

# LITHIUM – MADE IN THE USA

Helping Secure America's Energy Independence

Nasdaq :PLL





ASX :PLL

ARBN 647 286 360

**LiOH**

June 2022

# PIEDMONT AT A GLANCE

	Domestic lithium to power America's energy transition
<b>LiOH</b>	Developing 60,000tpy of LiOH production in the USA <sup>1</sup>
<b>SC6</b>	>500,000tpy of SC6 from assets in U.S., Canada and Ghana <sup>2</sup>
	Potential for near-term cash flow with 2023 NAL restart
	Industry-leading sustainability profile
	Proven leadership team
<b>\$</b>	Strong balance sheet to execute on 2022 catalysts

1. Plans include the Carolina Lithium Bankable Feasibility Study announced December 15, 2021 and a Preliminary Economic Assessment of the LHP-2 Project dated March 9, 2022.

2. SC6 production based on the results of the Carolina Lithium Bankable Feasibility Study as well as Piedmont's offtake agreement for 50% of SC6 production from Ewoyaa and the greater of 113,000tpy or 50% of SC6 production from North American Lithium

## CORPORATE SNAPSHOT

### PIEDMONT LITHIUM



Shares / CDIs Outstanding (100 CDIs = 1 Share)	17.9 mm	1,793.8 mm
Price (@ 6/10/22)	\$53.47	A\$0.74
Average Daily Trading Volume (30-day)	\$22 mm	A\$3 mm
Market Cap (@ 6/10/22)	\$959 mm	A\$1,327 mm
Cash (Est. 3/31/22)	\$166 mm	A\$235 mm
Equity Interests at Market (@ 6/10/22)	\$150 mm	A\$212 mm

### RESEARCH COVERAGE

J.P.Morgan

EVERCORE ISI

CANACCORD Genuity

**COWEN**

 **Loop Capital**

**B | RILEY** Securities

 **BTIG**

 **Clarksons Platou**  
Securities

 **ROTH** Capital Partners

**D | A | DAVIDSON**

**TUOHY BROTHERS**  
INVESTMENT RESEARCH INC.

# SUPPORTIVE INDUSTRY BACKDROP

**Biden to invoke Defense Production Act for electric vehicle battery materials**

**FORD MOTOR CO. CEO CALLS FOR MORE DOMESTIC MINING**

**Rivian CEO: Raw Material Shortage Will Severely Limit EV Battery Production**

**GM plans to exclusively offer electric vehicles by 2035**

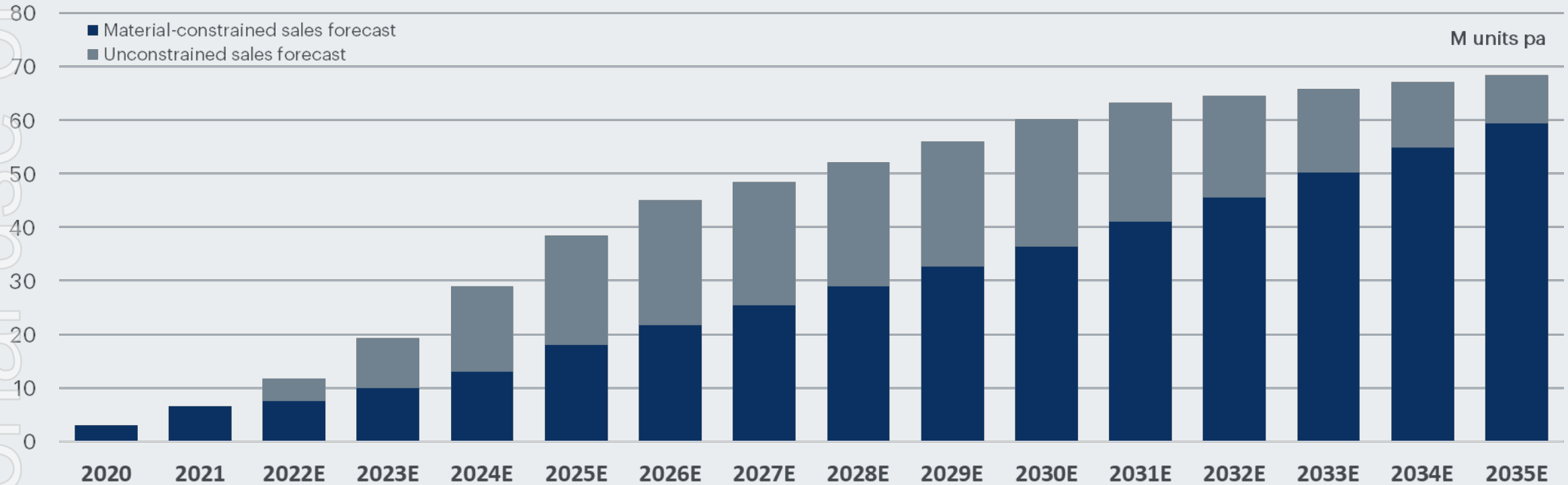
**VW to 'get actively involved in the raw materials business'**

