

# BUILDING AMERICA'S LEADING LITHIUM HYDROXIDE BUSINESS





ARBN 647 286 360

LiOH

December 2021

### **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, 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, (viii) 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.

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 Anouncement.

#### 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", "mineral resource", "measured 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" 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 promogulated 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.

Nasdag: PLL ASX: PLL





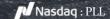
# BUILDING NORTH AMERICA'S LEADING SOURCE OF LITHIUM HYDROXIDE

Powering the Electric Vehicle Transition.

Returning Jobs to America.

Reinforcing U.S. National Security.

Investing in a More Sustainable Planet.







### PIEDMONT AT A GLANCE



An American company - based in Gaston County, NC



Hard rock lithium assets in three strategic locations



Only U.S. integrated spodumene-to-hydroxide project



~37% economic interest in large Quebec lithium project



Earning 50% of Africa's best-located lithium project



Industry-leading ESG profile



Strong balance sheet to advance projects

### **CORPORATE SNAPSHOT**

PIEDMONT LITHIUM INC.	Nasdaq	<b>X</b> ASX
Shares / CDIs Outstanding (100 CDIs = 1 Share)	15.87 mm	1,586.9 mm
Price (@ 12/10/21)	\$58.61	A\$0.85
Average Daily Trading Volume (30-day)	\$19 mm	A\$4 mm
Market Cap (@ 12/10/21)	\$930 mm	A\$1,349 mm
Cash (@ 9/30/21)	\$82 mm	A\$114 mm
Equity Interests at Market (@ 12/10/21)	\$133 mm	A\$186 mm

