Advanced Emissions Solutions, Inc.

Advancing Cleaner Energy

Third Quarter 2019 Results Call

November 13, 2019

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 future cash flows from refined coal (“RC”); potential RC facility transactions with tax-equity investors and estimated tonnage associated with such potential transaction; required capital investment to transition existing facilities to operating status; opportunities for optimizing operations including higher margin and higher growth activities; improving integration and other potential growth opportunities, including new markets; anticipated early repayment of term loan; and evaluation of additional ways to return capital to stockholders. These statements are based on current expectations, estimates, projections, beliefs and assumptions of our management. Such 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, changes and timing in laws, regulations, IRS interpretations or guidance, accounting rules and any pending court decisions, legal challenges to or repeal of them; changes in prices, economic conditions and market demand; the ability of the RC facilities to produce and sell coal that qualifies for tax credits; the timing, terms and changes in contracts for RC facilities, or failure to lease or sell RC facilities; tax equity lease renewals are not terminated or repriced; impact of competition; availability, cost of and demand for alternative tax credit vehicles and other technologies; technical, start-up and operational difficulties; availability of raw materials; customer demand for our products; competition within the industries in which we operate; availability of opportunities to further grow our business; loss of key personnel; and other factors discussed in greater detail 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. 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.

THIRD QUARTER 2019 BUSINESS HIGHLIGHTS

Refined Coal ("RC")

- Q3'19 distributions up 100% to $18.7 million
- Operating income up 42% to $18.2 million
- Secured tax equity investors for two additional royalty-bearing RC facilities
- Incremental 2019 contracted tonnage now 15M

Power Generation and Industrials ("PGI")

- Revenue up to $14.0 million, compared to $1.0 million
- Growth was driven by consumables
- Remain focused on filling plant capacity and winning share as a full solutions provider for pollution control

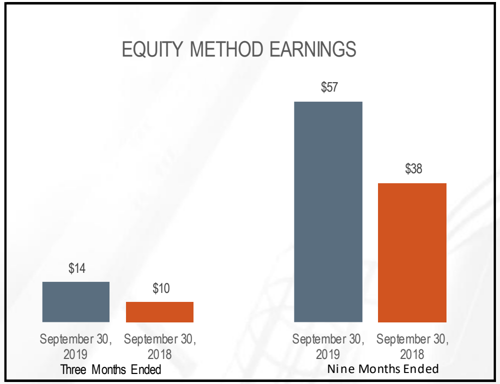
Net Income & Capital Allocation

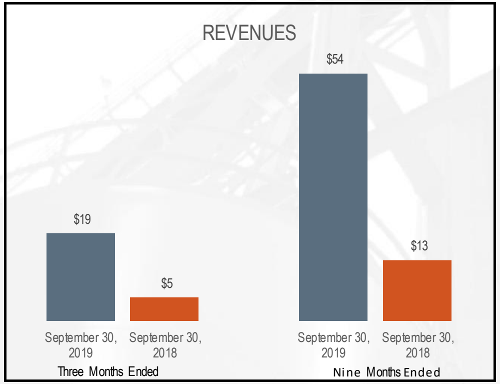
- Net income of $3.9 million, or $0.21 per diluted share
- Paid dividend of $0.25 per share
- Declared 2019 fourth quarter $0.25 per share
- Board increased amounts available for share repurchases to $10.0 million