**Elon Musk: "Do you like minting money? The Lithium business is for you."**

# EV SALES FORECAST

Raw Material Constraints Expected to Curtail EV Penetration Over the Next Decade

**MATERIAL-CONSTRAINED VS. UNCONSTRAINED EV SALES FORECAST**

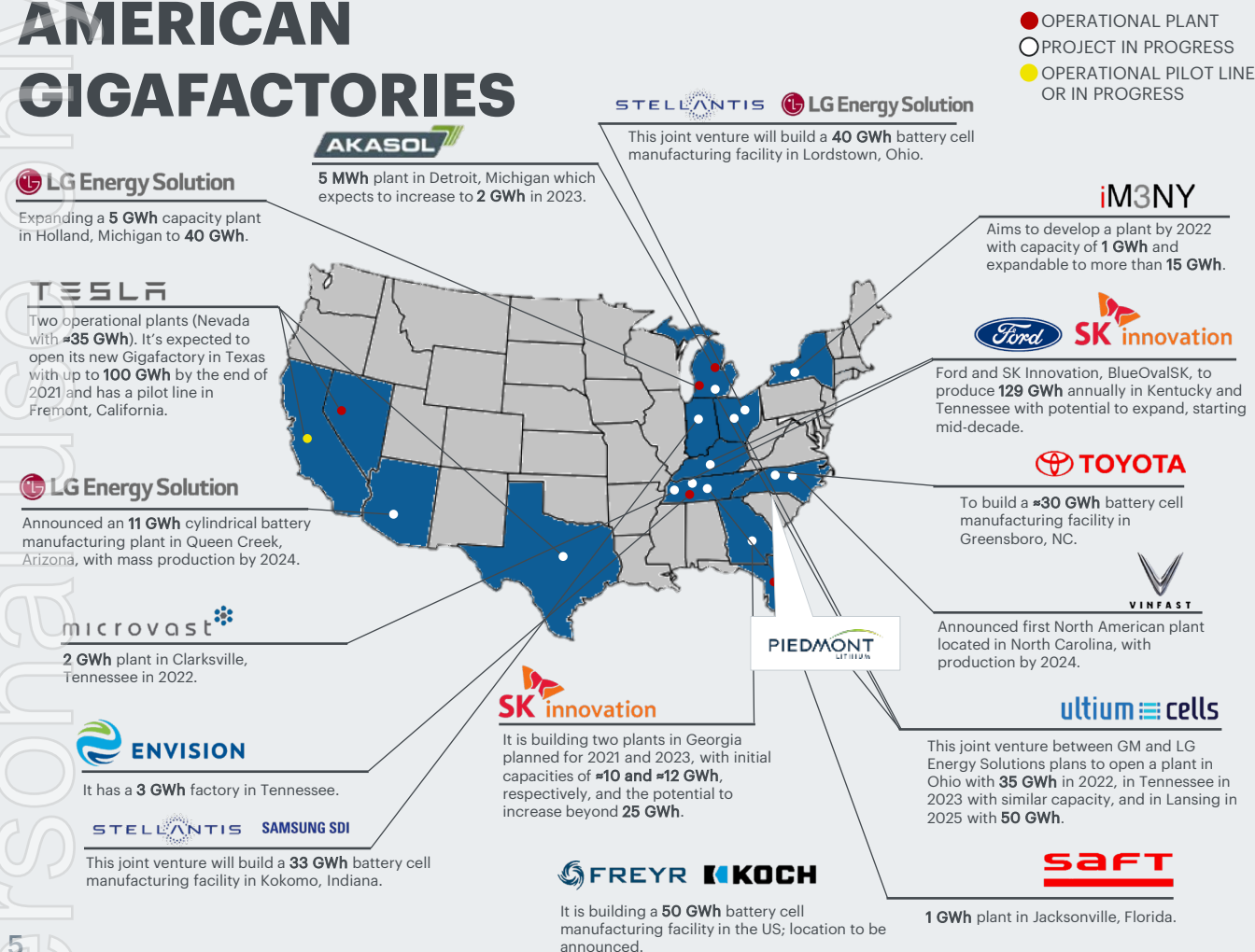


Source: Battery Material Review, Westbeck Capital estimates

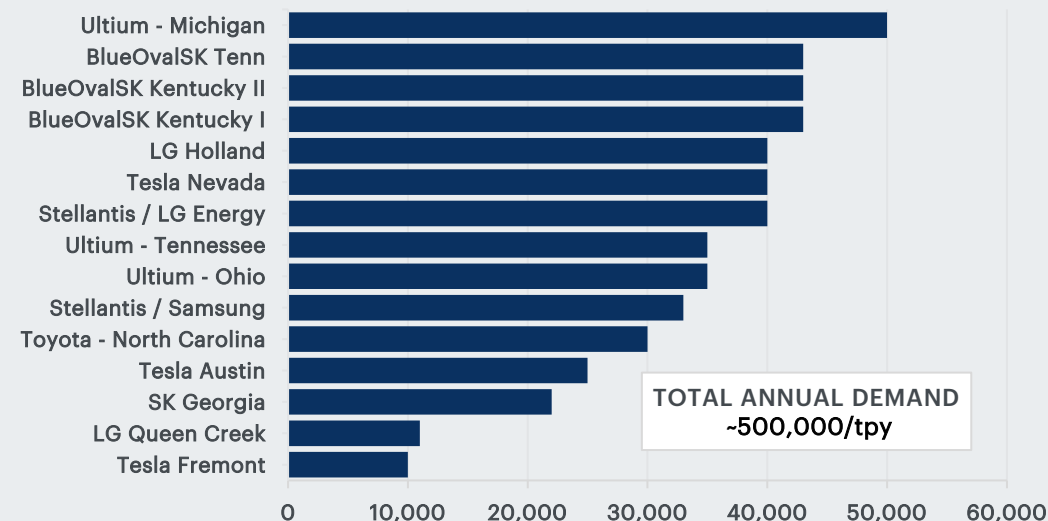
# DOMESTIC SHORTFALLS ANTICIPATED

Commitments of Over \$25 Billion to Build U.S. Battery Capacity by 2030

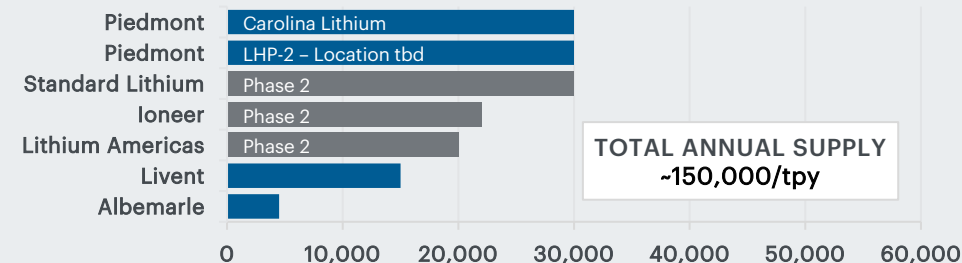
## AMERICAN GIGAFACTORIES



### LiOH REQUIRED BY SELECTED GIGA-FACTORIES BY 2025+



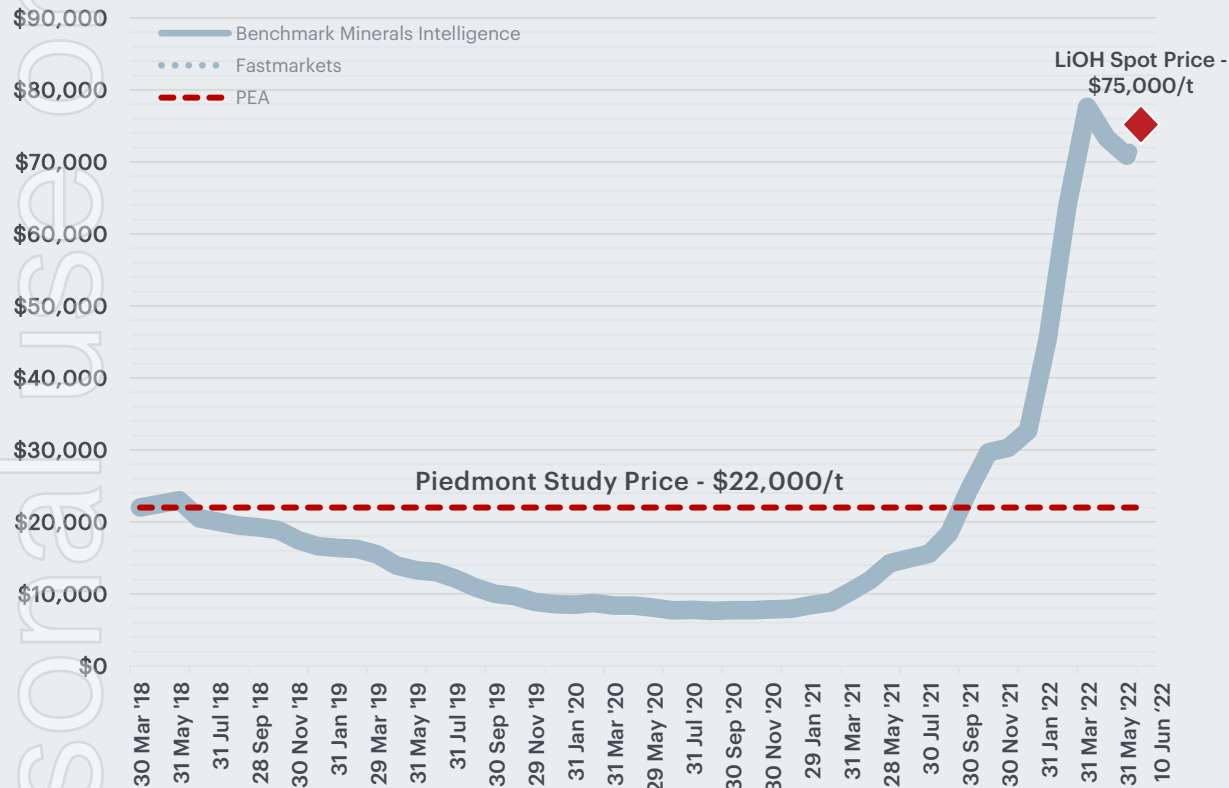
### SELECTED US LITHIUM HYDROXIDE SUPPLY BY 2025+



