Advanced Emissions Solutions, Inc.

Advancing Cleaner Energy

Second Quarter 2019 Results Call

August 6, 2019

SAFE HARBOR

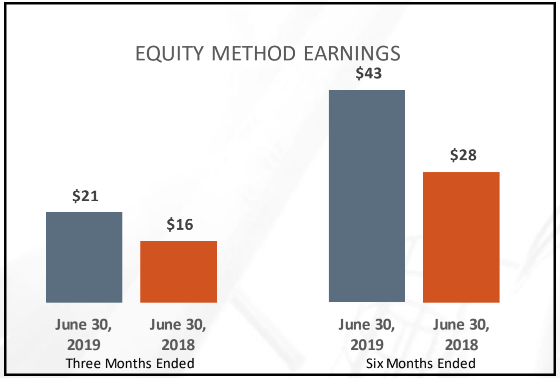
This presentation includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, which provides a "safe harbor" for such statements in certain circumstances. The forward-looking statements include statements or expectations regarding future cash flows from 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; 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.

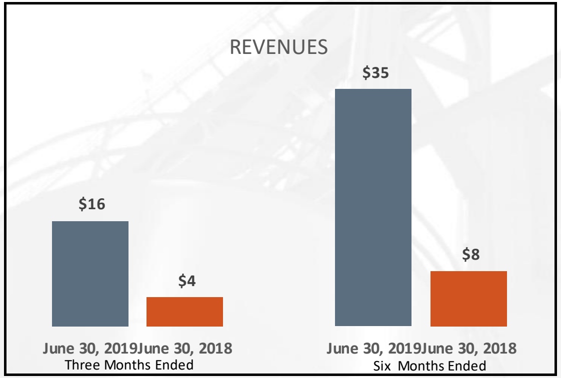
SECOND QUARTER 2019 HIGHLIGHTS

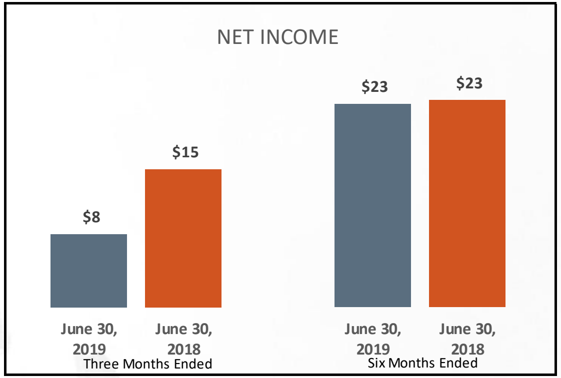
- RC invested facilities increased to 21 as of June 30, 2019; new facility is royalty bearing to ADES.
- Based on the 21 invested RC facilities as of June 30, 2019 and cash distributions received during the three months ended June 30, 2019, expected future net RC cash flows to ADES are now projected to be between $175 million and $200 million through year end 2021.
- RC Segment operating income was $24.6 million, a year-over-year increase of 35%
- Tinuum distributions to ADES were $18.6 million during the second quarter of 2019, a year-over-year increase of 26%
- Recognized PGI segment revenue of $11.0 million an increase from $0.8 million during the second quarter of 2018, driven by consumables
- Net income for the three months ended June 30, 2019 of $8.1 million or $0.44 per diluted share
- Ended the second quarter 2019 with a total cash balance of $20.4 million
  - Made quarterly principal payments of $10.0 million during the second quarter on the Company's $70.0 million term loan
  - Returned $2.1 million to shareholders during the three months ended June 30, 2019 through share repurchases
- Continued quarterly dividend; declared second quarter dividend of $0.25 per share, paid in June 2019, and declared 2019 third quarter $0.25 per share dividend payable on September 6, 2019 to stockholders of record as of business close on August 19, 2019

