

RESEARCH UPDATE
Dave Storms, CFA
dave@stonegateinc.com

214-987-4121

MARKET STATISTICS

Price	\$20.71
52-Week Range	\$17.05 - \$24.30
Daily Vol. (3 Month Avg.)	485,230
Market Cap (\$M)	\$2,634.2
Enterprise Value (\$M)	\$2,808.2
Shares Outstanding (M)	127.1
Float (M)	89.0

FINANCIAL SUMMARY

Equity (M)	\$1,858.6
BV/S	\$ 14.62
Cash (M)	\$ 59.8
Debt (M)	\$ 384.3
Debt/Cap	17.3%

FYE: Dec	2023	2024E	2025E
<i>(in \$M)</i>			
Rev	\$2,566.7	\$2,619.1	\$2,656.4
Chng%	7%	2%	1%
EBITDA	\$ 933.1	\$ 867.6	\$ 876.6
EPS	\$ 4.81	\$ 4.19	\$ 4.23
EVR	1.1x	1.1x	1.1x
EV/EBITDA	3.0x	3.2x	3.2x
P/E	4.3x	4.9x	4.9x


COMPANY DESCRIPTION

Alliance Resource Partners, L.P., a diversified natural resource company, produces and markets coal primarily to utilities and industrial users in the United States. The company operates through four segments: Illinois Basin Coal Operations, Appalachia Coal Operations, Oil & Gas Royalties, and Coal Royalties. As of December 31, 2022, it had approximately 580.7 million tons of proven and probable coal mineral reserves, as well as 1.17 billion tons of measured, indicated, and inferred coal mineral resources. The company was founded in 1971 and is headquartered in Tulsa, Oklahoma.

ALLIANCE RESOURCE PARTNERS, L.P. (NASDAQ: ARLP)
ARLP Releases Full Year 2023 and 4Q23 Earnings

ARLP reported solid 4Q23 results that capped a record year, despite significant headwinds. Full year pricing increased 8.6%, helping to mitigate a slight decrease in volumes. While the Company saw an increase in operating expenses, ARLP still saw year-over-year net income growth. ARLP updated its 2024 guidance, slightly decreasing expected full year coal ASP/ton, and we have updated our model accordingly. We note that management is optimistic when looking into FY24 given the strong futures curve of relevant commodity prices, which is leading to increased demand and an expected corollary increase in export prices.

Quarterly results – ARLP reported revenue, adj EBITDA, and adj EPS of \$636.5M, \$247.7M, and \$1.18, respectively. This compares to our/consensus estimates of \$673.2M/\$703.7M, \$283.4M/\$268.5M, and \$1.25/\$1.53, respectively. Domestic and export pricing were both challenged in the Illinois Basin, with export pricing slightly buoying the challenged domestic pricing in Appalachia. The net result was a quarter of decreased results as compared to 4Q22.

Coal Operations – ARLP 4Q23 coal sales were \$521.9M, down 17.3 y/y and down 4.9% q/q. Volumes decreased by 7.5% y/y to 8.6M tons. Pricing was down 10.7% y/y to arrive at \$60.6 asp/ton compared to \$67.84 in 4Q22. Volumes were impacted by an unexpected fire at a Gulf Coast export terminal, temporarily halting operations. ARLP is expecting to see a pricing rebound in export pricing through FY24. It is notable that the operational and geological challenges seen in 2H23 have been resolved and are not expected to be an issue moving forward.

Royalty Business – Total royalty revenues saw a decline of 1.9% y/y to \$53.0M. Volumes were up 13.1% y/y and down 5.4% y/y for BOE sold and coal royalty tons sold, respectively. O&G prices were down 19.7% y/y with coal royalty ASP up 24.3% y/y. For the full year 2023 ARLP completed \$110.9M in oil and gas mineral interest acquisitions, with \$24.8M in 4Q23.

Strategic Investments – In 4Q23 the Company announced an agreement with Infinitem to bring reliable motor technology to the mining industry. ARLP has been invested in Infinitem since the 2022 Series D funding that Infinitem raised. This motor technology is expected to be lighter, less resource intense, and consume 10% less energy thus providing mining companies with a more efficient and reliable alternative to heavy iron-core motors.

Strong liquidity and cash flow position – The Company ended 4Q23 with a liquidity position of \$492.1M, of which \$59.8M is in cash. This strong liquidity position gave ARLP the flexibility to make recent New Venture investments in 2H23. Management is expected to prioritize debt repurchases over the coming quarters with a repurchase of senior notes outstanding worth \$22.9M in the quarter and 85.0 in FY23. ARLP also generated \$4.6M of free cash flow in the quarter.

Valuation – We are using an EV/EBITDA framework to inform our ARLP valuation. Currently ARLP is trading at a FY24 EV/EBITDA of 2.9x compared to comps at an average of 4.8x. We are using our F24 expected EBITDA, and an EV/EBITDA range of 3.0x to 5.0x with a midpoint of 4.00x. This arrives at a valuation range of \$20.10 to \$35.20 with a mid-point of \$27.65.

INVESTMENT FACTORS

Alliance Resource Partners, L.P. is a diversified natural resource company operating as an MLP. The Company is the second largest coal producer in the Eastern U.S. and has an oil and gas minerals platform where it owns mineral and royalty interests. Its coal operations span seven underground mines located in the Illinois Basin and the Appalachia Basin where it produces a range of thermal and metallurgical coal with varying sulfur and heat contents. It markets its coal primarily to utilities and industrial users in the U.S. The Company's oil and gas minerals platform operates primarily in the Permian, Anadarko, and Williston Basins.

The Company is engaged in a transformation to be an energy company for today and the future. This reflects the fact that while green energy is a significant long-term trend, fossil fuels, such as coal, remain an important part of electricity generation today and in the near-term. By redeploying its strong cash flows and leveraging its decades of operational experience, Alliance is positioning itself to create long-term value for its unitholders.

Investment Positives

Diversified energy company with deep operational experience is undergoing a transformation

Alliance owns and operates coal mining assets along with a portfolio of oil and gas mineral interests located in strategic producing regions in the US. The Company has been in existence since the early 70's and its management team has nearly three decades of operational expertise in the natural resources industry. With a focus on maximizing shareholder value, the Company is looking to maximize current assets while also expanding its operations into green energy opportunities.