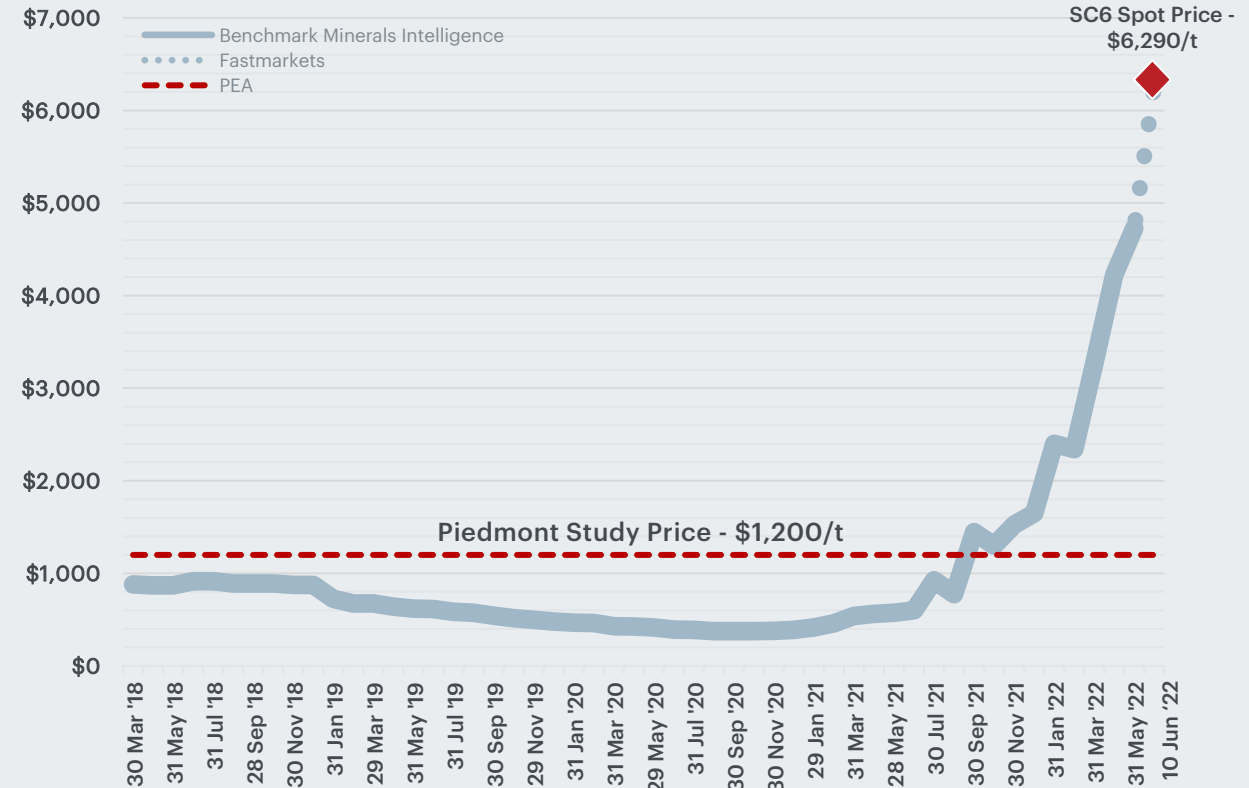
Source: Benchmark Mineral Intelligence – Lithium Forecast, Q3 2021, company announcements and Piedmont Lithium estimates

# SUPPLY IMBALANCE IS DRIVING PRICES HIGHER

## BATTERY GRADE LITHIUM HYDROXIDE PRICES (US\$/MT)



## SPODUMENE CONCENTRATE 6% PRICES (US\$/MT)



Historical Prices – Benchmark Mineral Intelligence lithium hydroxide (EXW China) and spodumene 6%, FOB Australia as of May 31, 2022

Spot Price Reported by Fastmarkets CIF China 'mid-price' for lithium hydroxide and spodumene 6% on June 10, 2022

"Piedmont Study Price" are the fixed prices assumed in the financial model developed as part of our LHP-2 Preliminary Economic Assessment announced March 8, 2022

Nasdaq : PLL

ASX : PLL

**PIEDMONT**  
LITHIUM

# PROJECTS



## CAROLINA LITHIUM (100% OWNERSHIP<sup>1</sup>)

CL

Project	Carolina Lithium
Location	Gaston County, North Carolina
Project Stage	Feasibility Study
Mineral Resources	44.2Mt @ 1.08% Li <sub>2</sub> O
Production	30,000tpy LiOH; 242,000tpy SC6
Economics	\$2.8bb NPV; \$592mm run-rate EBITDA

## LIOH PLANT TWO (100% OWNERSHIP<sup>1</sup>)

LHP-2

Project	Lithium Hydroxide Plant Two
Location	TBD, U.S.
Project Stage	Preliminary Economic Assessment
Production	30,000tpy LiOH
Economics	\$2.2bb NPV; \$346mm run-rate EBITDA

## QUEBEC (~35% ECONOMIC INTEREST<sup>2</sup>)

SYA

Project	Authier + NAL
Location	Abitibi Region, Quebec, Canada
Project Stage	Pre-Feasibility
Mineral Resources	119.1Mt @ 1.05% Li <sub>2</sub> O <sup>3</sup>
Production	168,000tpy SC6 <sup>4</sup>
Economics	\$571mm NPV; \$80mm capex <sup>4</sup>

## GHANA (EARN-IN OF 50% PROJECT INTEREST<sup>5</sup>)

ALL

Project	Ewoyaa
Location	Cape Coast, Ghana
Project Stage	Scoping + Exploration
Mineral Resources	30.1Mt @ 1.26% Li <sub>2</sub> O <sup>6</sup>
Production	300,000tpy SC6 (50% to PLL) <sup>7</sup>
Economics	\$789mm NPV; \$70mm capex <sup>7</sup>

<sup>1</sup> Refer to Piedmont Lithium press release dated March 9, 2022. Financial results for Carolina Lithium are indicative Company estimates not independently verified by the Qualified Persons.

<sup>2</sup> Piedmont owns a 25.0% interest in Sayona Quebec and a 14.4% stake in Sayona Mining, resulting in an effective economic interest of ~35% in the Abitibi Lithium Hub.

<sup>3</sup> Refer to Sayona Mining ASX announcement dated March 1, 2022 for JORC Code Compliant MRE.

<sup>4</sup> Refer to Sayona Mining ASX announcement dated May 23, 2022 for results of NAL Pre-Feasibility Study.

<sup>5</sup> Piedmont can earn a 50% interest in Atlantic Lithium's Ghanaian lithium portfolio and owns 9.9% of Atlantic Lithium.

<sup>6</sup> Refer to Atlantic Lithium AIM announcement dated March 24, 2022 for JORC Code Compliant MRE.

<sup>7</sup> Refer to Atlantic Lithium AIM announcement dated December 7, 2021.