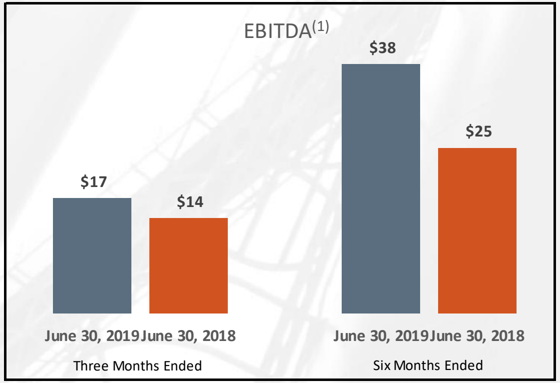
FINANCIALS

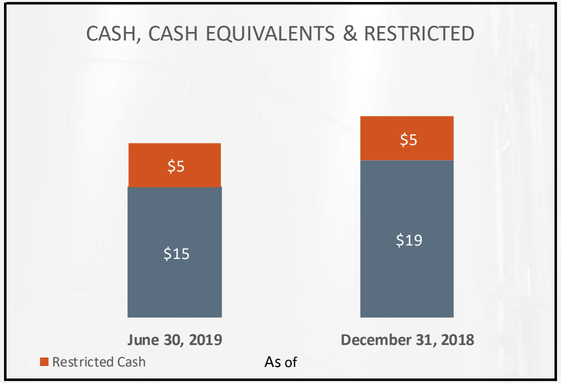
FINANCIAL HIGHLIGHTS

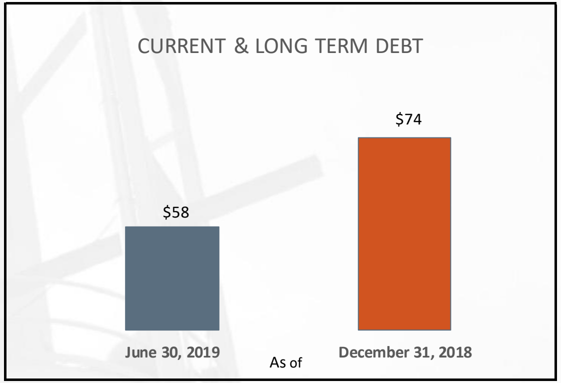










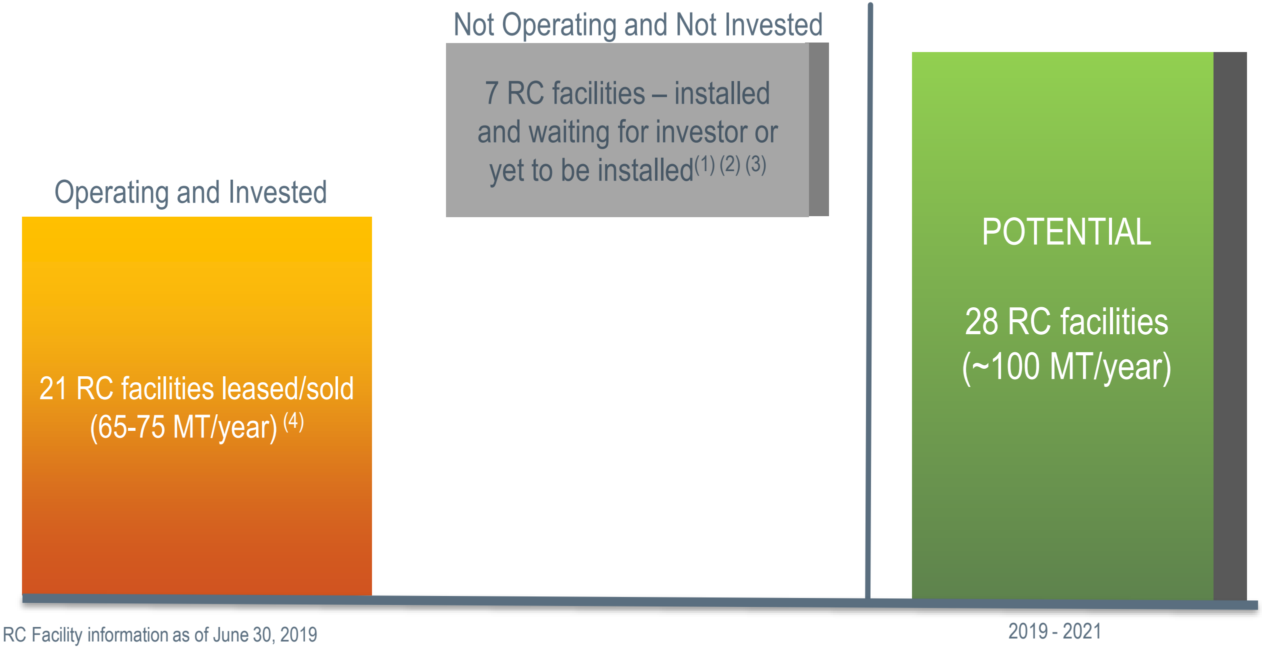


(1) EBITDA is a non-GAAP measure. See Appendix for definitions and reconciliations.

REFINED COAL

REFINED COAL FACILITIES TODAY AND TOMORROW

FULL-TIME OPERATIONS ROADMAP



RC Facility information as of June 30, 2019

(1) Certain facilities would require capital investment to transition to operating status
(2) Two facilities were in the engineering and construction phase
(3) One facility that is not operating was placed in service in 2009 and available Section 45 tax credit generation ability for this facility will expire during the year 2019
(4) One facility that is operating was placed in service in 2009 and available Section 45 tax credit generation ability for this facility will expire during the year 2019

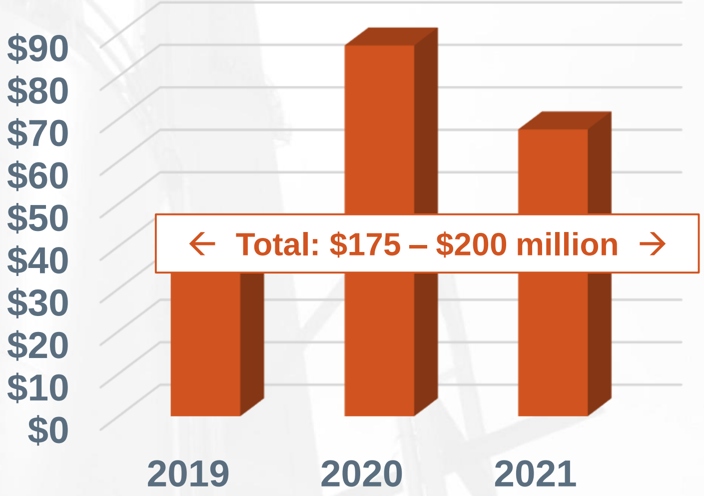
Future Cash Flows for ADES & 2019 Priorities

EXPECTED FUTURE RC CASH FLOWS

- Based on 21 invested facilities as of June 30, 2019 and includes all net RC cash flows of ADES (1)
- Results in expected future net RC cash flows of $175 million to $200 million to ADES in total through 2021 (2)
- There are currently 7 non-operating facilities awaiting a tax-equity investor
- Each additional refined coal facility could add between $5-7 million annually to ADES (3)
- We believe there remains opportunity to secure additional tax equity investors before PTC 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

(3) Estimates based on coal-fired utility that burns 4.0 million tons per year

GROWTH OPPORTUNITIES

TODAY | **TOMORROW**

Continue to gain market share and margin

Pursue higher margin and higher growth

Mercury Removal

- Positioned for continued profitable growth due to maintained market leadership and stable demand as prices stabilize
- Gain additional share through premium products, cost advantage and RC transition

Municipal Water

- Carbon Solutions can and does compete, albeit minimally, without any incremental plant investment
- However, additional feedstock sourcing is necessary

Broader Water Market

- Opportunity to leverage Carbon Solutions' best-in-class production facility and make investments to capture broader commercial and consumer market

