UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF

THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2019

Commission File Number: 001-33480

CLEAN ENERGY FUELS CORP.

(Exact name of registrant as specified in its charter)

Delaware	**33-0968580**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

4675 MacArthur Court, Suite 800, Newport Beach, CA 92660

(Address of principal executive offices, including zip code)

(949) 437-1000

(Registrant’s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.0001 par value per share	CLNE	Nasdaq Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer x
Non-accelerated filer o	Smaller reporting company o
	Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x

As of November 5, 2019, there were 204,723,055 shares of the registrant’s common stock, par value $0.0001 per share, issued and outstanding.

CLEAN ENERGY FUELS CORP. AND SUBSIDIARIES

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Unless the context indicates otherwise, all references to "Clean Energy," the "Company," "we," "us," or "our" in this report refer to Clean Energy Fuels Corp. together with its consolidated subsidiaries.

This report contains forward-looking statements. See the cautionary note regarding these statements in Part I, Item 2.-Management's Discussion and Analysis of Financial Condition and Results of Operations of this report.

We own registered or unregistered trademark or service mark rights to Redeem™, NGV Easy Bay™, Clean Energy™, Clean Energy Renewables™, and Clean Energy Cryogenics™. Although we do not use the "®" or "™" symbol in each instance in which one of our trademarks appears in this report, this should not be construed as any indication that we will not assert our rights thereto to the fullest extent under applicable law. Any other service marks, trademarks and trade names appearing in this report are the property of their respective owners.

PART I.—FINANCIAL INFORMATION

Item 1.—Financial Statements (Unaudited)

Clean Energy Fuels Corp. and Subsidiaries
Condensed Consolidated Balance Sheets
(In thousands, except share and per share data; Unaudited)

	December 31, 2018	September 30, 2019
Assets		
Current assets:		
Cash, cash equivalents and current portion of restricted cash	$ 30,624	$ 32,855
Short-term investments	65,646	66,755
Accounts receivable, net of allowance for doubtful accounts of $1,919 and $2,247 as of December 31, 2018 and September 30, 2019, respectively	68,865	65,349
Other receivables	15,544	9,110
Derivative assets, related party	1,508	931
Inventory	34,975	31,040
Prepaid expenses and other current assets	8,444	9,538
Total current assets	225,606	215,578
Operating lease right-of-use assets	—	24,043
Land, property and equipment, net	350,568	322,870
Long-term portion of restricted cash	4,000	4,848
Notes receivable and other long-term assets, net	17,470	21,106
Long-term portion of derivative assets, related party	8,824	5,742
Investments in other entities	26,079	25,870
Goodwill	64,328	64,328
Intangible assets, net	2,207	1,461
Total assets	$ 699,082	$ 685,846
Liabilities and Stockholders' Equity		
Current liabilities:		
Current portion of debt	$ 4,712	$ 55,397
Current portion of finance lease obligations	693	642
Current portion of operating lease obligations	—	3,176
Accounts payable	19,024	13,972
Accrued liabilities	48,469	41,399
Deferred revenue	7,361	6,855
Total current liabilities	80,259	121,441
Long-term portion of debt	75,003	24,044
Long-term portion of finance lease obligations	3,776	3,140
Long-term portion of operating lease obligations	—	21,901
Other long-term liabilities	15,035	12,853
Total liabilities	174,073	183,379
Commitments and contingencies (Note 17)		
Stockholders' equity:		
Preferred stock, $0.0001 par value. Authorized 1,000,000 shares; no shares issued and outstanding	—	—
Common stock, $0.0001 par value. Authorized 304,000,000 shares; issued and outstanding 203,599,892 shares and 204,719,995 shares as of December 31, 2018 and September 30, 2019, respectively	20	20
Additional paid-in capital	1,198,769	1,202,339
Accumulated deficit	(688,653)	(709,316)
Accumulated other comprehensive loss	(2,138)	(2,058)
Total Clean Energy Fuels Corp. stockholders' equity	507,998	490,985
Noncontrolling interest in subsidiary	17,011	11,482
Total stockholders' equity	525,009	502,467
Total liabilities and stockholders' equity	$ 699,082	$ 685,846

See accompanying notes to condensed consolidated financial statements.