# OUR ASSETS

We Have Invested in the Mineral Resources to Support our Mission to Become America's Largest Producer of Lithium Hydroxide

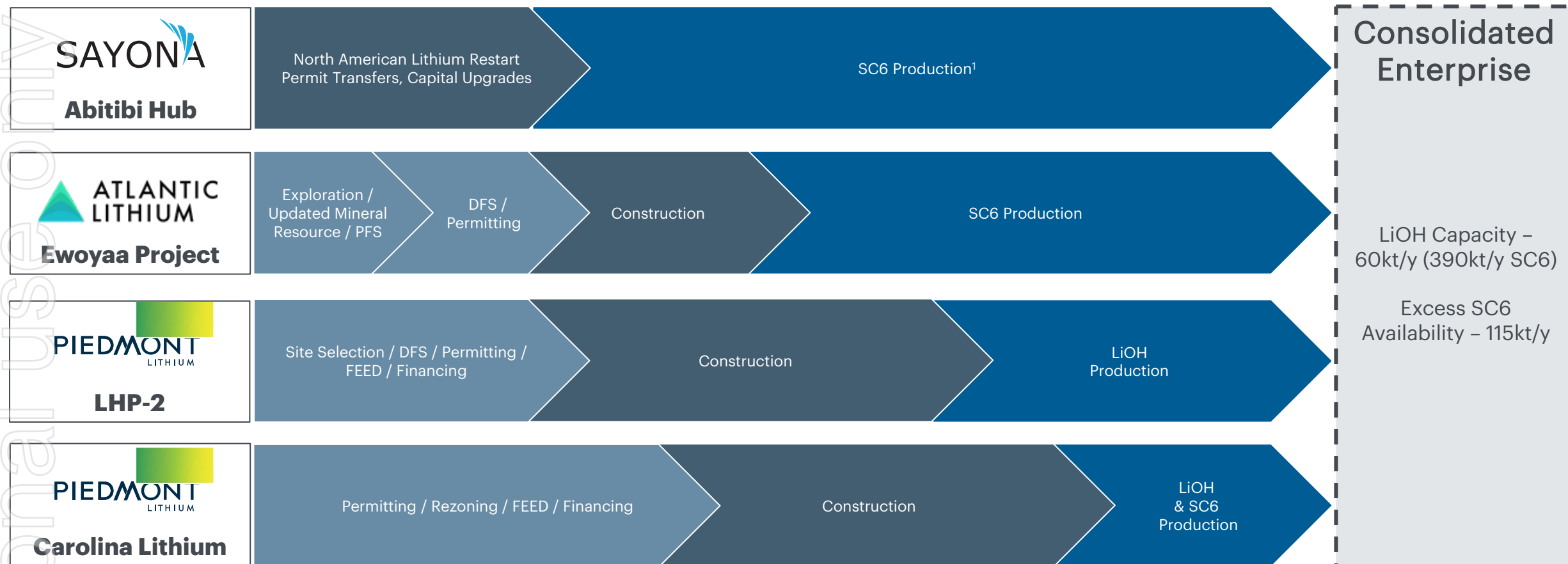
SPODUMENE CONCENTRATE	LITHIUM HYDROXIDE
CAROLINA LITHIUM USA <i>North Carolina</i> 242,000tpy SC6 <sup>1</sup>	USA LiOH PLANT ONE <i>North Carolina – Gaston County</i> 30,000tpy LiOH
EWOYAA <i>Ghana</i> 150,000tpy SC6 <sup>2</sup>	USA LiOH PLANT TWO <i>Location TBD</i> 30,000tpy LiOH
ABITIBI HUB <i>Quebec</i> 113,000tpy <sup>3</sup>	QUEBEC LiOH PLANT (UNDER CONSIDERATION) <i>Location TBD</i> Scale TBD

1: Annual spodumene concentrate production per Bankable Feasibility Study Results released December 14, 2021.

2: Piedmont's 50% offtake share of spodumene concentrate production from Atlantic Lithium Scoping Study updated released December 7, 2021.

3: Piedmont offtake is for the greater of 113,000tpy or 50% of production.

# DEVELOPMENT PROGRESSION



1. Initial SC6 production from the restart of the North American Lithium mine. Additional potential spodumene ore production from Authier and potential LiOH production from Quebec are the subject of ongoing technical studies.

# QUEBEC

NAL Restart Contemplated for H1 2023



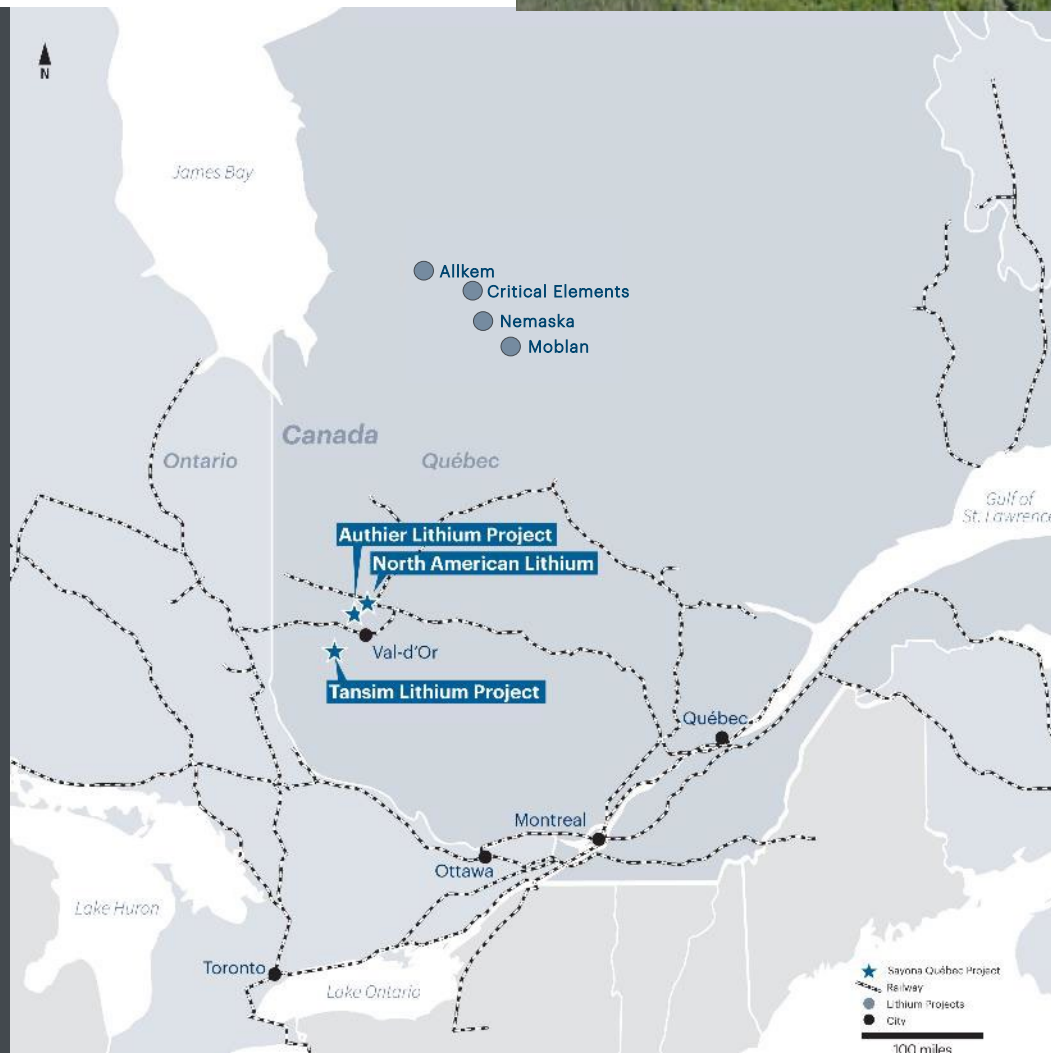
SYA

## HIGHLIGHTS

- Piedmont owns a 25% project interest in Sayona Quebec and a 14.4% equity interest in Sayona Mining
- Among Canada's largest and best-located lithium projects
- NAL is a past-producer with C\$400mm of capital investment
- Good rail and highway infrastructure
- Skilled local labor and contractors
- Potential for near-term SC6 production in North America with attractive offtake economics
- Low-cost renewable hydroelectricity

