Advanced Emissions Solutions, Inc.

Advancing Cleaner Energy

First Quarter 2022
Earnings Results Call

May 10, 2022

Safe Harbor

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. The forward-looking statements include statements or expectations regarding net, after-tax cash flows from refined coal (“RC”); expectations of continued APT performance improvement; expectations regarding achievements of our 2022 priorities, results from the Company’s review of strategic alternatives and other matters. These statements are based on current expectations, estimates, projections, beliefs and assumptions of our management. These forward-looking statements involve significant 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, opportunities for additional sales of our lignite activated carbon products and end-market diversification, the outcome of the review of strategic alternatives, our ability to meet customer supply requirements, 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 US government’s failure to promulgate regulations that benefit our business; changes in laws, regulations, IRS 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 we operate; loss of key personnel; ongoing effects of the COVID-19 pandemic and associated economic downturn on our operations and prospects; as well as other factors relating to our business, as discussed in our filings with the SEC. You are cautioned not to place undue reliance on such statements and to consult our SEC filings for additional risks and uncertainties that may apply to our business and the ownership of our securities. In addition to causing our actual results to differ, the factors listed above may cause our intentions to change from those statements of intention set forth in this presentation. Such changes in our intentions may also cause our results to differ. We may change our intentions, at any time and without notice, based on changes in such factors, our assumptions, or otherwise Our forward-looking statements are presented as of the date made, and we disclaim any duty to update such statements unless required by law to do so

First Quarter Highlights

Consolidated Results

- Consumables revenue was $26.4M compared to $18.5M
- Consumables gross margin was 18.5% compared to 24.6%
- Net loss was $3.0M compared to net income of $13.7M due to the effect of Tinuum investments in the prior year
- Adjusted EBITDA(1) of $0.9M compared to $26.1M
- Production volume exceeded internal expectations

Capital Allocation & Balance Sheet

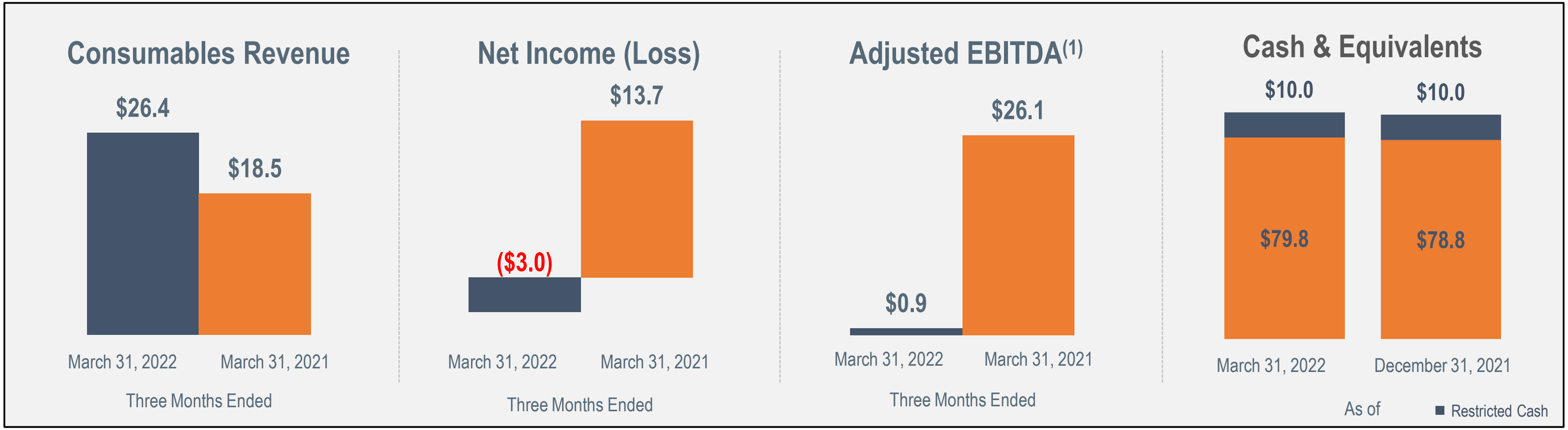
- Capital allocation priority remains with organic investment in our manufacturing capabilities
- Cash, including restricted cash, of $89.8M at quarter-end compared to $88.8M as of December 31, 2021
- Only remaining debt outstanding are finance liabilities totaling $3.9M
- Pleased with progression and nature of strategic review process

Outlook

- Expect continued top-line strength in APT market
- Margin pressures expected to persist in 2022, though will be partially offset via price initiatives and product mix
- Inventory flexibility improving; average selling price expected to trend higher
- Net, after-tax cash flows from Tinuum investments projected to be between $0.5-1.0M in Q2

(1) Adjusted EBITDA is a non-GAAP measure. See Appendix for definitions and reconciliations.