#### **RESEARCH COVERAGE**

J.P.Morgan

CANACCORD Genuity







### EVERCORE ISI









## **LEADERSHIP**



**KEITH PHILLIPS**Chief Executive Officer

**COWEN** 

J.P.Morgan





Patrick Brindle
Chief Development Officer



David Klanecky
Chief Operations Officer



Bruce Czachor
Chief Legal Officer



Michael White
Chief Financial Officer



Austin Devaney
Chief Commercial Officer



Kris McVey
Chief Human Resources Officer



Lamont Leatherman
Chief Geologist



Monique Parker

VP, HS&E

Brian Risinger

VP Corporate Comm. & IR





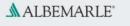














Kemira Rockwood Lithium









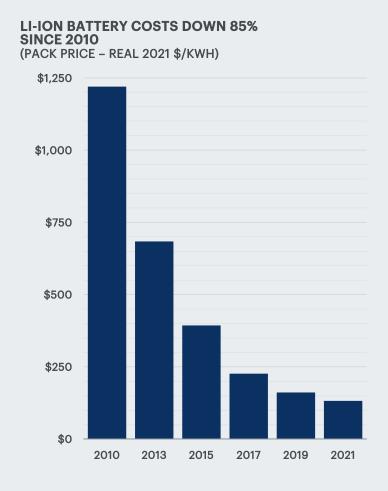


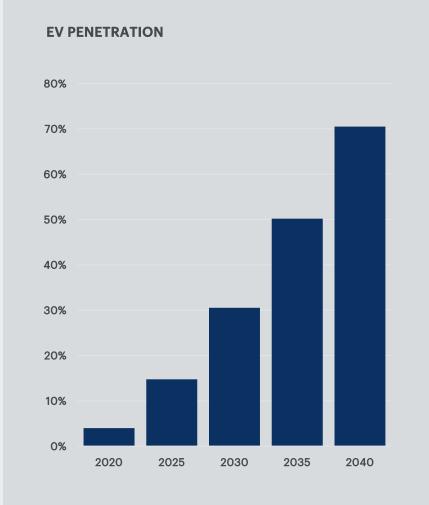


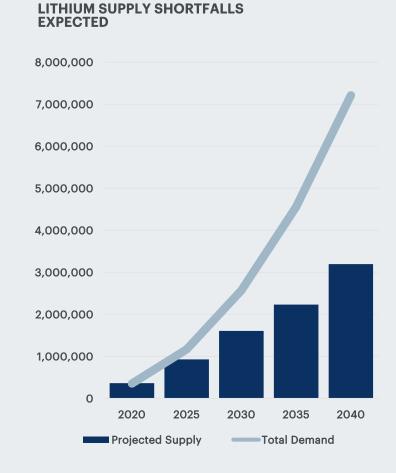




### LITHIUM MARKET TRENDS





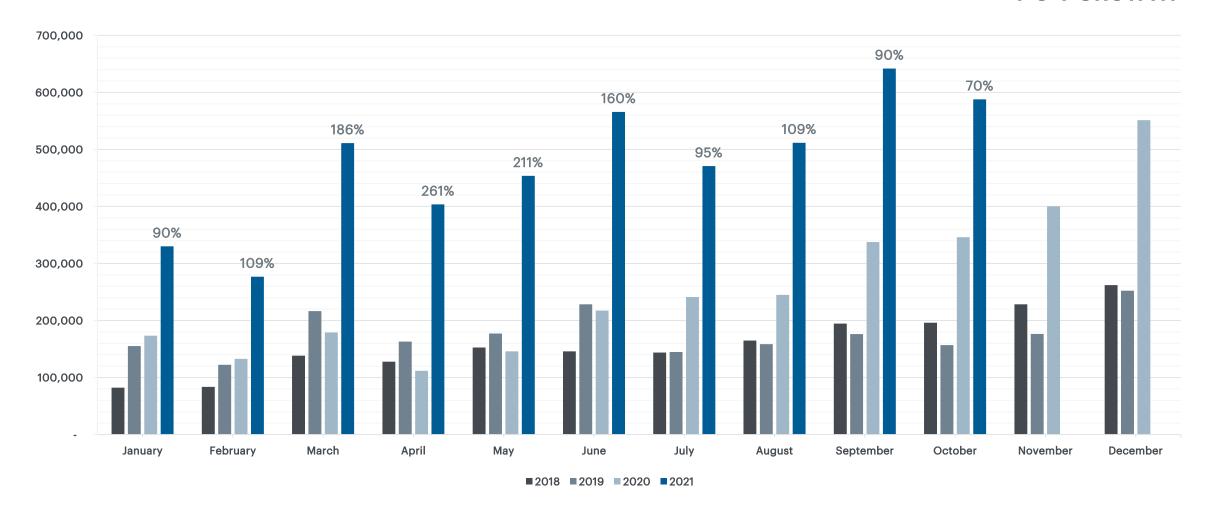


Source: Benchmark Mineral Intelligence - Lithium Forecast, Q3 2021

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### **WORLDWIDE EV SALES**

#### Y-O-Y GROWTH

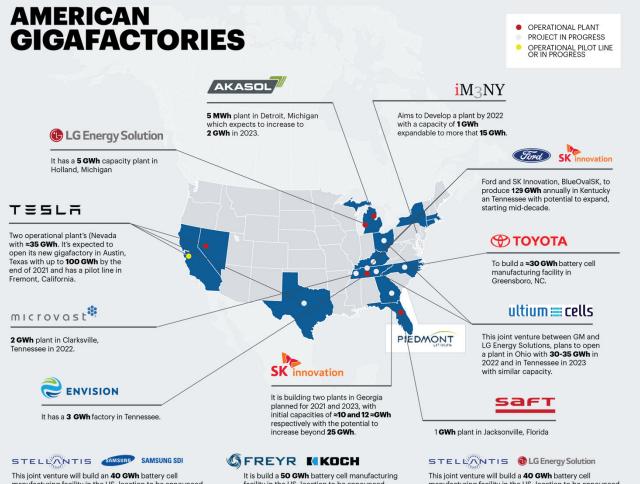




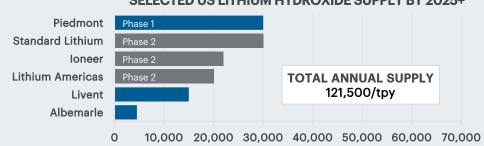


### DOMESTIC SHORTFALLS ANTICIPATED

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



#### LIOH REQUIRED BY SELECTED GIGA-FACTORIES BY 2025+ **GWh of Capacity** LG Holland BlueOvalSK Tenn BlueOvalSK Kentucky II BlueOvalSK Kentucky I Tesla Nevada Stellantis / Samsung Stellantis / LG Energy Ultium - Tennessee Ultium - Ohio Toyota - North Carolina Tesla Austin **TOTAL ANNUAL DEMAND** 466,000/tpy SK Georgia **Tesla Fremont** 10,000 20,000 30,000 40,000 50,000 60,000 70,000 SELECTED US LITHIUM HYDROXIDE SUPPLY BY 2025+



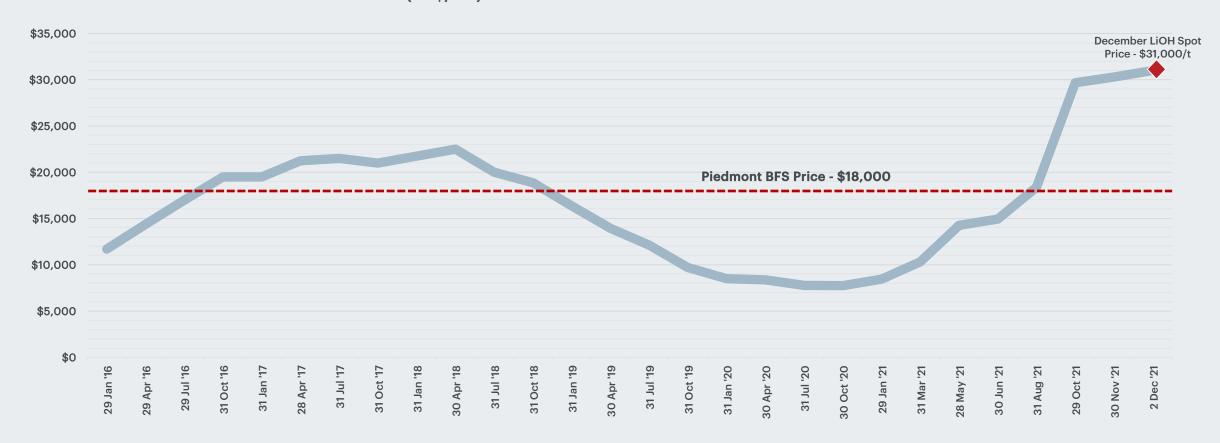
Source: Benchmark Mineral Intelligence - Lithium Forecast, Q3 2021, company announcements and Piedmont Lithium estimates

facility in the US: location to be announced.

manufacturing facility in the US; location to be announced.

### LITHIUM MARKET TRENDS

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

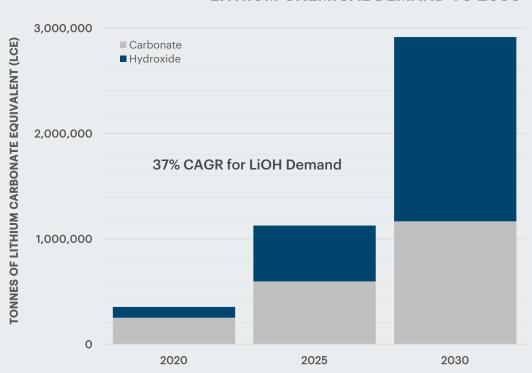


### THE RIGHT LITHIUM MATERIALS

Piedmont will Produce Lithium Hydroxide from Spodumene Concentrate

### **LIOH TAKING MARKET SHARE**





### **SC6 THE PREFERRED FEEDSTOCK**

"Lithium extracted from mining ... is more stable to extract, easier to scale and generally more sustainable."