## UPCOMING MILESTONES

- NAL restart decision
- Technical studies for integrated NAL/Authier targeted for H1 2022
- Evaluating LiOH production in Quebec



## FACT SHEET

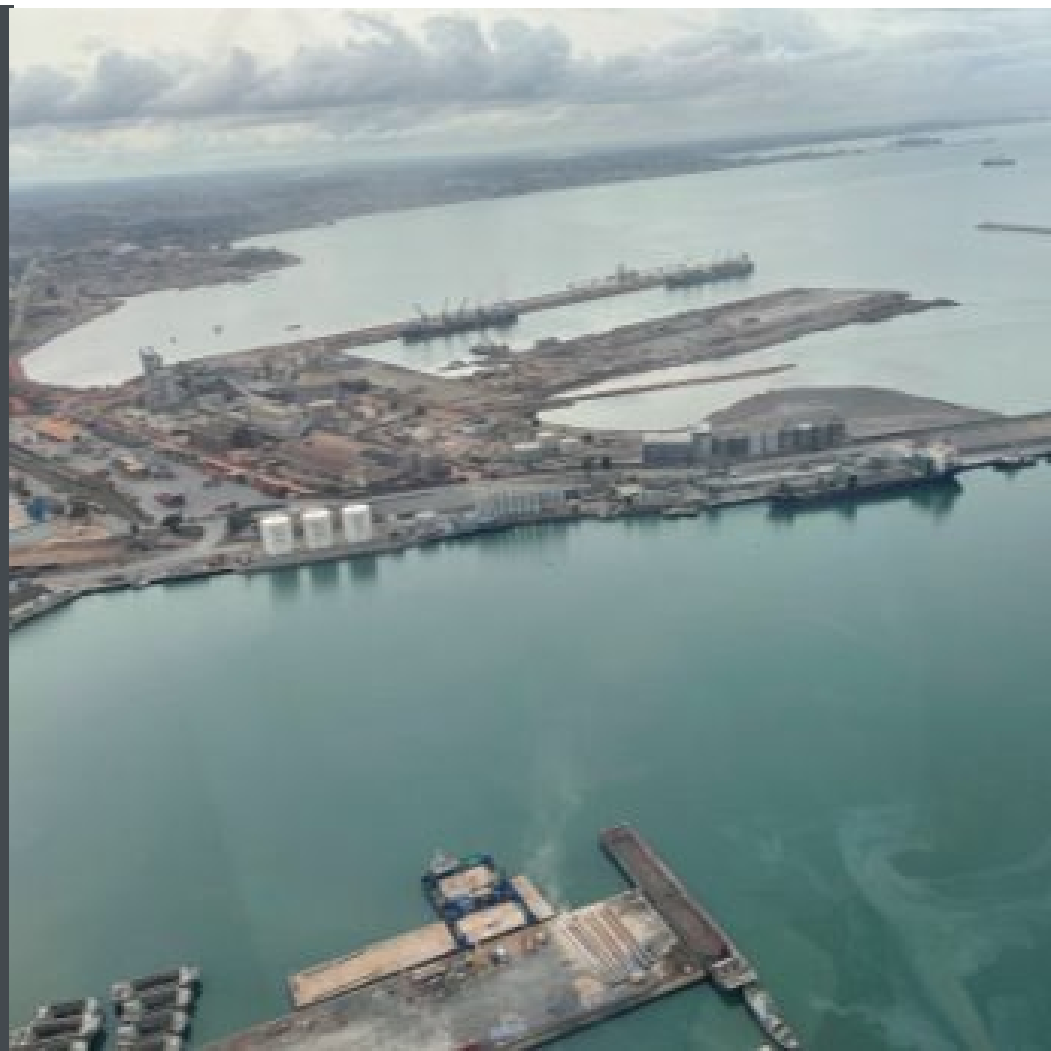
Location	Québec
Project Stage	Pre-Feasibility
Business	Spodumene Concentrate
Resources	119.0Mt @ 1.05% Li <sub>2</sub> O <sup>1</sup>
Production	168,000tpy SC6 <sup>2</sup>
PLL Offtake	Greater of 50% of production or 113,000tpy <sup>3</sup>
Offtake Price	Price Floor: \$500/t Price Ceiling: \$900/t <sup>3</sup>
Production	2023
Capex	\$80mm <sup>2</sup>
Opex	\$590/t SC6 <sup>2</sup>
After-tax NPV <sub>8</sub>	\$571mm <sup>2</sup>

1. Mineral Resources include JORC Code (2012) Mineral Resources of North American Lithium and Authier and are based on Sayona's public filing on March 1, 2022.
2. See Sayona Mining ASX announcement dated May 23, 2022 for NAL pre-feasibility announcement.
3. Refer to Piedmont's ASX announcement dated January 11, 2021 for supply agreement terms.

# GHANA

Atlantic Lithium Targeting First Production in 2024

ALL



## HIGHLIGHTS

- Piedmont owns 9.9% of Atlantic Lithium and can earn a 50% interest in ALL's Ghanaian lithium portfolio
- Mining-friendly jurisdiction
- ~70 miles from major port along national highway
- Short transport to North America for hydroxide conversion
- Coarse-grained spodumene implies low capex DMS flowsheet
- Adjacent hydroelectric powerlines

## UPCOMING MILESTONES

- Exploration results and updated mineral resource
- Feasibility study expected Q3 2022

## FACT SHEET

Location	Ghana
Project Stage	Exploration / Scoping
Business	Spodumene Concentrate
Resources	30.1Mt @ 1.26% Li <sub>2</sub> O <sup>1</sup>
Production	300,000tpy SC6 <sup>2</sup>
PLL Offtake	50% of annual production
DFS Timing	2022-2023
Production	2024-2025
Capex	\$70mm <sup>2</sup>
Opex	\$249/t SC6 <sup>2</sup>
After-tax NPV <sub>8</sub>	\$789mm <sup>2</sup>
After-tax IRR	194% <sup>2</sup>

<sup>1</sup> Refer to Atlantic Lithium AIM announcement dated March 24, 2022 for JORC Code Compliant MRE.

<sup>2</sup> Refer to Atlantic Lithium AIM announcement dated December 7, 2021.

# LHP-2

100% Owned by Piedmont Lithium

## HIGHLIGHTS

- 30,000tpy LiOH Production
- Merchant plant fed by market sources, including offtake agreements with Sayona Quebec and Atlantic Lithium
- Common physical and operating characteristics of Carolina Lithium Plant
- Features Metso:Outotec conversion technology

## UPCOMING MILESTONES

- Site selection
- EPC contractor selection
- Feasibility study
- Permitting
- Project financing
  - Strategic partnering
  - ATVM loan



LHP-2

## FACT SHEET<sup>1</sup>

Location	TBD
Project Stage	Preliminary Economic Assessment
Product	Lithium Hydroxide
Production	30,000tpy LiOH
Feedstock	196,000tpy SC6
Capex	\$572 million
Opex	\$10,630/t LiOH
EBITDA	\$346mm
After-tax NPV <sub>8</sub>	\$2.2 billion
After-tax IRR	33%
Payback	3.1 years

1: Refer to results of PLL Preliminary Economic Assessment announcement dated March 9, 2022.