Clean Energy Fuels Corp. and Subsidiaries

Condensed Consolidated Statements of Operations

(In thousands, except share and per share data; Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2019**	**2018**	**2019**
Revenue:				
Product revenue	$ 67,441	$ 62,808	$ 220,812	$ 190,947
Service revenue	9,879	11,626	29,378	33,503
Total revenue	77,320	74,434	250,190	224,450
Operating expenses:				
Cost of sales (exclusive of depreciation and amortization shown separately below):				
Product cost of sales	48,063	43,145	139,658	137,696
Service cost of sales	4,743	6,787	13,595	18,674
Change in fair value of derivative warrants	(9)	(10)	(101)	1,587
Selling, general and administrative	18,405	17,640	57,202	54,007
Depreciation and amortization	13,363	12,247	39,496	37,331
Total operating expenses	84,565	79,809	249,850	249,295
Operating income (loss)	(7,245)	(5,375)	340	(24,845)
Interest expense	(4,096)	(1,704)	(13,126)	(5,437)
Interest income	1,129	560	2,193	1,707
Other income (expense), net	(193)	165	(126)	2,928
(Loss) income from equity method investments	(542)	377	(2,739)	(123)
Loss from formation of equity method investment	(1,163)	—	(1,163)	—
Loss before income taxes	(12,110)	(5,977)	(14,621)	(25,770)
Income tax expense	(89)	(68)	(266)	(194)
Net loss	(12,199)	(6,045)	(14,887)	(25,964)
Loss attributable to noncontrolling interest	1,300	1,711	4,235	5,301
Net loss attributable to Clean Energy Fuels Corp.	$ (10,899)	$ (4,334)	$ (10,652)	$ (20,663)
Loss per share:				
Basic and diluted	$ (0.05)	$ (0.02)	$ (0.06)	$ (0.10)
Weighted-average common shares outstanding:				
Basic and diluted	203,469,222	204,712,888	172,946,896	204,522,984

See accompanying notes to condensed consolidated financial statements.

Clean Energy Fuels Corp. and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income (Loss)

(In thousands; Unaudited)

	Clean Energy Fuels Corp. Three Months Ended September 30,		Noncontrolling Interest Three Months Ended September 30,		Total Three Months Ended September 30,	
	2018	2019	2018	2019	2018	2019
Net loss	$ (10,899)	$ (4,334)	$ (1,300)	$ (1,711)	$ (12,199)	$ (6,045)
Other comprehensive income (loss), net of tax:						
Foreign currency translation adjustments, net of $0 tax in 2018 and 2019	59	(623)	—	—	59	(623)
Unrealized gains on available-for-sale securities, net of $0 tax in 2018 and 2019	56	5	—	—	56	5
Total other comprehensive income (loss)	115	(618)	—	—	115	(618)
Comprehensive loss	$ (10,784)	$ (4,952)	$ (1,300)	$ (1,711)	$ (12,084)	$ (6,663)

	Clean Energy Fuels Corp. Nine Months Ended September 30,		Noncontrolling Interest Nine Months Ended September 30,		Total Nine Months Ended September 30,	
	2018	2019	2018	2019	2018	2019
Net loss	$ (10,652)	$ (20,663)	$ (4,235)	$ (5,301)	$ (14,887)	$ (25,964)
Other comprehensive income (loss), net of tax:						
Foreign currency translation adjustments, net of $0 tax in 2018 and 2019	(45)	7	—	—	(45)	7
Unrealized gains on available-for-sale securities, net of $0 tax in 2018 and 2019	659	73	—	—	659	73
Total other comprehensive income	614	80	—	—	614	80
Comprehensive loss	$ (10,038)	$ (20,583)	$ (4,235)	$ (5,301)	$ (14,273)	$ (25,884)

See accompanying notes to condensed consolidated financial statements.

Clean Energy Fuels Corp. and Subsidiaries

Condensed Consolidated Statements of Stockholders' Equity

(In thousands; except share data)

	Common Stock						
	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interest in Subsidiary	Total Stockholders' Equity
Balance, December 31, 2017	151,650,969	$ 15	$ 1,111,432	$ (683,570)	$ (887)	$ 22,668	$ 449,658
Cumulative effect of adopting ASU 2014-09	—	—	—	(1,293)	—	—	(1,293)
Balance, January 1, 2018	151,650,969	15	1,111,432	(684,863)	(887)	22,668	448,365
Issuance of common stock, net of offering costs	863,581	—	110	—	—	—	110
Stock-based compensation	—	—	1,898	—	—	—	1,898
Net income (loss)	—	—	—	12,222	—	(1,749)	10,473
Other comprehensive loss	—	—	—	—	(25)	—	(25)
Balance, March 31, 2018	152,514,550	15	1,113,440	(672,641)	(912)	20,919	460,821
Issuance of common stock, net of offering costs	50,916,228	5	80,753	—	—	—	80,758
Stock-based compensation	—	—	1,208	—	—	—	1,208
Net loss	—	—	—	(11,975)	—	(1,186)	(13,161)
Other comprehensive income	—	—	—	—	524	—	524
Balance, June30, 2018	203,430,778	20	1,195,401	(684,616)	(388)	19,733	530,150
Issuance of common stock, net of offering costs	42,199	—	113	—	—	—	113
Stock-based compensation	—	—	1,206	—	—	—	1,206
Net loss	—	—	—	(10,899)	—	(1,300)	(12,199)
Other comprehensive income	—	—	—	—	115	—	115
Balance, September 30, 2018	203,472,977	$ 20	$ 1,196,720	$ (695,515)	$ (273)	$ 18,433	$ 519,385