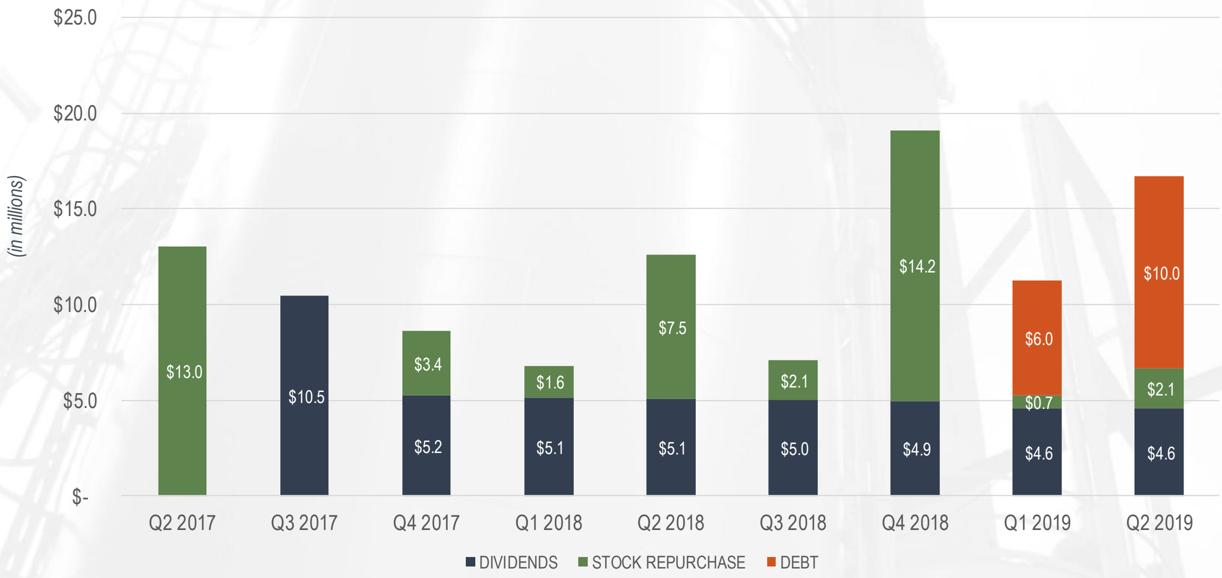
Adjacent Segments & International Expansion

- Regenerated Carbon
- Chemicals and Food
- International Mercury Control

CURRENT PLANT CONFIGURATION | **INVESTMENT NEEDED**

CAPITAL ALLOCATION

- Since the start of the Capital Allocation program [(1)], we have paid $45.0 million in dividends and utilized capital of $44.6 million to repurchase shares
- The Company entered a three-year, $70 million term loan in November 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 June 30, 2019 the Company made $16 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

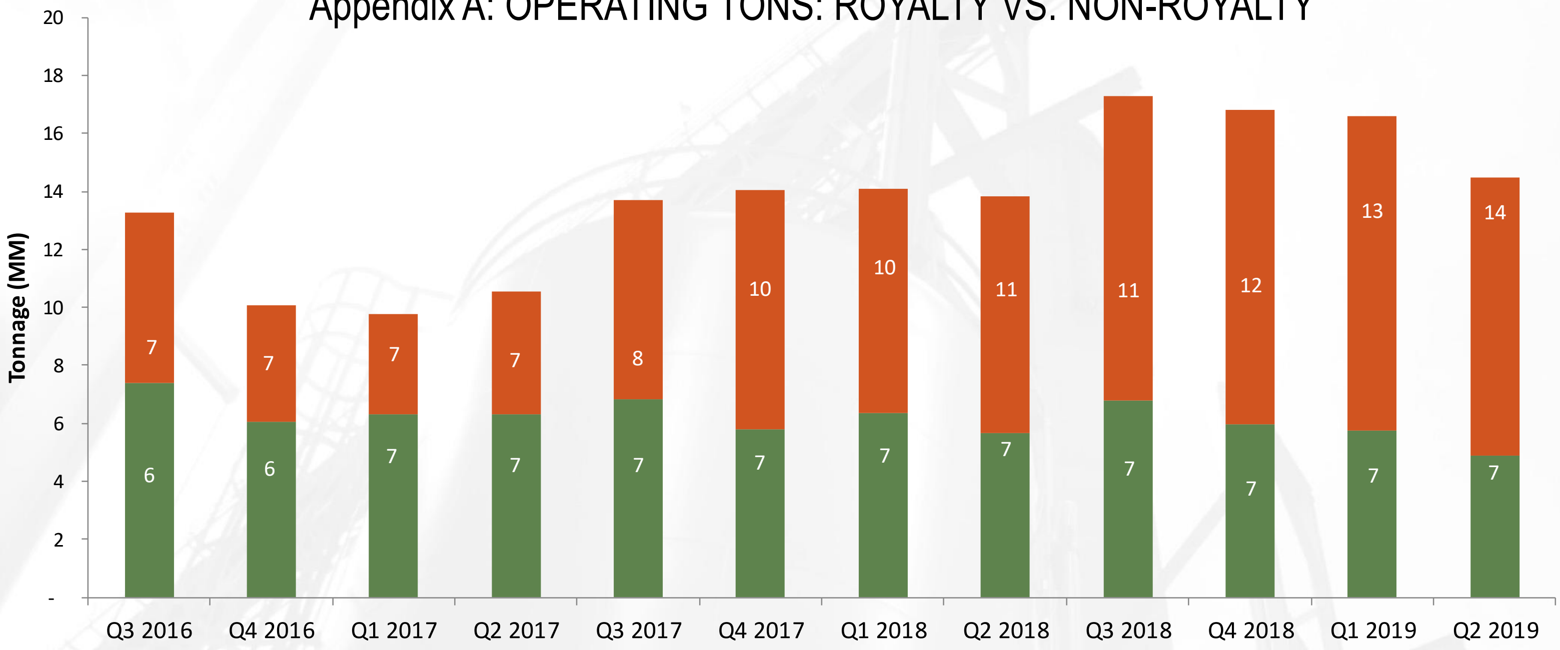
RETURN CAPITAL TO SHAREHOLDERS:

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 June 30, 2019	Operating Tons		QTD - Total
	Royalty	Non-Royalty	
Tonnage (1)	9,592	4,905	14,497
Count (#) (2)	14	7	21

Six Months Ended June 30, 2019	Operating Tons		YTD - Total
	Royalty	Non-Royalty	
Tonnage (1)	20,454	10,636	31,090
Count (#) (2)	14	7	21

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 June 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 June 30, 2019	As of December 31, 2018
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	$ 15,420	$ 18,577
Receivables, net	5,606	9,554
Receivables, related parties	4,189	4,284
Inventories, net	17,798	21,791
Prepaid expenses and other assets	5,598	5,570
Total current assets	48,611	59,776
Restricted cash, long-term	5,000	5,195
Property, plant and equipment, net of accumulated depreciation of $4,179 and $1,499, respectively	44,825	42,697
Intangible assets, net	4,501	4,830
Equity method investments	48,403	6,634
Deferred tax assets, net	19,179	32,539
Other long-term assets, net	16,553	7,993
Total Assets	$ 187,072	$ 159,664
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,631	$ 6,235
Accrued payroll and related liabilities	3,450	8,279
Current portion of long-term debt	24,025	24,067
Other current liabilities	5,552	2,138
Total current liabilities	39,658	40,719
Long-term debt	34,204	50,058
Other long-term liabilities	5,449	940
Total Liabilities	79,311	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, 22,867,405 and 22,640,677 shares issued, and 18,554,626 and 18,576,489 shares outstanding at June 30, 2019 and December 31, 2018, respectively	23	23
Treasury stock, at cost: 4,312,779 and 4,064,188 shares as of June 30, 2019 and December 31, 2018, respectively	(44,571)	(41,740)
Additional paid-in capital	97,354	96,750
Retained earnings	54,955	12,914
Total stockholders' equity	107,761	67,947
Total Liabilities and Stockholders' Equity	$ 187,072	$ 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 June 30, 2019.