# CAROLINA

100% Owned by Piedmont Lithium

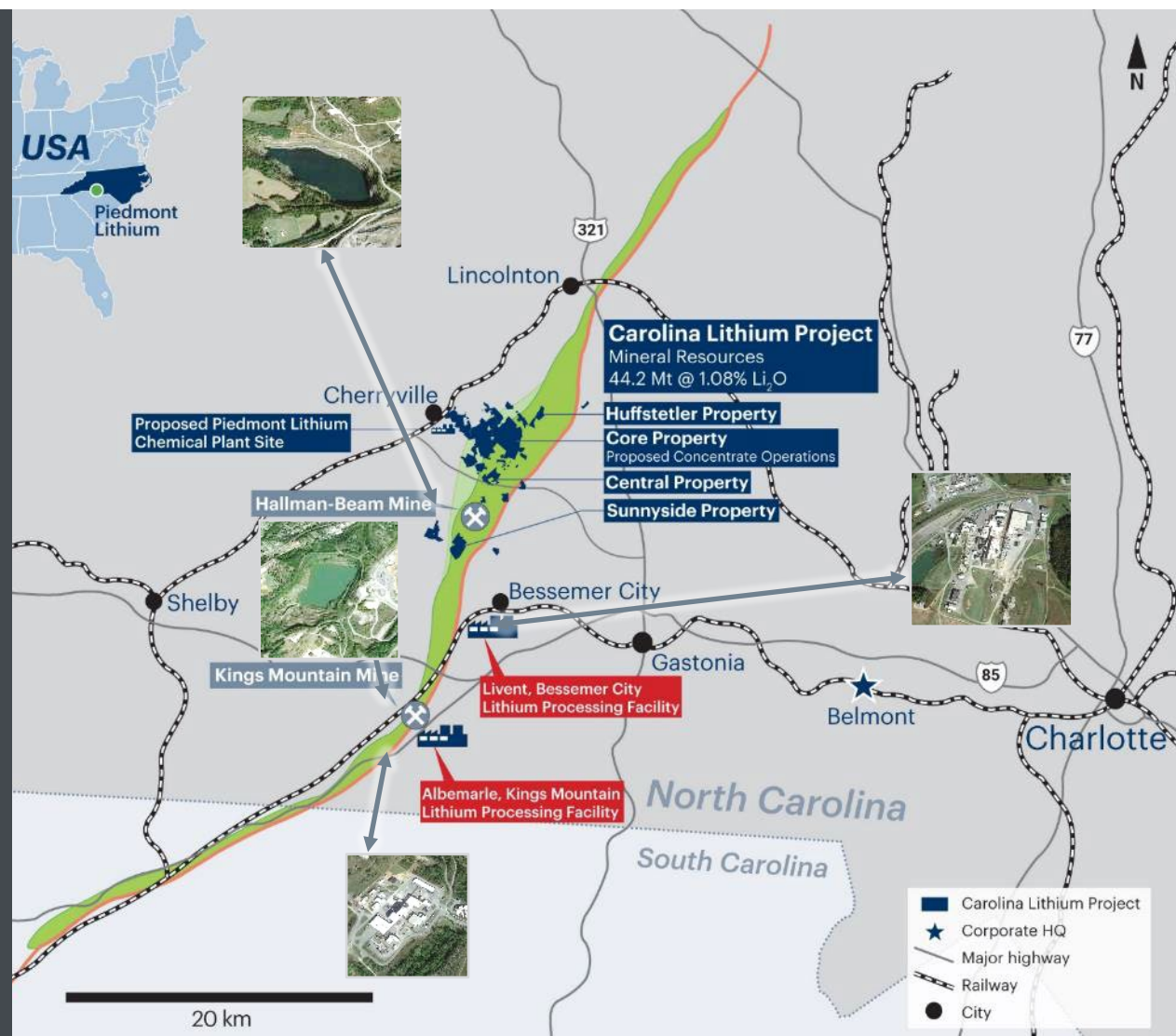
CL

## HIGHLIGHTS

- Located in Gaston County, NC, the cradle of the lithium business
- Strong infrastructure
- Single integrated site
- Skilled local labor
- Proximity to lithium and byproduct markets
- Industry-leading ESG profile
- Projected to be a low-cost producer

## UPCOMING MILESTONES

- Permitting and rezoning
- Detailed engineering / FEED
- LiOH and byproduct offtake
- Project financing
  - Strategic partnering
  - ATVM loan



## FACT SHEET<sup>1</sup>

Location	North Carolina, USA
Project Stage	Feasibility Study
Product	Lithium Hydroxide
Resources	44.2Mt @ 1.08% Li <sub>2</sub> O
Production	30,000tpy LiOH
Feedstock	242,000tpy SC6
Capex	\$988 million
Opex	\$4,377/t LiOH
EBITDA	\$592mm first 10 years
After-tax NPV <sub>8</sub>	\$2.8 billion
After-tax IRR	34%
Payback	2.9 years

1: Refer to results of PLL Preliminary Economic Assessment announcement dated March 9, 2022. Illustrative financial outcomes for the Carolina Lithium Project when applying a fixed price of \$22,000 per metric tonne of lithium hydroxide and \$1,200 per metric tonne of spodumene concentrate to the Carolina Lithium financial model. Results are Company estimates and indicative only and are not independently verified by the Carolina Lithium BFS Qualified Persons.