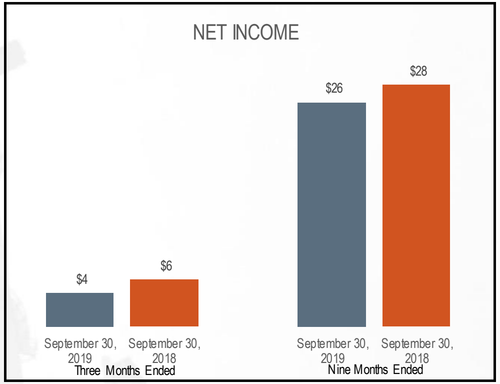
Outlook

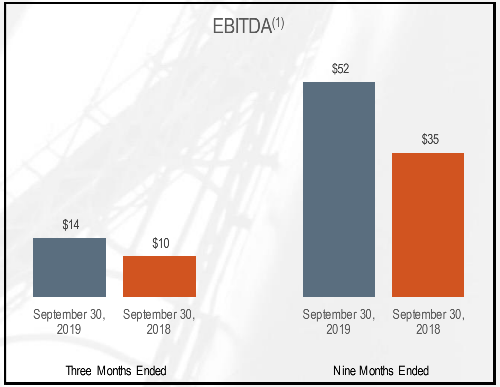
- Cashflows from RC projected to be between $150 million to $175 million through 2021, with more expected
- Increasing earnings from Activated Carbon as manufacturing plant is leveraged

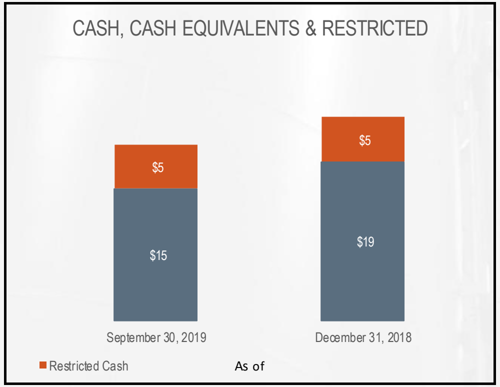
FINANCIAL HIGHLIGHTS

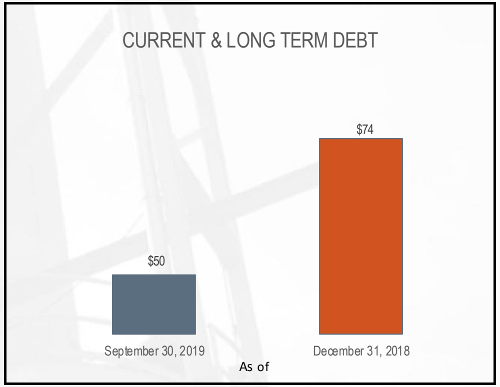










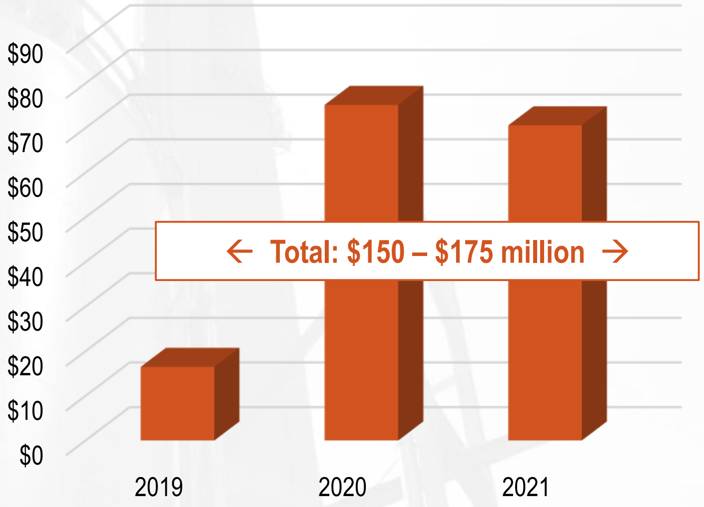


(1) EBITDA is a non-GAAP measure. See Appendix for definitions and reconciliations.

EXPECTED FUTURE REFINED COAL ("RC") CASH FLOWS

- Based on 23 invested facilities as of September 30, 2019 and includes all net RC cash flows of ADES (1)
- Results in expected future net RC cash flows of $150 million to $175 million to ADES in total through 2021 (2)
- Future net RC cash flows based upon expiration of two 2019 RC units during Q4 2019
- Each additional refined coal facility could add between $5-7 million annually to ADES (3)
- We believe opportunities remain to secure additional tax equity investors before production tax credit expiration, currently scheduled for December 31, 2021

EXPECTED FUTURE CASH FLOWS FROM RC BUSINESS (1)
(in millions)



