

ADES

Disclaimer

This presentation includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, which provides a "safe harbor" for such statements in certain circumstances. When used in this presentation, the words "can," "will," "intends," "expects," "believes," similar expressions and any other statements that are not historical facts are intended to identify those assertions as forward-looking statements. All statements that address activities, events or developments that Advanced Emissions Solutions, Inc. ("ADES" or the "Company") intend, expect or believe may occur in the future are forward-looking statements. These forward-looking statements may relate to such matters as business strategy, goals and expectations concerning the combination of ADES and Arg (the "Transaction") (including future operations, future performance or results). The forward-looking statements may further include expectations about future demand for our APT products, pressure on APT margins and acceptance of price increases, our ability to secure customers and develop sales channels for GAC and other products, among other matters. These forward-looking statements involve risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to: the effect of the announcement of the Arg acquisition on the Company's ability to hire key personnel, its ability to maintain relationships with customers, suppliers and others with whom it does business, or its results of operations and business generally; risks related to diverting management's attention from the Company's ongoing business operations; the ability to meet Nasdag's listing standards following the consummation of the Transaction; costs related to the Transaction; opportunities for additional sales of our lignite activated carbon products and end-market diversification; the Company's ability to meet customer supply requirements; The ability to successfully integrate Ara's business, the ability to develop and utilize Ara's products and technology and the expected demand for those products, the rate of coal-fired power generation in the United States: timing of new and pending regulations and any legal challenges to or extensions of compliance dates of them, the U.S. government's failure to promulgate regulations that benefit our business: changes in laws and regulations; Internal Revenue Service interpretations or guidance, accounting rules, any pending court decisions, prices, economic conditions and market demand; impact of competition; availability, cost of and demand for alternative energy sources and other technologies; technical, start up and operational difficulties; competition within the industries in which the Company operates; loss of key personnel; ongoing effects of the COVID-19 pandemic and associated economic downturn on operations and prospects; as well as other factors relating to our business, as described in the Company's filings with the U.S. Securities and Exchange Commission (the "SEC"), with particular emphasis on the risk factor disclosures contained in those filings. You are cautioned not to place undue reliance on the forward-looking statements and to consult filings ADES has made and will make with the SEC for additional discussion concerning risks and uncertainties that may apply to the business and the ownership of ADES securities. The forward-looking statements speak only as to the date of this presentation, and the Company does not undertake any obligation to update its forward-looking statements to reflect events or circumstances that may arise after the date of this presentation.

Non-GAAP Financial Measures

Included in this presentation are certain financial measures that are not calculated in accordance with U.S. generally accepted accounting principles ("GAAP") designed to supplement, and not substitute, the Company's financial information presented in accordance with GAAP. The non-GAAP measures as defined by the Company may not be comparable to similar non-GAAP measures presented by other companies. The presentation of such measures, which may include adjustments to exclude unusual or non-recurring items, should not be construed as an inference that the Company's future results or leverage will be unaffected by other unusual or non-recurring items. Please see the Company's filings with the SEC for how we define these non-GAAP measures, a discussion of why we believe they are useful to investors, and certain limitations and reconciliations thereof to the most directly comparable GAAP measures.









First Quarter Highlights

Corporate Highlights

- Completed the acquisition of Arq Limited's subsidiaries on February 1st
- Successful pricing initiatives on commercial contracts
- Completed the sale of Marshall Mine LLC which resulted in a gain of \$2.7M
- Three additional board members added with acquisition as well as a new audit committee chair

Capital Plan & Cost Update

- ➢ Initial growth capex projects related to both Corbin and Red River totaling between \$45.0M and \$50.0M for the commercial production of GAC products have been initiated and are ontrack with expected completion by end of 2024
- Growth Capex spend in 2023 is expected to be between \$27.0M and \$30.0M
- Actions underway to achieve the planned go forward cost structure of the combined company

Business Plan Initiatives

- Commenced initial phase of the business plan, setting stage to realize the future growth potential of the combined company
- Engaging lead customers in the GAC market to secure sales channels
- Participating in technical speaking engagements to strengthen remediation market base and awareness
- ➤ Continuing to develop opportunities for emerging markets for Arq PowderTM



Financial Highlights



- Revenue and Cost of Revenue decrease is driven by reduced demand for our products within the power generation market, caused by lower natural gas pricing
- Other operating expense increased with the addition of Arq in the current period and related transaction and integration costs, offset by the gain on the sale of Marshall Mine
- > Transaction and integration costs for the first quarter of 2023 and 2022 are \$4.4M and \$0.8M, respectively, and are included in Net Income (Loss) and Adjusted EBITDA
- > Strong cash position provides the ability to invest organically in our manufacturing capabilities and execute initial phase of growth capital plans