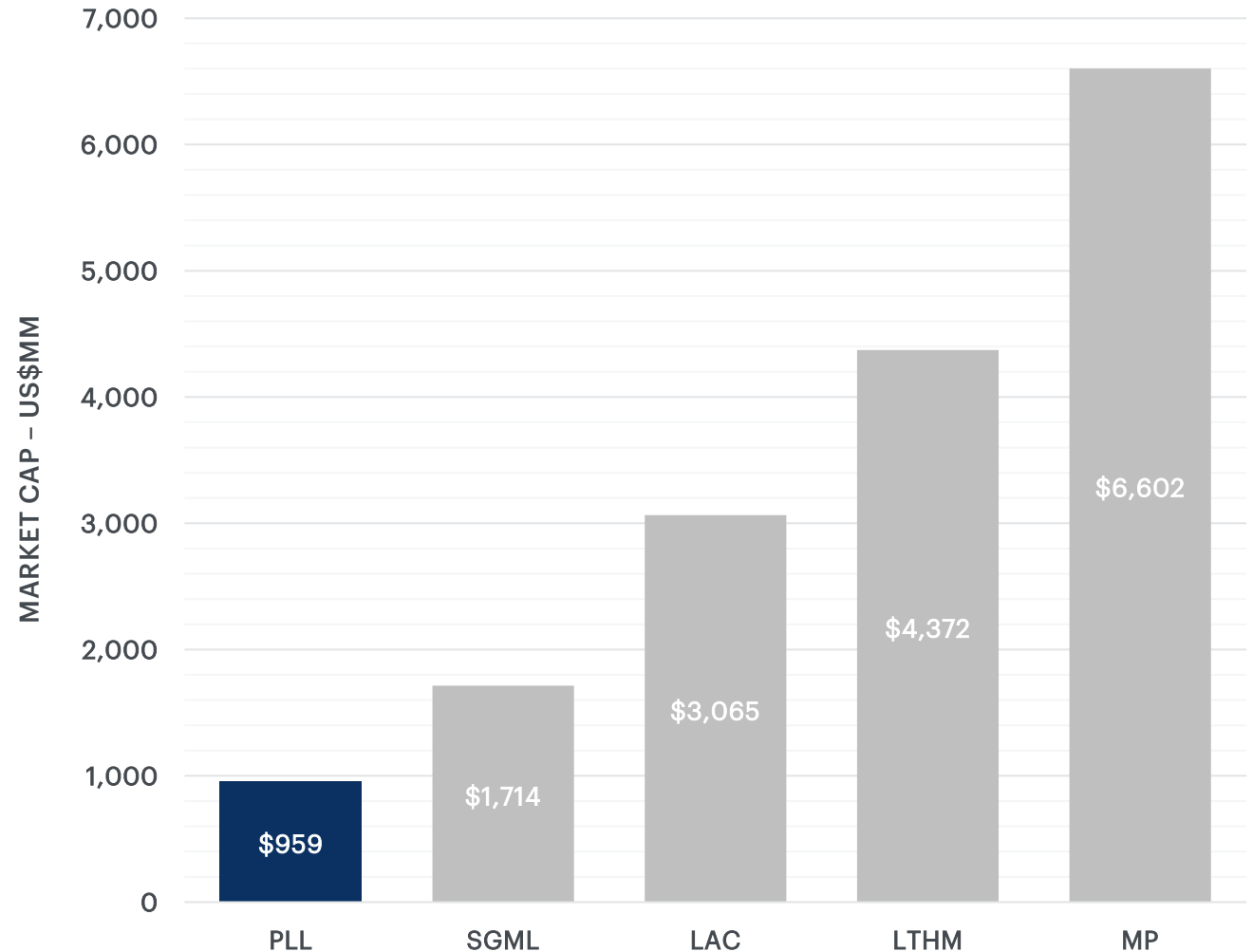
# CATALYSTS TO DRIVE SHAREHOLDER VALUE

## RECENT ACCOMPLISHMENTS

- ✓ Added depth to leadership team
- ✓ Redomiciled to become a U.S. company
- ✓ Underpinned future growth through strategic investments
  - ✓ 14.5% of SYA plus 25% project interest
  - ✓ 9.9% of ALL and earning 50% project interest
- ✓ Bankable Feasibility Study for Carolina Lithium
- ✓ Preliminary Economic Assessment for LHP-2

## KEY FUTURE MILESTONES

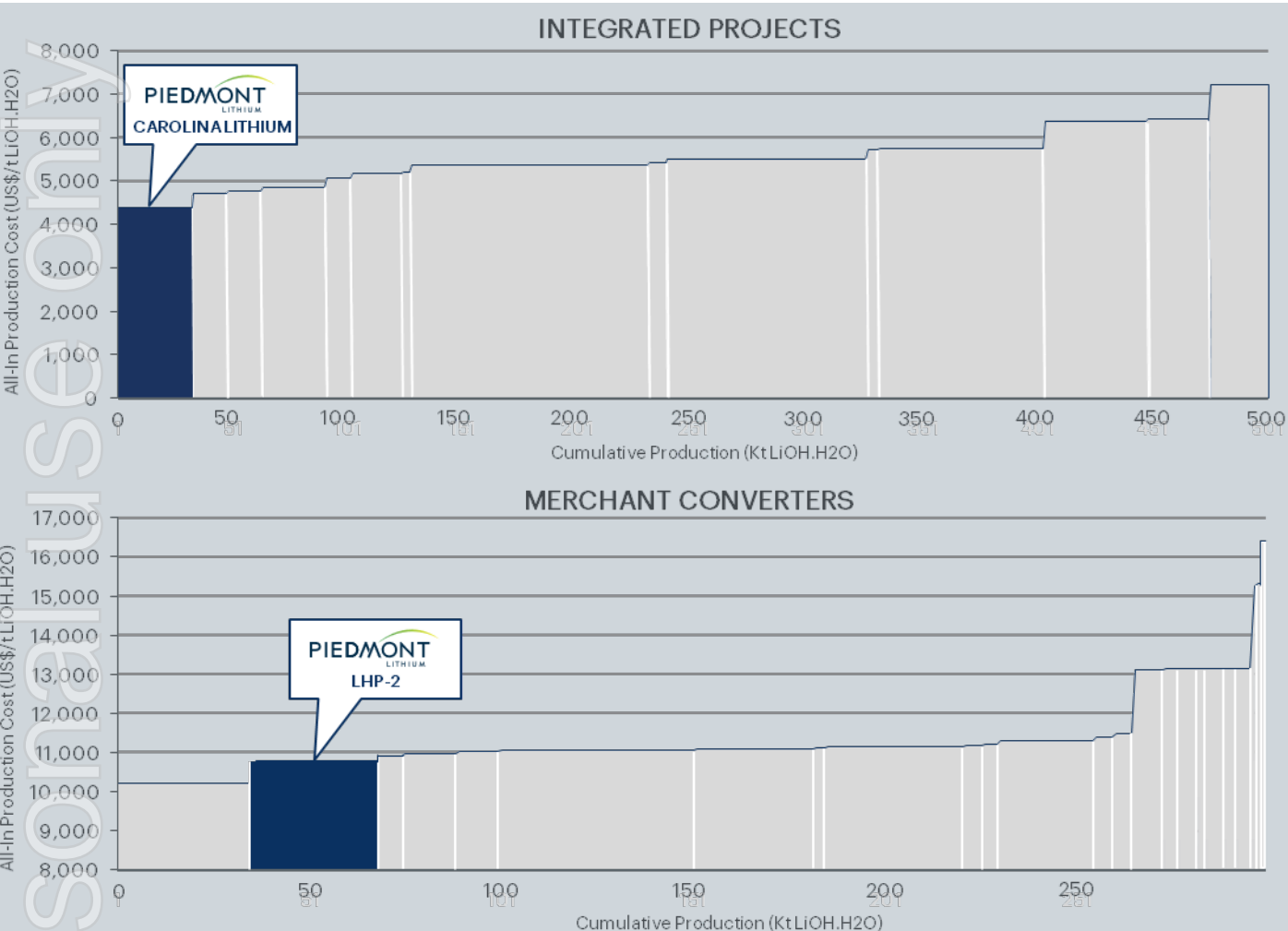
- ☐ Quebec – **feasibility study** / NAL restart decision
- ☐ Ghana – **resource update** / PFS / mining license
- ☐ LHP-2 – site selection, DFS, long-lead items and permitting
- ☐ Carolina Lithium – permitting and land consolidation
- ☐ Lithium and byproduct sales agreements
- ☐ Strategic partnering and project financing



Notes: Market caps as of June 10, 2022

# COST CURVES

Location Drives Projected 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

Personnel (US\$/y avg.)	\$90,000	\$150,000	~\$300
Electricity (kWh)	5.7c	17.0c	~\$300
Natural Gas (Gi)	\$4.01	\$9.00	~\$130
SC6 Transport (T)	\$2	\$71	~\$475
LiOH Tailing Disposal (T)	\$0	\$50	~\$350
State Royalties	0%	5%	~\$225
By-product Credits (T)	\$147	\$0	~\$950

By-product Credits (T) ratio. Company estimates derived from PLL Bankability Study results announced on December 15, 2021.

