



Piedmont Lithium – A near-term cashflow generating North American lithium producer trading at a deep discount to its fair value.

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Executive Summary

Piedmont Lithium ("Piedmont or PLL") is trading at a substantial discount to both our sum of parts valuation and on an EV/NPV EV/EBITDA basis relative to peers despite its joint venture with Sayona Mining for North American Lithium ("NAL") in Quebec progressing towards the restart of spodumene concentrate ("SC") production in H1 2023 and its Tennessee lithium project securing a \$141.7M DOE grant to offset the total estimated capex of US\$70M. With PLL's JV partner Atlantic Lithium ("Atlantic") in Ghana on track to start SC production in late 2024, PLL has deftly created a virtually integrated lithium chemical producer that benefits from low opex input costs and benefits from USA government incentives through the newly legislated Inflation Reduction Act ("IRA") and Bipartisan Infrastructure Law ("BIL").

In October 2022, I visited PLL's new head office in Belmont, North Carolina and met with most of the senior management. It's been nearly four years since I visited the drill core shed and wrote my first research report on the company in March 2019. Over time, the executive management team has grown by adding highly experienced personnel. Below the senior management level, substantial new hires have supported the progression and design of the North Carolina and Tennessee lithium projects. In my opinion, this is an impressive team that executed with perfect timing the Sayona Quebec and Atlantic deals, the successful DOE grant for Tennessee and is making meaningful progress towards the final permitting of the North Carolina lithium project. The recent endorsement of the North Carolina project by [Senator Thom Tillis](#) and [Albemarle securing a US\\$150M DOE grant](#) for spodumene concentration in North Carolina (Kings Mountain) bodes well for PLL getting over the line.

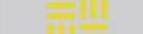
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RK Equity sees a strong case for PLL generating an EBITDA of over US\$500M in 2024, rising to over US\$900M in 2025 from SC production alone, implying a current valuation of just 1.2 times EV/EBITDA - glaringly cheap relative to producing and near producing SC peers like Sigma, Core and Pilbara Minerals. Should PLL successfully secure the necessary permits in North Carolina, the

company's EBITDA will be further boosted from ~2026/2027 onwards. SC and lithium chemical prices have remained resilient, with upstream SC producers capturing a substantially higher share of the supply chain margins. PLL can pivot in the near term and optimize its position. Few pure lithium plays are listed in the USA, and fewer are listed operating companies. Further, PLL is the only lithium developer 100% domiciled in the USA, making it uniquely qualified for inclusion into indexes such as the Russell 2000 and available for purchase by a greater share of the US investment community. This garners the company USA credibility/liquidity and could underpin a higher EBITDA multiple. Livent produces approximately 20ktpa of lithium hydroxide, and while it has plans to expand to 50ktpa, its market cap is ~US\$5.3B versus PLL trading at US\$1.1B with sufficient SC to produce 30-35ktpa lithium hydroxide in 2025 and the potential to increase that to over 60ktpa if its North Carolina project progresses. Depending on timelines, PLL could generate sufficient free cash flows to internally fund its expansion to 60ktpa hydroxide production. Further, PLL has cash on hand, and the ability to raise additional capital through a prepay on NAL output will limit or eliminate shareholder dilution until NAL comes online in 1H 2023.

The company has a clear path with limited technical risk to becoming an SC-only producer with ~250ktpa generating an EBITDA of ~US\$900M+ in 2025 – the capex required to achieve this EBITDA is low and requires no further equity dilution in our opinion. PLL's Tennessee lithium hydroxide project (now partially funded by the US\$141.7M DOE grant) and North Carolina lithium project offer EBITDA upside to ~US\$1.5-US\$2B by 2026/2027.

PLL's interests in Sayona Quebec (NAL) and Atlantic puts PLL on a path to cash flow generation by H2 2023. NAL has derisked its flow sheet by adding new jaw crushers, screen/belt filters, ore sorters and magnetic separation. Feedback from mine site visits is that the mine and concentrator are ready to restart in Q1 2023 – RK Equity has been more conservative and assumed Q2 2023.



Chart: NAL equipment (Source: Sayona)

Near and mid-term catalysts for PLL:

- NAL restart and free cash flows (from Q2 2023) – possible prepay agreement (US\$50MM – US\$100MM) raised against future NAL SC supply to be used to fund construction at the Tennessee plant
- ALL resource update (Q4 2022), definitive feasibility study (Q2 2023) and Mining License approval and final investment decision (Q4 2023)
- Tennessee permitting and final investment decision (Q3 2023), possible JV partner and ATVM loan?
- NC permitting approval (2023/2024)

Sum of the Parts Valuation

Piedmont is trading at just 12% of my sum of the parts valuation for its four projects and equity stakes in Sayona and Atlantic. Our NPV(8%) for PLL's 25% stake plus offtake agreement in NAL is ~US\$1.8B, meaning PLL is trading on an **EV/NAL-only NPV** ratio of 0.53x. We consider Atlantic to be a great asset – low capex (US\$125M) and opex (US\$278/t) with a simple flow sheet (DMS only) that will ramp to nameplate production (255ktpa SC6) quickly. We value PLL's 50% stake in Atlantic Ghana's NPV (net of US\$125MM capex commitments) at ~US\$1.3B. We have used PLL's feasibility study valuations for Tennessee lithium at US\$2.2B and North Carolina at US\$2.8B. We consider PLL's equity holdings in Sayona Mining Limited ("Sayona") and Atlantic to be strategic and not for sale; therefore, we treat those assets as a line item added to the NPV.

Asset	NPV	Estimated Start Date	Estimated Production	Technical Risk
NAL	US\$1.8B	H1 2023	SC6 113ktpa	Low to Medium
Atlantic (Ewoyaa)	US\$1.3B	Q4 2024	SC6 127.5ktpa	Low
LHP-2 (Tennessee)	US\$2.2B	2025	LiOH 30ktpa	High
North Carolina	US\$2.8B	2026/2027	SC6 248ktpa, LiOH 30ktpa	SC6 Medium, LiOH High
PLL NPV (TOTAL)	US\$8.1B			
PLL EV	US\$1B			
PLL EV / NPV	0.123			

Chart: PLL NPV Estimate (Source: Author and company announcements)

Should NAL come online and deliver as expected, and Atlantic's Ewoyaa project and Tennessee are permitted (2023), we expect PLL to trade on a near-term blended EV/NPV ratio (excluding North Carolina – permitting and final investment decision likely 2024) closer to 0.7x. This ratio equates to a fair value price of US\$189.40/share.

Asset	NPV	Estimated Start Date	Equity / Debt to Finance
NAL	US\$1.8B	H1 2023	25
Atlantic (Ewoyaa)	US\$1.3B	Q4 2024	125
Tennessee	US\$2.2B	2025	480
PLL NPV (TOTAL)	US\$5.3B		
PLL Market Cap	US\$1.1B		
PLL Net Cash			-130
	Market cap	1.1	
	Net New Equity + Debt	0.5	
	SYA & ALL shares	-0.2	
	PLL EV US\$B	1.4	
		US\$B	
	PLL NPV (TOTAL)	5.3	
	EV/NPV target	0.7	
	EV Implied	3.7	
	Less New Equity/Debt	-0.5	
	Plus SYA & ALL shares	0.2	
	Market Cap (Implied)	3.4	
	Fair Value (US\$/share)	189.4	

Chart: Estimated NPVs and fair value share price (Source: Author)

A **longer-term** valuation methodology we utilise is a **risk-weighted forward EV/EBITDA multiple** against long-term chemical and SC prices. Based on a long-term SC6 price of US\$2,050/t, we derive a long-term steady state EBITDA of US\$725MM for PLL as an SC only producer assuming Sayona Quebec, Atlantic, and North Carolina are in production. If we generate a long-term EBITDA for the Tennessee and North Carolina plants plus SC, we estimate US\$1,350MM using a US\$30k/t chemical price.

