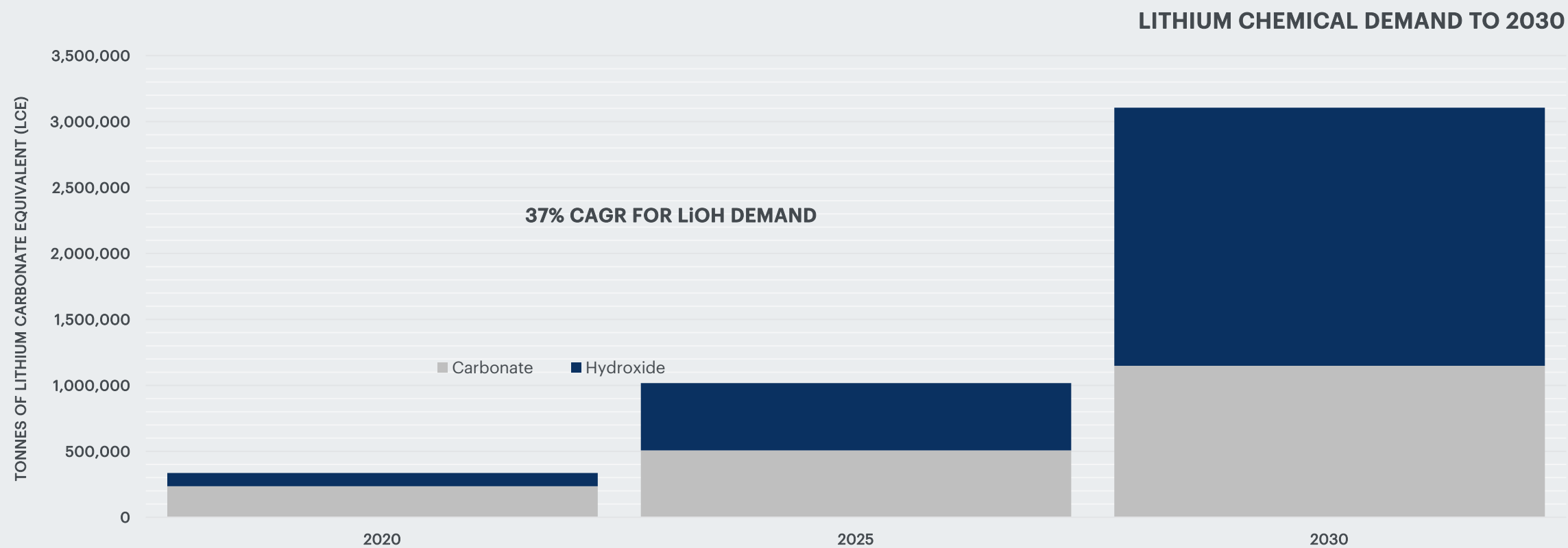
Volkswagen to 'get actively involved in the raw materials business'

