

A GROWING LITHIUM PRODUCER

Offering Near-term Leverage to Lithium Prices





ARBN 647 286 360

LiOH

February 2024

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, construction and production activities of Sayona Mining, Atlantic Lithium and Piedmont Lithium; current plans for Piedmont's mineral and chemical processing projects; Piedmont's potential acquisition of an ownership interest in Ewoyaa; and strategy.

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 expressed or implied by the forward-looking statements. Such risk factors include, among others: (i) that Piedmont, Sayona Mining or Atlantic Lithium may be unable to commercially extract mineral deposits, (ii) that Piedmont's, Sayona Mining's or Atlantic Lithium'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 related to Piedmont's projects of our partners in Quebec and Ghana, (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 Mining or 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

Qualified Persons Statement

We have reported mineral reserves, which were prepared in accordance with Regulation S-K Item 1300 (as promulgated by the SEC, "S-K 1300") and the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code") (as required by the ASX), in connection with our exploration and evaluation activities. As of December 31, 2022, we reported 18.3 million metric tons of probable mineral reserves at a grade of 1.10% Li2O. We issued our first mineral resource estimate pursuant to S-K 1300 and the JORC Code on October 21, 2021 and have not finalized any subsequent estimates. The proven and probable reserve figures presented herein are estimates based on information available at the time of calculation.

The mineral resource figures presented herein are estimates based on information available at the time of calculation and do not include that portion of our mineral resources that been converted to proven and probable reserves as shown above, as they are reported exclusive of mineral reserves. We have reported mineral resources, prepared in accordance with S-K 1300, as part of our exploration and evaluation activities. As of December 31, 2022, we have reported 25.89 million metric tons of mineral resources, exclusive of mineral reserves, at a grade of 1.06% Li2O.

An initial Technical Report Summary with respect to our estimated mineral reserves was filed as an exhibit to our Transition Report for the six-month period ending December 31, 2021. An Amended Technical Report Summary, dated April 20, 2023 (the "Amended TRS"), was filed as Exhibit 96.3 to our most recent Form 10-K/A to include certain information as required by S-K 1300. Key assumptions and parameters relating to our estimates of mineral reserves and resources are discussed in Sections 1.9 and 1.10 of the Amended TRS. We intend to publish reserves annually and recalculate reserves if any new significant changes are expected, taking into account metal prices, changes to estimates of future production and costs, divestments and depletion, as well as any acquisitions and additions.

As required by ASX Listing Rules, Piedmont confirms that: a) it is not aware of any new information or data that materially affects the information included in our most recent form 10-K/A; b) all material assumptions and technical parameters underpinning mineral reserves, mineral resources, production targets, and related forecast financial information derived from production targets included in our form 10-K/A continue to apply and have not materially changed; and c) the form and context in which the relevant Qualified Persons' findings are presented in this report have not been materially modified from the Amended TRS.

DISCLAIMERS

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

Standards for Assessing Mineral Reserves and Resources

As a U.S. public company listed in the United States and Australia, Piedmont is required to comply with the resource estimation standards of both S-K 1300 and the JORC Code. Certain of Piedmont's partners instead comply with the JORC Code or Canadian National Instrument 43-101, Standards of Disclosure for Mineral Projects ("NI 43-101").

Each of these standards contain specific meanings for terms such as "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" "proven mineral reserves," "probable mineral reserves" and for various types of technical studies. Although the principles for reporting mineral reserves and resources, including subcategories of measured, indicated and inferred resources, are broadly similar under each set of standards, we caution you that estimates prepared solely under the JORC Code or NI 43-101 are not fully comparable to similarly titled measures disclosed under S-K 1300 or the other reporting and disclosure requirements of the U.S. federal securities laws, rules and regulations.

Mineral Reserves and Resources of Piedmont

Mineral reserve and mineral resource information contained in this presentation for the Carolina Lithium Project was prepared by Piedmont in accordance with S-K 1300 and the JORC Code.

Mineral Reserves and Resources of Sayona Quebec

Mineral reserve and mineral resource information contained in this presentation for the Authier and North American Lithium Projects was prepared by Sayona in accordance with the JORC Code and NI 43-101. Such information was not prepared in accordance with S-K 1300.

Mineral Reserves and Resources of Atlantic Lithium

Mineral reserve and mineral resource information contained in this presentation for the Ewoyaa Project was prepared by Atlantic Lithium in accordance with the JORC Code. Such information was not prepared in accordance with S-K 1300.