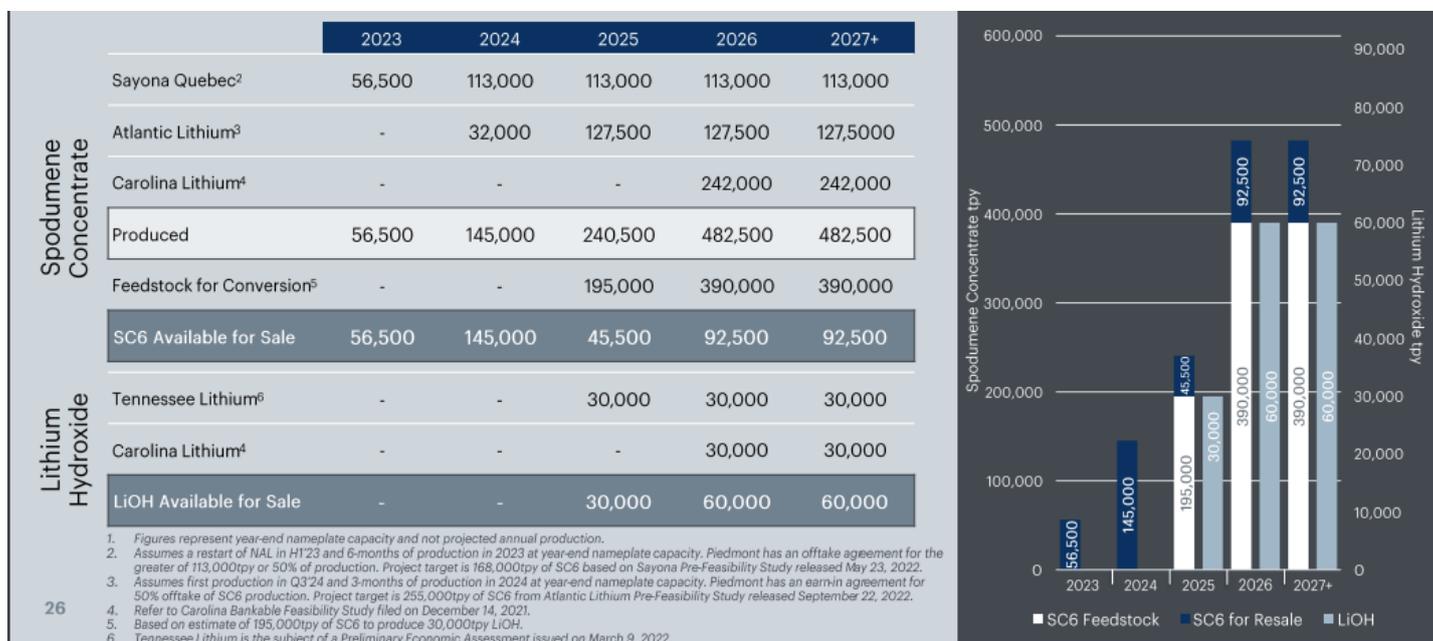


Chart: Estimated nameplate capacity (Source: Piedmont company presentation)

Based on a **risk-weighted** conservative EV/EBITDA ratio of 6x applied to the long-term EBITDA for SC6 only, we reach a valuation of US\$197/share and using a 9x ratio for an integrated EBITDA of US\$1,350MM; the fair value price estimate is US\$608/share. There is greater technical risk in achieving the vertically integrated business model but the substantial reward of a higher EV/EBITDA valuation multiple and steady state EBITDA. *In the near term, we estimate that PLL will trade on an SC6 only EV/EBITDA multiple in 2024/2025 of 2.1x and 1.2x using a US\$62 reference share price. Given the low/medium technical risk of PLL achieving targeted production volumes of SC by these dates, we see the company as offering compelling value to investors and potential acquirers desperately short of SC supply.*

In summary, our near-term fair value estimate for PLL is US\$189.40/share – the catalyst for a rerating to this price will be the successful restart of NAL in the next few months (Q1/Q2 2023) and the permitting approval of Atlantic and the Tennessee lithium plant in 2023.

Longer-term, the transition of PLL to an integrated producer in Tennessee and North Carolina (60ktpa hydroxide) with additional SC for sale will underpin a further upward rerating of the company.

The case for "stronger for longer" lithium prices

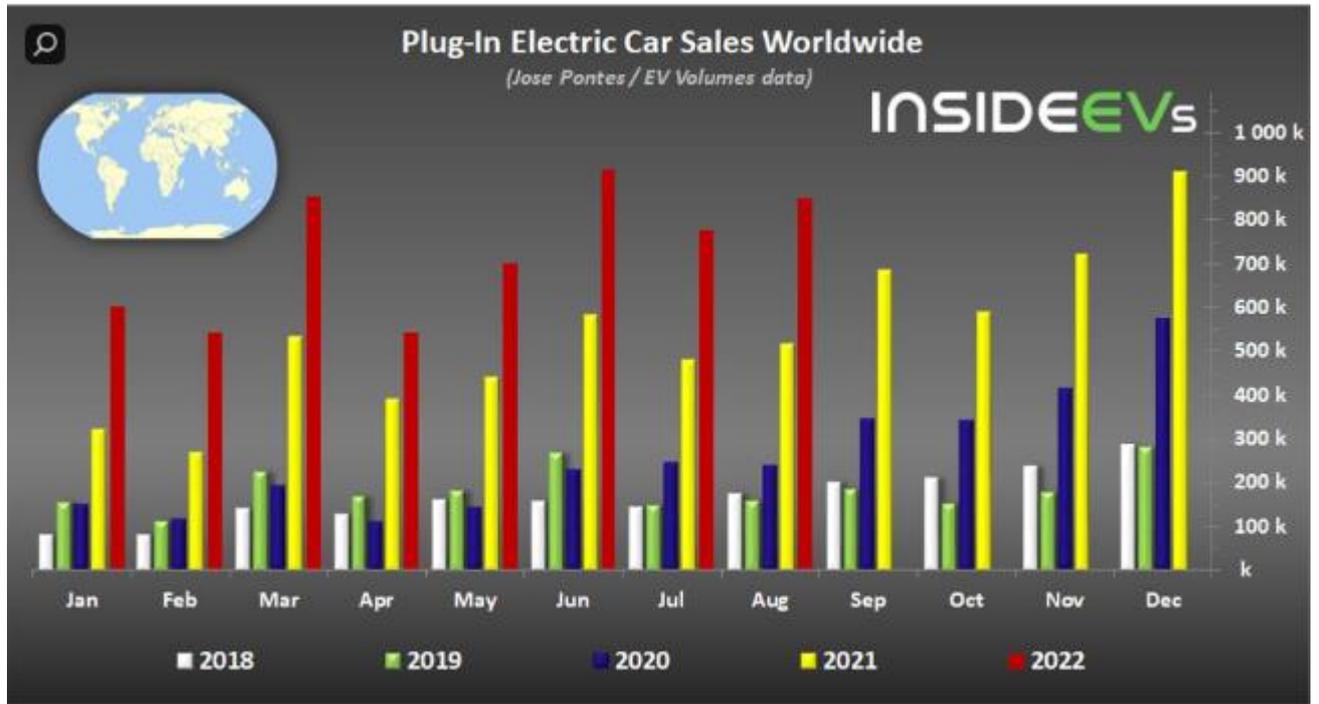


Chart: Monthly EV sales 2018-2022 (Source: InsideEvs)