Volkswagen - April 2019

"BMW signs contract with Ganfeng for sustainable lithium from mines in Australia."

BMW - November 2019

"...consistency of quality of lithium hydroxide is on top of everything ... it is easiest to achieve ... from spodumene."

Fastmarkets - August 2021

### **PROJECTS**



#### **CAROLINA LITHIUM (100% OWNERSHIP)**



Project	Carolina Lithium
Location	Gaston County, North Carolina
Phase 1 Project Stage	Bankable Feasibility Study
Mineral Resources	44.2Mt @ 1.08% Li <sub>2</sub> O
Production	30,000tpy LiOH; 242,000tpy SC6
Economics	\$2.0bb NPV; ~\$459mm run-rate EBITDA

#### QUEBEC PROJECTS (~37% ECONOMIC INTEREST¹)



Authier + NAL
Abitibi Region, Quebec
DFS to be updated in 2022
78.7Mt @ 1.04% Li <sub>2</sub> O <sup>2</sup>
TBD

#### ATLANTIC LITHIUM (EARNING UP TO 50% PROJECT INTEREST3)



Project	Ewoyaa
Location	Cape Coast, Ghana
Project Stage	Scoping + Exploration
Mineral Resources	21.3Mt @ 1.31% Li <sub>2</sub> O <sup>4</sup>
Production	300,000tpy SC6 (50% to PLL) <sup>5</sup>
Economics	\$789mm NPV; \$70mm capex <sup>5</sup>

- 1 Piedmont owns a 25.0% interest in Abitibi Lithium and a 16.52% stake in Sayona Mining, resulting in an effective economic interest of 37.4%.
- 2 Pro-forma 78.7Mt @ 1.04% Li<sub>2</sub>O based on Sayona Quebec JORC Code Compliant MRE of 20.94Mt @ 1.01% Li<sub>2</sub>O announced on September 24, 2018 and NAL NI 43-101 Compliant MRE of 57.7Mt @ 1.05% Li<sub>2</sub>O effective August 24, 2017 and reported by Sayona Mining on September 13, 2021 as a Foreign Mineral Resource Estimate.
- 3 Piedmont can earn a 50% interest in Atlantic Lithium"s Ghanaian lithium portfolio and owns 9.9% of Atlantic Lithium.
- 4 Refer to Atlantic Lithium AIM announcement dated December 1, 2021 for JORC Code Compliant MRE.
- 5 Refer to Atlantic Lithium AIM announcement dated December 7, 2021.





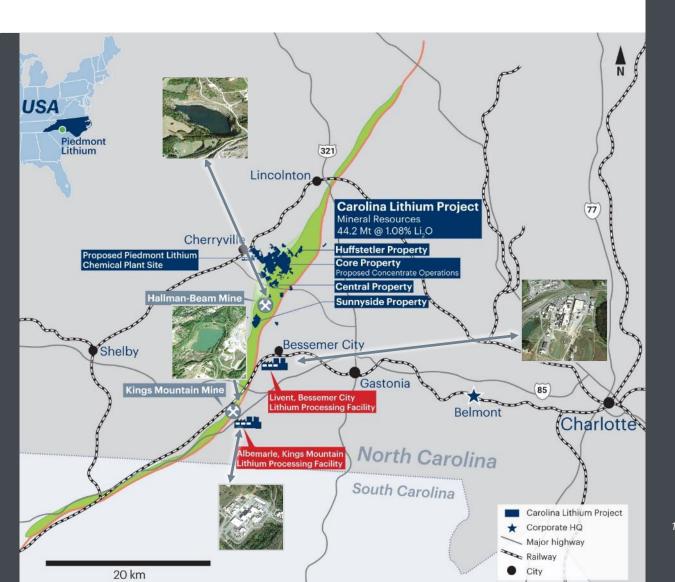
### **CAROLINA LITHIUM**

#### **LOCATION**

- Gaston County, NC
- 25 miles west of Charlotte
- 'Cradle of lithium'
- Strong infrastructure
- Single integrated site
- Skilled local labor
- Proximity to lithium and by-product markets

#### **HIGHLIGHTS**

- Private land not subject to federal/state royalties
- Large high-grade resource
- Pure spodumene mineralogy
- Industry-leading ESG profile
- Projected to be a low-cost producer