Proven track record bodes well for transformation

Alliance is going to leverage its existing operational capabilities and redeploy its solid cash flows into its next generation energy platforms. The Company first accomplished this "shift" in 2014, when it started engaging in its oil and gas minerals platform as a passive investor. As time progressed and management concluded it had the requisite expertise, it acquired these assets and became directly responsible for managing and expanding these assets. The Company intends to use this same playbook to create its new energy platform that is positioned in green energy.

Strong history of generating cash flow to support strategic objectives

Over the past 15 years, the Company has generated positive FCF in each year. FY23 FCF was \$421.6M, and \$551.9M in FY22. This favorable cash flow profile, coupled with the company's focus on maintaining a conservative balance sheet, should help drive its growth initiatives within its oil and natural gas royalty business, along with its diversification efforts into green energy. The Company intends to return 30% of its annual FCF before growth investments in the form of cash distributions and in FY23 raised its quarterly cash distribution for unitholders to \$0.70 per unit or an annualized \$2.80 per unit.

Green energy transformation starts with two new investments

In April 2022, Alliance announced its first two strategic investments for its new energy platform. Francis Energy is an owner operator of a network of EV fast charging infrastructure in Oklahoma with plans to expand across the Midwest and Eastern U.S. Infinitem Electric is a Texas-based developer and manufacturer of electric motors, which potentially offers a more efficient and environmentally friendly alternative to conventional electric motors. Following the two investments made in 1Q22, ARLP announced an additional \$25.0M commitment to a private equity fund, NGP Energy Capital. NGP's focuses on investments in green energy. Fitting nicely into its announced strategy, ARLP hopes to gain additional exposure to green energy investments, but more importantly, to leverage NGP's expertise to learn and find additional attractive areas for investment.

But coal remains an important fossil fuel

The demand for coal should continue as it remains an important component in electricity generation today and in the near term. According to the EIA, coal accounted for 19.5% of the U.S.' electricity generation in 2022. On a global scale, according to the World Coal Association, electricity production from coal represents ~37% of total electricity production with the IEA projecting coal should still generate ~ 22% of the world's electricity in 2040. Alliance should stand to benefit as it is the second largest coal producer in the Eastern U.S.

Investment Challenges / Risks

Changes in global economic conditions

Weakness in global economic conditions or economic conditions in customer's industries could adversely affect the company's operating results and financial condition.

Volatility in raw material prices

Coal and oil and gas prices are volatile and based on numerous demand/supply, economic and geopolitical reasons, which are beyond the Company's control. Additionally, the Company may face an unexpected rise in raw material costs and transportation charges or supply chain disruptions, adversely impacting its margins and profitability.

Loss of key customers

In 2022, the Company's most significant customers included Louisville Gas and Electric Company, Duke Energy, and Tennessee Valley Authority. Each of these companies accounted for more than 10% of revenue. Furthermore, the company undertakes indirect sales through exports to international clients in Europe, Africa, and Asia in brokered transactions. These sales constituted approximately 12.5%, 12.5% and 3.3% of tons sold on December 31, 2022, 2021 and 2020. If the Company loses any of its key customers, it will likely have an adverse impact on its operations and financial condition.

Access to capital

Alliance Resources business is capital intensive and has outlined a growth strategy that requires funding sources. While the Company intends to fund its operations and growth initiatives via existing cash balances, future cash flows, and its current debt facilities, there are periods of weakness in the energy sector. Weakness in the industry may negatively impact the Company's ability to meet financial covenants, refinance existing debt obligation, obtain additional financing, and/or financing on acceptable terms, which may negatively impact growth initiatives and the Company's financial condition.

Inability to carry out cash distribution

Cash distribution to unitholders is dependent on the cash generated from the Company's operations, an amount that fluctuates based on numerous factors such as coal and oil & gas production, demand and supply of coal, price of coal, operating costs, capital expenditure, debt obligations, and broader economic conditions among others.

MLP tax treatment

MLP's tax treatment depends on its status as a partnership for US Federal income taxes. As such, ARLP is not subject to a material amount of entity-level taxation. If the IRS were to change its tax position of MLPs and tax them as a corporation, operating results may be negatively impacted. Additionally, the market price of the equity may be negatively impacted by the change in tax laws.

VALUATION SUMMARY

We use a comparative analysis to frame valuation. We are using coal producers for our comps.

Comparative Analysis

Alliance Resource Partners, L.P. (NASDAQ: ARLP)
(all figures in \$M except per share information)

Name	Ticker	Price (1)	Sh	Mkt Cap	EV	Revenues (2)			EBITDA (2)			Earnings (2)			TBV/Sh MRQ
						TTM	2024 E	2025 E	TTM	2024 E	2025 E	TTM	2024 E	2025 E	
CONSOL Energy Inc.	CEIX	\$ 93.68	31.0	\$ 2,905.0	\$ 2,876.9	\$ 2,515	\$ 2,253	\$ 2,179	\$1,097.1	\$ 843.2	\$ 784.3	\$ 20.15	\$ 18.0	\$ 19.4	\$ 42.01
Alpha Metallurgical Resources, Inc.	AMR	\$ 395.54	13.3	\$ 5,254.2	\$ 4,968.6	\$ 3,335	\$ 2,986	\$ 2,712	\$1,016.3	\$ 676.8	\$ 624.5	\$ 49.93	\$ 31.6	\$ 18.2	\$ 112.64
Peabody Energy Corporation	BTU	\$ 26.63	131.1	\$ 3,491.2	\$ 2,911.8	\$ 5,338	\$ 4,573	\$ 3,987	\$1,754.4	\$1,087.8	\$ 738.4	\$ 7.67	\$ 4.1	\$ 1.5	\$ 26.16
Arch Resources, Inc.	ARCH	\$ 178.65	18.4	\$ 3,281.7	\$ 3,211.6	\$ 3,210	\$ 2,903	\$ 2,704	\$802.3	\$ 785.6	\$ 650.2	\$ 41.99	\$ 29.8	\$ 25.7	\$ 76.16
Warrior Met Coal, Inc.	HCC	\$ 65.17	52.0	\$ 3,390.1	\$ 2,870.8	\$ 1,658	\$ 1,621	\$ 1,469	\$670.7	\$ 667.1	\$ 540.6	\$ 8.64	\$ -	\$ 5.7	\$ 33.55
Natural Resource Partners L.P.	NRP	\$ 96.86	12.6	\$ 1,223.8	\$ 1,467.3	\$ 298	\$ -	\$ -	\$240.8	\$ -	\$ -	\$ 12.06	\$ -	\$ -	\$ 38.16
Alliance Resource Partners, L.P.	ARLP	\$ 20.71	127.1	\$ 2,634.2	\$ 2,808.2	\$ 2,567	\$ 2,619	\$ 2,656	\$940.4	\$ 949.6	\$ 959.8	\$ 4.95	\$ 4.19	\$ 4.23	\$ 14.43