	2020	2021	2022	2023	2024	2025	2026	2027	2028
Cathode									
NMC 111	9	14	19	24	0	0	0	0	0
NMC 532	118	177	212	243	251	259	215	167	166
NMC 622	130	171	224	270	319	345	323	267	208
NCM 711/811/9	70	165	328	361	493	664	969	1420	1997
NCA + NCMA	77	131	212	350	469	647	808	1000	1248
Next Frontier	0	0	0	0	0	65	108	200	250
LFP	138	459	742	1213	1576	2070	2693	3333	4160
LCO	74	92	114	140	144	155	162	167	175
LMO	84	102	77	94	101	108	108	113	116
TOTAL (KT)	700	1 312	1 928	2 695	3 353	4 313	5 385	6 665	8 320
Effective GWh	381	690	1 021	1 397	1 738	2 231	2 779	3 451	4 325
Carbonate KT LCE	167	299	408	571	676	838	1002	1179	1424
Hydroxide KT LCE	84	149	251	329	435	572	736	953	1234
Cathode KT LCE	250	448	659	900	1 111	1 411	1 739	2 132	2 658
% change		79%	47%	37%	23%	27%	23%	23%	25%
EV sales	3.2	6.7	9.6	13.7	16.8	20.8	25.6	31.4	38.3
% change		105%	45%	42%	23%	24%	23%	23%	22%
EV sales (limit)	3.2	6.7	8.0	11.6	14.9	17.4	19.6	21.5	22.1
% change		105%	21%	44%	28%	17%	13%	10%	3%

	2020	2021	2022	2023	2024	2025	2026	2027	2028
Lithium									
Carbonate supply	155 768	251 053	377 595	522 728	636 694	757 114	859 853	951 383	1 044 186
Carbonate demand	166 634	298 622	407 505	571 099	676 350	838 175	1 002 315	1 178 738	1 424 111
Net Carbonate	(10,866)	(47,569)	(29,910)	(48,371)	(39,656)	(81,061)	(142,462)	(227,355)	(379,925)
Hydroxide supply	88 790	136 423	209 567	282 891	383 779	483 030	575 152	667 274	748 196
Hydroxide demand	83 569	149 250	251 139	329 238	435 022	572 479	736 461	953 346	1 234 191
Net Hydroxide	5,221	(12,827)	(41,573)	(46,347)	(51,243)	(89,449)	(161,309)	(286,072)	(485,995)

Chart: RK Equity cathode lithium demand to 2028

We narrowly define what qualifies as potential new supply in our model. Further, final battery-grade qualification timelines remain a challenge. *IF and only if substantial upstream investment occurs in the near term and projects are permitted can the outlook change* – the price charts below tell the true story, and

we're only in Q4 2022. Our EV sales limit for 2022 based on battery-grade lithium supply is 8.0M units. Actual EV sales will exceed that cap this year if the entire supply chain ran down inventories of cathode, cell and completed EVs to meet demand. However, this can only be done once, and we forecast a widening differential between EV sales forecasts and the RK Equity sales limit in 2023. We remain convinced that hard rock is the quickest route to feedstock for *existing* conversion capacity in China and additional lithium units to supply the EV market. China Inc is already scouring the globe looking for projects and will likely focus heavily on Africa and internal assets – but they'll take anything. Western OEMs and battery manufacturers continue to play on the periphery and part fund and part offtake through what can be best described as non-binding arrangements, even if the parties claim otherwise. If this situation continues, China will dominate EV sales worldwide as it exports from its localised manufacturing hub. How will the USA and Europe protect their EV industries if they don't have sufficient local supply? In a recent [article](#), Reuters estimated that OEMs had committed US\$1.2 trillion to their EV initiatives, but only a small fraction of that has been earmarked for upstream raw materials. The most vulnerable parties currently are, in our opinion, the South Korean battery manufacturers that have announced grand plans in the USA with no guaranteed raw material or cathode supply.

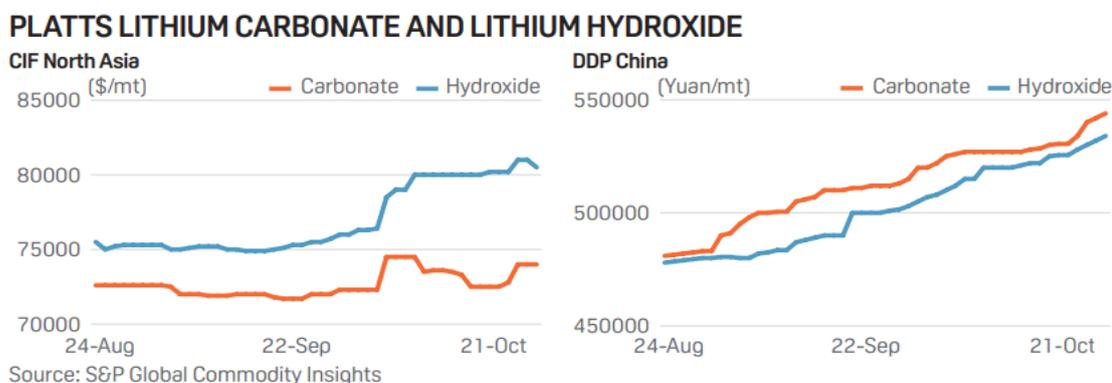


Chart: Historic lithium prices (Source: SP Platts)