(1) Net projected RC cash flows include the impact of all expected Tinuum distributions and royalty payments offset by the Company's federal and state tax payments as well as 453A interest payments
(2) The expectation is based on the following four key assumptions: 1) Tinuum Group continues to not operate retained facilities; 2) Tinuum Group does not have material unexpected CapEx or unusual operating expenses based on expectations as of the balance sheet date; 3) tax equity lease renewals are not terminated or repriced; and 4) coal-fired generation remains consistent with contractual expectations
(3) Estimates based on coal-fired utility that burns 4.0 million tons per year

POWER GENERATION & INDUSTRIALS ("PGI") GROWTH OPPORTUNITIES

Mercury Removal

Positioned for profitable growth due to maintained market leadership and stable demand plus additional share gain through RC transition

Today

Tomorrow

Future

Industrial and Municipal Water

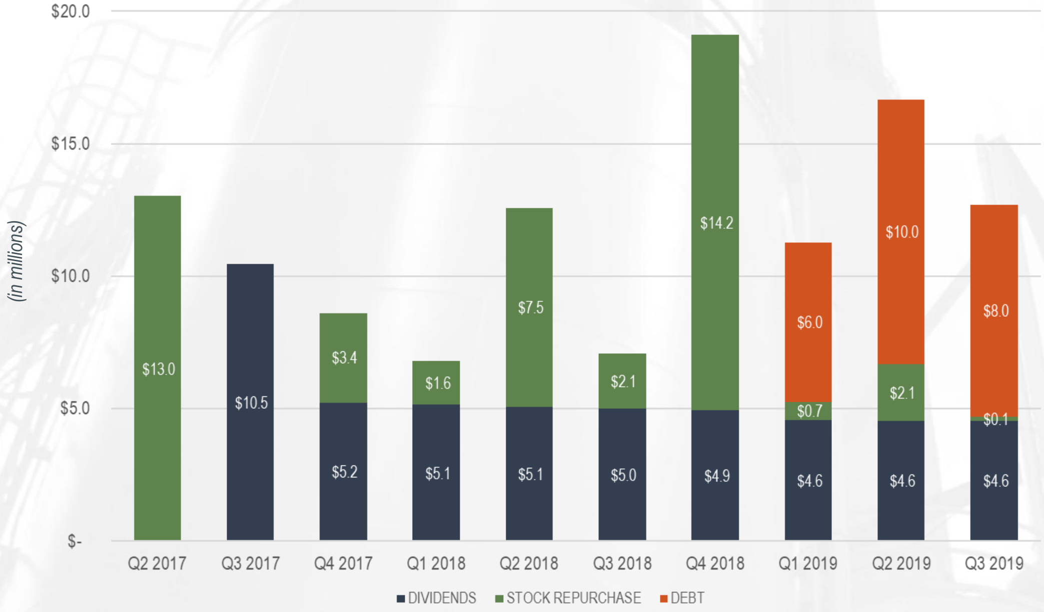
Opportunity to leverage Carbon Solutions' best-in-class production facility and make investments to capture broader share of industrial and municipal water markets

Premium and Adjacent Segments

Lowest cost manufacturer, coupled with Industry leading Commercial and R&D expertise can drive higher growth and premium margin across the entire activated carbon market

CAPITAL ALLOCATION

- Since the start of the Capital Allocation program [1], we have paid $49.6 million in dividends and utilized capital of $44.7 million to repurchase shares
- The Company entered a three-year, $70 million term loan in December 2018 to fund the acquisition of Carbon Solutions which requires quarterly principal repayments of $6.0 million. We expect to pay off this loan in less than the stated three-year term funded by Tinuum cash flows
- We are currently committed to our dividend program and will continue to leverage opportunistic share repurchases
- As of September 30, 2019 the Company made $24 million in debt principal payments during 2019



(1) The Company started its current Capital Allocation program in the second quarter of 2017.