Financial Highlights



- Consumables revenue grew 42% compared to prior year driven by increased sales volumes and higher average selling price
- Total revenue grew 17%, as the prior year included $4.1 million of royalties which did not reoccur in the first quarter of 2022
- Year-over-year variance in Net Income and Adjusted EBITDA driven by the winddown of the historical RC business segment at the end of 2021
- Strong cash position and minimal liabilities offer us flexibility to invest organically in our manufacturing capabilities and navigate strategic review from a position of strength

(1) Adjusted EBITDA is a non-GAAP measure. See Appendix for definitions and reconciliations.

Activated Carbon Opportunities

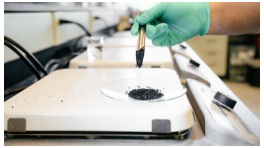
Power Generation

- *Currently the North American provider-of-choice in mercury removal for coal-fired power generation. We leverage our leading Intellectual Property, manufacturing assets, technologies and relationships to maintain our market position. However, this market is likely to remain structurally more challenged as aggregate coal burn is expected to decline over time.*

Industrial and Water

- *In response, we have developed a solid market position for certain Industrial applications and Municipal water – including markets that the Red River plant did not previously serve – which has diversified our product and customer mix.*

Adjacent Markets



- *More specialized applications, offering higher margin and higher growth commercial market opportunities. The quality of Red River plant offers us the asset base to pursue these adjacent markets.*

Our goal is to remain the provider-of-choice in the North American activated carbon market

We are well-positioned to capitalize on emerging opportunities; production capacity is significantly utilized; and we are selling into a more balanced mix of commercial markets