ELECTRIFICATION DEMANDS REGIONALIZATION



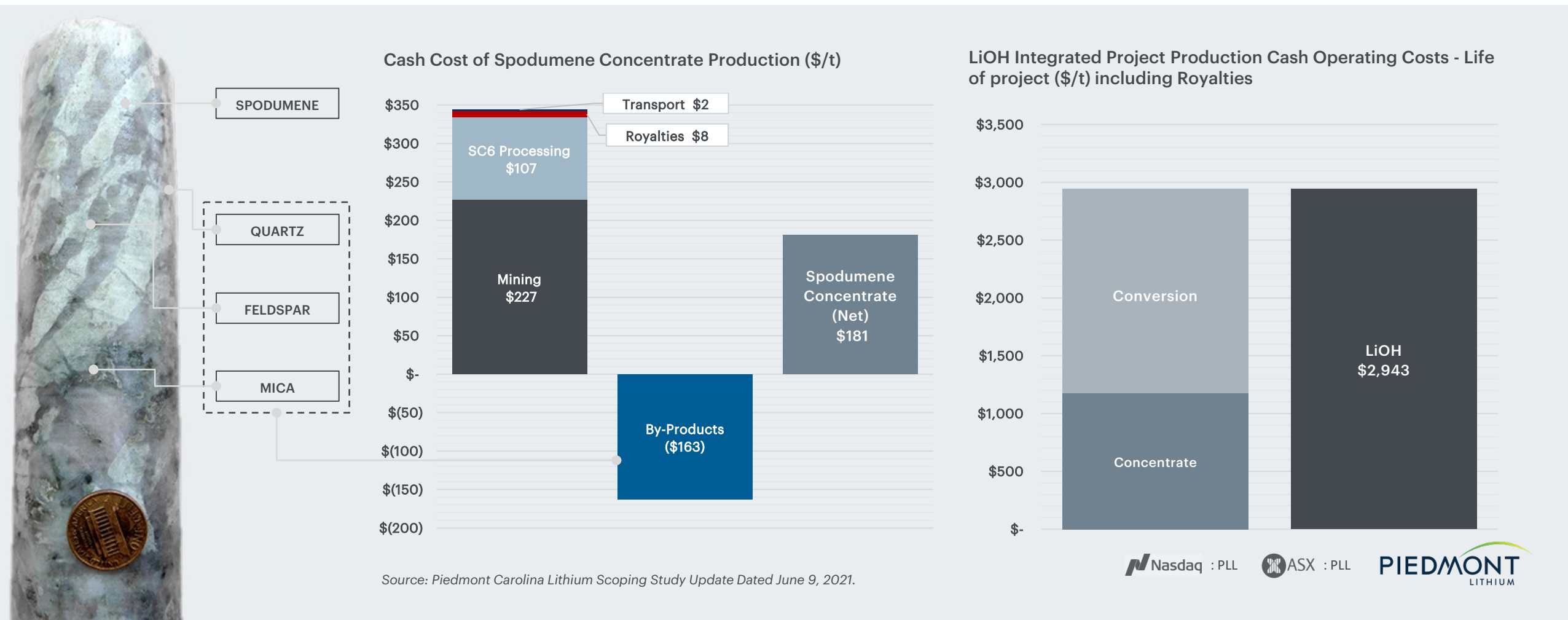
THE RIGHT LITHIUM MATERIALS

LiOH TAKING MARKET SHARE

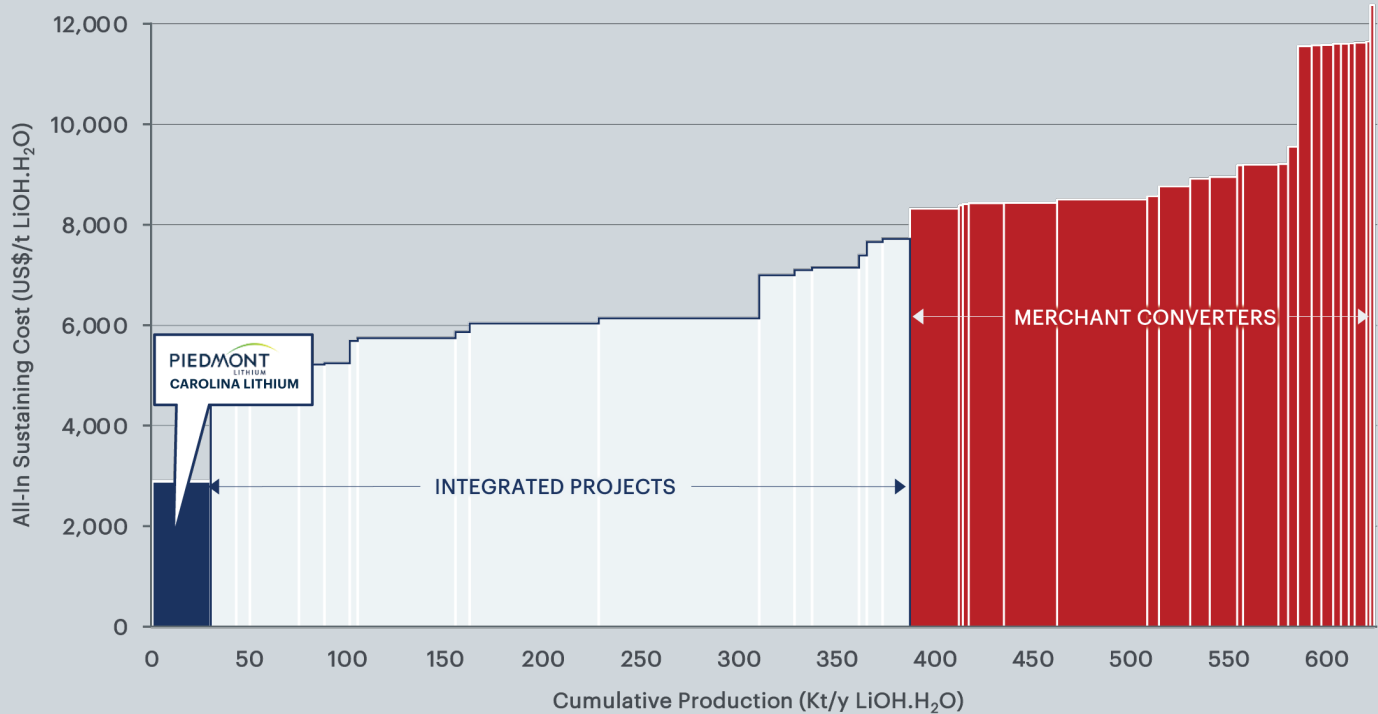


Source: RK Equity

BY-PRODUCTS OFFER IMPORTANT CREDITS TO OPERATING COSTS



LOCATION AND INTEGRATION DRIVE COST ADVANTAGES



Source: Roskill Lithium Cost Model Service - Extractive – 2028 Production and Cost Forecast
All-In Sustaining Cost includes all direct and indirect operating costs related directly to the physical activity of producing lithium compounds, including mining/extraction, processing, refining and on-site general and administrative costs.

PIEDMONT VS. AUSTRALIAN PRODUCERS



North
Carolina



Western
Australia



PLL Advantage
Per LiOH Tonne

| | North Carolina | Western Australia | PLL Advantage Per LiOH Tonne |
|---------------------------|-------------------|----------------------|---------------------------------|
| Personnel (US\$/y avg.) | \$90,000 | \$150,000 | \$300 |
| Electricity (kWh) | 5.5c | 17.0c | \$316 |
| Natural Gas (GJ) | \$3.68 | \$9.00 | \$130 |
| SC6 Transport (t) | \$2 | \$71 | \$483 |
| LiOH Tailing Disposal (t) | \$0 | \$50 | \$350 |
| State Royalties | 0% | 5% | \$225 |
| By-product Credits (t) | \$163 | \$0 | \$1,141 |

Source: Company estimates. Assumes 7:1 SC6:LiOH ratio.

PROVEN LEADERS



Keith Phillips

Chief Executive Officer

30+ years advisory & financing experience with JPMorgan, Merrill Lynch & Goldman Sachs



Patrick Brindle

Chief Development Officer

20+ years project global development experience



Michael White

Chief Financial Officer

25+ years experience; most recently Chief Accounting Officer of Apergy Corporation



Bruce Czachor

Chief Legal Officer

Former partner of Shearman & Sterling



Brian Risinger

VP – Corporate Communications

25+ years IR & media; most recently with Sonoco



Malissa Gordon

Community & Government Relations

13+ years at Gaston County Economic Development



David Klanecky

Chief Operating Officer

25+ years lithium and chemical industry experience; former head of hard rock lithium hydroxide at Albemarle



Austin Devaney

Chief Marketing Officer

Former head of lithium sales for Albemarle



Lamont Leatherman

Chief Geologist

25+ years experience; discovered the Piedmont Lithium Project



Binh Meador

Senior Project Manager - Chemical Ops

20+ years chemical engineering with Fluor



Jim Nottingham

Senior Project Manager - Concentrate Ops

30+ years mining construction & concentrator operations



Pratt Ray

Production Manager - Chemical Ops

30+ years experience in lithium chemical production at Livent



David Buckley

Advisor - Process Engineering

25+ years lithium conversion; ex-Livent and Albemarle

WORLD-CLASS TECHNICAL PARTNERS

PRIMERO

Metso:Outotec



SGS

HR




WHY PIEDMONT?