In June 2023, Atlantic Lithium announced the successful completion of a technical study for Ewoyaa in accordance with the JORC Code, demonstrating the potential of Ewoyaa to produce low-cost spodumene concentrate using a dense medium only processing technique. In the Atlantic Lithium study, 6% of the mined tons reported in the production target was based on the inclusion of inferred resources. There is a low level of geological confidence associated with inferred mineral resources, and there is no certainty that further exploration work would result in a determination of measured or indicated mineral resources resulting from the inferred resources, that the inferred resources would be converted to mineral reserves or that the production target itself would be realized. Although Atlantic Lithium has characterized this technical study as a definitive feasibility study, due to the inclusion of the inferred resources, we consider the production target and its associated economics as a scoping study.

WHY PIEDMONT?

NAL is North America's Largest Lithium Operation

NAL Permitted, Built and Operating with Ramp-up Near Completion

NAL Volume and Cost Improvements Expected in 2024

Strong Leverage to Lithium Prices

High ROIC Near-Term Project in Ghana

Strategic Projects in North Carolina and Tennessee

Balance Sheet Fortified with Recent Share Sales

CORPORATE SNAPSHOT

PIEDMONT LITHIUM	Nasdaq	M ASX
Shares / CDIs Outstanding (100 CDIs = 1 Share)	19.21 mm	1,920.9 mm
Price (@ 2/23/24)	\$12.34	A\$0.20
Average Daily Trading Volume (90-day)	\$13 mm	A\$1 mm
Market Cap (@ 2/23/24)	\$237 mm	A\$384 mm
Cash (Est. @ 12/31/23)	\$72 mm	A\$105 mm
Net Proceeds from Sales of Equity Interests	\$49 mm	A\$72 mm