Appendix C: 10-Q Income Statement[1]

(in thousands, except per share data)	Three Months Ended June 30, 2019	Three Months Ended June 30, 2018	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018
Revenues:				
Consumables	$ 11,386	$ 726	$ 26,495	$ 1,347
License royalties, related party	4,191	3,523	8,411	6,753
Other	—	24	—	72
Total revenues	15,577	4,273	34,906	8,172
Operating expenses:				
Consumables cost of revenue, exclusive of depreciation and amortization	12,286	902	26,394	1,613
Other sales cost of revenue, exclusive of depreciation and amortization	6	(198)	6	(346)
Payroll and benefits	2,798	2,759	5,354	4,973
Legal and professional fees	1,569	1,213	3,545	2,761
General and administrative	2,421	1,094	4,563	2,264
Depreciation, amortization, depletion and accretion	757	72	2,859	188
Total operating expenses	19,837	5,842	42,721	11,453
Operating loss	(4,260)	(1,569)	(7,815)	(3,281)
Other income (expense):				
Earnings from equity method investments	20,935	15,889	42,625	28,142
Interest expense	(1,987)	(412)	(4,091)	(748)
Other	60	34	130	60
Total other income	$ 19,008	$ 15,511	$ 38,664	$ 27,454
Income before income tax expense	14,748	13,942	30,849	24,173
Income tax expense (benefit)	6,634	(1,349)	8,333	1,220
Net income	$ 8,114	$ 15,291	$ 22,516	$ 22,953
Earnings per common share (Note 1):				
Basic	$ 0.45	$ 0.76	$ 1.23	$ 1.13
Diluted	$ 0.44	$ 0.75	$ 1.22	$ 1.12
Weighted-average number of common shares outstanding:				
Basic	18,172	20,062	18,219	20,275
Diluted	18,377	20,195	18,412	20,386

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

Appendix D: 10-Q Cash Flow[1]

(in thousands)	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018
Cash flows from operating activities		
Net income	$ 22,516	$ 22,953
Adjustments to reconcile net income to net cash provided by operating activities:		
Increase (decrease) in valuation allowance on deferred tax assets	849	(498)
Depreciation, amortization, depletion and accretion	2,859	188
Amortization of debt discount and debt issuance costs	851	—
Stock-based compensation expense	858	1,010
Earnings from equity method investments	(42,625)	(28,142)
Other non-cash items, net	474	192
Changes in operating assets and liabilities:		
Receivables and related party receivables	4,044	(64)
Prepaid expenses and other assets	47	(375)
Costs incurred on uncompleted contracts	—	15,945
Inventories	3,794	—
Deferred tax assets, net	4,097	(246)
Other long-term assets	1,470	—
Accounts payable	(758)	323
Accrued payroll and related liabilities	(4,829)	152
Other current liabilities	862	(1,505)
Billings on uncompleted contracts	—	(15,945)
Operating lease liabilities	(1,563)	—
Other long-term liabilities	(462)	(135)
Distributions from equity method investees, return on investment	38,088	2,700
Net cash provided by (used in) operating activities	30,572	(3,447)

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

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

(in thousands)	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	$ —	$ 25,500
Acquisition of business	(661)	—
Acquisition of property, plant, equipment, and intangible assets	(3,797)	(131)
Mine development costs	(521)	—
Contributions to equity method investees	—	(750)
Net cash (used in) provided by investing activities	(4,979)	24,619
Cash flows from financing activities		
Principal payments on term loan	(16,000)	—
Principal payments on finance lease obligations	(681)	—
Dividends paid	(9,179)	(10,216)
Repurchase of common shares	(2,831)	(9,111)
Repurchase of common shares to satisfy tax withholdings	(254)	(359)
Net cash used in financing activities	(28,945)	(19,686)
(Decrease) increase in Cash and Cash Equivalents and Restricted Cash	(3,352)	1,486
Cash and Cash Equivalents and Restricted Cash, beginning of period	23,772	30,693
Cash and Cash Equivalents and Restricted Cash, end of period	$ 20,420	$ 32,179
Supplemental disclosure of non-cash investing and financing activities:		
Acquisition of property, plant and equipment through accounts payable	$ 1,561	$ —
Dividends declared, not paid	$ 113	$ 63

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended June 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 June 30,		Six Months Ended June 30,	
(in thousands)	**2019**	**2018**	**2019**	**2018**
Net income	$ 8,114	$ 15,291	$ 22,516	$ 22,953
Depreciation, amortization, depletion and accretion	757	72	2,859	188
Interest expense, net	1,921	383	3,956	686
Income tax expense (benefit)	6,634	(1,349)	8,333	1,220
Consolidated EBITDA	$ 17,426	$ 14,397	$ 37,664	$ 25,047