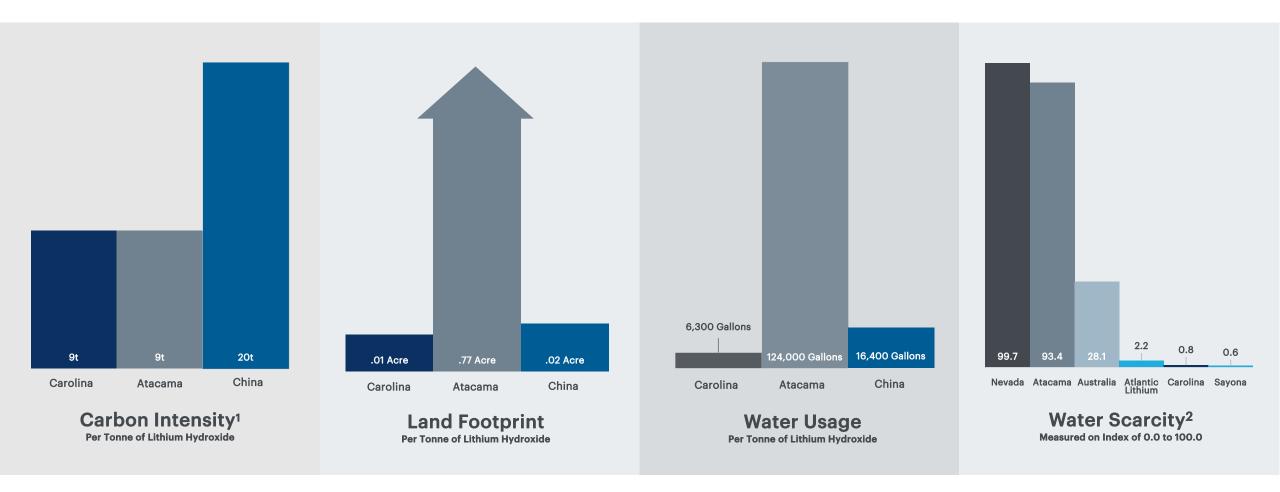
#### FACT SHEET<sup>1</sup>

Location	North Carolina, USA
Project Stage	Bankable 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	\$3,657/t LiOH
EBITDA	~\$460mm first 10 years
After-tax NPV <sub>8</sub>	<sub>3</sub> ~\$2.0 billion
After-tax IRR	27%
Payback	3.5 years

<sup>1:</sup> Refer to results of PLL Bankable Feasibility Study announcement dated December 14, 2021. Based on Piedmont estimates prepared pursuant to S-K 1300 and the JORC Code.

### INDUSTRY-LEADING SUSTAINABILITY

Life-Cycle Analysis Incorporating Scope 1, 2 and 3 Emissions



Sources: Minviro Reports and Company estimates







<sup>1:</sup> Includes Scope 1, 2 and 3 emissions

<sup>2:</sup> WULCA - AWARE factors for non-agricultural activities (normal average over 12 months) interpretation – Spatio-temporal scale



\$459mm STEADY-STATE EBITDA<sup>1</sup> \$2.04bb
AFTER-TAX NPV8

27%
AFTER-TAX IRR

30,000t/y
LIOH PRODUCTION

\$3,657/t

30 year PROJECT LIFE<sup>2</sup>

#### **KEY ASSUMPTIONS**

- 18.3 Mt Ore Reserves only Production Target<sup>2</sup>
- 100% open-pit operations
- Capital and operating costs updated to Q4 2021 including recent inflationary pressures
- Long-term LiOH and SC6 price assumption >40% below current spot pricing
- Potential future upside
  - Additional conversion of Mineral Resources to Reserves
  - Potential development of additional LiOH capacity

Source: Estimated values previously disclosed in Company announcement "Piedmont completes bankable feasibility study of the Carolina Lithium Project with positive results

<sup>2:</sup> BFS estimates of Chemical Plant operations assume a 30-year project life supported by 11 years of Ore Reserves followed by 19 years of market purchases of spodumene concentrate

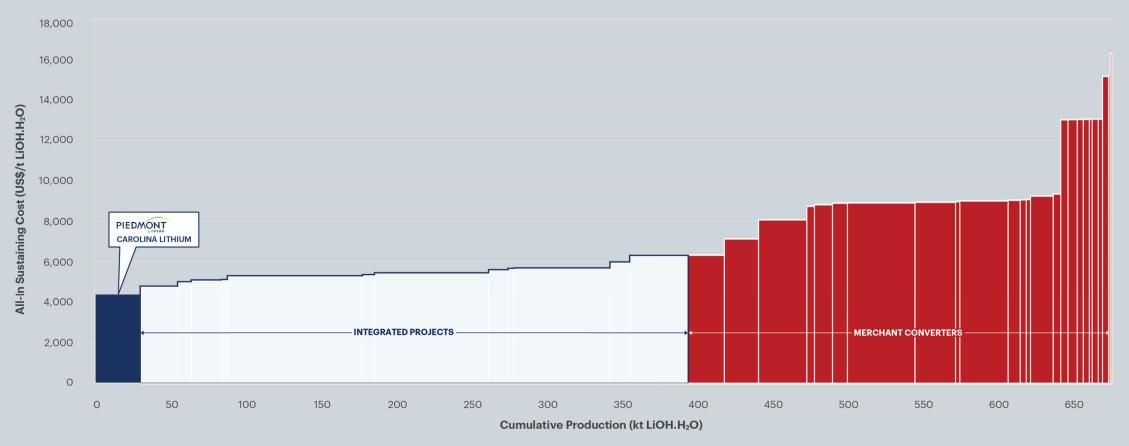






<sup>1:</sup> Estimated steady-state average EBITDA and annual cash cost of lithium hydroxide production during first 10 years of operations using spodumene concentrate produced from Carolina Lithium







Advancing Project Regulatory Approvals for Development & Construction

#### **Remaining Key Permit Approvals**

Federal 404 Permit Received in 2019

- State Mining Permit Submitted 8/31
  - Public Hearing completed 11/15/21 through 11/18/21
  - Responding to Department Comments
- Air Permit application will follow Bankable Feasibility Study
- Local Approvals will Follow State Permits
  - Gaston County I-3 Industrial Rezoning
  - Gaston County Special Use Permit

#### **Gaston County Quarry and Mining Ordinances**

Reasonable and Fair Development and Operating Standards

- Blasting daylight hours 6 days per week / excluding holidays
- Trucking shipments allowed from 6:00 AM to 10:00 PM
- Reasonable setback distances to neighboring properties
- Noise mitigation plan standards
- Dust mitigation plan standards
- Security, access and fencing standards
- Visual screening, berms and wall standards
- Rezoning process mechanics clarified