Name	Ticker	Price (1)	Sh	Mkt Cap	EV	EV/S (2)			EV/EBITDA (2)			P/E (2)			P/TBV
						TTM	2024 E	2025 E	TTM	2024 E	2025 E	TTM	2024 E	2025 E	
CONSOL Energy Inc.	CEIX	\$ 93.68	31.0	\$ 2,905.0	\$ 2,876.9	1.1x	1.3x	1.3x	2.6x	3.4x	3.7x	4.6x	5.2x	4.8x	2.2x
Alpha Metallurgical Resources, Inc.	AMR	\$ 395.54	13.3	\$ 5,254.2	\$ 4,968.6	1.5x	1.7x	1.8x	4.9x	7.3x	6.0x	7.9x	12.5x	21.7x	3.5x
Peabody Energy Corporation	BTU	\$ 26.63	131.1	\$ 1,183.8	\$ 1,184.8	0.5x	0.6x	0.7x	1.7x	2.7x	3.9x	3.5x	6.5x	18.3x	1.0x
Arch Resources, Inc.	ARCH	\$ 178.65	18.4	\$ 3,649.3	\$ 3,571.3	1.0x	1.1x	1.2x	4.0x	4.1x	4.9x	4.3x	6.0x	7.0x	2.3x
Warrior Met Coal, Inc.	HCC	\$ 65.17	52.0	\$ 3,769.8	\$ 3,192.3	1.7x	1.8x	2.0x	4.3x	4.3x	5.3x	7.8x	7.5x	11.4x	1.9x
Natural Resource Partners L.P.	NRP	\$ 96.86	12.6	\$ 1,360.9	\$ 1,631.6	4.9x	nm	nm	6.1x	nm	nm	8.0x	nm	nm	2.5x
Average						1.8x	1.3x	1.4x	3.9x	4.4x	4.8x	6.0x	7.6x	12.6x	2.3x
Median						1.3x	1.3x	1.3x	4.1x	4.1x	4.9x	6.1x	6.5x	11.4x	2.3x
Alliance Resource Partners, L.P.	ARLP	\$ 20.71	127.1	\$ 2,634.2	\$ 2,808.2	1.1x	1.1x	1.1x	3.0x	3.0x	2.9x	4.2x	4.9x	4.9x	1.4x

(1) Previous day's closing price

(2) Estimates are from Capital IQ except those for ARLP, which are Stonegate estimates
Source: Company Reports; CapitalIQ; Stonegate Capital Markets

Based on our FY2025 estimates, ARLP is trading at a 2.9x EV/EBITDA multiple compared to average comps at 4.8x.

We are using an EV/EBITDA range of 3.0x to 5.0x with a midpoint of 4.0x. We believe this range is reasonable given current comp multiples, combined with historical forward valuation multiples.

Ratios & Historical Trading Multiples

Alliance Resource Partners, L.P. (NASDAQ: ARLP)

Name	Ticker	GPM			OPM			EBITDA Margin				
		2019	2020	2021	2019	2020	2021	2015	2016	2018	2019	2020 #
CONSOL Energy Inc.	CEIX	21.5	33.3	50.7	(6.7)	4.8	25.5	20.9	24.8	26.8	16.7	22.5
Alpha Metallurgical Resources, Inc.	AMR	9.5	25.7	44.3	(7.0)	16.5	38.9	14.4	16.1	13.3	5.4	23.2
Peabody Energy Corporation	BTU	12.4	23.1	33.9	(56.2)	11.0	25.6	9.2	23.8	18.3	7.1	20.2
Arch Resources, Inc.	ARCH	6.1	28.5	37.4	(17.2)	18.1	30.1	7.9	17.8	16.1	1.1	24.5
Warrior Met Coal, Inc.	HCC	15.8	44.9	57.6	(3.5)	25.0	47.4	(1.0)	44.1	38.2	12.0	38.7
Warrior Met Coal, Inc.	HCC	80.8	86.1	89.4	(42.8)	64.7	74.5	75.0	78.6	76.5	69.7	77.1
Natural Resource Partners L.P.	NRP	48.3	65.5	73.5	(23.1)	44.9	61.0	37.5	61.3	57.3	40.8	57.9
		35.1	41.8	39.7	13.4	26.9	26.2	33.5	30.6	28.8	30.1	38.3

Name	Ticker	D/C (%)	D/E (%)	Debt / EBITDA	EBITDA Margin Yr Avg (%)	5YR Frwd AVG Multiples			7YR Frwd AVG Multiples			10YR Frwd AVG Multiples		
						EV/S	EV/EBITDA	P/E	EV/S	EV/EBITDA	P/E	EV/S	EV/EBITDA	P/E
CONSOL Energy Inc.	CEIX	14.4	16.9	0.2x	25.5	1.1x	3.8x	7.8x	1.1x	3.8x	7.8x	1.1x	3.8x	7.8x
Alpha Metallurgical Resources, Inc.	AMR	0.7	0.7	0.0x	18.7	0.5x	2.7x	5.1x	0.5x	2.7x	5.8x	0.5x	2.7x	5.8x
Peabody Energy Corporation	BTU	9.2	10.1	0.2x	19.0	0.6x	3.2x	10.1x	0.7x	3.6x	9.7x	0.7x	3.6x	9.7x
Arch Resources, Inc.	ARCH	9.3	10.3	0.2x	17.1	0.6x	3.3x	6.2x	0.8x	4.1x	7.7x	0.8x	4.1x	7.7x
Warrior Met Coal, Inc.	HCC	9.2	10.1	0.3x	33.0	1.2x	3.9x	7.4x	1.2x	3.8x	7.2x	1.2x	3.8x	7.2x
Natural Resource Partners L.P.	NRP	27.4	37.7	0.9x	76.8	3.8x	5.6x	6.3x	3.9x	6.1x	5.6x	5.0x	7.1x	7.4x
Average		8.4	9.5	0.1x	20.1	0.7x	3.2x	7.3x	0.8x	3.5x	7.8x	0.8x	3.5x	7.8x
Median		9.3	10.2	0.2x	18.9	0.6x	3.3x	7.0x	0.7x	3.7x	7.8x	0.7x	3.7x	7.8x
Alliance Resource Partners, L.P.	ARLP	27.1	37.1	0.4x	32.5	1.2x	3.7x	8.7x	1.2x	3.7x	8.9x	1.2x	3.9x	9.1x

Source: Capital IQ

Applying our FY24 expected EBITDA to the EV/EBITDA range of 3.0x to 5.0x with a midpoint of 4.00x, we arrive at a valuation range of \$20.10 to \$35.20 with a mid-point of \$27.65.