RESEARCH COVERAGE









CANACCORD Genuity



D|A|DAVIDSON

Evercore ISI











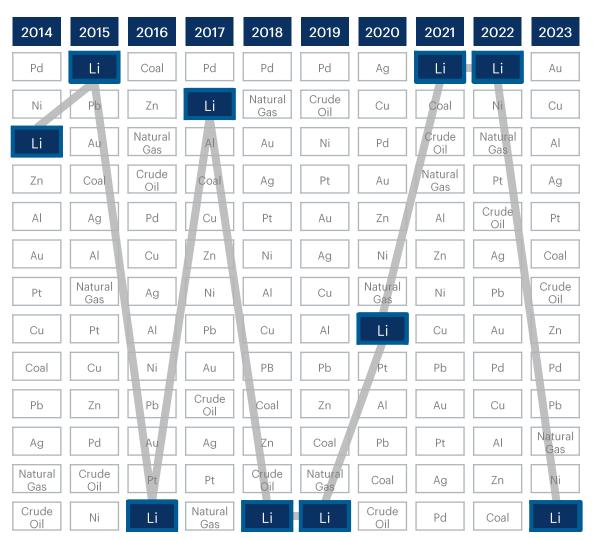
TUOHY BROTHERS

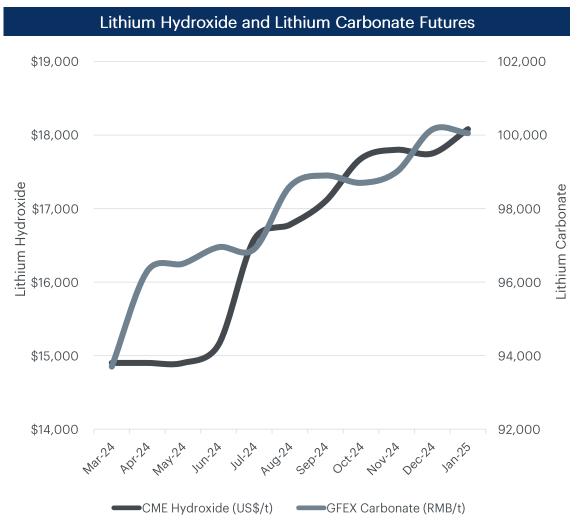
INVESTMENT RESEARCH INC

LITHIUM MARKETS



Lithium prices have been volatile; futures markets in contango

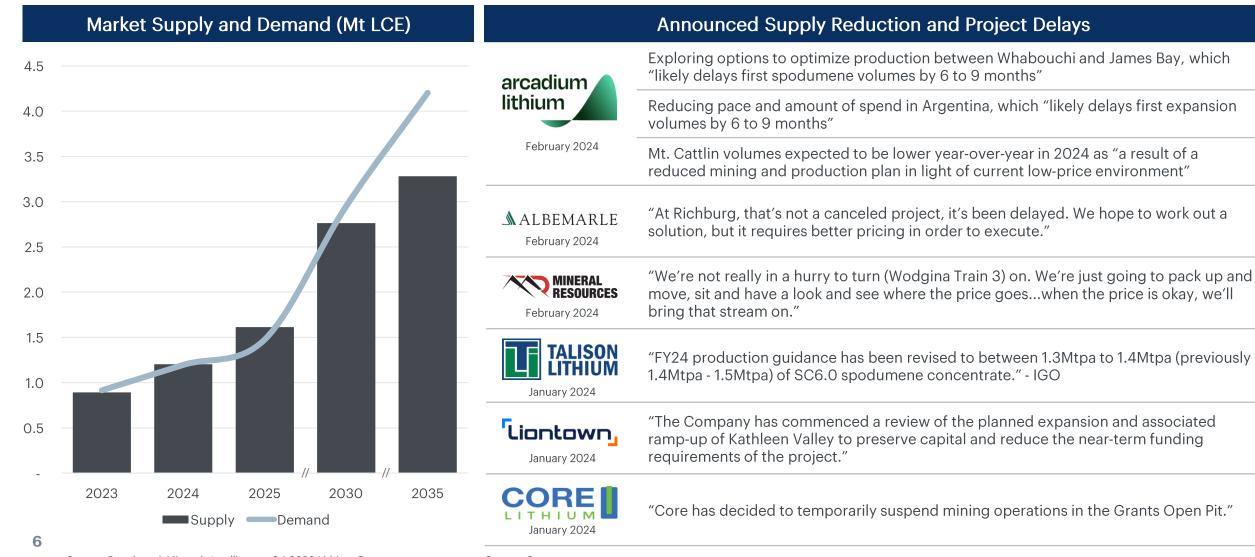




MARKET OUTLOOK



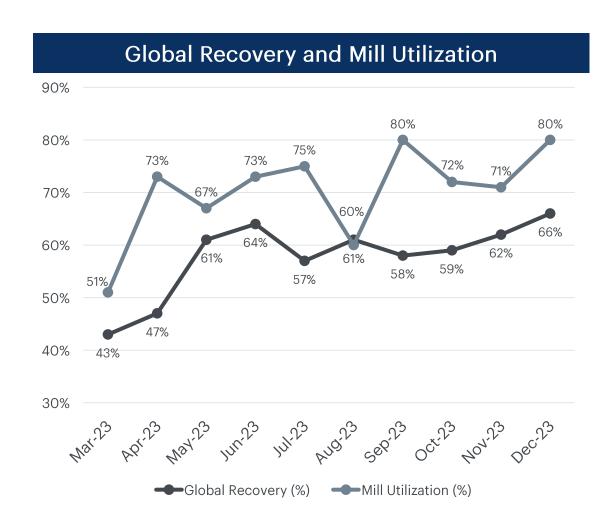
Demand growth remains strong; low prices increase risk to future supply

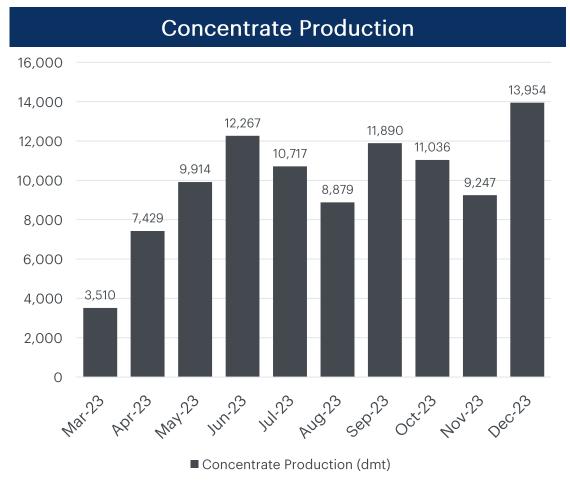


NAL OPERATIONS CONTINUING TO RAMP



December saw record production, recovery and utilization





NAL - OPTIMIZATION EFFORTS



Progressing final restart construction activities and implementing controls upgrades; reviewing cost structure

Q3'23 Update:

Crushed Ore Dome



Q4'23 Update:



- Tailings Storage Facility 1

- Crushed ore storage
 - Targeting mill availability of >90%
- Tailings storage expansion
- C-150 'Pre-Crush' jaw crusher
- Metso Courier 8 online analyzer
- Evaluating ore sorter upgrades
- Controls infrastructure
- Operational review of cost structure
 - Mining costs
 - Operational costs

Q3'23 source: Sayona Mining September 2023 Quarterly Activities Report, filed with the ASX October 30, 2023
Q4'23 source: Sayona Mining December 2023 Quarterly Activities Report filed with the ASX January 30, 2024; Sayona Mining 2023 AGM presentation filed with the ASX November 30, 2023