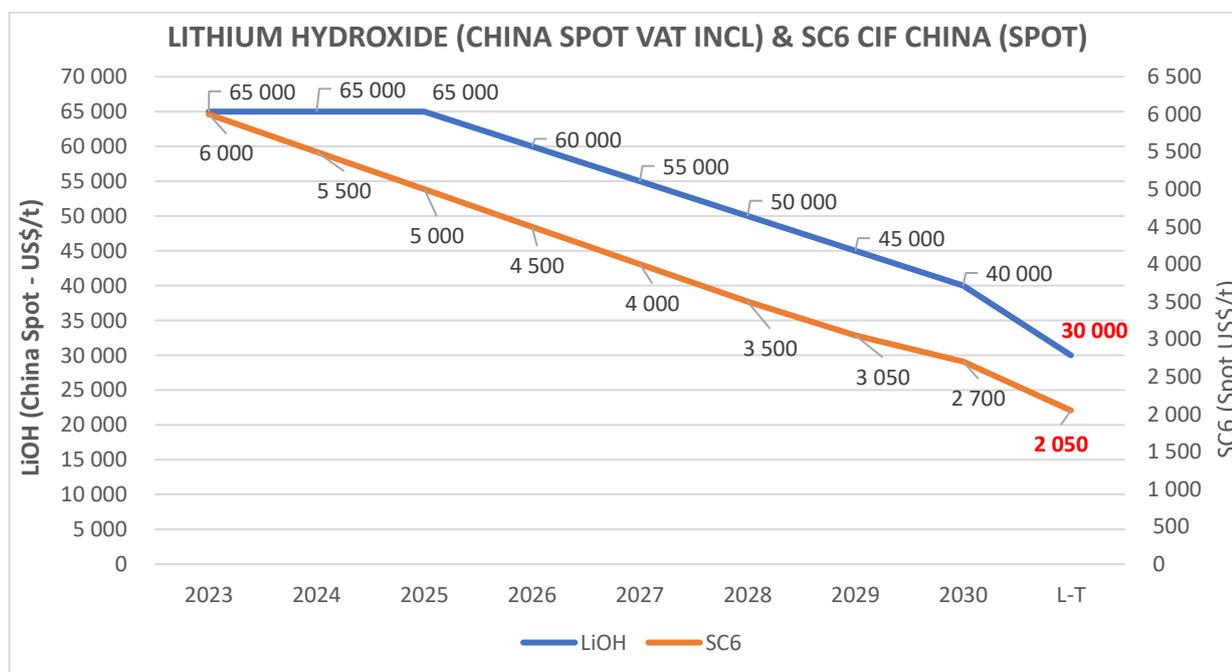


Chart: RK Equity lithium chemical and SC6 price forecast

RK Equity sees hydroxide spot prices remaining steady until 2025. *The modest declines beyond 2025 are premised on additional SC projects being permitted and coming online. We see Australia, Africa and Canada*

as the major contributors. Further, as additional SC production ramps up, we expect the operating margins of the chemical converters to be more favourable than current market conditions. This will benefit the operating margin and internal rate of return earned by PLL at its Tennessee plant and North Carolina lithium project. **Based on history and the sector's poor track record of delivery, there is an upside risk to our price forecasts and a "stronger for even longer" scenario playing out.** We see limited technical risk in delivering DMS-only SC projects – the greater risk is permitting timelines, finding skilled staff and delivery timelines and installation for lead items. **Advanced SC projects using floatation and conventional brine projects have also been handicapped and factored in and are important contributors. However, we see longer ramp-up timelines to achieve feasibility study recovery rates and product specifications.**

Based on recent site visit feedback to NAL and an analysis of Atlantic's flow sheet and mineralogy, we consider PLL's probability of meeting our forecasted production volumes within the given timeframes better than most of its industry peers.

The challenge facing the USA

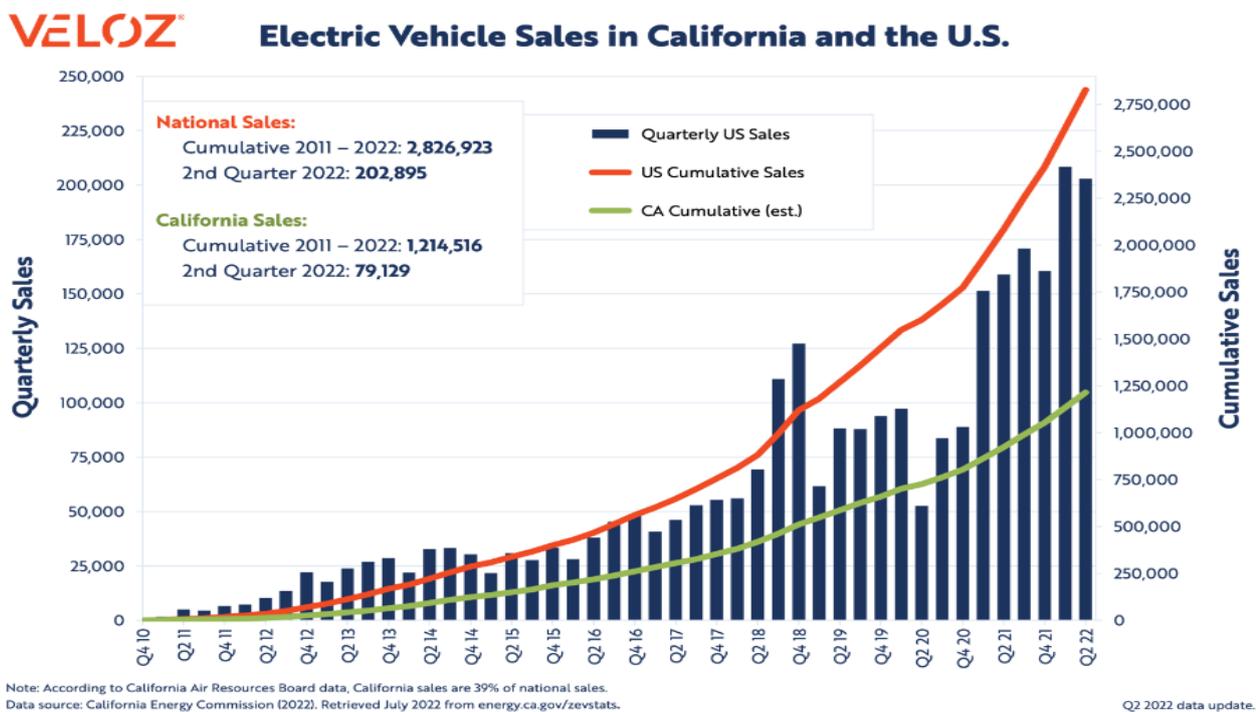


Chart: Veloz US & California EV sales data

Demand for lithium chemicals, particularly from the electric vehicle ("EV") sector, has remained resilient despite slowing total auto sales and price pressures for OEMs. We see the USA as the highest demand growth market globally between now and 2030 through EV sales growth and larger average battery pack sizes. The IRA's incentive support (45W) for heavy commercial vehicles (up to \$US40k per vehicle) is likely to drive substantial demand in that sector and battery cell output.

The USA's greatest challenge is securing sufficient domestic raw material and cathode production to match downstream battery and EV output to create a "closed loop" self-sufficient supply chain. Introducing the IRA and EV tax credits (with conditions) is a start – the more important component to achieving self-sufficiency is project permitting. PLL estimates that planned USA battery plants will need ~650,000/tpa of battery-grade hydroxide in 2030. Global battery-grade supply is less than half

that for 2022. Even if cathode preference in the USA shifts towards more LFP and lithium carbonate, the goal of self-sufficiency isn't possible by 2030. What is possible? The USA could achieve greater domestic lithium chemical production if free trade countries supply USA-based chemical conversion facilities with feedstock, such as PLL's Tennessee lithium plant. Tesla has signed offtake agreements with SC producers and will seek to produce its own lithium hydroxide in the USA using that material. Note that the first Tesla plant will likely only have ~15,000tpa capacity based on the announced estimated capex (US\$375M) and will only be realistically operational in 2025/2026.

The DOE grants recently allocated totalled only US\$2.8B and were split across the entire supply chain (see map below). According to the DOE, the funding would support sufficient lithium to produce 2M EVs annually. Based on a 40%-50% EV penetration objective by 2030, that would equate to 6M-7.5M EVs. For a project to reach nameplate capacity by 2030, it would need to be under construction by 2025 – 2026 at the latest.