2019 PRIORITIES

INCREASE AND OPTIMIZE REFINED COAL NET CASH FLOWS:

Add Investors:

- Nurture current & add additional sales channels
- Leverage improving refined coal tax equity market and investor clarity as a result of tax reform

Optimization:

- Maximize operational performance to produce RC and further develop customer relationships to ensure retention of RC customers
- Optimize resources at ADES to support Tinuum and public platform while also reducing expenses

INTEGRATION AND GROWTH:

Integration:

- Efficiently combine the teams, expertise, operations and product suite of Carbon Solutions

Growth:

- Immediately address market share capture in North American Mercury Control PAC market, as well as evaluate and pursue adjacent market PAC opportunities

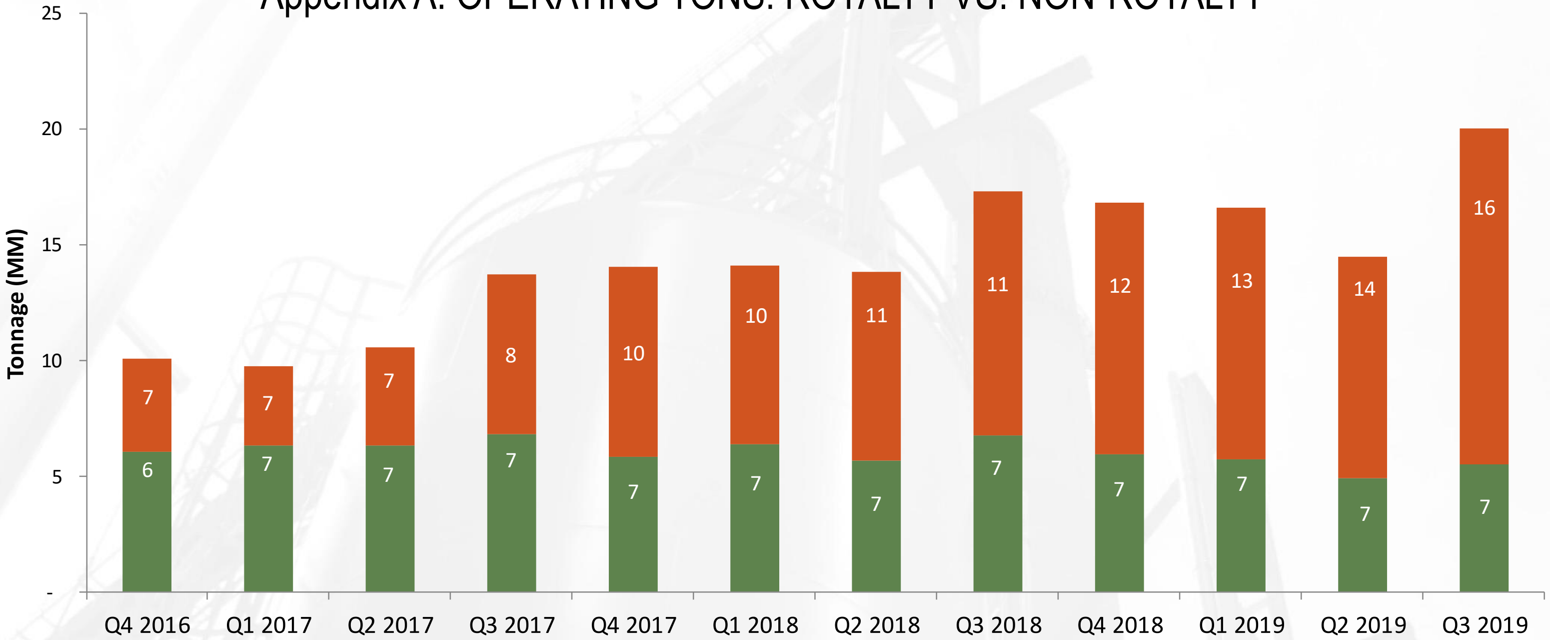
RETURN CAPITAL TO SHAREHOLDERS:

Evaluate options and execute on continued progress for additional return of capital to shareholders, including:

- Stock repurchases (open market and/or one-time tender offers)
- Dividends (one-time and/or incremental recurring)

APPENDIX

Appendix A: OPERATING TONS: ROYALTY VS. NON-ROYALTY



Three Month Ended September 30, 2019	Operating Tons		QTD - Total
	Royalty	Non-Royalty	
Tonnage [(1)]	14,506	5,500	20,006
Count (#) [(2)]	16	7	23