STRONG CUSTOMER AGREEMENTS IN PLACE PIEDMONT



Prioritizing deliveries under long-term contracts in 2024

PIEDMONT AS CUSTOMER



113,000TPY SC - LOM¹

- > 113,000tpy or 50% of production
- Market price subject to floor & ceiling
- Floor \$500/t; ceiling \$900/t SC6
- Life of mine
- Secondary feedstock for Tennessee
- Evaluating options for conversion in Quebec

PIEDMONT AS SUPPLIER



200,000T SC - 4 YEARS²

- Priced with reference to Fastmarkets SC6 market pricing
- To be supplied via SYQ offtake



125,000T SC - 3 YEARS³

- Priced with reference to LiOH market pricina
- To be supplied via SYQ offtake

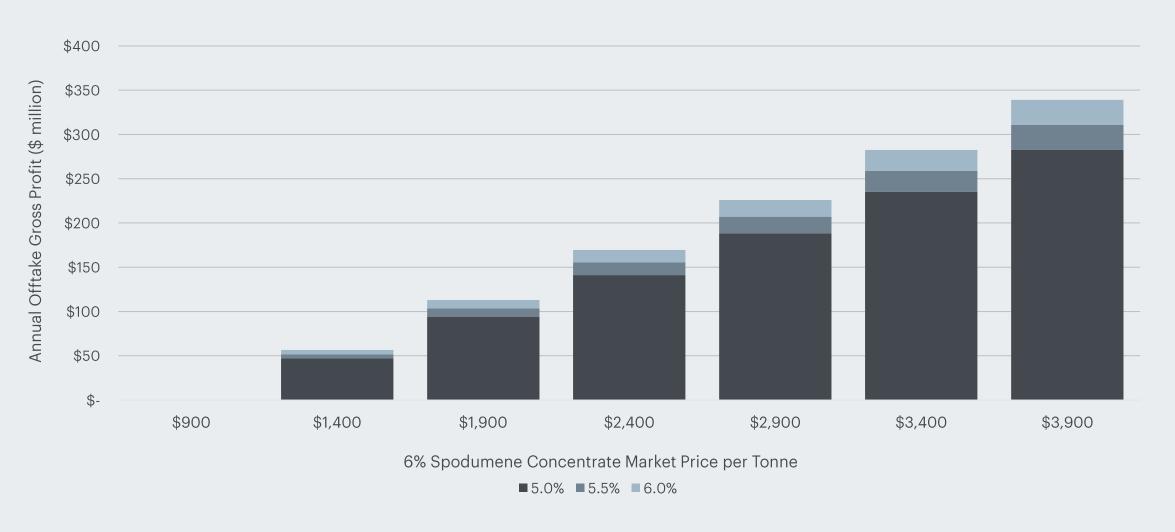
- See Piedmont announcement "Piedmont Lithium and LG Chem Sign Equity Investment and Binding Offtake Agreements" dated February 16, 2023
- See Piedmont announcement "Piedmont Lithium Amends Agreement with Tesla" dated January 3, 2023

See Piedmont announcement "Piedmont Lithium and Sayona Mining Formalize Restart Plans for North American Lithium in Quebec" dated June 28, 2022

LEVERAGE TO LITHIUM PRICES



Illustrative gross profit from NAL offtake



EWOYAA PROJECT IS ADVANCING



Mining Lease granted in October 2023

Ewoyaa Project



Funding Strategy

- Project timeline¹
 - Management targeting 2024 permitting / approvals
 - Management targeting Final Investment Decision by 2025
 - Management targeting 2026 full commercial production
- DFS published June 2023 \$185mm capex²
 - Piedmont to fund first \$70mm of capex to finalize earn-in
 - Minerals Income Investment Fund \$28mm investment for 6% Project stake
 - Remaining capex split based on project ownership (Piedmont 47% / Atlantic 47% / MIIF 6%)
- Piedmont evaluating non-dilutive funding options
 - DFC loan may cover majority of project capex
 - Customer funding for early years of PLL offtake

See Piedmont Lithium SEC filing dated February 6, 2024, a copy of which can be found on our website.

^{2.} See Atlantic Lithium AIM announcement dated June 29, 2023.

2024 OUTLOOK



Investment spending in 2024 is largely front-end loaded

	Units	H1 2024	H2 2024	FY2024	FY2023
Capital expenditures ¹	\$ million	\$8 - \$10	\$2 - \$4	\$10 - \$14	\$57
Investments in and advances to affiliates ¹	\$ million	\$20 - \$24	\$12 - \$14	\$32 - \$38	\$43

1. Estimated 2024 figures based on year-to-date performance and management estimates for spend at Carolina Lithium, Tennessee Lithium, North American Lithium and Ewoyaa. Current 2024 outlook is subject to further changes in market conditions.