We see the following essential catalysts for the stock in F2023 and beyond:

- Higher and steady coal prices F24+
- Strong profitability and free cash flows F24+
- New green-energy investments announced F24+
- Increased global demand.....F24+

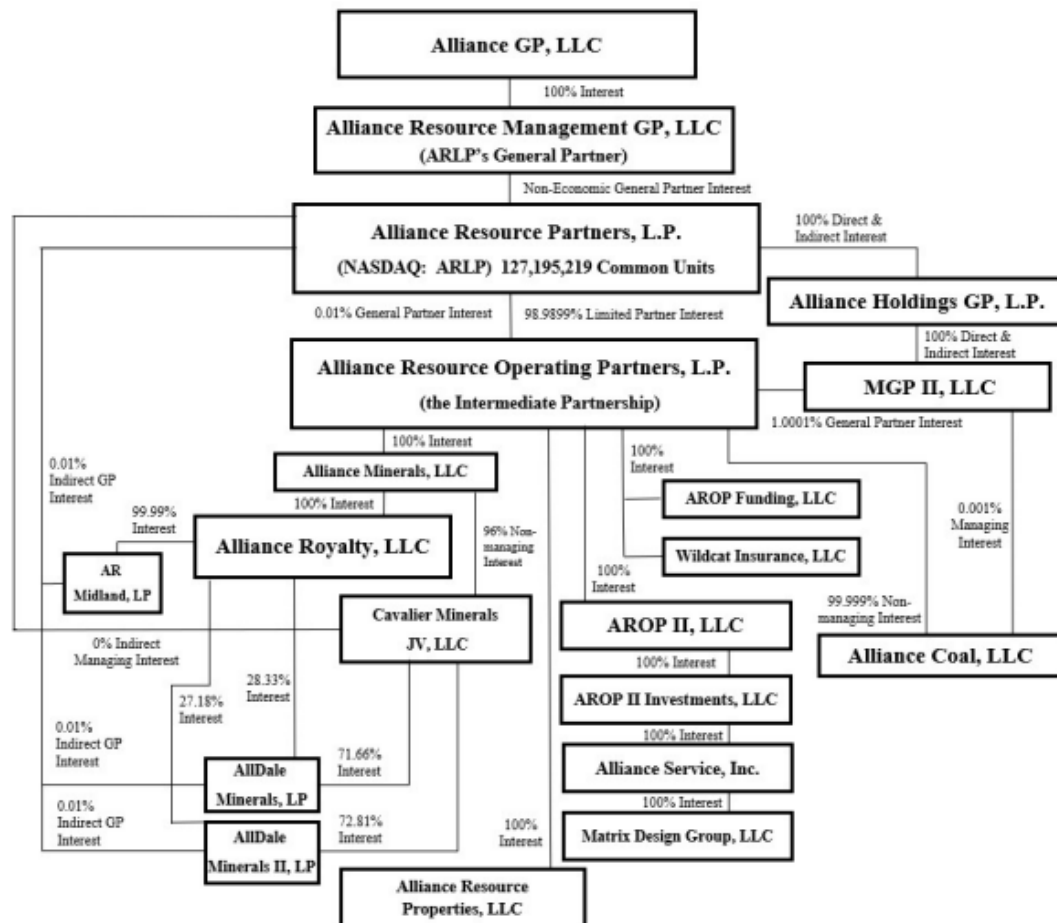
COMPANY OVERVIEW

Company Background

Alliance Resource Partners, L.P. is a diversified natural resource company that began operations in 1971 and is a publicly traded MLP on the NASDAQ under the ticker symbol ARLP. The Company is the second largest coal producer in the Eastern U.S. and owns an oil and gas minerals platform where it owns mineral and royalty interests in approximately 1.5 million gross acres. Its coal operations include seven underground mines that are in the Illinois Basin and the Appalachia Basin where it produces a range of thermal and metallurgical coal with varying sulfur and heat contents. It markets its coal primarily to utilities and industrial users in the U.S.

The Company’s oil and gas minerals platform has invested over \$500 million and over 61,000 net royalty acres. These operations are primarily in the Permian, Anadarko, and Williston Basins. ARLP markets its mineral interests for lease to operators in those regions and generates royalty income from the leasing and development of those mineral interests.

Exhibit 1: Alliance Resource Partners, L.P. Organization and Ownership Structure



Source: Company Reports

The Company is engaged in a transformation to be an energy company for today and the future. This reflects the fact that while green energy is a significant long-term trend, fossil fuels, such as coal, remain an important part of electricity generation today and in the near-term.

Strategy and Growth Objectives

ARLP generates strong cash flows through its operations, which will help drive its growth initiatives within its oil and natural gas royalty business, along with its diversification efforts into green energy.