The Industry's Premier Lithium Development Company

| | |
|---------------------------------|---|
| Large Market with High Growth | <ul style="list-style-type: none">▪ Total Addressable Market for lithium exceeds \$50 billion for EV applications by 2030¹▪ EV penetration expected to grow 10x from ~4% in 2020 to over ~40% by 2030▪ Grid storage market potentially larger than EVs in the long term |
| The Right Lithium Materials | <ul style="list-style-type: none">▪ Production of lithium hydroxide ("LiOH") from spodumene ("SC6")▪ LiOH required in the long-range batteries needed by major OEMs▪ Spodumene is the preferred feedstock for cost, sustainability and scalability |
| Ideal Locations | <ul style="list-style-type: none">▪ North Carolina offers exceptional infrastructure, talent and low operating costs▪ Sayona investment in Quebec capitalizes on low-cost, sustainable hydroelectricity▪ 83% of the world's lithium hydroxide currently produced in China |
| Exceptional Scale and Economics | <ul style="list-style-type: none">▪ Strategy to be the USA's #1 lithium hydroxide producer▪ One of North America's largest spodumene resources; scalable via 3rd party spodumene supply▪ Low operating costs driven by location, low power and transport costs, and by-product sales |
| Sustainable Business Model | <ul style="list-style-type: none">▪ The lowest carbon, water and land footprint among conventional lithium projects▪ Massive reduction in transport distances from quarry to customer▪ Fully-integrated LiOH manufacturing and by-product credits drive lowest cost position |
| Proven Leadership Team | <ul style="list-style-type: none">▪ Operational team with large company and project mining and chemical industry experience▪ Highly experienced people in all senior staff functions▪ Senior leadership focused on driving shareholder value in a responsible way |

SCOPING UPDATE

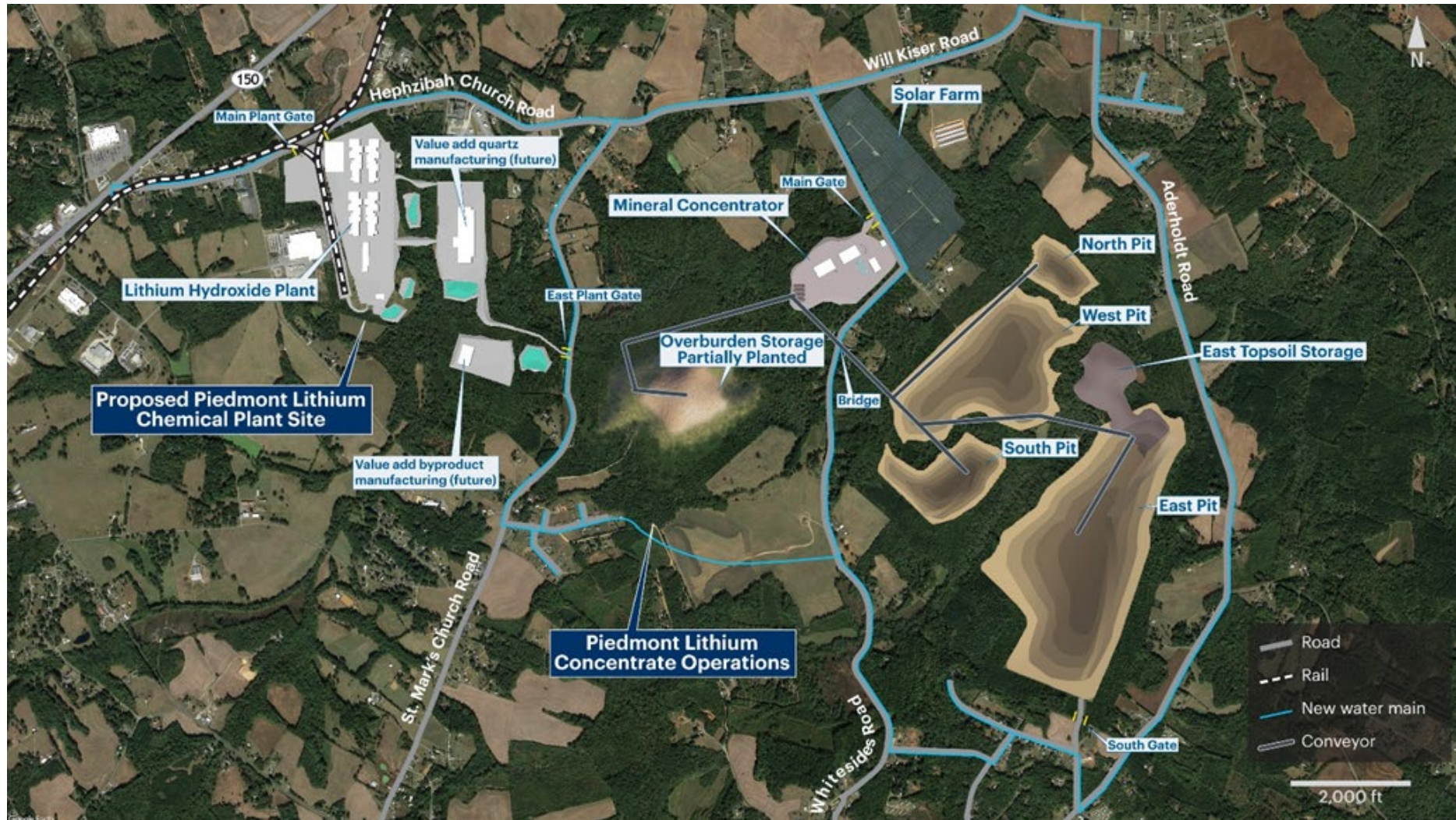
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 ASX :PLL