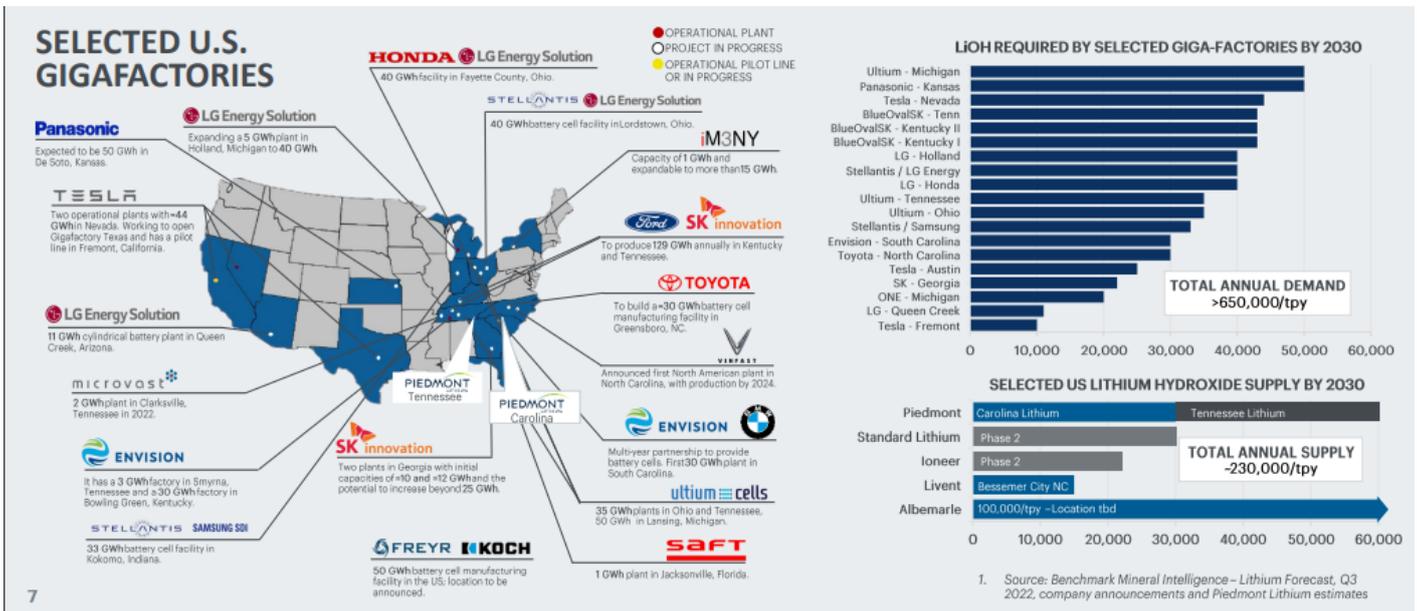


Chart: USA Gigafactories and implied lithium hydroxide demand (Source: PLL company presentation)



Chart: DOE map of grants (Source: Department of Energy)

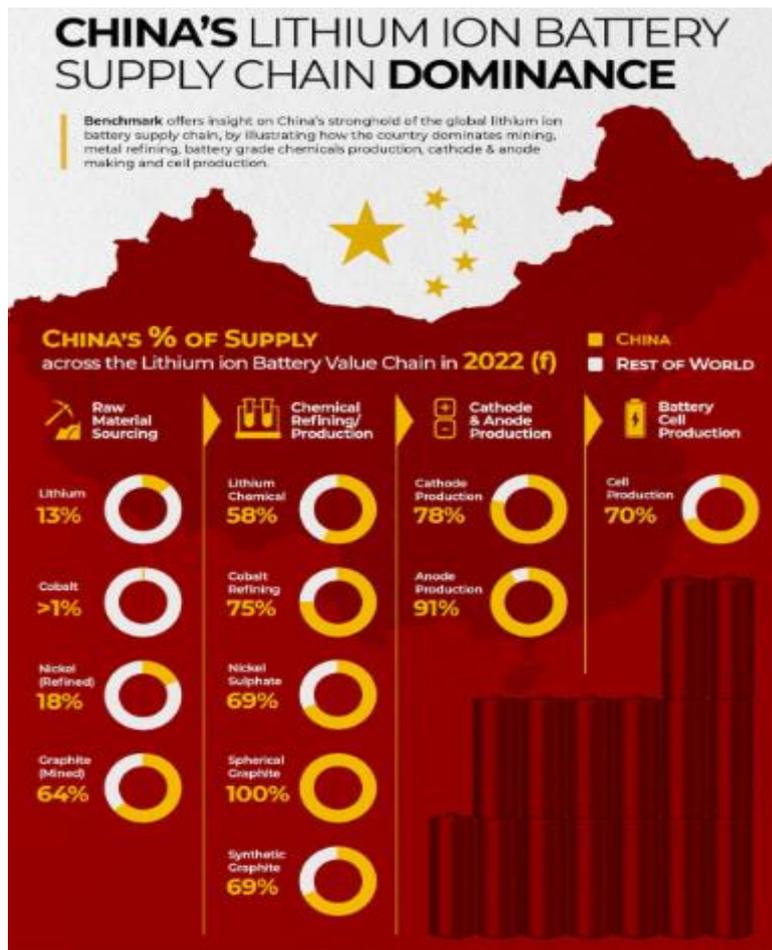


Chart: China's percentage of supply (Source: Benchmark Mineral Intelligence)

The chart above only tells part of the story, as China's share of lithium hydroxide production is closer to 80% than 60%. As mentioned previously, all areas of the battery supply chain will need to be addressed for the USA to reach self-sufficiency. Redwood Materials has plans to produce 100ktpa and 500ktpa of cathode material in the USA by 2025 and 2030. The USA lags the most in raw material sourcing and chemical refining.

The North American battery cell capacity proposed pipeline in August 2021 was 500GWh that figure now stands at 638 GWh according to Benchmark Mineral Intelligence ("BMI"), with South Korean companies representing 53% of the total. As mentioned earlier, these companies are vulnerable to raw material shortages, given that they have limited upstream exposure and ownership. We forecast that the battery cell capacity pipeline will reach 1,000 GWh by 2030 – meaning even greater competition between manufacturers for limited raw material supply.