Nine Months Ended September 30, 2019	Operating Tons		YTD - Total
	Royalty	Non-Royalty	
Tonnage [(1)]	34,960	16,136	51,096
Count (#) [(2)]	16	7	23

Note: Numbers within bar graph represent the number of facilities per category as of the end of each quarter presented

(1) Tonnage information is based upon RC production for the three months ended September 30, 2019 (in thousands)

(2) Counts are based upon the number of facilities of which a royalty has been earned during the period

Appendix B: 10-Q Balance Sheet(1)

(in thousands, except share data)	As of September 30, 2019	As of December 31, 2018
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	$ 15,155	$ 18,577
Receivables, net	6,771	9,554
Receivables, related parties	4,382	4,284
Inventories, net	16,917	21,791
Prepaid expenses and other assets	6,070	5,570
Total current assets	49,295	59,776
Restricted cash, long-term	5,000	5,195
Property, plant and equipment, net of accumulated depreciation of $5,651 and $1,499, respectively	44,168	42,697
Intangible assets, net	4,300	4,830
Equity method investments	44,111	6,634
Deferred tax assets, net	13,491	32,539
Other long-term assets, net	18,363	7,993
Total Assets	$ 178,728	$ 159,664
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,838	$ 6,235
Accrued payroll and related liabilities	3,893	8,279
Current portion of long-term debt	24,072	24,067
Other current liabilities	4,287	2,138
Total current liabilities	39,090	40,719
Long-term debt	26,276	50,058
Other long-term liabilities	6,062	940
Total Liabilities	71,428	91,717
Commitments and contingencies (Note 8)		
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, 22,915,429 and 22,640,677 shares issued, and 18,594,498 and 18,576,489 shares outstanding at September 30, 2019 and December 31, 2018, respectively	23	23
Treasury stock, at cost: 4,320,931 and 4,064,188 shares as of September 30, 2019 and December 31, 2018, respectively	(44,666)	(41,740)
Additional paid-in capital	97,706	96,750
Retained earnings	54,237	12,914
Total stockholders' equity	107,300	67,947
Total Liabilities and Stockholders' Equity	$ 178,728	$ 159,664

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended September 30, 2019.

Appendix C: 10-Q Income Statement[1]

(in thousands, except per share data)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Revenues:				
Consumables	$ 14,748	$ 1,043	$ 41,243	$ 2,390
License royalties, related party	4,385	4,104	12,796	10,857
Other	—	—	—	72
Total revenues	19,133	5,147	54,039	13,319
Operating expenses:				
Consumables cost of revenue, exclusive of depreciation and amortization	11,939	954	38,339	2,567
Other sales cost of revenue, exclusive of depreciation and amortization	—	—	—	(346)
Payroll and benefits	2,651	2,555	8,005	7,528
Legal and professional fees	1,755	698	5,300	3,459
General and administrative	3,136	834	7,699	3,098
Depreciation, amortization, depletion and accretion	2,043	74	4,902	262
Total operating expenses	21,524	5,115	64,245	16,568
Operating (loss) income	(2,391)	32	(10,206)	(3,249)
Other income (expense):				
Earnings from equity method investments	14,426	9,715	57,051	37,857
Interest expense	(1,729)	(399)	(5,820)	(1,147)
Other	212	86	342	146
Total other income	$ 12,909	$ 9,402	$ 51,573	$ 36,856
Income before income tax expense	10,518	9,434	41,367	33,607
Income tax expense	6,595	3,931	14,928	5,151
Net income	$ 3,923	$ 5,503	$ 26,439	$ 28,456
Earnings per common share (Note 1):				
Basic	$ 0.22	$ 0.28	$ 1.45	$ 1.41
Diluted	$ 0.21	$ 0.28	$ 1.44	$ 1.40
Weighted-average number of common shares outstanding:				
Basic	18,112	19,726	18,184	20,090
Diluted	18,339	19,876	18,394	20,228

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended September 30, 2019.