ABN 50 002 664 495

LiOH

SCOPING UPDATE – SITE PLAN

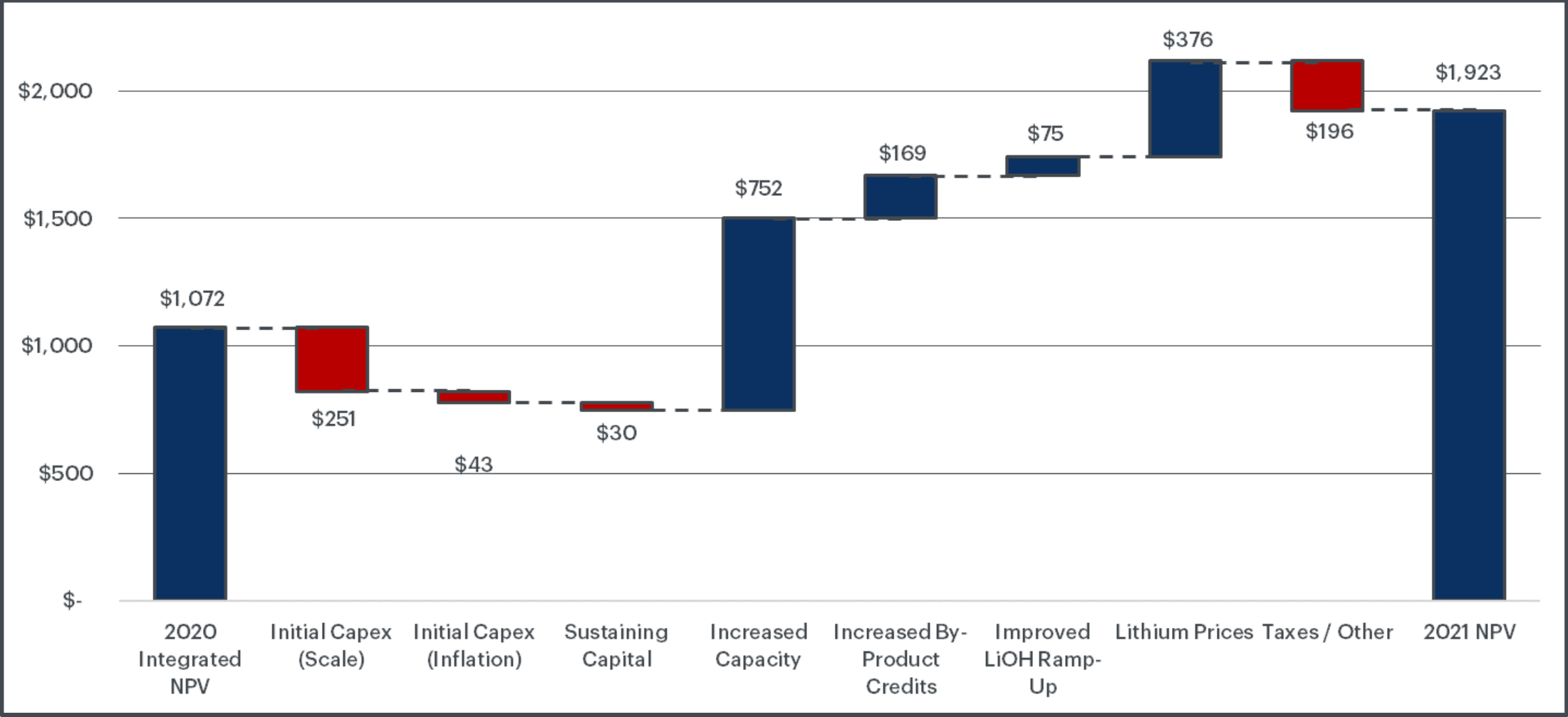


SCOPING – 2021 VS. 2020 – KEY OUTCOMES

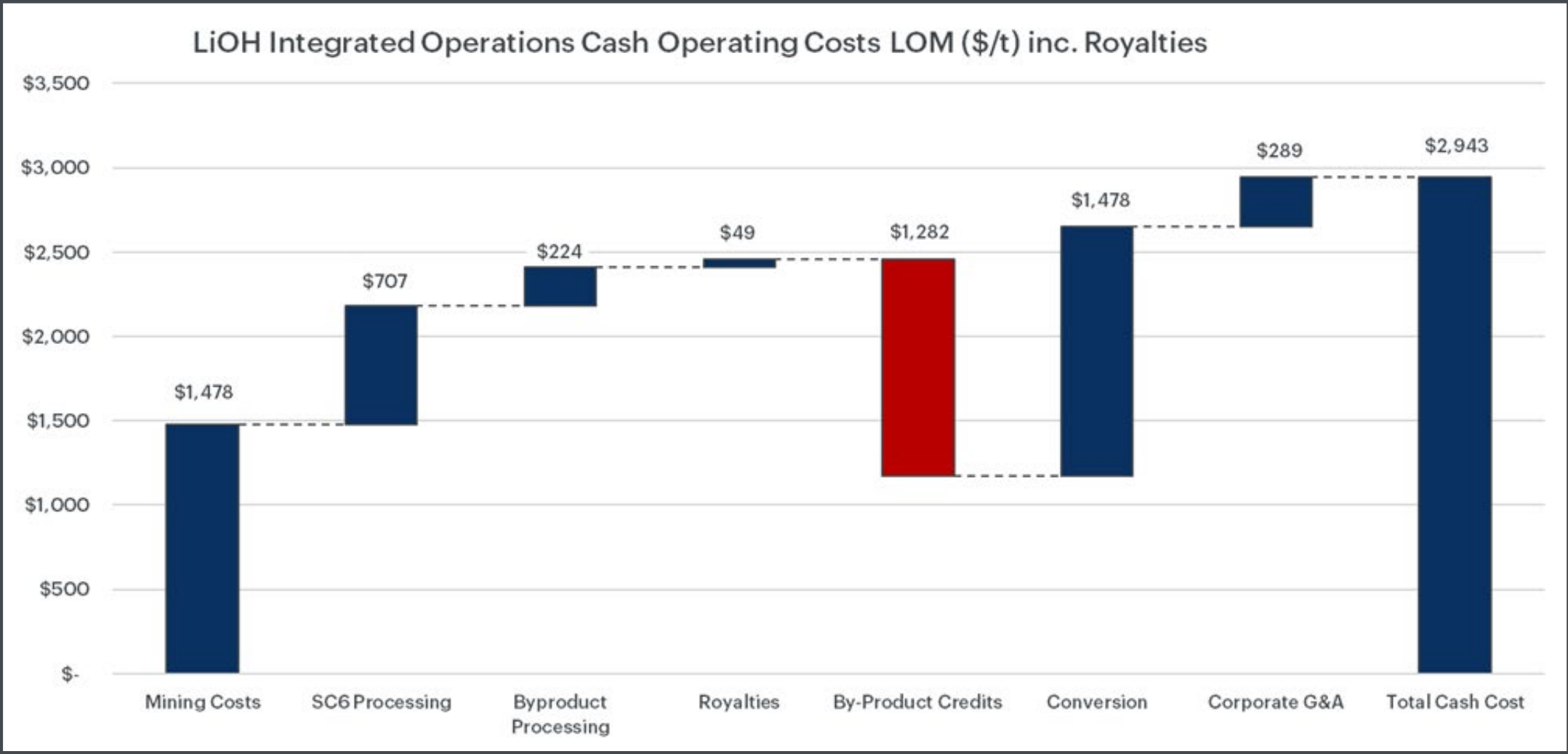
Table 1: Comparative Outcomes of 2021 and 2020 Scoping Studies