FUNDING OUR GROWTH



Evaluating funding options with a view to minimizing dilution to Piedmont shareholders

Corporate

- \$72mm cash at 12/31/23
- \$49mm in net proceeds from sales of Sayona Mining and Atlantic Lithium shares

Quebec

- Potential joint venture credit facility
- Royalty on joint venture or Piedmont offtake tonnage
- Prepaid offtake for joint venture

Ghana

- \$28mm MIIF investment to fund pre- and post-FID expenses
- \$185mm project capex (\$124mm Piedmont; \$54mm Atlantic; \$7mm MIIF)
- Potential Development Finance Corporation project financing
- Considering prepaid offtake for Piedmont tonnage

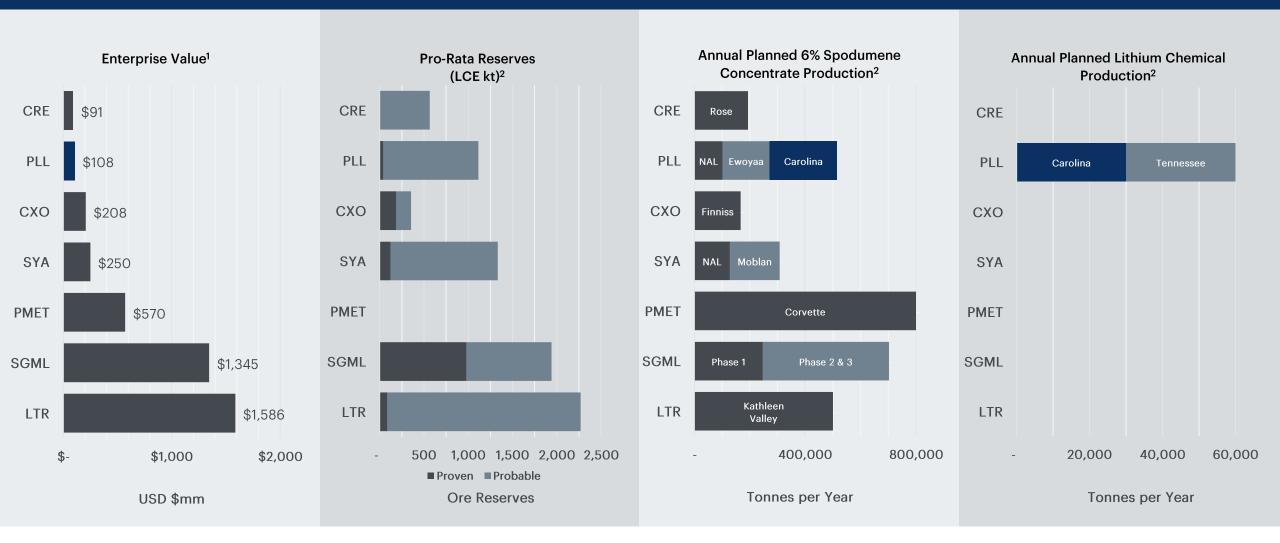
U.S. Projects

- Strategic partnering may include JVs, offtake prepayments, or equity investments
- Government programs potential for Department of Energy ATVM Loan

PEER BENCHMARKING



Piedmont offers scale, diversification, downstream integration, and current production



Enterprise Values consist of market capitalization, total debt, minority interests, preferred stock, and convertible preferred stock less cash and short-term investments. Data sourced from Factset as of February 23, 2024.

^{14 2.} Figures are based on disclosed resource updates and average life of mine production estimates. Production estimates may include the use of inferred resources. Proportional rights and offtake agreements are reflected. Note that projects for which technical studies have not been completed are excluded. See Peer Project Notes on slide 23 for further disclosure.



PIEDMONT LITHIUM

Nasdaq :PLL

₩ASX :PLL

ABN 50 002 664 495

LiOH

2024 MILESTONES



Positioning Piedmont for further success

2023 ACCOMPLISHMENTS **☑** Quebec ✓ Updated Ore Reserves at NAL of 21.7Mt @ 1.08% Li₂O Positive DFS for restart of NAL mine/concentrator First SC production and shipments at NAL **G**hana ☑ Ore Reserves estimated at 18.9Mt @ 1.24% Li2O ■ Ewoyaa Definitive Feasibility Study published Mining Lease granted October 2023 ☑ Carolina Lithium ADI 2 and partial ADI 3 responses submitted ☑ Community outreach with key Gaston County stakeholders ✓ Completion of funding of committed land purchases **▼** Tennessee Lithium Definitive Feasibility Study completed April 2023 Receipt of material permits required for construction **☑** Corporate \$75mm private placement with LG Chem in Q1 2023 ■ Expanded engineering and corporate teams ☑ Inaugural Power for Life foundation scholarships awarded