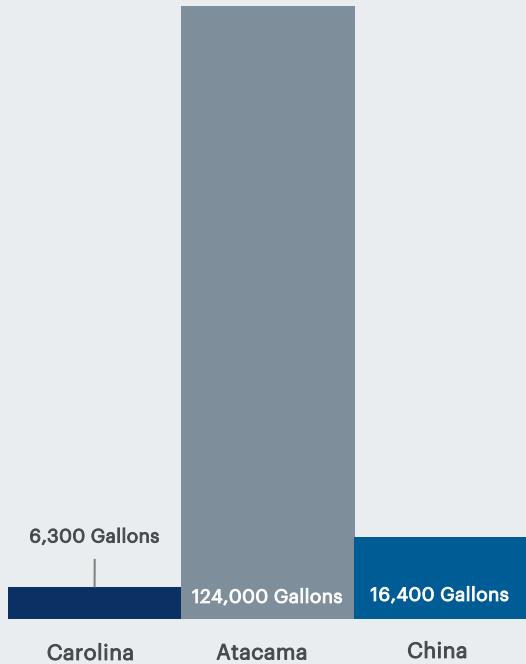
# INDUSTRY LEADING SUSTAINABILITY

Personal use only



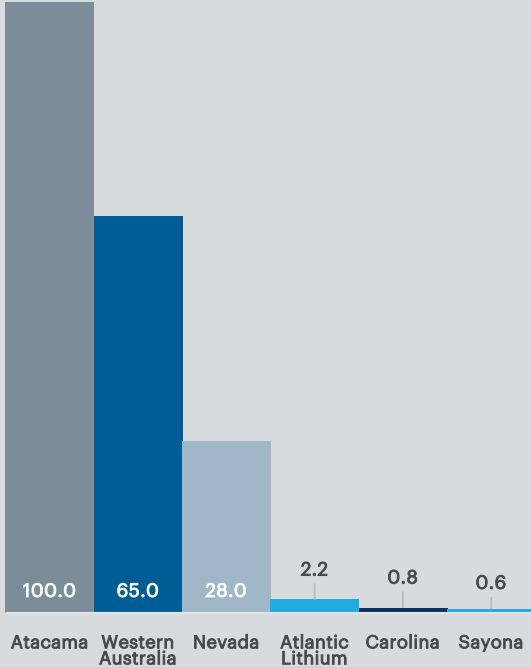
**Land Footprint <sup>1</sup>**

Per Tonne of Lithium Hydroxide Monohydrate Per Year



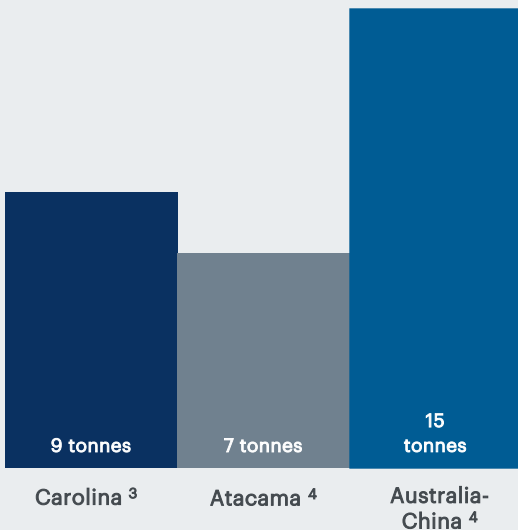
**Direct Water Use <sup>1</sup>**

Per Tonne of Lithium Hydroxide Monohydrate



**Water Scarcity Factor <sup>2</sup>**

Measured on Index of 0 (low scarcity) to 100 (high scarcity)



**Carbon Intensity (Scope 1-3)**

Per Tonne of Lithium Hydroxide Monohydrate

1. Piedmont Lithium Calculations Based on Public Reports (2021)  
 2. WULCA - AWARE Factors for Non-Agricultural Activities: <https://wulca-waterlca.org/aware/what-is-aware/>  
 3. Prospective LCA Study of Lithium Hydroxide Production at the Piedmont Lithium Project, Minviro Confidential Report (2021) – Target Decarbonized Project Scenario  
 4. The CO<sub>2</sub> Impact of the 2020s' Battery Quality Lithium Hydroxide Supply Chain, Minviro Public Report (2020)

# DISCLAIMERS



## Forward Looking Statements

This presentation contains forward-looking statements within the meaning of or as described in securities laws in the United States and Australia, including statements regarding exploration, development and construction activities; current plans for Piedmont's mineral and chemical processing projects (including its partners); projections of market demand and prices; statements about the timing and amount of reserve and resource declarations and our chemical processing operations; strategy; value; returns; capital allocation and investment; expectations regarding permitting; costs and expenses; 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, many of which are beyond our control, and which may cause actual timing of events, results, performance or achievements and other factors to be materially different from the future timing of 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) that Piedmont's properties may not contain expected reserves, (iii) risks and hazards inherent in the mining business (including risks inherent in exploring, developing, constructing and operating 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 and lithium products, (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, zoning and regulatory delays, (ix) uncertainties inherent in the estimation of lithium resources, (x) risks related to competition, (xi) risks related to the information, data and projections related to Sayona Quebec and Atlantic Lithium, (xii) occurrences and outcomes of claims, litigation and regulatory actions, investigations and proceedings, (xiii) risks regarding our ability to achieve profitability, enter into and deliver product under supply agreements on favorable terms, our ability to obtain sufficient financing to develop and construct our projects, our ability to comply with governmental regulations and our ability to obtain necessary permits, and (xiv) other uncertainties and risk factors set out in filings made from time to time with the U.S. Securities and Exchange Commission ("SEC") and the Australian Securities Exchange, including Piedmont's most recent filings with the SEC. 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.

## Competent Persons Statement

The Carolina Lithium Project comprises the Project's estimated Probable Ore Reserves of 18.3 Mt @ 1.10% Li<sub>2</sub>O and Mineral Resource estimate of 44.2Mt @ 1.08% Li<sub>2</sub>O comprised of Indicated Mineral Resources of 28.2Mt @ 1.11% Li<sub>2</sub>O and Inferred Mineral Resources of 15.9Mt @ 1.02% Li<sub>2</sub>O previously reported on October 21, 2021 ("Mineral Resource update"). The information in this presentation that relates to Exploration Results, Mineral Resources, Metallurgical Testwork, Process Design, Operating Costs, Capital Costs, Financial Analysis, Mining Engineering, Mine Schedule, Mining Costs and Ore Reserves of the Carolina Lithium Project was extracted from our announcement entitled 'Piedmont Completes Bankable Feasibility Study of the Carolina Lithium Project with Positive Results' dated December 13, 2021 ("Original Announcement") which is available to view on the Company's website at [www.piedmontlithium.com](http://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 Announcement; b) all material assumptions and technical parameters underpinning Mineral Resources, production targets, and related forecast financial information derived from production targets included in the Original Announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons' findings are presented in this report have not been materially modified from the Original Announcement.

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

The information contained herein by Piedmont for the Carolina Lithium Project has been prepared in accordance with the requirements of the securities laws in effect in the United States and Australia. The terms "ore reserves", "proven ore reserves", "probable ore reserves", "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are used herein as defined by the U.S. Securities and Exchange Commission ("SEC") in Regulation S-K, Item 1300 ("S-K 1300") and as defined in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code").

Information presented herein related to the Mineral Resources of Sayona Quebec's Authier Project and Atlantic Lithium's Ewoyaa Project have been prepared in accordance with the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves (the "JORC Code"). Additionally, the historical Mineral Resources for North American Lithium have been prepared in accordance with the regulations of National Instrument 43-101, Standards of Disclosure for Mineral Project ("NI 43-101") in effect in Canada. The terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are terms with meaning both in the JORC Code and NI 43-101. Comparable terms are now also defined by the 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, NI 43-101 and S-K 1300 standards, information contained herein that describes Sayona's and Atlantic Lithium's mineral deposits are 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](http://www.sec.gov).

**LiOH**



# **LITHIUM – MADE IN THE USA**

**Helping Secure America's Energy Independence**

**June 2022**

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