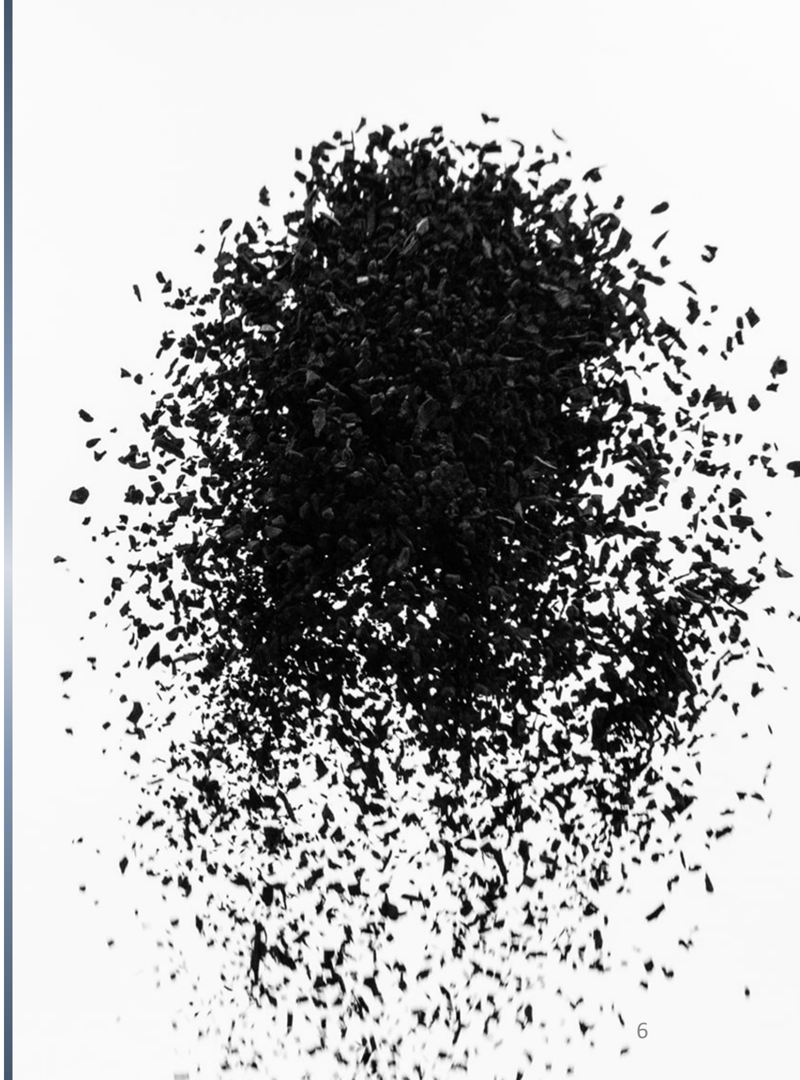
2022 Priorities

ENHANCE LONG-TERM PROFITABILITY AT RED RIVER PLANT:

- Capitalize on highly efficient and low-cost world class manufacturing facilities
- Pursue optimal customer mix to leverage enhanced value creation through new customer contracts
- Structurally upgrade customer contracting terms to minimize headwinds from increased cost pressures stemming from inventory build and supply chain challenges
- Accelerate diversification among product and customer mix through investment in new product development
- Remain vigilant for additional rationalization opportunities and supply agreements

ALLOCATE CASH FLOWS & ASSETS TO DRIVE SHAREHOLDER VALUE:

- Invest in Red River plant's strategic initiatives to solidify position as provider-of-choice for activated carbon
- Conclude strategic alternatives review and ensure maximization of shareholder value



APPENDIX

Appendix A: 10-Q Balance Sheet[(1)]

(in thousands, except share data)	As of March 31, 2022	As of December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 79,807	$ 78,753
Receivables, net	13,008	12,622
Receivables, related parties	—	2,481
Inventories, net	10,280	7,850
Prepaid expenses and other assets	7,387	6,661
Total current assets	110,482	108,367
Restricted cash, long-term	10,000	10,027
Property, plant and equipment, net of accumulated depreciation of $8,881 and $7,684, respectively	30,310	30,171
Intangible assets, net	1,155	1,237
Equity method investments	711	2,391
Other long-term assets, net	28,913	33,243
Total Assets	$ 181,571	$ 185,436
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 9,328	$ 10,009
Accrued payroll and related liabilities	3,959	6,477
Current portion of finance lease obligations	957	1,011
Other current liabilities	4,552	5,124
Total current liabilities	18,796	22,621
Long-term finance lease obligations, net of current portion	2,955	3,152
Other long-term liabilities	15,470	12,362
Total Liabilities	37,221	38,135
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock: par value of $.001 per share, 50,000,000 shares authorized, none outstanding	—	—
Common stock: par value of $.001 per share, 100,000,000 shares authorized, 23,724,218 and 23,460,212 shares issued, and 19,106,072 and 18,842,066 shares outstanding at March 31, 2022 and December 31, 2021, respectively	24	23
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of March 31, 2022 and December 31, 2021, respectively	(47,692)	(47,692)
Additional paid-in capital	102,187	102,106
Retained earnings	89,831	92,864
Total Stockholders' Equity	144,350	147,301
Total Liabilities and Stockholders' Equity	$ 181,571	$ 185,436

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended March 31, 2022.

Appendix B: 10-Q Income Statement[1]

(in thousands, except per share data)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Revenues:		
Consumables	$ 26,402	$ 18,541
License royalties, related party	—	4,066
Total revenues	26,402	22,607
Operating expenses:		
Consumables cost of revenue, exclusive of depreciation and amortization	21,507	13,984
Payroll and benefits	2,626	2,469
Legal and professional fees	2,172	1,803
General and administrative	1,926	1,915
Depreciation, amortization, depletion and accretion	1,506	2,106
Total operating expenses	29,737	22,277
Operating (loss) income	(3,335)	330
Other income (expense):		
Earnings from equity method investments	833	18,312
Interest expense	(86)	(837)
Other	(445)	421
Total other income	302	17,896
(Loss) income before income tax expense	(3,033)	18,226
Income tax expense	—	4,489
Net (loss) income	$ (3,033)	$ 13,737
(Loss) earnings per common share (Note 1):		
Basic	$ (0.17)	$ 0.76
Diluted	$ (0.17)	$ 0.75
Weighted-average number of common shares outstanding:		
Basic	18,344	18,166
Diluted	18,344	18,274

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended March 31, 2022.