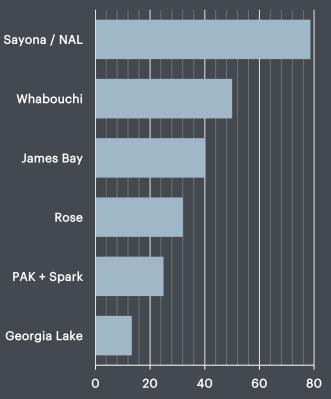


Piedmont Owns a 25% Project Interest



# SYA

#### Canadian Spodumene Projects<sup>1</sup>



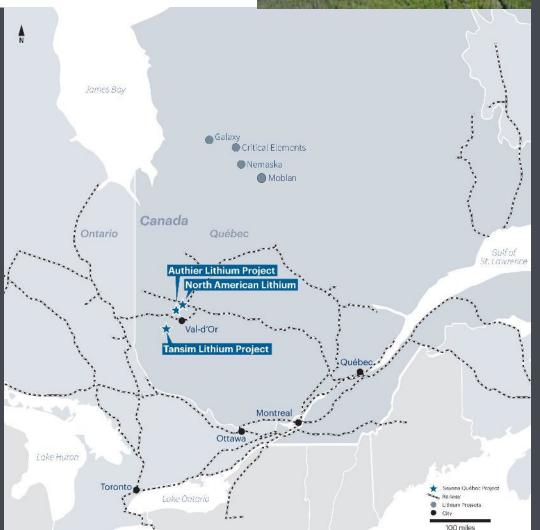
1: Open-pit lithium resources (Mt) from public filings. Sayona / NAL Mineral Resources include Mineral Resources of North American Lithium and are based on Sayona public filings.

#### **LOCATION**

- One of Quebec's best-located lithium projects
- Close to Val-d'Or, a major mining center in Quebec's Abitibi region
- Good rail and highway infrastructure
- Skilled local labor and contractors
- Low-cost renewable hydroelectricity

#### **HIGHLIGHTS**

- North America's largest spodumene resource
- NAL is a past-producer with \$400mm of capital investment
- Authier is DFS-complete and in final stage of BAPE approval
- PLL offtake > 50% of production or 113,000tpy SC6 - price ceiling \$900/t





### **ATLANTIC LITHIUM**

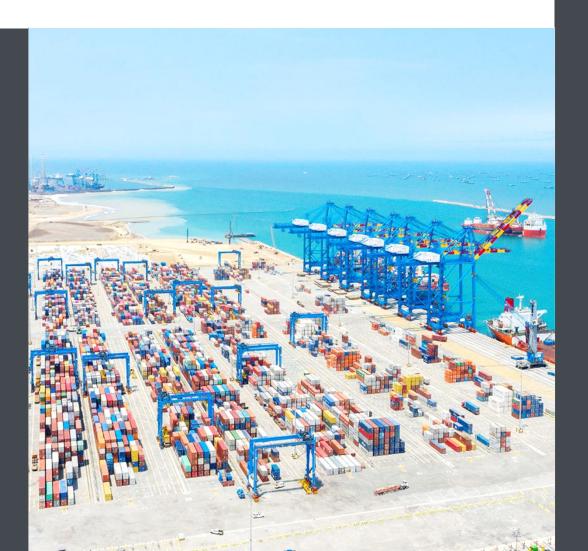
Piedmont Earning a 50% Project Interest

#### **LOCATION**

- Mining-friendly jurisdiction
  - 100-year mining history
- ~70 miles from major port along national highway
- Short transport to North America for hydroxide conversion
- Skilled labor pool

#### **HIGHLIGHTS**

- Shallow, high-grade resource with potential exploration upside
  - 260 square mile exploration package
- Coarse-grained spodumene implies low capex DMS flowsheet
- Adjacent hydroelectric powerlines





#### **FACT SHEET**

Location	Ghana
Project Stage	Exploration / Scoping
Business	Spodumene Concentrate
Resources	21.3Mt @ 1.31% 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>
Орех	\$249/t SC6 <sup>2</sup>
After-tax NPV <sub>8</sub>	\$789mm <sup>2</sup>
After-tax IRR	194%²

<sup>1</sup> Refer to Atlantic Lithium AIM announcement dated December 1, 2021 for JORC Code Compliant MRE.

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



LiOH SC6 **CAROLINA LITHIUM Commissioning / Operations** PHASE 1 BFS/ **PIEDMONT** 30,000tpy LiOH Permitting/ Construction Funding/ **Carolina Lithium** FID 242,000tpy1 Market Sales (SC6) Deliveries to 2<sup>nd</sup> LiOH plant **LIOH LOCATION TBD** ATLANTIC LITHIUM Permitting/ Ghana Exploration & DFS / NC Phase 2 LiOH BFS **Commissioning / Operations** Construction Ghana 150,000tpy<sup>2</sup> **Commissioning / Operations QUEBEC LIOH** Integrated DFS for SYA + NAL / Permitting/ Construction Quebec Site Selection for Quebec LiOH Plant FID Market Supply SC6 tbd

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

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

### **COMPONENTS OF SHAREHOLDER VALUE**

#### **CAROLINA LITHIUM**

- 100% ownership
- >\$2bb after-tax NPV¹
- USA's only spodumene project
- Ideally-located in North Carolina
- Short transport distances
- Deep local talent pool
- Low-cost energy
- Proximity to local by-product markets
- Low royalties and taxes<sup>2</sup>
- 2022 catalysts
  - Permitting / approvals
  - Strategic partnering
  - LiOH and by-product offtake