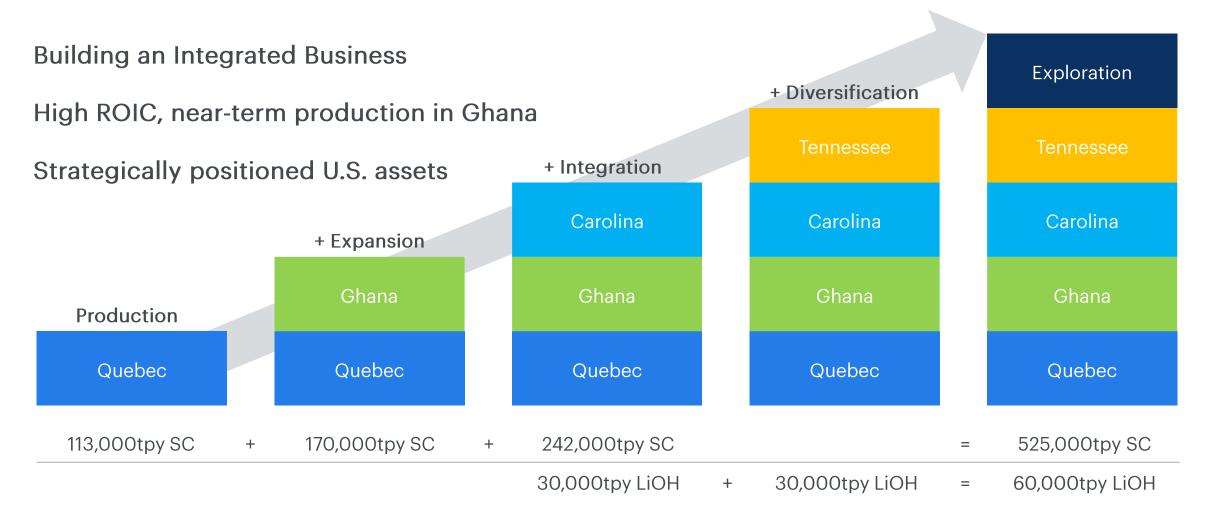
20	Z T IVI	ILLOTONEO
	Queb	ec
		Completion of capex associated with optimization work Transition PLL offtake from spot shipments to LT customer deliveries Secure JV-level funding to reduce JV capital calls
	Ghana	а
		Ratification of Mining Lease, ESIA approval Completion of \$28mm MIIF project-level investment Advance DFC and offtake funding to lessen PLL capital contribution
	U.S. P	rojects
		Secure mine permit and air permit for Carolina Lithium Confirm timing cadence of the two projects Project finance / ATVM loan application Downstream partnering and lithium hydroxide offtake
	Corpo	prate
		Raise non-dilutive capital to fortify balance sheet Manage operating and capital costs through bottom of cycle Evaluate consolidation opportunities

2024 MILESTONES

PIEDMONT DEVELOPMENT PIPELINE



Aligning near-term upstream production with long-term value creation



LOCATION MATTERS!



UNITED STATES

- US domicile improves access to US capital markets
- Russell 2000 inclusion / over 20% of PLL shares held by Index Funds
- Well-positioned to benefit from the IRA and other US government programs
- Southeastern United States has become integral part of the "Battery Belt"

QUEBEC

- Based near Val-d'Or, a major mining service center
- No requirement for fly-in/fly-out labor
- Reliable, clean and sustainable hydropower
- Proximity to rail network to access St. Lawrence Seaway and US markets

GHANA

- Project site is 1km from a paved road and 110km from port at Takoradi
- Hydro and solar power proximate to site
- Strong national employment, training programs, and community engagement
- Significant mining industry mining generates more than one-third of export revenues¹

CAROLINA

- Located on the Carolina Tin-Spodumene Belt in Gaston County, NC
- Single integrated site
- Outstanding transport and power infrastructure
- Proximity to lithium and byproduct markets

TENNESSEE

- Near planned and existing cathode, battery, and automotive plants
- Development-ready site located near rail, highways and waterways
- Strong local workforce, business climate and government support