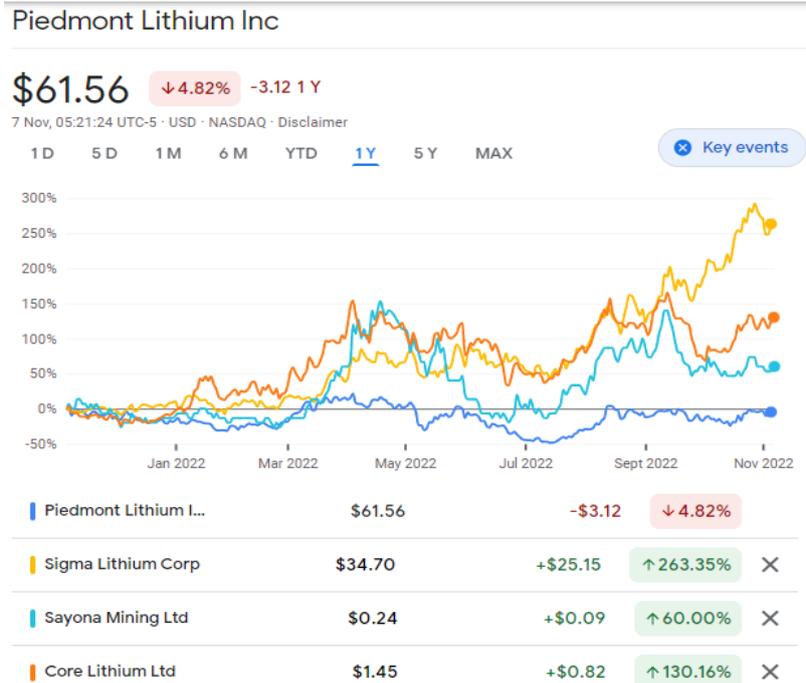
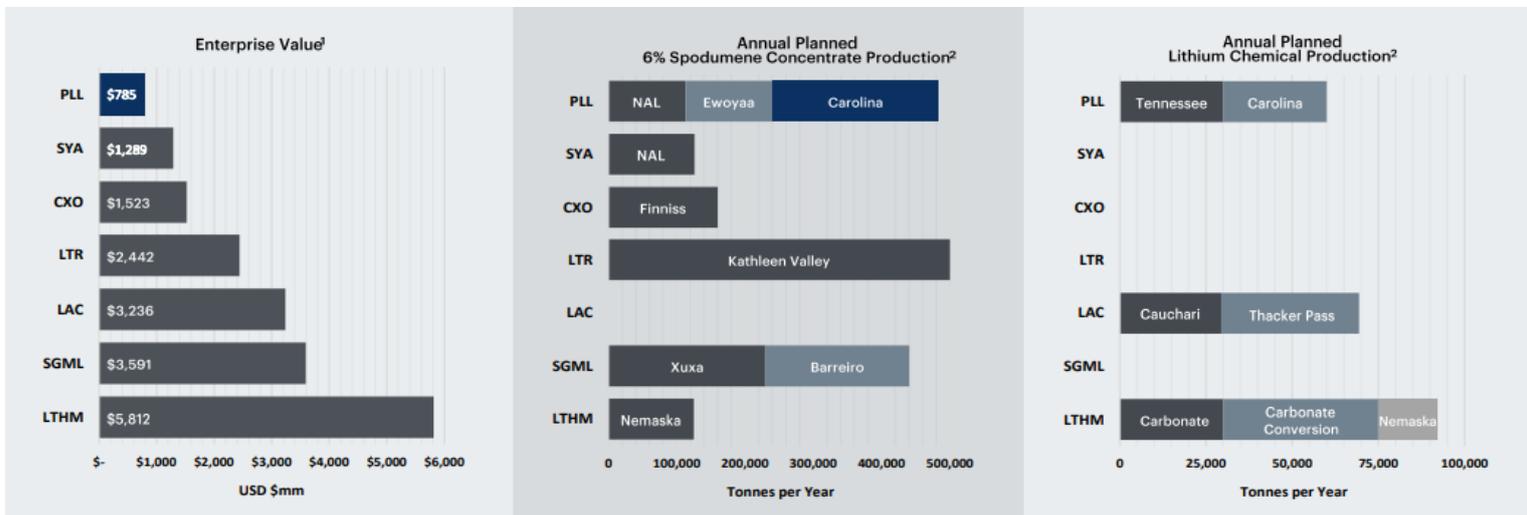


Chart: 1-year share price performance of PLL and peers (Source: Google Finance)

Over the past year, PLL has underperformed its SC peer group despite making substantial progress towards production at NAL with JV partner Sayona. With NAL being the only near-term producing asset within the Sayona portfolio, the outperformance over PLL is surprising. The chart below further reinforces our fair value range estimate of US\$107.90 – US\$221.70/share.



1. Enterprise Values are sourced from Nasdaq as of October 28, 2022 and shown in US\$mm.
 2. See Peer Projects in the Appendix for additional disclosures. Proportional rights and offtake agreements are reflected. Note that projects for which technical studies have not been completed are excluded.

Chart: PLL peer comparison of EV and planned SC6 and lithium chemical production (Source: PLL presentation)

- PLL, including North Carolina, will have a nameplate SC6 production capacity of 482,500tpa by 2026, similar to Lontown and Sigma (phase 2).
- PLL's proposed 482,500/t 2026 nameplate capacity is highly likely to exceed Sayona and Core after they expand beyond their initial operations.

PLL SC6 production share and EBITDA

Reporting Period	2023F	2024F	2025F	2026F
PLL SC6 share (NAL)	40 806	109 861	113 000	113 000
PLL SC6 share (ALL)	0	5 000	100 000	127 500
PLL SC6 share	40 806	114 861	213 000	240 500
PLL EBITDA (MM) (US\$)	212.8	543.9	933.3	942.3

North American Lithium

Reporting Period	2Q2023F	3Q2023F	4Q2023F	1Q2024F	2Q2024F	3Q2024F	4Q2024F	2025F	2026F
NAL SC6 production	15 000	20 000	30 000	40 000	45 000	45 000	45 000	180 000	180 000
PLL SC6 share *	9 417	12 556	18 833	25 111	28 250	28 250	28 250	113 000	113 000
PLL SC6 cost/t (US\$)	900	900	900	900	900	900	900	900	900
PLL SC6 sale price/t (US\$)	6 500	6 000	6 000	6 000	5 500	5 500	5 500	5 000	4 500
PLL EBITDA (MM) (US\$)	52.7	64.0	96.1	128.1	130.0	130.0	130.0	463.3	406.8

* RK Equity assumes PLL will receive 113/180*actual production until 180ktpa steady state is achieved

Atlantic Lithium

Reporting Period	2Q2023F	3Q2023F	4Q2023F	1Q2024F	2Q2024F	3Q2024F	4Q2024F	2025F	2026F
ALL SC6 production	0	0	0	0	0	0	10 000	200 000	255 000
PLL SC6 share (50%)	0	0	0	0	0	0	5 000	100 000	127 500
PLL SC6 cost/t (US\$)	300	300	300	300	300	300	300	300	300
PLL SC6 sale price/t (US\$)	6 500	6 000	6 000	6 000	5 500	5 500	5 500	5 000	4 500
PLL EBITDA (MM) (US\$)	0.0	0.0	0.0	0.0	0.0	0.0	26.0	470.0	535.5

What if scenarios?