#### **SAYONA**

- 17% equity stake
  - \$112mm @ 12/10/21
- 25% project interest
  - NPV to be updated in 2022
- One of Canada's largest spodumene resources
- NAL a past-producer with ~C\$400mm of prior investment
- Located near mining center of Val-d'Or, Quebec
- 2022 catalysts
  - Resource update
  - NAL restart study
  - LiOH site selection

#### ATLANTIC LITHIUM

- 9.9% equity stake
  - **\$21mm @ 12/10/21**
- Can earn 50% project interest
  - \$789M after-tax NPV<sup>3</sup>
- Africa's best located spodumene resource
- 70 miles to Takoradi port
- Simple DMS flow sheet implies low capex and opex<sup>4</sup>
- 2022 catalysts
  - Resource update
  - Prefeasibility Study
  - Regional exploration







<sup>1:</sup> Estimated after tax NPV based on the results of Carolina Lithium Bankable Feasibility Study reported on December 14, 2021.

<sup>2:</sup> Average royalty of \$1.00 per ROM tonne delivered to concentrator. BFS assumes an effective tax rate of 22.975% reducing to 21% from 2028 onwards.

<sup>3:</sup> As reported in Atlantic Lithium's AIM Announcement dated December 7, 2021 "Scoping Study Yields Significant Upside"

<sup>4:</sup> Estimated C1 opex of US\$249/t and estimated capital costs of US\$70mm reported by Atlantic Lithium on December 7, 2021

### CATALYSTS TO DRIVE SHAREHOLDER VALUE

# UPCOMING MILESTONES Carolina Lithium ☐ Bankable Feasibility Study ☐ State Mining Permit ☐ Air Permit

#### **Quebec Projects**

- ☐ Integrated Authier + NAL Feasibility
- NAL Restart Evaluation

County Rezoning

**Project Financing** 

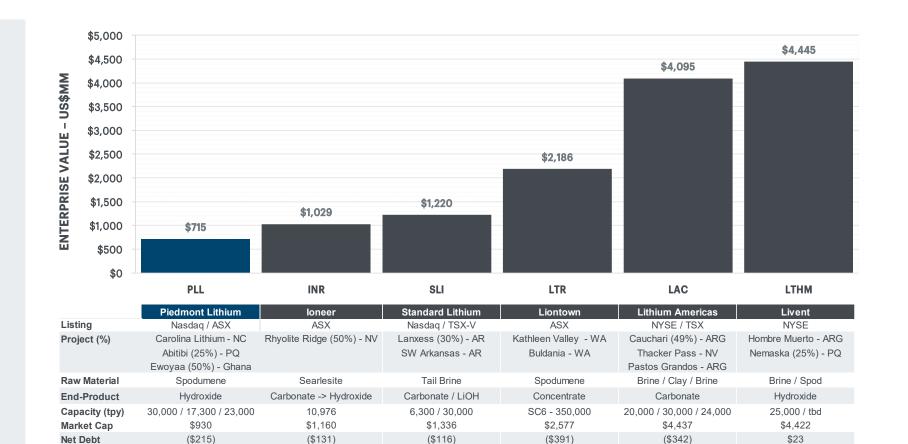
LiOH Site Selection

#### **Ghana - Atlantic Lithium**

- ☐ Prefeasibility Study
- Feasibility Study

#### **Sales Agreements**

- ☐ Lithium Hydroxide
- ☐ By-Product Industrial Minerals



\$1,220

#### Notes

**Enterprise Value** 

- 1. Project information from company filings.
- Enterprise values as of December 10, 2021, reflect equity market cap net of cash and marketable securities.

\$1,029

3. Capacity reflects Company's proportionate interest.

\$715



\$2,186



\$4,095



\$4,445

### WHY PIEDMONT?

### The Industry's Premier Lithium Development Company

Large Addressable Market	<ul> <li>Total Addressable Market for lithium expected to exceed \$50 billion for EV applications by 2030<sup>1</sup></li> <li>EV penetration expected to grow 10x from ~4% in 2020 to over ~40% by 2030</li> <li>Grid storage market may potentially be larger than EVs in the long term</li> </ul>
The Right Lithium Materials	<ul> <li>Production of lithium hydroxide ("LiOH") from spodumene concentrate ("SC6")</li> <li>LiOH required in the long-range batteries expected to dominate the US market</li> <li>SC6 is the preferred feedstock for cost, sustainability and scalability</li> </ul>
Three Strategic Spodumene Resources	<ul> <li>North Carolina offers favorable infrastructure, talent and proximity to large customers</li> <li>Sayona / NAL investment in Quebec capitalizes on low-cost, sustainable hydroelectricity</li> <li>Atlantic Lithium may provide additional high-quality SC6 to support North American LiOH production</li> </ul>
Growth Pipeline with Attractive Economics	<ul> <li>Large spodumene resource base underpins potential growth in lithium hydroxide production</li> <li>\$2.0 billion NPV for Carolina Lithium; low capex expected in Quebec (brownfield) and Ghana (DMS)</li> <li>Economies of scale should be available with additional trains at core LiOH sites</li> </ul>
Sustainable Business Model	<ul> <li>Targeting low carbon, water and land footprint relative to other conventional lithium projects</li> <li>Expect to utilize renewable solar power in North Carolina and hydroelectric in Quebec and Ghana</li> <li>Fully-integrated LiOH manufacturing and by-product credits drive low-cost position</li> </ul>
Proven Leadership Team	<ul> <li>Operational team with large company mining and specialty chemicals experience</li> <li>Experienced people in all senior staff functions</li> <li>Senior leadership focused on driving shareholder value in a responsible way</li> </ul>