| <i>Outcomes</i> | <i>Unit</i> | <i>2021 Study</i> | <i>2020 Study</i> |
|--|-------------|-------------------|-------------------|
| Project life | years | 20 | 25 |
| Steady-state average annual lithium hydroxide production | t/y | 30,000 | 22,720 |
| Steady-state average annual spodumene concentrate production | t/y | 248,000 | 160,000 |
| Steady-state average annual by-product production (all products) | t/y | 714,000 | 224,000 |
| Long term lithium hydroxide price | US\$/t | \$15,239 | \$12,910 |
| Long term spodumene concentrate price | US\$/t | \$762 | \$564 |
| Steady-state average cash cost of lithium hydroxide production | US\$/t | \$2,943 | \$3,712 |
| Steady-state average cost of spodumene concentrate production | US\$/t | \$181 | \$201 |
| Initial capital cost (including contingency) | US\$MM | \$838 | \$545 |
| Steady-state average annual EBITDA | US\$MM/y | \$401 | \$218 |
| After tax NPV @ 8% discount rate | US\$MM | \$1,923 | \$1,071 |
| After tax IRR | % | 31% | 26% |
| Payback from start of operations | years | 2.92 | 3.23 |

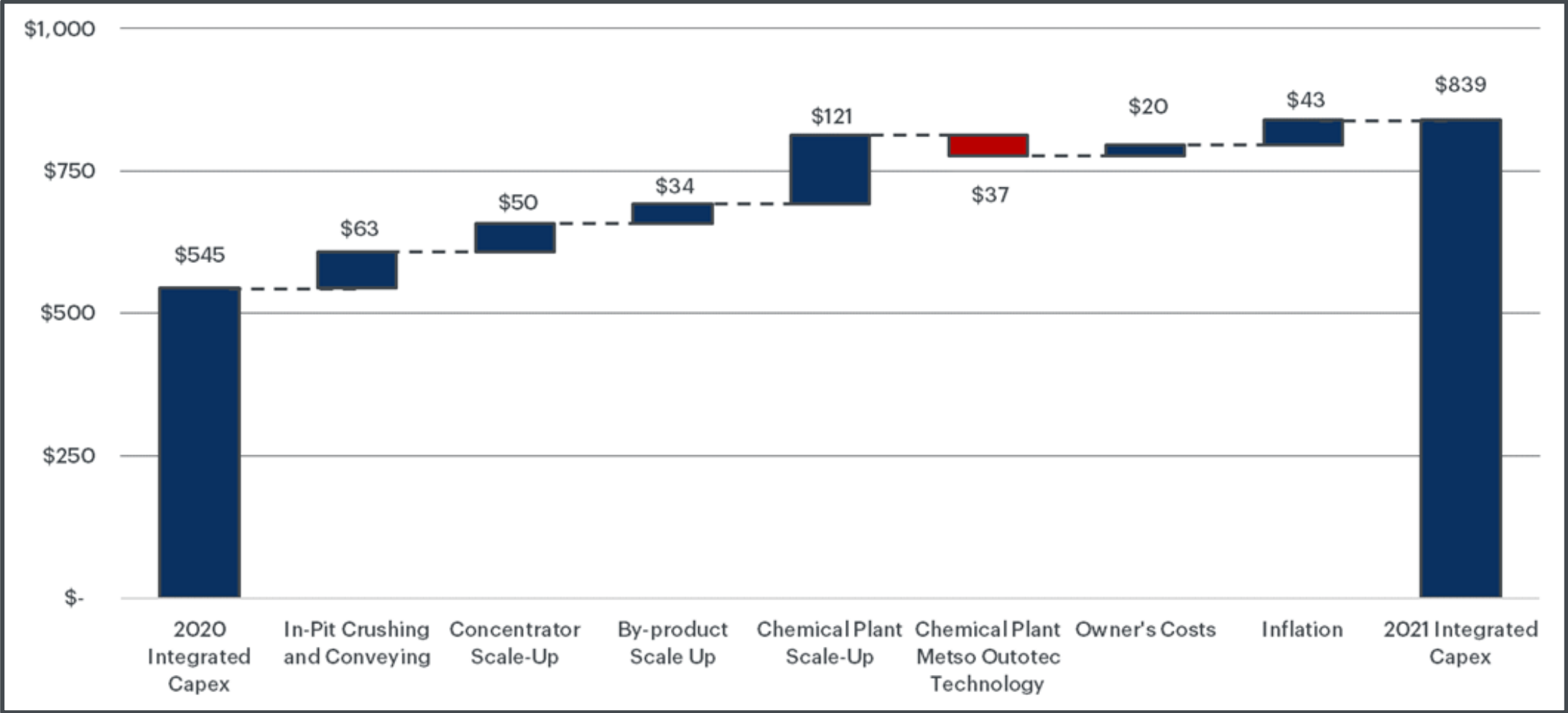
SCOPING – 2021 VS. 2020 – NET PRESENT VALUE