ADES at a Glance



Top 3 Activated Carbon Supplier

17% share of the North American market

100+ Customers >90% Retention

>50% new business win rate

4 Existing Facilities

Vertically integrated feedstock, manufacturing and distribution facilities

~175 Patents and Applications

Protecting products, methods and processes

Providing Innovative Environmental Solutions for a Cleaner Future

Regulatory Impact

Expanded opportunities due to potential changes in environmental regulations

Growth Capital Expansion

\$45.0M to \$50.0M of capital to allow for initial commercial GAC production

Expanded & Diversified Markets

Ability to double AC addressable market and access new markets

Material Environmental Benefits

Waste feedstock and electricity generation reduces lifecycle environmental footprint



2023 Priorities and Milestones

Maintain high renewal rates with existing PAC customers

Continue to align contracts with market conditions to increase ASP



Ensure successful integration of Arg team and assets

Red River and Corbin capital improvements to enable commercial scale GAC production

Focus on adjacent markets on securing lead customers for GAC and other emerging products



Appendix





Appendix A: 10-Q Balance Sheet⁽¹⁾

				As of		
(in thousands, except share data)		March 31, 2023		December 31, 2022		
ASSETS						
Current assets:						
Cash	\$	68,026	\$	66,432		
Receivables, net		10,061		13,864		
Inventories, net		20,232		17,828		
Prepaid expenses and other current assets		6,405		7,538		
Total current assets		104,724		105,662		
Restricted cash, long-term		11,064		10,000		
Property, plant and equipment, net of accumulated depreciation of \$13,477 and \$11,897, respectively		76,378		34.855		
Other long-term assets, net		41,785		30,647		
Total Assets	\$	233,951	S	181,164		
LIABILITIES AND STOCKHOLDERS EQUITY		200,001		101,101		
Current liabilities:						
Accounts payable and accrued expenses	\$	12,245	\$	16,108		
Current portion of debt obligations		1,611		1,131		
Other current liabilities		6,188		6,645		
Total current liabilities		20,044		23,884		
Long-term debt obligations, net of current portion		20,119		3,450		
Other long-term liabilities		13,647		13,851		
Total Liabilities		53,810		41,185		
Commitments and contingencies (Note 8)						
Redeemable preferred stock - Series A Convertible Preferred subject to redemption: par value \$0.001 per share, 8,900,000 shares authorized,		18,927		_		
5,362,926 shares issued and outstanding		10,521				
Stockholders' equity:						
Preferred stock: par value \$0.001 per share, 50,000,000 shares authorized, -0-shares issued and outstanding		_		_		
Common stock: par value of \$.001 per share, 100,000,000 shares authorized, 31,854,636 and 23,788,319 shares issued, and 27,236,490		32		24		
and 19,170,173 shares outstanding at March 31, 2023 and December 31, 2022, respectively						
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of March 31, 2023 and December 31, 2022, respectively		(47,692)		(47,692)		
Additional paid-in capital		132,590 76,284		103,698 83.949		
Retained earnings		161,284				
Total Stockholders' Equity Total Lightities and Stockholders' Equity	•	233.951	•	139,979 181,164		
Total Liabilities and Stockholders' Equity	φ	233,951	Ų	101,104		



Appendix B: 10-Q Income Statement⁽¹⁾

	Т	Three Months Ended March 31,			
(in thousands, except per share data)		2023	2022		
Revenues:					
Consumables	\$	20,805 \$	26,402		
Total revenues		20,805	26,402		
Operating expenses:					
Consumables cost of revenue, exclusive of depreciation and amortization		17,175	21,507		
Payroll and benefits		4,699	2,626		
Legal and professional fees		4,538	2,172		
General and administrative		2,778	1,926		
Depreciation, amortization, depletion and accretion		2,137	1,506		
Gain on sale of Marshall Mine, LLC		(2,695)	_		
Total operating expenses		28,632	29,737		
Operating loss		(7,827)	(3,335)		
Other income (expense):					
Earnings from equity method investments		638	833		
Interest expense		(534)	(86)		
Other		182	(445)		
Total other income		286	302		
Loss before income taxes		(7,541)	(3,033)		
Income tax benefit		33			
Net loss	\$	(7,508) \$	(3,033)		
Loss per common share (Note 1):					
Basic	\$	(0.32) \$	(0.17)		
Diluted	\$	(0.32) \$	(0.17)		
Weighted-average number of common shares outstanding:					
Basic		23,770	18,344		
Diluted		23,770	18,344		



Appendix C: 10-Q Cash Flow⁽¹⁾

		Three Months Ended March 31,			
(in thousands)		023	2022		
Cash flows from operating activities					
Net loss	\$	(7,508) \$	(3,033)		
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:					
Depreciation, amortization, depletion and accretion		2,137	1,506		
Gain on sale of Marshall Mine, LLC		(2,695)	_		
Operating lease expense		738	663		
Earnings from equity method investments		(638)	(833)		
Stock-based compensation expense		563	464		
Other non-cash items, net		11	550		
Changes in operating assets and liabilities:					
Receivables and related party receivables		3,867	2,095		
Prepaid expenses and other assets		3,360	(725)		
Inventories, net		(2,312)	(2,359)		
Other long-term assets, net		(479)	3,116		
Accounts payable and accrued expenses		(14,025)	(3,210)		
Other current liabilities		(210)	(1,231)		
Operating lease liabilities		(787)	2,680		
Other long-term liabilities		273	910		
Distributions from equity method investees, return on investment		_	1,501		
Net cash (used in) provided by operating activities	\$	(17,705) \$	2,094		