	Reporting Period			
SC6/t	2023F	2024F	2025F	2026F
2000	45	129	294	341
3000	86	244	507	582
4000	126	359	720	822
5000	167	474	933	1 063
6000	208	589	1 146	1 303
7000	249	704	1 359	1 544
8000	290	819	1 572	1 784
9000	331	933	1 785	2 025
	PLL EBITDA (US\$MM)			

Tables: Author estimates

Integrated EBITDA Model (Tennessee)

Tennessee Lithium

Reporting Period	2025	2026	2027	2028	2029	2030
LiOH Production	4 000	20 000	30 000	30 000	30 000	30 000
SC6 Units	28 000	140 000	210 000	210 000	210 000	210 000
Average selling price/t	65 000	60 000	55 000	50 000	45 000	40 000
Revenue (US\$MM)	260	1 200	1 650	1 500	1 350	1 200
SC6 Input cost (US\$MM)	-25	-110	-131	-131	-131	-131
LiOH Processing cost (US\$MM)	-18	-90	-135	-135	-135	-135
LHP2 EBITDA (US\$MM)	216.8	1 000.2	1 384.2	1 234.2	1 084.2	934.2
Spodumene Concentrate Sales						
Excess SC6 sales	185 000	100 500	30 500	30 500	30 500	30 500
SC6 sales price/(US\$/t)	5 000	4 500	4 000	3 500	3 050	2 700
SC6 sales revenue (US\$MM)	925	452	122	107	93	82
SC6 input cost (US\$MM)	-107	-30	-9	-9	-9	-9
SC6 EBITDA (US\$MM)	818.5	422.1	112.9	97.6	83.9	73.2
PLL Total EBITDA (US\$MM)	1 035.3	1 422.3	1 497.1	1 331.8	1 168.1	1 007.4

Table: Author estimate

We ascribe a high probability that the Tennessee lithium plant will be permitted and built. PLL has secured a DOE grant of US\$141.7MM for the project, leaving the company with ~US\$430MM to fund (RK Equity estimates US\$480MM to include working capital). Currently, non-integrated chemical conversion plants are not generating decent margins as SC miners can keep most of the lithium supply chain profits. As such, PLL wouldn't make a substantial margin converting its SC in-house versus just selling SC in the market. However, we see some operating margins shifting back to converters over time as more brownfield and greenfield SC projects are built. On a look-through basis (SC priced at cost), PLL will generate over ~US\$1.4B EBITDA in 2026/2027 should Tennessee ramp up hydroxide production at battery-grade (~US\$500M more than selling SC only).

Commercialization

PROJECT NAME: Tennessee Lithium

APPLICANT: Piedmont Lithium Inc.

Federal Cost Share: \$141,680,442

Recipient Cost Share: \$430,356,259

Supply Chain Segment: Materials Separation & Processing (Cathode Minerals)

Project Description:

Piedmont Lithium (Piedmont) is a leading global developer of lithium resources for the U.S. electric vehicle industry. Piedmont is designing Tennessee Lithium to be a world-class lithium hydroxide facility and a large, low-cost contributor to the battery manufacturing supply chain with a sustainability footprint that is superior to incumbent producers.

Located in McMinn County, Tennessee, the project will be sited in an ideal location and uniquely positioned to supply America's rapidly growing electric vehicle market. At full production, the Tennessee Lithium is expected to produce 30,000 metric tons per year of lithium hydroxide for the domestic battery and EV market, doubling the lithium hydroxide production capacity currently available in the United States. Construction is expected to begin in 2023, subject to permitting and project financing, with first production targeted for 2025. Using modern technology and processes, Piedmont expects Tennessee Lithium to be one of the most sustainable operations in the world.

Community Benefits:

Piedmont Lithium plans to invest approximately \$600 million in the development of Tennessee Lithium, drive significant economic activity, and create approximately 120 new, direct jobs. Further, Piedmont plans to partner with local organizations and community stakeholders to support necessary training programs for local employees and contribute to philanthropic and civic efforts in the region.

The location of Tennessee Lithium in McMinn County, Tennessee is Tennessee Certified and within an Opportunity Zone. The site has direct access to high voltage power, natural gas, and water and wastewater services, and is logistically advantageous with adjacent rail service by CSX and proximity to U.S. Routes 11 and 411 as well as Interstate I-75. The site is approximately 12 miles from the Hiawasee River, allowing for barge transport of spodumene concentrate (SC6) as well as the potential for modular construction. In addition to excellent infrastructure, Tennessee is home to a hardworking, talented workforce and a welcoming business climate. The location also features proximity to battery and automotive plants being constructed by prospective customers as well as Piedmont's corporate headquarters and planned Carolina Lithium project in North Carolina.



Chart: DOE grant information (Source: DOE)

North American Lithium

Reporting Period	2023	2024	2025	2026	2027	2028	2029	2030
NAL SC6 production	65 000	175 000	180 000	180 000	180 000	180 000	180 000	180 000
PLL SC6 share *	40 806	109 861	113 000	113 000	113 000	113 000	113 000	113 000
PLL SC6 cost/t (US\$)	900	900	900	900	900	900	900	900
PLL SC6 sale price/t (US\$)	5 500	5 500	5 000	4 500	3 900	3 500	3 000	2 500
PLL EBITDA (MM) (US\$)	187.7	505.4	463.3	406.8	339.0	293.8	237.3	180.8
Depreciation	-35.0	-35.0	-35.0	-35.0				
Tax (26.6%)	-40.6	-125.1	-113.9	-98.9	-90.2	-78.2	-63.1	-48.1
Profit after tax	147.1	380.2	349.4	307.9	248.8	215.6	174.2	132.7
Sustaining capex	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Free cash flow (US\$MM)	144.1	377.2	346.4	304.9	245.8	212.6	171.2	129.7
Discounted (8%)	131.9	319.8	271.9	221.6	165.4	132.5	98.8	69.3
NPV(8%)(US\$MM)	1 818.0							

* RK Equity assumes PLL will receive 113/180*actual production until 180ktpa steady state is achieved

- RK Equity values the SYA Quebec 25% stake plus offtake agreement at ~US\$1.8B based on a 22-year mine life and a long-term SC6 price of US\$2050/t. This long-term SC6 price correlates to a long-term lithium chemical price of US\$30,000/t. **Based on these metrics, PLL is trading on an enterprise value ("EV") to an NPV ratio of 0.53x for its SYA Quebec stake. In our opinion, the successful restart of the NAL SC operation could trigger a takeover bid for PLL as the balance of asset ownership (Atlantic, Tennessee and North Carolina) plus shareholdings would represent free upside.**
- According to a company [statement](#) from Sayona on the 27th of October 2022, procurement and permitting are 96% complete at NAL. Further, they reaffirmed that the operation is ready to restart in Q1 2023.
- A pre-feasibility study is underway at Sayona, Quebec, to assess the possibility of restarting lithium carbonate production at NAL. For PLL to participate in a downstream operation, the economics would need to be compelling relative to its existing JV and offtake arrangement. Sayona and PLL may enter into a restructured JV agreement to compensate for any changes made.