SCOPING – 2021 VS. 2020 – CASH COSTS



SCOPING – 2021 VS. 2020 – INITIAL CAPITAL



SCOPING UPDATE – INITIAL CAPITAL

Table 1: Estimated Capital Costs

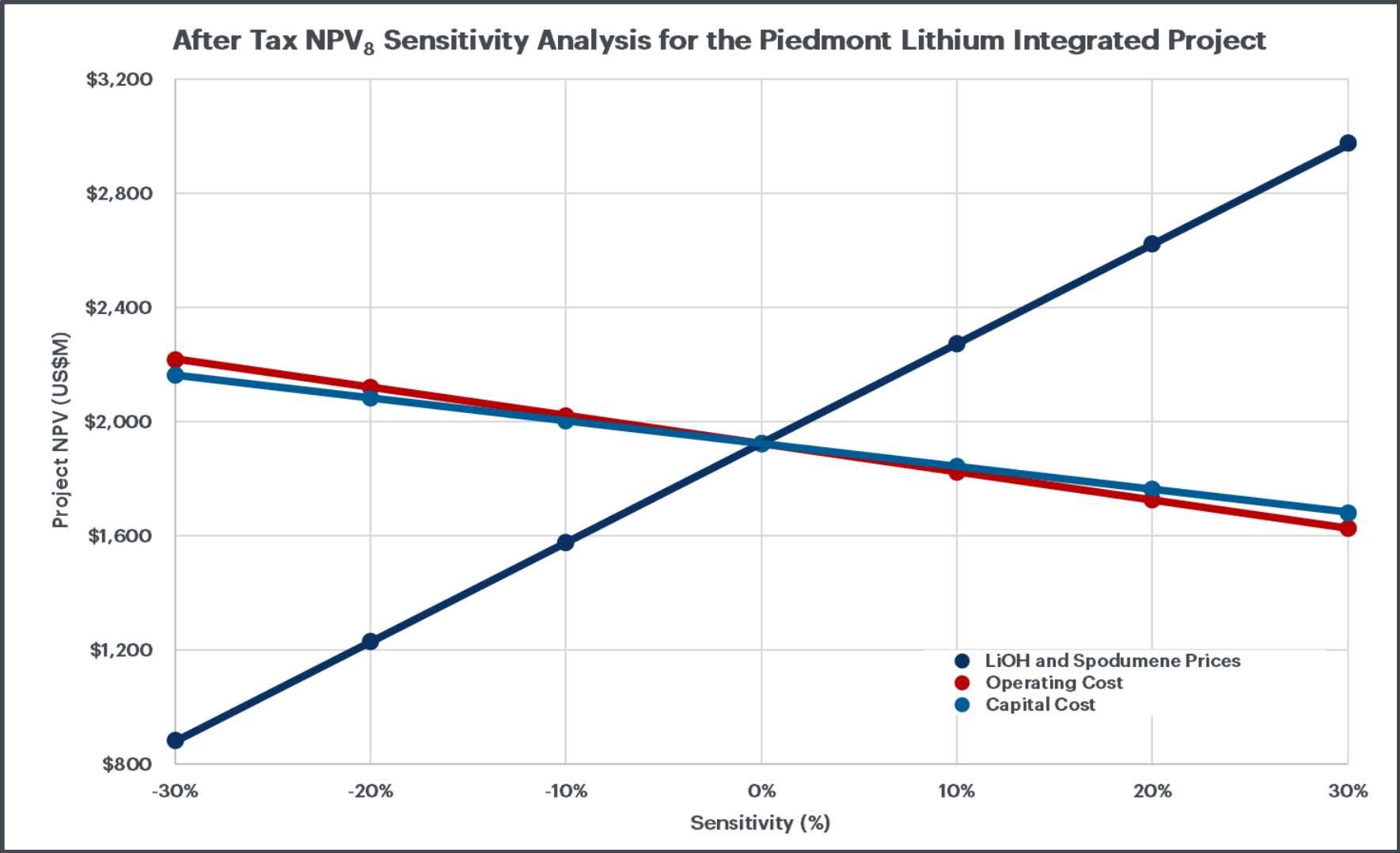
| Cost Center | Life-of-mine total (US\$ million) |
|--|-----------------------------------|
| Mine establishment and infrastructure direct costs | \$67.0 |
| In-pit crushing and conveyors | \$52.1 |
| Spodumene concentrator | \$115.2 |
| By-products plant | \$39.0 |
| Chemical plant | \$277.3 |
| Project indirects | \$88.4 |
| Total | \$639.0 |
| Land acquisition | \$28.0 |
| Other owner's costs | \$43.8 |
| Total Initial Capital (Excluding Contingency) | \$710.8 |
| Contingency | \$127.8 |
| Total Development Capital | \$838.6 |
| Deferred and sustaining capital | \$337.9 |
| Working capital | \$48.3 |