Three Months Ended March 31

Appendix C: 10-Q Cash Flow (continued)(1)

		i nree Months Ended March 31,			
housands)		2023		2022	
Cash flows from investing activities					
Acquisition of property, plant, equipment, and intangible assets, net	\$	(3,545)	\$	(1,359)	
Cash and restricted cash acquired in business acquisition		2,225		_	
Disposal of Marshall Mine, LLC		(2,177)		_	
Distributions from equity method investees in excess of cumulative earnings		638		1,013	
Mine development costs		(38)		(93)	
Net cash used in investing activities		(2,897)		(439)	
Cash flows from financing activities					
Net proceeds from common stock issuance		15,220		_	
Term Loan, related party, net of discount and issuance costs		8,522		_	
Principal payments on finance lease obligations		(295)		(226)	
Repurchase of common stock to satisfy tax withholdings		(146)		(382)	
Principal payments on notes payable		(41)		_	
Dividends paid on common stock		_		(20)	
Net cash provided by (used) in financing activities		23,260		(628)	
Increase in Cash and Restricted Cash		2,658		1,027	
Cash and Restricted Cash, beginning of period		76,432		88,780	
Cash and Restricted Cash, end of period	\$	79,090	\$	89,807	
Supplemental disclosure of non-cash investing and financing activities:					
Equity issued as consideration for acquisition of business	\$	31,205	\$	_	
Change in accrued purchases for property and equipment	\$	520	\$	10	
Paid-in-kind dividend on redeemable preferred stock	\$	157	\$	_	



Appendix D: Non-GAAP Financial Measure & Adjusted EBITDA Reconciliation to Net (Loss) Income

Note on Non-GAAP Financial Measures

To supplement the Company's financial information presented in accordance with U.S. generally accepted accounting principles, ("GAAP"), the Press Release includes non-GAAP measures of certain financial performance. The non-GAAP measures include EBITDA (EBITDA Loss) and Adjusted EBITDA (EBITDA Loss). The Company included non-GAAP measures because management believes that they help to facilitate comparison of operating results between periods. The Company believes the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses, gains and losses that may not be indicative of core operating results and business outlook. Management uses these non-GAAP measures in evaluating the performance of our business.

These non-GAAP measures are not in accordance with, or an alternative to, measures prepared in accordance with GAAP and may be different from non-GAAP measures used by other companies. In addition, these non-GAAP measures are not based on any comprehensive set of accounting rules or principles. These measures should only be used to evaluate the Company's results of operations in conjunction with the corresponding GAAP measures.

The Company has defined EBITDA (EBITDA Loss) as net income (loss) adjusted for the impact of the following items that are either non-cash or that we do not consider representative of our ongoing operating performance: depreciation, amortization, depletion, accretion, amortization of upfront customer consideration ("Upfront Customer Consideration"), interest expense, net and income taxes. The Company has defined Adjusted EBITDA (EBITDA Loss) as EBITDA (EBITDA Loss) reduced by the non-cash impact of equity earnings from equity method investments and gain on sale of Marshall Mine LLC, increased by cash distributions from equity method investments, loss on early settlement of a long-term receivable. The Company believes that the Consolidated Adjusted EBITDA measure is less susceptible to variances that affect the Company's operating performance.

When used in conjunction with GAAP financial measures, the Company believes these non-GAAP measures are supplemental measures of operating performance which explain the operating performance for the period-to-period comparisons and against competitors' performance. Generally, the Company believes these non-GAAP measures are less susceptible to variances that affect operating performance results. The Company expects the adjustments to EBITDA (EBITDA Loss) and Adjusted EBITDA (EBITDA Loss) in future periods will be generally similar. These non-GAAP measures have limitations as analytical tools and should not be considered in isolation or as a substitute for analyzing our results as reported under GAAP.



Appendix E: Adjusted EBITDA Reconciliation to Net (Loss) Income

Three Months Ended March 31. 2023 (in thousands) 2022 (7,508) \$ Net loss(1) \$ (3,033)Depreciation, amortization, depletion and accretion 2.137 1.506 Amortization of Upfront Customer Consideration 127 127 Interest expense, net 289 64 Income tax benefit (33)(4,988)(1,336)(EBITDA loss) Cash distributions from equity method investees 638 2,514 (638)(833)Equity earnings Gain on sale of Marshall Mine, LLC (2,695)Loss on early settlement of long-term receivable 535 (Adjusted EBITDA loss) Adjusted EBITDA (7,683)880

⁽¹⁾ Included in Net loss for the three months ended March 31, 2023 and 2022, was \$4.4 million and \$0.8 million, respectively, of transaction and integration costs incurred related to the Arq Acquisition. Additionally, for the three months ended March 31, 2023, Net Loss included \$0.9 million of Arq payroll and benefit costs.