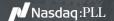








# BANKABLE FEASIBILITY STUDY RESULTS





ABN 50 002 664 495

**LiOH** 



### **BFS-SUMMARY FINANCIAL RESULTS**

BFS Summary Outcomes for the Carolina Lithium Project	Unit	Ore Reserves Scenario
Financial Performance		
Average annual steady state EBITDA – first 10 years	\$mm/y	\$459
Average annual steady state EBITDA – life of operations	\$mm/y	\$346
Average annual steady state after-tax cash flow – first 10 years	\$mm/y	\$296
Average annual steady state after-tax cash flow – life of operations	\$mm/y	\$244
After tax Net Present Value ("NPV") @ 8% discount rate	\$mm	\$2,041
After tax Internal Rate of Return ("IRR")	%	27%
Payback from start of operations	years	3.5

### **CAROLINA LITHIUM BFS SITE PLAN**



## **ORE RESERVES** AND MINERAL RESOURCES

#### PLL Global Mineral Resources - 100% Basis for Each Project

		Carolir	Carolina Lithium <sup>1</sup>		Sayona Quebec <sup>2</sup>			Atlantic Lithium <sup>3</sup>				
Category	Mt	Grade (Li <sub>2</sub> O%)	Li <sub>2</sub> O	LCE (kt)	Mt	Grade (Li <sub>2</sub> O%)	Li <sub>2</sub> O	LCE	Mt	Grade (Li <sub>2</sub> O%)	Li <sub>2</sub> O	LCE
Ore Reserves												
Proven	-	-	-	-	17.8	0.96%	170,370	421	-	-	-	-
Probable	18.3	1.10%	201,300	498	14.8	0.97%	143,040	354	-	-	-	-
Total Ore Reserves	18.3	1.10%	201,300	498	32.6	0.96%	313,410	775	-	-	-	-
Mineral Resources												
Measured	-	-	-	-	20.1	1.06%	213,120	527	-	-	-	-
Indicated	28.2	1.11%	313,242	775	36.4	1.01%	369,160	913	5.2	1.39%	72,280	179
Total M&I	28.2	1.11%	313,242	775	56.5	1.03%	582,280	1,440	5.2	1.39%	72,280	179
Inferred	15.9	1.02%	162,486	402	22.2	1.05%	232,280	574	16.1	1.28%	206,080	510
Total	44.2	1.08%	475,728	1,176	78.7	1.04%	814,560	2,014	21.3	1.31%	278,360	688

<sup>1:</sup> Piedmont Lithium Mineral Resources as of October 21, 2021 and Ore Reserves as of December 14, 2021







<sup>2:</sup> Pro-forma 78.7Mt @ 1.04% Li2O based on Sayona Quebec JORC Code Compliant MRE of 20.94Mt @ 1.01% Li2O announced on September 24, 2018 and NAL NI 43-101 Compliant MRE of 57.7Mt @ 1.05% Li2O effective August 24, 2017 and reported by Sayona Mining on September 13, 2021 as a Foreign Mineral Resource Estimate.

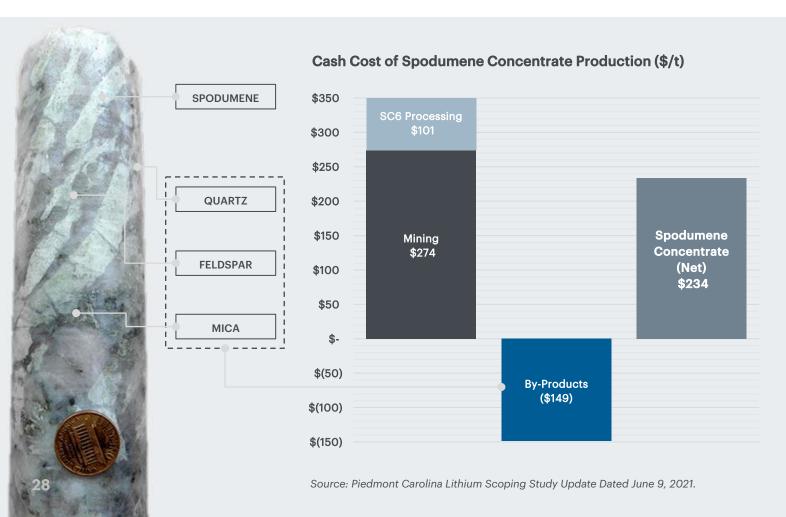
<sup>3:</sup> Refer to Atlantic Lithium AIM announcement dated December 1, 2021 for JORC Code Compliant MRE.

## PRODUCTION, CAPEX AND OPEX

BFS Summary Outcomes for the Carolina Lithium Project	Unit	Ore Reserves Scenario
LiOH Conversion Plant Production		
Operation life	years	30
Steady-state annual lithium hydroxide production	t/y	30,000
Metallurgical recovery	%	91
Life of project battery quality LiOH production	kt	883
Mine Production		
Ore Reserves production scenario	years	11
Average steady state SC6 production	t/y	242,000
Average steady state quartz production	t/y	252,000
Average steady state feldspar production	t/y	392,000
Average steady state mica production	t/y	28,000
Life-of-Mine ("LOM") Production		
Production target – run-of-mine ore	Mt	20.1
LOM SC6 production	Mt	2.6
LOM quartz production	Mt	2.7
LOM feldspar production	Mt	4.2
LOM mica production	Mt	0.3
LOM feed grade (excluding dilution)	%	1.10
LOM average concentrate grade	%	6.0
LOM average process recovery	%	77
LOM average strip ratio	waste:ore	11.6:1
LOM average strip ratio	waste:ore	11.0