SCOPING UPDATE – MILESTONES

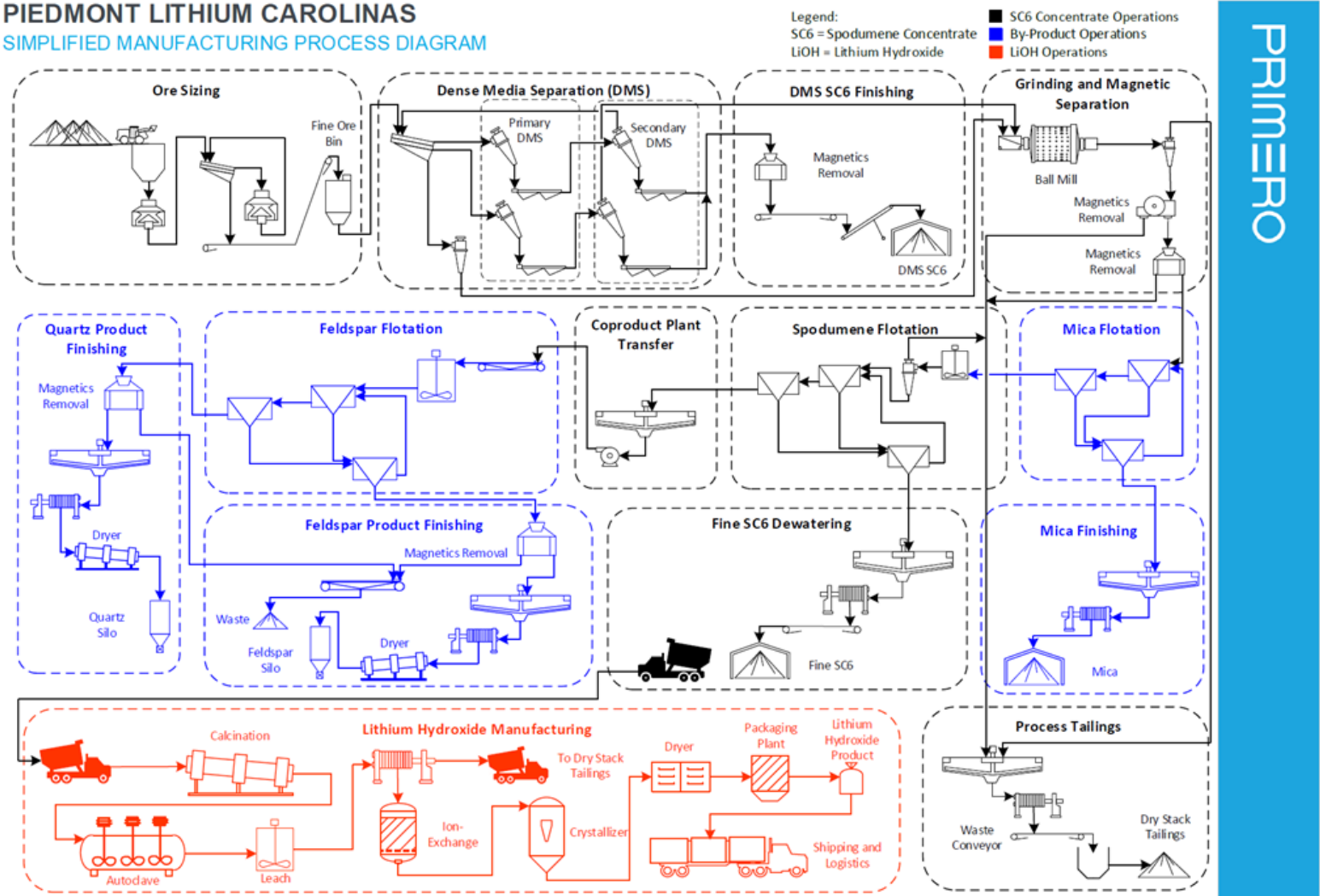
Table 1: Piedmont Carolina Lithium Project Milestone Schedule – Lithium Hydroxide Operations

| Milestone Description | Milestone Date |
|---------------------------------------|----------------|
| Complete Integrated DFS | September 2021 |
| Financial Investment Decision (“FID”) | December 2021 |
| Start Detailed Design Engineering | January 2022 |
| Commence Long Lead Equipment Awards | January 2022 |
| Start Construction | April 2022 |
| Pre-Operational Testing Start | July 2023 |
| Mechanical Completion | October 2023 |
| Pre-Operational Testing Completion | November 2023 |
| Commissioning Start | December 2023 |

SCOPING UPDATE – SENSITIVITY ANALYSIS



SCOPING UPDATE – FLOW SHEET



PRIMERO

RESERVES AND RESOURCES

Global Ore Reserves & Mineral Resources – Piedmont Lithium and Sayona Mining – 100% Basis

| Category | Piedmont Lithium ¹ | | | | Sayona Mining ² | | | |
|--------------------------|-------------------------------|----------------------------|------------------------|----------------|----------------------------|----------------------------|------------------------|--------------|
| | Tonnes (Mt) | Grade (Li ₂ O%) | Li ₂ O (kt) | LCE (kt) | Tonnes (Mt) | Grade (Li ₂ O%) | Li ₂ O (kt) | LCE (kt) |
| Ore Reserves | | | | | | | | |
| Proven | - | - | - | - | 6.1 | 0.99 | 60.4 | 149.4 |
| Probable | - | - | - | - | 6.0 | 1.02 | 61.2 | 151.3 |
| Total Reserves | - | - | - | - | 12.1 | 1.00 | 121.6 | 300.7 |
| Mineral Resources | | | | | | | | |
| Measured | - | - | - | - | 6.6 | 1.02 | 67.1 | 165.9 |
| Indicated | 21.6 | 1.12 | 241.0 | 597.0 | 10.6 | 1.00 | 107.1 | 264.9 |
| Inferred | 17.6 | 1.03 | 181.0 | 449.0 | 3.8 | 0.98 | 36.8 | 91.0 |
| Total MRE | 39.2 | 1.09 | 422.0 | 1,046.0 | 20.9 | 1.01 | 211.0 | 521.8 |

Note 1: Piedmont Lithium Mineral Resources as of April 7, 2021

Note 2: Sayona Mining ASX announcement reporting Ore Reserves, and Mineral Resources dated September 24, 2018

DISCLAIMERS

Forward Looking Statements

This presentation contains forward-looking statements within the meaning of or as described in securities legislation in the United States and Australia, including statements regarding exploration and development activities; plans for Piedmont's mineral projects; projections of market demand and prices; statements about the timing and amount of reserve and resource declarations; and statements about the timing and ability to complete scoping studies and feasibility studies.