Atlantic Ewoyaa Project

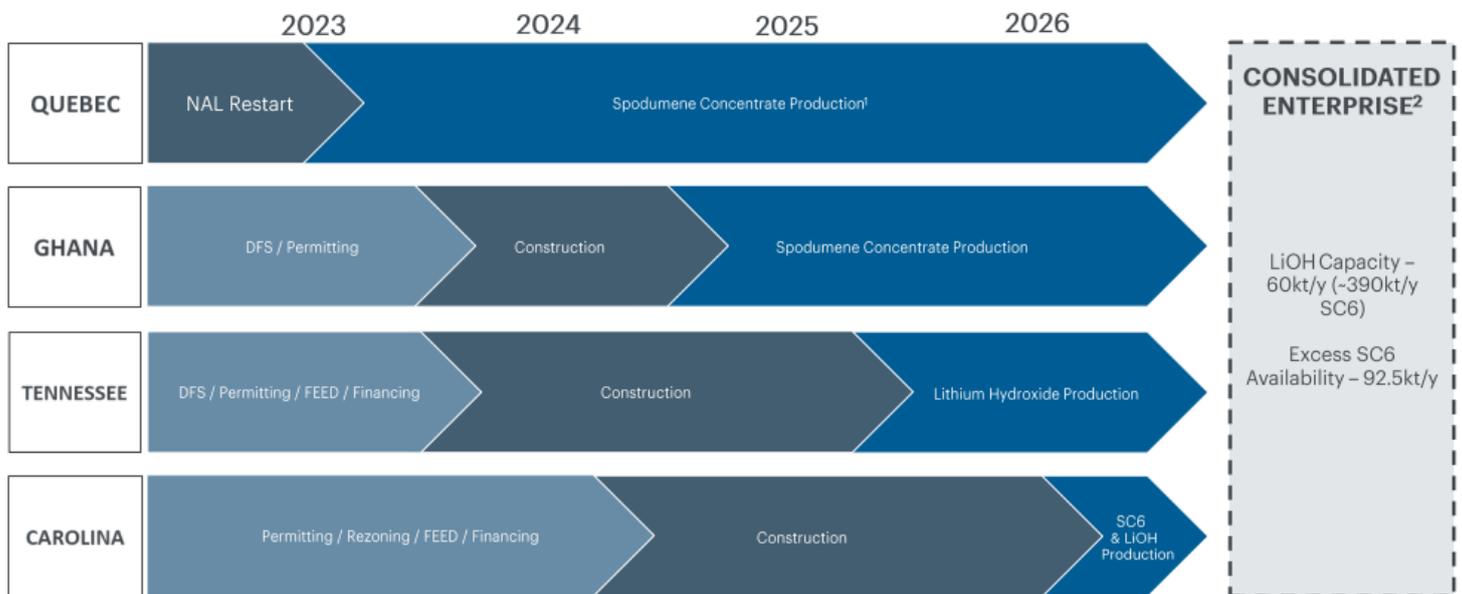
	Dec-22	Jun-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30
257 230 000 Waste/t			7 800 000	9 890 000	13 340 000	10 600 000	20 000 000	19 600 000
8.24 W:O			3.0	4.3	5.8	5.3	10.0	9.8
31 200 000 Crusher Feed/t			2 600 000	2 300 000	2 300 000	2 000 000	2 000 000	2 000 000
Total Material			10 400 000	12 190 000	15 640 000	12 600 000	22 000 000	21 600 000
29 900 000 Ore Processed/t			1 900 000	2 000 000	2 000 000	2 000 000	2 000 000	2 000 000
1.22% Grade %			1.33%	1.27%	1.12%	1.14%	1.28%	1.29%
62.5% Recovery %			62.5%	62.5%	62.5%	62.5%	62.5%	62.5%
6% Li Concentrate			263 229	304 271	268 333	237 500	266 667	268 750
3 867 083 Price USD			5 000	4 500	4 000	3 500	3 050	2 700
DSO & Feldspar credits			40.0	40.0	40.0	40.0	40.0	40.0
11 238 Revenue US\$			1316.1	1369.2	1073.3	871.3	853.3	765.6
(546.1) All-in cost US\$/t			(585.2)	(532.2)	(570.3)	(519.1)	(590.7)	(558.2)
(8178.7) Costs			(194.0)	(201.9)	(193.0)	(163.3)	(197.5)	(190.0)
8 527 EBITDA (US\$MM)			1122.1	1167.3	880.3	708.0	655.8	575.6
(125.0) Depreciation			(25.0)	(25.0)	(25.0)	(25.0)	(25.0)	0.0
EBT			1097.1	1142.3	855.3	683.0	630.8	575.6
Accumulated tax loss		(47.0)	1050.1					
35% Tax			(367.5)	(399.8)	(299.4)	(239.0)	(220.8)	(201.5)
Capex		0.0	0.0					
5602.6 After tax cash		0.0	754.6	767.5	580.9	468.9	435.0	374.1
8.00% DCF (US\$MM)		0.0	598.9	564.0	395.3	295.4	253.7	202.0
			NPV (US\$MM)	3 137				
			45% (PLL effective)	1 412				
			Less Capex share	(125)				
			PLL (ALL) NPV US\$MM	1 287				

- We have taken a conservative approach to the mineable resource and kept that at 30MT – based on recent drilling results and additional targets still to be explored, *our forecasted final resource is 50MT+*
- We have estimated a capex commitment of US\$100 million for PLL and conservatively assumed an upfront commitment for that amount
- Using our updated SC price deck, we estimate that PLL's effective 45% NPV share in the Ewoyaa project is ~US\$1.3B
- There is scope for an upside adjustment once an updated mineral resource estimate is released in late 2022 or early 2023 and the definitive feasibility study is published (due mid-2023)
- Atlantic has appointed an experienced [Chief Operating Officer](#) and submitted its [Mining License application](#) in October 2022 – *the target is to reach a final investment decision by the end of Q3 2024*
- ***Based on our SC6 price deck, it would take only ~3 years of discounted cash flows (NPV8%) for an acquirer to recoup a £1/share takeover bid for ALL***

Conclusion

DEVELOPMENT PROGRESSION

Indicative Timelines - actual timelines remain subject to permitting, financing and construction.



1. Initial SC6 production from the restart of the North American Lithium mine. Potential LiOH production from Quebec is the subject of further technical studies.

2. Figures for LiOH Capacity and Excess SC6 Availability are based on studies released by Piedmont Lithium, Sayona Mining and Atlantic Lithium covering each project. See Peer Project Notes in the appendix for pro-rata production figures.

Chart: PLL development timeline (Source: PLL company presentation)

Near and mid-term catalysts for PLL:

- NAL restart and free cash flows (from Q2 2023) – possible prepay agreement (US\$50MM – US\$100MM) raised against future NAL SC supply to be used to fund construction at the Tennessee plant
- ALL resource update (Q4 2022), definitive feasibility study (Q2 2023) and Mining License approval and final investment decision (Q4 2023)
- Tennessee permitting and final investment decision (Q3 2023), possible JV partner and ATVM loan?
- North Carolina permitting approval and financing (2024)

The key catalyst for PLL is the successful restart of NAL – market feedback from site visits is that the project is on track. RK Equity forecasts that the SC market will remain tight in 2023, meaning NAL will likely sell material at prices similar to current spot levels. With battery-grade lithium chemical demand forecasted to grow ~240kt in 2023, supply growth will again struggle to match demand. Whilst there have been some offtakes and JV arrangements (with and without funding) announced in 2022, on balance, total upstream investment continues to fall woefully short of what is required. As such, we see an increase in M&A activity in 2023 as downstream customers reach desperation.

PLL has a credible path to 240ktpa of SC6 attributable output and 30,000tpa of lithium hydroxide production by 2025. North Carolina will potentially add 30,000tpa hydroxide and an excess of 47ktpa

of additional SC available for sale from 2026/2027. Importantly, no offtake agreements have been signed by PLL that commit volumes from either Tennessee or North Carolina.

The market has given PLL little recognition for its investments into Sayona Quebec (NAL) and Atlantic. The USA stock market has few listed pure lithium plays and even fewer operating assets. PLL offers investors the opportunity to gain exposure to hard rock (SC6) and lithium chemical refining. By 2024 PLL should have exposure to two operating assets that generate meaningful EBITDA (>US\$500MM).

A number of near-term catalysts underpin a fair value price of US\$189.40/share by Q2/Q3 2023.

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