1. According to the U.S. Department of Commerce's Ghana Country Commercial Guide dated November 26, 2023.

QUEBEC



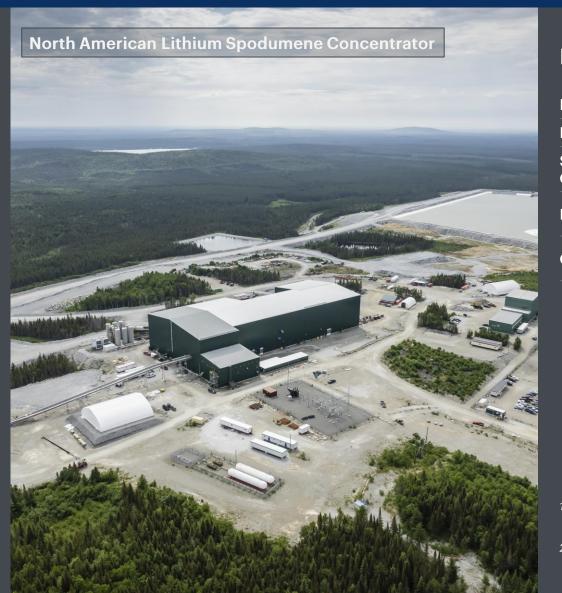


HIGHLIGHTS

- Piedmont Interest
 - 25% of Sayona Quebec
 - Offtake 113,000tpy SC6 with ceiling price of \$900/t¹
- Among Canada's largest and bestlocated lithium projects
- Good road and rail access
- Skilled local labor and contractors
- Low-cost renewable hydroelectricity

UPCOMING MILESTONES

- Completion of optimization work
- Resource upgrade from 2023 drill campaign
- DFS for on-site carbonate refinery



FACT SHEET

Location	Québec		
Business	Spodumene Concentrate		
SYA Fiscal '24 Guidance ²	Production: 140,000 - 160,000 Sales: 160,000 - 180,000		
PLL Offtake ¹	Greater of 50% of production or 113,000tpy		
Offtake Price	Price Floor: \$500/t Price Ceiling: \$900/t		

Refer to Piedmont's announcement dated June 28, 2022 for a summary of offtake agreement terms, a copy of which can be found in our SEC filings.

^{2.} See Sayona Mining September 2023 Quarterly Activities Report dated October 30, 2023.

GHANA

Advancing the Ewoyaa project

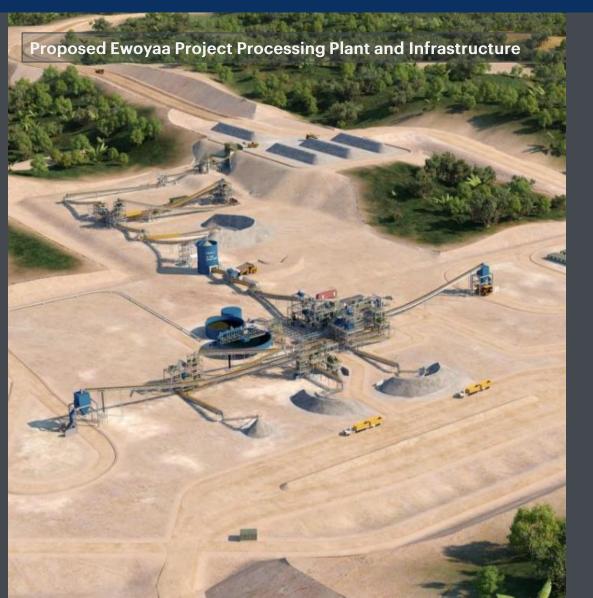


HIGHLIGHTS

- Piedmont Interest¹
 - 5% ALL shares
 - Earning 50% of Ghanaian lithium portfolio²
 - Offtake 50% of life of mine production at market
- Mining-friendly jurisdiction
- ~70 miles from major port along national highway
- Coarse-grained spodumene implies low capex DMS flowsheet
- Adjacent hydroelectric powerlines

UPCOMING MILESTONES

- Management targeting 2024 Mining Lease ratification and permitting
- Completion of MIIF investment
- Funding alternatives for Piedmont's share of capex



FACT SHEET³

Location	Ghana
Business	Spodumene Concentrate
Production	365,000tpy SC
PLL Offtake	50% of annual production
Capex	\$185mm
Opex	\$377/t
After-tax NPV _{8%}	\$1.3bb
After-tax IRR	94%

- l. Piedmont owns ~32.7mm shares of Atlantic Lithium (AIM: ALL) and has an earn-in agreement for 50% of the Ewoyaa project.
- 2. 50% project interest prior to Ghanaian government and potential MIIF interest, which may be negotiated.
- Production and economics are based on a Definitive Feasibility Study, which includes the use of inferred resources. See Atlantic Lithium AIM announcement "Ewoyaa Definitive Feasibility Study" dated June 29, 2023. Economics do not account for Ghanaian government's free carry.