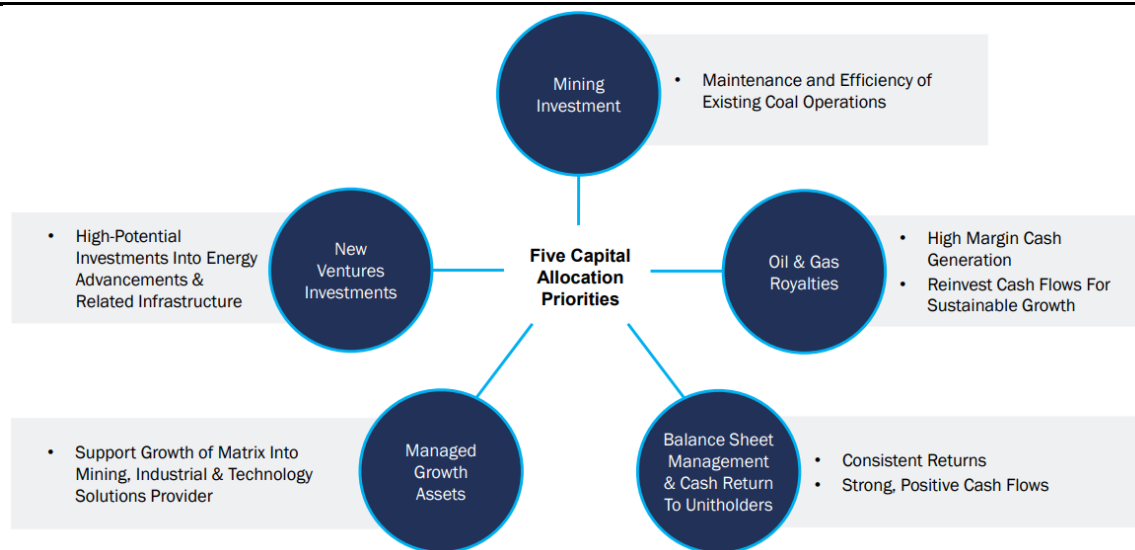
Exhibit 2: Building an Energy Company for Today and The Future



Source: Company Reports

ARLP is going to leverage its existing operational capabilities and redeploy its solid cash flows into its next generation energy platforms. The Company first accomplished this “shift” in 2014, when it started engaging in its oil and gas minerals platform as a passive investor. As time progressed and management concluded it had the requisite expertise, it acquired these assets and became directly responsible for managing and expanding these assets. The Company intends to use this same playbook to create its new energy platform that is positioned in green energy.

Exhibit 3: Capital Allocation at a Glance



Source: Company Reports

ARLP is actively evaluating actionable strategic investments across a range of new energy sectors. Green energy opportunities involve exploring strategic minerals and metals, alternate energy sources like wind, solar, and battery and charging infrastructure for electric vehicles to name a few. The Company’s strategy will seek to identify and execute opportunistic investments where the Partnership’s expertise is most relevant given its (1) extensive track record of investments success and financial discipline, (2) decades of operational experience scaling capital-intensive energy businesses, (3) understanding of and relationships across the energy value chain, and (4) experience with energy and environmental governing bodies and regulators. Exhibit 4 illustrates some of the new energy themes ARLP is evaluating.

Exhibit 4: Examples of the New Energy Platform Investment Opportunities



Source: Company Reports

Importantly, in April 2022, ARLP announced its first two strategic investments for the New Energy Platform via its investments in Francis Energy and Infinium Electric. Francis Energy is an owner operator of a network of EV fast charging infrastructure in Oklahoma. Francis Energy has plans to service states across the Midwest and the Eastern part of the U.S. Infinium Electric is a start-up developer and manufacturer of electric motors featuring printed circuit boards stators. The product has the potential to result in motors that are smaller, lighter, quieter, more efficient, and capable of operating at a fraction of the carbon footprint of conventional electric motors. Following these two investments, ARLP announced an additional \$25.0M commitment to a private equity fund, NGP Energy Capital. NGP’s focuses on investments in green energy. Fitting nicely into its announced strategy, ARLP hopes to gain additional exposure to green energy investments, but more importantly, to leverage NGP’s expertise to learn and find additional attractive areas for investment.

Most recently, in 3Q23, ARLP announced that it has partaken in the Infinium Electric Series E funding round, further backing its commitment to the company noting the significant potential for Infinium technology to be synergistic with Alliance’s operations. In addition to this investment, the Company also made an initial investment in Ascend Elements worth \$25.0M. Ascend is a US based manufacturer and recycler located in Hopkinsville, KY that is constructing North Americas first commercial scale manufacturing facility for the production of EV battery cathode materials.

Business Overview

The Company operates in four business segments: Illinois Basin Coal Operations, Appalachia Coal Operation, Oil and Gas Royalties, and Coal Royalties.

Coal Mines and Facilities

ARLP is the second-largest coal producer in the eastern U.S and produces a wide variety of coal that cater to the specific needs of a diverse set of customers. ARLP's coal properties are in the Illinois Basin and the Appalachia Basin. Mining operations on these properties consist of underground mines that produce bituminous coal intended primarily for use in electric power generation (thermal) and steel production (metallurgical). In addition, to mining, the Company also holds and leases/subleases coal mineral interests. In 2022, the Company had substantial coal reserves as seen in Exhibit 5 and Exhibit 6.

Exhibit 5: ARLP Coal Operations - Mineral Resources as of December 31, 2022

Resources (tons in millions)	Heat Content (Btus per pound)	Pounds SO ₂ per MMBtu			Resource Classification			Ownership		Total	
		<1.2	1.2-2.5	>2.5	Measured	Indicated	Combined	Inferred	Owned		Leased
(1)											
Illinois Basin											
Dotiki (KY)	12,100	—	2.3	73.7	51.2	24.8	76.0	—	27.6	48.4	76.0
Henderson/Union (KY)	11,450	—	3.2	517.6	175.4	284.0	459.4	61.4	74.9	445.9	520.8
Sebree South (KY)	11,750	—	—	43.5	22.1	16.8	38.9	4.6	0.3	43.2	43.5
Gibson South (IN)	11,500	—	—	0.3	—	—	—	0.3	—	0.3	0.3
Hamilton County (IL)	11,650	5.1	33.8	400.4	188.1	240.0	428.1	11.2	32.5	406.8	439.3
Region Total		5.1	39.3	1,035.5	436.8	565.6	1,002.4	77.5	135.3	944.6	1,079.9
Appalachian Basin											
Mountain View (WV)	13,200	—	0.4	6.3	2.1	4.4	6.5	0.2	1.8	4.9	6.7
Tunnel Ridge (WV)	12,600	—	—	0.7	—	—	—	0.7	0.7	—	0.7
Penn Ridge (PA)	12,500	—	—	78.0	21.9	53.2	75.1	2.9	78.0	—	78.0
Region Total		—	0.4	85.0	24.0	57.6	81.6	3.8	80.5	4.9	85.4
Total		5.1	39.7	1,120.5	460.8	623.2	1,084.0	81.3	215.8	949.5	1,165.3
% of Total		0.4%	3.4%	96.2%	39.5%	53.5%	93.0%	7.0%	18.5%	81.5%	100.0%

(1) Combined resources are defined as measured plus indicated resources.