Appendix D: 10-Q Cash Flow[1]

(in thousands)	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Cash flows from operating activities		
Net income	$ 26,439	$ 28,456
Adjustments to reconcile net income to net cash provided by operating activities:		
Increase in valuation allowance on deferred tax assets	3,822	2,731
Depreciation, amortization, depletion and accretion	4,902	262
Operating lease expense	2,371	—
Amortization of debt discount and debt issuance costs	1,324	—
Stock-based compensation expense	1,326	1,929
Earnings from equity method investments	(57,051)	(37,857)
Other non-cash items, net	697	190
Changes in operating assets and liabilities:		
Receivables and related party receivables	2,685	(375)
Prepaid expenses and other assets	(440)	(797)
Costs incurred on uncompleted contracts	—	15,945
Inventories	4,566	—
Deferred tax assets, net	6,812	(966)
Other long-term assets	(43)	—
Accounts payable	1,010	(340)
Accrued payroll and related liabilities	(4,386)	587
Other current liabilities	(278)	(1,974)
Billings on uncompleted contracts	—	(15,945)
Operating lease liabilities	(2,435)	—
Other long-term liabilities	(529)	(157)
Distributions from equity method investees, return on investment	56,806	4,000
Net cash provided by (used in) operating activities	47,598	(4,311)

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended September 30, 2019.

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

(in thousands)	Nine Months Ended September 30, 2019	2018
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	$ —	$ 33,575
Acquisition of business	(661)	—
Acquisition of property, plant, equipment, and intangible assets, net	(6,430)	(191)
Mine development costs	(2,083)	—
Contributions to equity method investees	—	(750)
Net cash (used in) provided by investing activities	(9,174)	32,634
Cash flows from financing activities		
Principal payments on term loan	(24,000)	—
Principal payments on finance lease obligations	(1,016)	—
Dividends paid	(13,729)	(15,226)
Repurchase of common shares	(2,926)	(11,169)
Repurchase of common shares to satisfy tax withholdings	(370)	(707)
Net cash used in financing activities	(42,041)	(27,102)
(Decrease) increase in Cash and Cash Equivalents and Restricted Cash	(3,617)	1,221
Cash and Cash Equivalents and Restricted Cash, beginning of period	23,772	30,693
Cash and Cash Equivalents and Restricted Cash, end of period	$ 20,155	$ 31,914
Supplemental disclosure of non-cash investing and financing activities:		
Dividends declared, not paid	$ 204	$ 85

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended September 30, 2019.

Appendix E: Non-GAAP Financial Measure & Consolidated EBITDA Reconciliation to Net Income

Note on Non-GAAP Financial Measure

To supplement the Company's financial information presented in accordance with U.S. generally accepted accounting principles, or GAAP, this investor presentation includes a non-GAAP measure of certain financial performance. This non-GAAP measures include Consolidated EBITDA. The Company included a non-GAAP measure because management believes that it helps to facilitate comparison of operating results between periods. The Company believes the non-GAAP measure provides 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. The non-GAAP measure is 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, the non-GAAP measure is not based on any comprehensive set of accounting rules or principles. This measure should only be used to evaluate the Company's results of operations in conjunction with the corresponding GAAP measures.

The Company has defined Consolidated EBITDA as net 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, interest expense, net and income tax expense. Because Consolidated EBITDA omits certain non-cash items, the Company believes that the measure is less susceptible to variances that affect the Company's operating performance.

The Company presents Consolidated EBITDA because the Company believes it is useful as supplemental measures in evaluating the performance of the Company's operating performance and provides greater transparency into the results of operations. The Company's management uses Consolidated EBITDA as a factor in evaluating the performance of its business.

The adjustments to Consolidated EBITDA in future periods are generally expected to be similar. Consolidated EBITDA has limitations as analytical tools, and you should not consider these measures in isolation or as a substitute for analyzing the Company's results as reported under GAAP.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2019	2018	2019	2018
Net income	$ 3,923	$ 5,503	$ 26,439	$ 28,456
Depreciation, amortization, depletion and accretion	2,043	74	4,902	262
Interest expense, net	1,663	317	5,619	1,003
Income tax expense	6,595	3,931	14,928	5,151
Consolidated EBITDA	$ 14,224	$ 9,825	$ 51,888	$ 34,872