CAROLINA LITHIUM



Planned fully-integrated 30,000 tpy LiOH operation 100% owned by Piedmont Lithium

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
- Projected to be a low-cost producer

UPCOMING MILESTONES

- Mine permit
- Air permit
- Land rezoning



FACT SHEET¹

Location	North Carolina, USA
Project Stage	Feasibility Study
Product	Lithium Hydroxide
Resources	44.2Mt @ 1.08% Li ₂ O
Production	30,000tpy LiOH
Feedstock	242,000tpy SC6
Capex	\$988 million
Opex	\$4,377/t LiOH
EBITDA	\$459mm first 10 years
After-tax NPV _{8%}	\$2.0 billion
After-tax IRR	27%
Payback	3.5 years

Refer to results of PLL Bankable Feasibility Study announcement dated December 14, 2021, a copy of which can be found on our Company website or in our SEC filings. Estimates prepared pursuant to SEC S-K 1300 and the JORC Code.

TENNESSEE LITHIUM

100% owned by Piedmont Lithium



HIGHLIGHTS

- 30,000tpy proposed LiOH production
- Spodumene feed expected from market sources, including offtake agreement with Atlantic Lithium
- Excellent rail, river, and road transport
- Key permits received

UPCOMING MILESTONES

- Project finance / ATVM loan application
- Strategic partnering
- Lithium hydroxide offtake



FACT SHEET¹

Location	Etowah, McMinn County, TN
Product	Lithium Hydroxide
Production	30,000tpy LiOH
Feedstock	196,000tpy SC6
Capex	\$809mm
Орех	\$13,673/t LiOH
EBITDA	\$376mm
After-tax NPV _{8%}	\$2.5bb
After-tax IRR	32%
Payback	2.8 years

Refer to announcement "Piedmont Lithium Completes Definitive Feasibility Study of Tennessee Lithium Project" dated April 20, 2023, a copy of which can be found on our Company website or in our SEC filings.

PEER PROJECT NOTES



Company	ompany Project		Ore Reserves ¹		Spodumene Concentrate Production ¹		Lithium Chemical Production ¹		Source
Company	110,000	Ownership	Proven (LCE kt)	Probable (LCE kt)	Tonnes (kt)	Grade (% Li2O)	Tonnes (kt)	Product	- Source
Piedmont Lithium	Carolina Lithium	100%	-	497	242	6.0%	30	Hydroxide	Piedmont Lithium SEC filing dated December 14, 2021; Carolina Lithium Bankable Feasibility Study
Piedmont Lithium	Tennessee Lithium	100%	-	-	-	-	30	Hydroxide	Piedmont Lithium SEC filing dated April 20, 2023; Tennessee Lithium Definitive Feasibility Study
Piedmont Lithium	Ewoyaa	50%	-	772	340	5.8%	-	-	Atlantic Lithium AIM announcement dated June 29, 2023; Ewoyaa Definitive Feasibility Study
Piedmont Lithium	Abitibi Hub	25%	164	684	190	5.4%	-	-	Sayona Mining ASX announcement dated April 14, 2023; NAL Definitive Feasibility Study
Sayona Mining	Abitibi Hub	75%	164	684	190	5.4%	-	-	Sayona Mining ASX announcement dated April 14, 2023; NAL Definitive Feasibility Study
Sayona Mining	Moblan	60%	-	1,162	300	6.0%	-	-	Sayona Mining ASX announcement dated February 19, 2024; Moblan Definitive Feasibility Study
Core Lithium	Finniss	100%	187	167	173	5.8%	-	-	Core Lithium ASX announcement dated September 29, 2023; Core Lithium Annual Report Core Lithium ASX announcement dated July 26, 2021; Stage 1 Definitive Feasibility Study
Critical Elements	Rose	100%	-	566	193	5.7%	-	-	Critical Elements SEDAR filing dated October 11, 2023; NI-43-101 technical report for the Rose Lithium-Tantalum Project Feasibility Study
Patriot Battery Metals	Corvette	100%	-	-	800	6.0%	-	-	Patriot Battery Metals SEDAR filing dated September 8, 2023; Mineral Resource Estimate for the CV5 Pegmatite
Sigma Lithium	Phase 1	100%	318	133	270	5.5%	-	-	Sigma Lithium SEDAR filing dated January 16, 2023; Grota do Cirilo Lithium Project Updated Technical Report
Sigma Lithium	Phase 2 & 3	100%	660	830	496	5.5%	-	-	Sigma Lithium SEDAR filing dated January 16, 2023; Grota do Cirilo Lithium Project Updated Technical Report





CORPORATE PRESENTATION February 2024

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