Source: Company Reports

Exhibit 6: ARLP Coal Operation - Mineral Reserves as of December 31, 2022

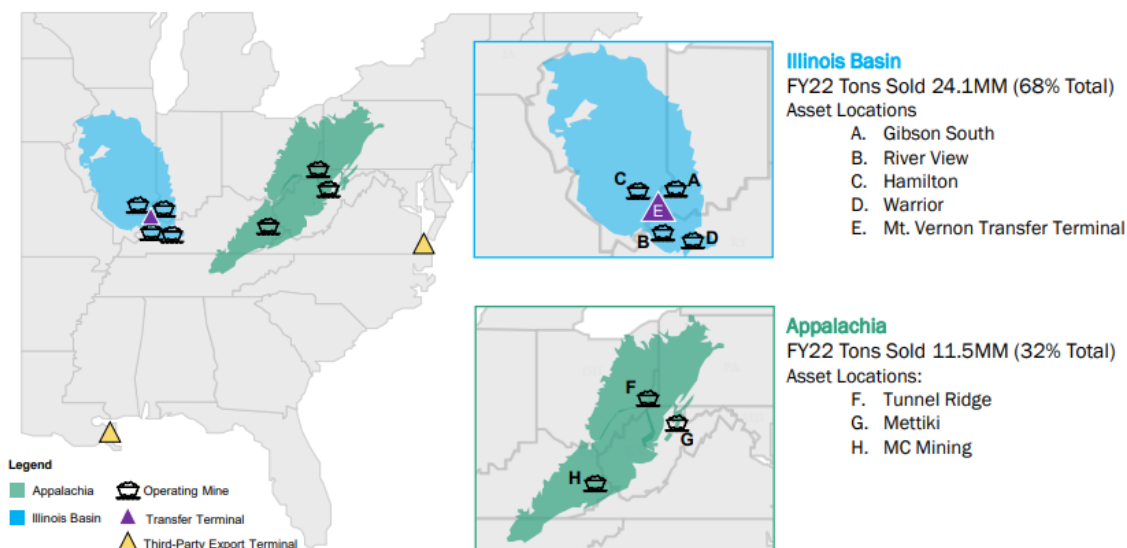
Reserves (tons in millions)	Heat Content (Btus per pound)	Pounds SO ₂ per MMBtu			Classification		Ownership		Total
		<1.2	1.2-2.5	>2.5	Proven	Probable	Owned	Leased	
Illinois Basin Operations									
Warrior (KY)	12,300	—	—	59.7	46.0	13.7	14.4	45.3	59.7
River View (KY)	11,450	—	—	204.7	112.6	92.1	60.2	144.5	204.7
Hamilton County (IL)	11,650	—	—	125.9	55.0	70.9	21.5	104.4	125.9
Gibson (South) (IN)	11,500	0.7	10.9	37.4	39.6	9.4	17.0	32.0	49.0
Region Total		0.7	10.9	427.7	253.2	186.1	113.1	326.2	439.3
Appalachian Basin Operations									
MC Mining (KY)	12,800	10.0	1.1	—	8.1	3.0	—	11.1	11.1
Mountain View (WV)	13,200	—	3.8	6.5	9.1	1.2	—	10.3	10.3
Tunnel Ridge (WV)	12,600	—	—	120.0	61.7	58.3	11.1	108.9	120.0
Region Total		10.0	4.9	126.5	78.9	62.5	11.1	130.3	141.4
Total		10.7	15.8	554.2	332.1	248.6	124.2	456.5	580.7
% of Total		1.8%	2.7%	95.4%	57.2%	42.8%	21.4%	78.6%	100.0%

Source: Company Reports

Total coal sold in 2022 consisted of 4.4% low-sulfur coal, 60.4% medium-sulfur coal, and 35.2% high-sulfur coal. In 2022, nearly 82.4% (2021: 81.6%) of tons sold were to United States electric utilities, while international buyers purchased 12.5% (2021: 12.5%) through brokered transactions.

The Company produces a wide range of thermal and metallurgical coal that has varied sulfur and heat contents to cater to the specifications laid down by customers. In 2022, approximately 82.4% of the tons sold were to domestic electric utilities, while 12.5% were purchased by international markets through brokered transactions. The rest went to third-party resellers and industrial consumers.

Exhibit 7: Location of Coal Mining Operations



Source: Company Reports

Illinois Basin

The Illinois basin properties are in western Kentucky, southern Illinois, and southern Indiana. The basin has four active mining complexes.

Gibson Complex is in Gibson County, Indiana. It is an underground mine and uses continuous mining units that use groom-and-pillar mining techniques to generate low/medium-sulfur coal. The preparation plant has a capacity of 1,800 tons of raw coal per hour, and the production is shipped directly to customers or the Mt. Vernon Transfer Terminal trans-loading facility for barge delivery.

Hamilton Complex is in Hamilton County, Illinois. The mine is an underground long wall mine that produces medium/high-sulfur coal. The preparation plant has a throughput capacity of 2,000 tons of raw coal per hour. The Company acquired complete control and ownership of the mine in 2015. production is shipped directly to customers or the Mt. Vernon Transfer Terminal trans-loading facility for barge delivery.

River View Complex is in Union County, Kentucky. The mine is the largest room-and-pillar coal mine in the U.S. The mine began production in 2009 and uses continuous mining units to produce medium/high-sulfur coal. The preparation plant has a throughput capacity of 2,700 tons of raw coal per hour. Coal is transported by overland belt to a barge loading facility on the Ohio River.

Warrior Complex operates an underground mining complex located near Madisonville in Hopkins County, Kentucky. The complex opened in 1985 and was acquired by ARLP in February 2023. The mine uses continuous mining units employing a room-and-pillar mining technique to produce medium/high sulfur coal. The preparation plant has a throughput capacity of 1,200 tons of raw coal per hour. production is shipped directly to customers or the Mt. Vernon Transfer Terminal trans-loading facility for barge delivery.