Such forward-looking statements involve substantial and known and unknown risks, uncertainties and other risk factors which may cause actual events, results, performance or achievements to be materially different from events, results, performance or achievements expressed or implied by the forward-looking statements. Such risk factors include, among others: (i) that Piedmont will be unable to commercially extract mineral deposits, (ii) Piedmont's properties may not contain expected reserves, (iii) risks and hazards inherent in the mining business (including risks inherent in developing mining projects, environmental hazards, industrial accidents, weather or geologically related conditions), (iv) uncertainty about Piedmont's ability to obtain required capital to execute its business plan, (v) Piedmont's ability to hire and retain required personnel, (vi) changes in the market prices of lithium, (vii) changes in technology or the development of substitute products, (viii) the uncertainties inherent in exploratory, developmental and production activities, including risks relating to permitting and regulatory delays, (ix) uncertainties inherent in the estimation of lithium resources, (x) risks related to competition, and (xi) other uncertainties and risk factors set out in filings made from time to time with the U.S. Securities and Exchange Commission and the Australian Securities Exchange, including Piedmont's most recent Annual Report on Form 20-F. The forward-looking statements, projections and estimates are given only as of the date of this presentation and actual events, results, performance and achievements could vary significantly from the forward looking statements, projections and estimates presented in this presentation. Readers are cautioned not to put undue reliance on forward-looking statements. Piedmont disclaims any intent or obligation to update publicly such forward-looking statements, projections and estimates, whether as a result of new information, future events or otherwise. Additionally, Piedmont, except as required by applicable law, undertakes no obligation to comment on analyses, expectations or statements made by third parties in respect of Piedmont, its financial or operating results or its securities.

Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources

The Project's Core Property Mineral Resource of 25.1Mt @ 1.09% Li₂O comprises Indicated Mineral Resources of 12.5Mt @ 1.13% Li₂O and Inferred Mineral Resources of 12.6Mt @ 1.04% Li₂O. The Central Property Mineral Resource of 2.80Mt @ 1.34% Li₂O comprises Indicated Mineral Resources of 1.41Mt @ 1.38% Li₂O and 1.39Mt @ 1.29% Li₂O.

Because Piedmont is listed on the Australian Securities Exchange, the information contained in this presentation has been prepared in accordance with the requirements of the securities laws in effect in Australia, which differ from the requirements of U.S. securities laws. The terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are Australian terms defined in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Comparable terms are now also defined by the U.S. Securities and Exchange Commission ("SEC") in its newly adopted Modernization of Property Disclosures for Mining Registrants as promulgated in its S-K 1300 standards. While the guidelines for reporting mineral resources, including subcategories of measured, indicated, and inferred resources, are largely similar for JORC and S-K 1300 standards, documentation is ongoing with respect to the S-K 1300 Technical Report Summary template to formally categorize Piedmont's mineral holdings as both JORC and S-K 1300 compatible. While the competent persons responsible for this announcement do not foresee any challenges in categorizing the resources delineated in this announcement as S-K 1300 compliant, information contained herein that describes Piedmont's mineral deposits is not fully comparable to similar information made public by U.S. companies subject to reporting and disclosure requirements under the U.S. federal securities laws and the rules and regulations thereunder. U.S. investors are urged to consider Piedmont's disclosure in its SEC filings, copies of which may be obtained from Piedmont or from the EDGAR system on the SEC's website at www.sec.gov.

Competent Persons Statements

The information in this presentation that relates to Exploration Results is based on, and fairly represents, information compiled or reviewed by Mr. Lamont Leatherman, a Competent Person who is a Registered Member of the 'Society for Mining, Metallurgy and Exploration', a 'Recognized Professional Organization' (RPO). Mr. Leatherman is an employee of the Company. Mr. Leatherman has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Leatherman consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this presentation that relates to lithium Mineral Resources is extracted from our announcement entitled "Piedmont Increases Lithium Resources by 40%" dated April 8, 2021. The information in this announcement that relates to by-product Mineral Resources is extracted from our announcement entitled "Piedmont Focused on Increased Sustainability with 40% Increase in Quartz, Feldspar, and Mica Mineral Resources" dated June 8, 2021. Both announcements are available to view on the Company website at www.piedmontlithium.com. Piedmont confirms that: a) it is not aware of any new information or data that materially affects the information included in the original announcements; b) all material assumptions and technical parameters underpinning the Mineral Resources in the original announcements continue to apply and have not materially changed; and c) the form and context in which the Competent Person's findings are presented in this announcement have not been materially modified from the original announcements.

The information in this presentation that relates to Process Design, Capital Costs, and Operating Costs is based on, and fairly represents, information compiled or reviewed by Mr. Alexandre Roy, a Competent Person who is a Registered Member of 'Ordres des Ingenieurs du Quebec', a 'Recognized Professional Organization' (RPO). Mr. Roy is a full time employee of Primero Group. Mr. Roy has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr. Roy consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this presentation that relates to Mining Engineering and Mining Schedule is based on information compiled by Mr. Chris Scott and reviewed by Dr. Steven Keim, both of whom are employees of Marshall Miller and Associates (MM&A). Dr. Keim takes overall responsibility as Competent Person for the portions of the work completed by MM&A. Dr. Steven Keim is a Competent Person who is a Registered Member of the 'Society for Mining, Metallurgy & Exploration Society', a 'Recognized Professional Organization' (RPO). Dr. Keim has sufficient experience, which is relevant to the style of mineral extraction under consideration, and to the activity he is undertaking, to qualify as Competent Person in terms of the JORC Code (2012 Edition). Dr. Keim has reviewed this document and consents to the inclusion in this report of the matters based on his information in the form and context within which it appears.



LiOH

PIEDMONT
LITHIUM

LITHIUM – MADE IN THE USA

Powering America's Clean Energy Transition

June 2021

Keith D. Phillips – President and CEO

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kphillips@piedmontlithium.com

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Exploration Office | 5706 Dallas-Cherryville Hwy. 279 | Bessemer City | NC 28016 | USA

Australia Office | 28 The Esplanade | 9th Floor | Perth | WA 6000 | Australia

 Nasdaq :PLL

 ASX :PLL

ARBN 647 286 360

www.piedmontlithium.com