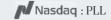
BFS Summary Outcomes for the Carolina Lithium Project	Unit	Ore Reserves Scenario
Operating Costs - Steady-State Production - First 10 Years		
Average LiOH production cash costs	\$/t	\$3,657
Average LiOH production all in sustaining costs	\$/t	\$4,377
Average SC6 production cash costs	\$/t	\$234
Operating Costs – Average Life of LiOH Conversion Operations		
Average LiOH production cash costs	\$/t	\$6,235
Average LiOH production all in sustaining costs	\$/t	\$6,559
Average SC6 supply cost	\$/t	\$687
Capital Costs		
Mining	\$mm	\$81
Concentrator	\$mm	\$162
Byproducts	\$mm	\$45
Lithium hydroxide conversion plant	\$mm	\$408
Project indirects	\$mm	\$99
Owner's costs	\$mm	\$73
Contingency	\$mm	\$120
Total initial capital cost	\$mm	\$988
Sustaining, working and deferred capital	\$mm	\$351

## **BY-PRODUCTS OFFER IMPORTANT CREDITS TO OPERATING COSTS**

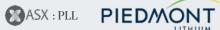


**LiOH Integrated Project Production Cash Operating Costs -**Life of project (\$/t) including Royalties

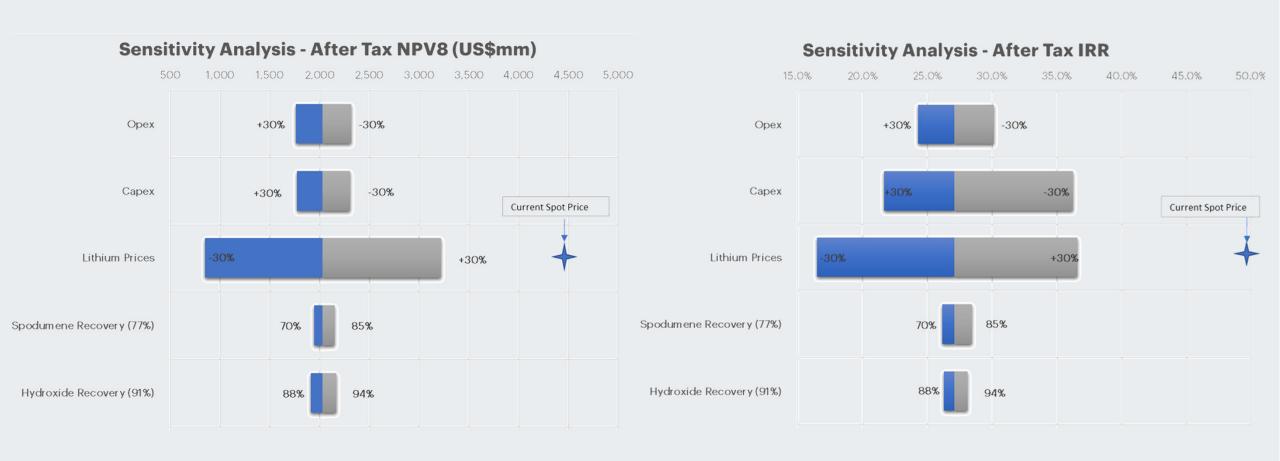








### SENSITIVITY ANALYSIS

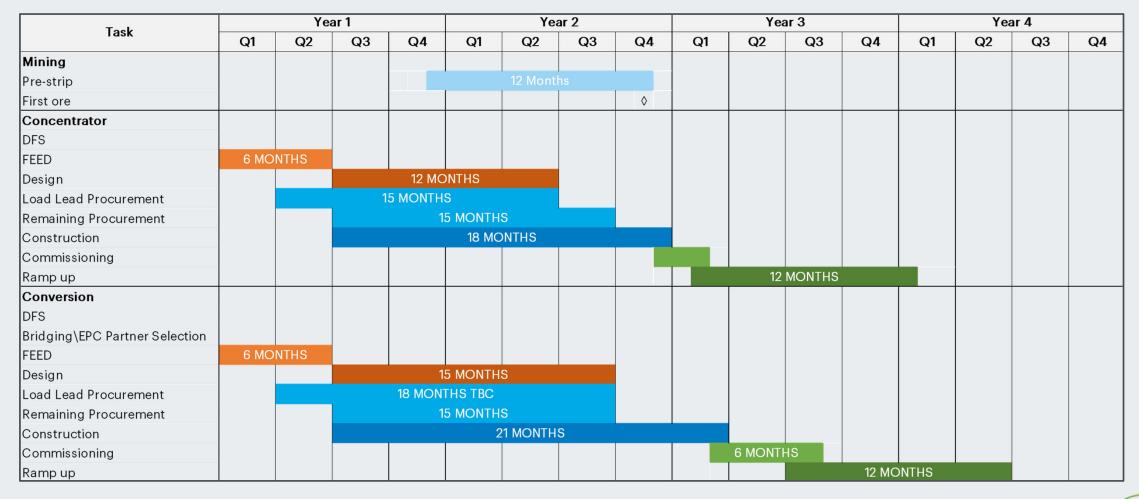








### **DEVELOPMENT TIMELINE**













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December 2021

Keith D. Phillips – President and CEO +1 973 809 0505 kphillips@piedmontlithium.com

Head Office | 32 N Main Street | Suite 100 | Belmont, NC 28012 | USA
Exploration Office | 5706 Dallas-Cherryville Hwy. 279 | Bessemer City | NC 28016 | USA
Australia Office | 28 The Esplanade | 9th Floor | Perth | WA 6000 | Australia

www.piedmontlithium.com



ARBN 647 286 360