Mt. Vernon Transfer Terminal is a coal-loading terminal on the Ohio River at Mt. Vernon, Indiana, operated by the Company's subsidiary Mt. Vernon which leases land and operates the facility. The coal is delivered to the location by both rail and truck. It has a capacity of 8.0 million tons per year, with a storage capacity of nearly 200,000 tons. In 2021, the terminal loaded approximately 1.4 million tons for Gibson County Coal and Hamilton customers.

Appalachian Basin

The Appalachian properties are in northern west Virginia, Maryland, western Pennsylvania and eastern Kentucky. The Company operates three mining complexes in the region.

Tunnel Ridge Complex is an underground longwall mine located in West Virginia. Operations at the mine began in May 2012. The preparation plant has a capacity of 2,000 tons of raw coal per hour. The coal produced is a medium/high-sulfur coal that is transported directly through a conveyor belt to a barge loading facility on the Ohio River.

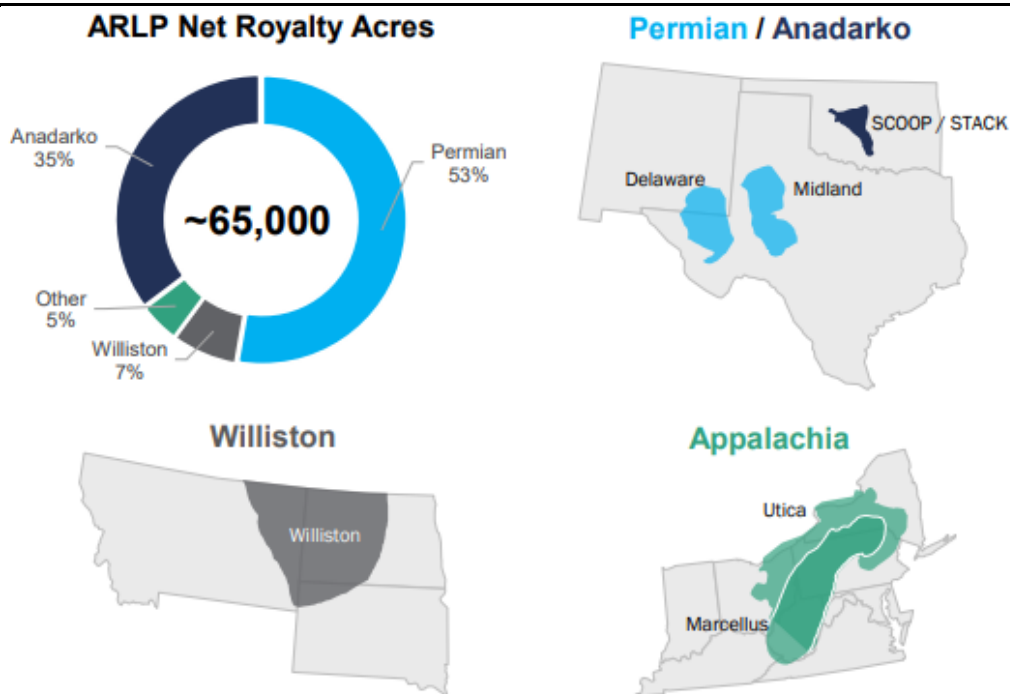
Mettiki Complex consists of two properties: the Mountain View mine located in Tucker County, West Virginia, and a preparation plant located in Garrett County, Maryland. The Mountain View mine produces medium-sulfur coal and is shipped to the Mettiki (MD) preparation plant for processing for the metallurgical coal market or to the coal blending facility at the Virginia Electric and Power Company Mt. Storm Power Station. The preparation plant has a throughput capacity of 1,350 tons of raw coal per hour.

MC Mining Complex, located in Pike County, Kentucky, was acquired by ARLP in 1989. The development of mine five was completed in July 2020. The mine uses continuous mining units using room-and-pillar mining techniques to produce low-sulfur coal and has a throughput capacity of 1,000 tons of raw coal per hour. The coal produced at MC Mining in 2021 met or exceeded the compliance requirements of Phase II of the Federal Clean Air Act.

Oil and Gas Mineral Interests

ARLP’s oil & gas mineral interests are primarily located on private islands in three basins, including Permian (Delaware and Midland), Anadarko (SCOOP/STACK), and Williston (Bakken) Basins.

Exhibit 8: ARLP’s Oil & Gas Mineral Interests



Source: Company Reports

The Company’s developed and undeveloped net acres are standardized to a 1/8th royalty, equate to nearly 61,400 oil & gas net royalty acres, which also includes 3,968 oil & gas net royalty acres owned through equity interest in AllDale III.

Exhibit 9: ARLP Net Proved Oil & Gas Reserves

	As of December 31, 2022			
	Crude Oil (MBbl)	Natural Gas (MMcf)	Natural Gas Liquids (MBbl)	Total (MBOE) (2)
Estimated proved developed reserves	6,976	37,882	4,388	17,678
Estimated proved undeveloped reserves	1,362	5,155	697	2,918
Total estimated proved reserves (1)	8,338	43,037	5,085	20,596

(1) Proved reserves of approximately 1,736 MBOE were attributable to noncontrolling interests as of December 31, 2022.

(2) Natural gas reserve volumes are converted to BOE based on a 6:1 ratio: 6 Mcf of natural gas converts to one BOE.

Source: Company Reports

Furthermore, when the Company leases its interests, it receives a lease bonus (upfront cash payment) and a mineral royalty that entitles it to receive a fixed percentage of the revenue or production from the oil & gas produced from the acreage underlying its interests, free of lease operating expenses and capital costs. The Company is actively investing in oil & gas mineral interests in premier oil-rich basins. The primary Oil and Gas interests of the Company are:

Permian Basin—Delaware and Midland Basins ranges from West Texas into southeastern New Mexico and is the most active area for horizontal drilling in the U.S. The basin is further divided into the Delaware Basin in the west and the Midland Basin in the east. The Company has multiple producing zones of horizontal economic development including Wolfcamp, Spraberry, and Bone Spring formations. ARLP recently purchased acreage in the Permian Basin through Boulders Acquisition, reiterating its commitment to acquiring strategic properties in the highest growth oil & gas plays.