Appendix C: 10-Q Cash Flow[1]

(in thousands)	Three Months Ended March 31, 2022	2021
Cash flows from operating activities		
Net (loss) income	$ (3,033)	$ 13,737
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Deferred income tax expense	—	3,051
Depreciation, amortization, depletion and accretion	1,506	2,106
Operating lease expense	663	379
Amortization of debt discount and debt issuance costs	—	591
Stock-based compensation expense	464	421
Earnings from equity method investments	(833)	(18,312)
Other non-cash items, net	550	(273)
Changes in operating assets and liabilities:		
Receivables and related party receivables	2,095	2,147
Prepaid expenses and other assets	(725)	1,178
Inventories, net	(2,359)	1,548
Other long-term assets, net	3,116	(1,817)
Accounts payable	(692)	(706)
Accrued payroll and related liabilities	(2,518)	(1,043)
Other current liabilities	(1,231)	1,305
Operating lease liabilities	2,680	2,104
Other long-term liabilities	910	(2,113)
Distributions from equity method investees, return on investment	1,501	17,644
Net cash provided by operating activities	2,094	21,947

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended March 31, 2022.

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

(in thousands)	Three Months Ended March 31, 2022	2021
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	$ 1,013	$ 5,607
Acquisition of property, plant, equipment, and intangible assets, net	(1,359)	(1,321)
Mine development costs	(93)	(248)
Proceeds from sale of property and equipment	—	848
Net cash (used in) provided by investing activities	(439)	4,886
Cash flows from financing activities		
Principal payments on term loan	—	(10,000)
Principal payments on finance lease obligations	(226)	(315)
Dividends paid	(20)	—
Repurchase of common shares to satisfy tax withholdings	(382)	(216)
Net cash used in financing activities	(628)	(10,531)
Increase in Cash and Cash Equivalents and Restricted Cash	1,027	16,302
Cash and Cash Equivalents and Restricted Cash, beginning of period	88,780	35,932
Cash and Cash Equivalents and Restricted Cash, end of period	$ 89,807	$ 52,234
Supplemental disclosure of non-cash investing and financing activities:		
Acquisition of property and equipment through accounts payable	$ 10	$ 765

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended March 31, 2022.

Appendix D: Non-GAAP Financial Measure & Consolidated 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, or GAAP, this investor presentation includes non-GAAP measures of certain financial performance. The non-GAAP measures include Consolidated Adjusted EBITDA. 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 that may not be indicative of core operating results and business outlook. 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 Consolidated Adjusted EBITDA as net (loss) income, adjusted for the impact of the following items that are either non-cash or that the Company does not consider representative of its ongoing operating performance: depreciation, amortization, depletion and accretion, amortization of upfront customer consideration, interest expense, net, income tax expense; then reduced by the non-cash impact of equity earnings from equity method investments and increased by cash distributions from equity method investments and loss on early settlement of Norit Receivable. The Company believes that the Consolidated Adjusted EBITDA measure is less susceptible to variances that affect the Company's operating performance.

The Company presents the non-GAAP measures because the Company believes they are useful as supplemental measures in evaluating the performance of the Company's operating performance and provide greater transparency into the results of operations. The Company's management uses Consolidated Adjusted EBITDA as a factor in evaluating the performance of its business. The adjustments to Consolidated Adjusted EBITDA in future periods are generally expected to be similar. Consolidated Adjusted EBITDA has limitations as an analytical tool, and you should not consider these measures in isolation or as a substitute for analyzing the Company's results as reported under GAAP.

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

	Three Months Ended March 31,	
(in thousands)	2022	2021
Net (loss) income	$ (3,033)	$ 13,737
Depreciation, amortization, depletion and accretion	1,506	2,106
Amortization of Upfront Customer Consideration	127	127
Interest expense, net	64	729
Income tax (benefit) expense	—	4,489
Consolidated (EBITDA loss) EBITDA	(1,336)	21,188
Cash distributions from equity method investees	2,514	23,251
Equity earnings	(833)	(18,312)
Loss on early settlement of Norit Receivable	535	—
Consolidated Adjusted EBITDA	$ 880	$ 26,127