Anadarko Basin—SCOOP and STACK Plays – The South-Central Oklahoma Oil Province is located in central Oklahoma in Grady, Garvin, Stephens, and McClain Counties that contains multiple producing zones of horizontal economic development including numerous Woodford benches and the Springer Shale. Other formations in the area attract operator interest, including the Sycamore, Caney, and Osage, also known as SCORE (Sycamore Caney Osage Resource Expansion). On the other hand, the STACK play (Sooner Trend, Anadarko Basin, Canadian, and Kingfisher Counties) is located in central Oklahoma in Kingfisher, Canadian, Caddo, and Blaine Counties that include multiple producing zones of horizontal economic development including but not limited to the Meramec and Woodford formations.

Williston Basin—Bakken extends from western North Dakota into eastern Montana and includes multiple producing zones of horizontal economic development including the Bakken and Three Forks formations.

Exhibit 10: ARLP Oil & Gas Mineral Interests – Acreage Concentration

Basin	Developed Acreage			Undeveloped Acreage		
	Gross	Net Mineral	Net Royalty	Gross	Net Mineral	Net Royalty
Permian Basin	296,336	8,208	10,724	538,434	14,913	20,053
Anadarko Basin	150,007	5,494	7,849	287,130	10,517	15,007
Williston Basin	130,054	2,083	2,724	96,962	1,553	2,044
Other	25,200	918	1,152	40,337	1,470	1,823
Total	601,597	16,703	22,449	962,863	28,453	38,927

Source: Company Reports

Other interests include mineral interests owned in the Appalachia Basin comprising Ohio, West Virginia, and Pennsylvania. In the Appalachia Basin, the most prominent plays include the Marcellus Shale, and Utica plays, covering most of Pennsylvania, northern West Virginia, and eastern Ohio. The Company also holds interests in the Tuscaloosa Marine Shale play in Mississippi and Haynesville Shale formation located in northwest Louisiana.

Coal Royalties

ARLP leases its reserves and resources to its mining complexes under long-term leases. Nearly two-thirds of the royalty-based leases have initial terms of five to 40 years, with the option to extend the lease for additional terms. ARLP grants lessees the right to mine and sell in exchange for royalty payments based on a percentage of the sale price or a fixed royalty per ton of coal mined and sold. The lessee is also responsible for providing information about the tons of coal mined and sold, the sales price of extracted coal, and calculating royalty payments.

End Markets & Customer Base

The Company has an established customer base that it acquired through existing business relationships or participation in a bidding process. The Company enters into long-term supply agreements with many of its customers, which allow the Company to predict its sales volume and prices. In 2022, approximately 85% and 65.6% of ARLP's sales tonnage and total coal sales, respectively were sold under long-term agreements with committed term expirations ranging from 2022 to 2029.

In 2022, the Company's most significant customers included Louisville Gas and Electric Company, Duke Energy, and Tennessee Valley Authority. Each of these companies accounted for more than 10% of revenue. Furthermore, ARLP sells indirectly (through brokered transactions) to the international market, including end-users in Europe, Africa, Asia, North America, and South America. During the years December 31, 2022, 2021, and 2020, export tons represented approximately 12.5%, 12.5%, and 3.3% of tons sold, respectively.

In 2014, the Company began investing in oil & gas mineral interests in some of the most important oil-rich basins. However, in 2019 ARLP turned into an active and material participant from a passive investor in oil and gas minerals. The Company is adding acreage to its existing interests and aims to become a significant participant in the nation's highest growth oil & gas plays.

IMPORTANT DISCLOSURES AND DISCLAIMER

- (a) The research analyst and/or a member of the analyst's household do not have a financial interest in the debt or equity securities of the subject company.
- (b) The research analyst responsible for the preparation of this report has not received compensation that is based upon Stonegate's investment banking revenues.
- (c) Stonegate or any affiliate have not managed or co-managed a public offering of securities for the subject company in the last twelve months, received investment banking compensation from the subject company in the last 12 months, nor expects or receive or intends or seek compensation for investment banking services from the subject company in the next three months.
- (d) Stonegate's equity affiliate, Stonegate Capital Partners, "SCP" has a contractual agreement with the subject company to provide research services, investor relations support, and investor outreach. SCP receives a monthly retainer for these non-investment banking services.
- (e) Stonegate or its affiliates do not beneficially own 1% or more of any class of common equity securities of the subject company.
- (f) Stonegate does not make a market in the subject company.
- (g) The research analyst has not received any compensation from the subject company in the previous 12 months.
- (h) Stonegate, the research analyst, or associated person of Stonegate with the ability to influence the content of the research report knows or has reason to know of any material conflicts of interest at the time of publication or distribution of the research report.
- (i) No employee of Stonegate has a position as an officer or director of the subject company.

Ratings - Stonegate does not provide ratings for the covered companies.

Distribution of Ratings - Stonegate does not provide ratings for covered companies.

Price Chart - Stonegate does not have, nor has previously had, a rating for its covered companies.

Price Targets - Stonegate does not provide price targets for its covered companies. However, Stonegate does provide valuation analysis.

Regulation Analyst Certification:

I, Dave Storms, CFA, hereby certify that all views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this report.

For Additional Information Contact:

Stonegate Capital Markets, Inc.
Dave Storms, CFA
Dave@stonegateinc.com
214-987-4121

Please note that this report was originally prepared and issued by Stonegate for distribution to their market professional and institutional investor customers. Recipients who are not market professional or institutional investor customers of Stonegate should seek the advice of their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents. The information contained herein is based on sources which we believe to be reliable but is not necessarily complete and its accuracy cannot be guaranteed. Because the objectives of individual clients may vary, this report is not to be construed as an offer or the solicitation of an offer to sell or buy the securities herein mentioned. This report is the independent work of Stonegate Capital Markets and is not to be construed as having been issued by, or in any way endorsed or guaranteed by, any issuing companies of the securities mentioned herein. The firm and/or its employees and/or its individual shareholders and/or members of their families and/or its managed funds may have positions or warrants in the securities mentioned and, before or after your receipt of this report, may make or recommend purchases and/or sales for their own accounts or for the accounts of other customers of the firm from time to time in the open market or otherwise. While we endeavor to update the information contained herein on a reasonable basis, there may be regulatory, compliance, or other reasons that prevent us from doing so. The opinions or information expressed are believed to be accurate as of the date of this report; no subsequent publication or distribution of this report shall mean or imply that any such opinions or information remains current at any time after the date of this report. All opinions are subject to change without notice, and we do not undertake to advise you of any such changes. Reproduction or redistribution of this report without the expressed written consent of Stonegate Capital Markets is prohibited. Additional information on any securities mentioned is available on request.