	Common Stock						
	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interest in Subsidiary	Total Stockholders' Equity
Balance, December 31, 2018	203,599,892	$ 20	$ 1,198,769	$ (688,653)	$ (2,138)	$ 17,011	$ 525,009
Issuance of common stock, net of offering costs	1,052,040	—	175	—	—	—	175
Stock-based compensation	—	—	1,246	—	—	—	1,246
Net loss	—	—	—	(10,946)	—	(1,879)	(12,825)
Other comprehensive income	—	—	—	—	374	—	374
Increase in ownership in subsidiary	—	—	228	—	—	(228)	—
Balance, March 31, 2019	204,651,932	20	1,200,418	(699,599)	(1,764)	14,904	513,979
Issuance of common stock, net of offering costs	3,214	—	4	—	—	—	4
Stock-based compensation	—	—	918	—	—	—	918
Net loss	—	—	—	(5,383)	—	(1,711)	(7,094)
Other comprehensive income	—	—	—	—	324	—	324
Balance, June 30, 2019	204,655,146	20	1,201,340	(704,982)	(1,440)	13,193	508,131
Issuance of common stock, net of offering costs	64,849	—	107	—	—	—	107
Stock-based compensation	—	—	892	—	—	—	892
Net loss	—	—	—	(4,334)	—	(1,711)	(6,045)
Other comprehensive loss	—	—	—	—	(618)	—	(618)
Balance, September 30, 2019	204,719,995	$ 20	$ 1,202,339	$ (709,316)	$ (2,058)	$ 11,482	$ 502,467

See accompanying notes to condensed consolidated financial statements.

Clean Energy Fuels Corp. and Subsidiaries

Condensed Consolidated Statements of Cash Flows

(In thousands; Unaudited)

	Nine Months Ended September 30,	
	2018	**2019**
Cash flows from operating activities:		
Net loss	$ (14,887)	$ (25,964)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization expense	39,496	37,331
Provision for doubtful accounts, notes and inventory	1,294	1,071
Stock-based compensation expense	4,312	3,056
Change in fair value of derivative instruments	(101)	4,854
Derivative settlement loss	—	(210)
Amortization of discount and debt issuance cost	55	(555)
Loss (gain) on disposal of property and equipment	1,210	(4,043)
Loss from formation of equity method investment	1,163	—
Loss from equity method investments	2,739	123
Right-of-use asset amortization	—	2,597
Changes in operating assets and liabilities:		
Accounts and other receivables	(6,605)	3,947
Inventory	(2,403)	2,799
Prepaid expenses and other assets	260	(4,593)
Operating lease liabilities	—	(3,053)
Accounts payable	(2,374)	(3,215)
Deferred revenue	2,790	(3,121)
Accrued expenses and other	2,055	(6,421)
Net cash provided by operating activities	29,004	4,603
Cash flows from investing activities:		
Purchases of short-term investments	(293,599)	(138,260)
Maturities and sales of short-term investments	340,284	137,896
Purchases of and deposits on property and equipment	(14,209)	(12,252)
Payments on and proceeds from sales of loans receivable	388	556
Cash received from sale of certain assets of subsidiary, net	871	4,973
Proceeds from disposal of property and equipment	530	6,569
Net cash provided by (used in) investing activities	34,265	(518)
Cash flows from financing activities:		
Issuances of common stock	83,433	286
Fees paid for issuances of common stock	(993)	—
Proceeds from debt instruments	8,243	3,694
Repayment of finance lease obligations and debt instruments	(31,066)	(5,066)
Payments for debt issuance costs	—	(29)
Net cash provided by (used in) financing activities	59,617	(1,115)
Effect of exchange rates on cash, cash equivalents and restricted cash	(74)	109
Net increase in cash, cash equivalents and restricted cash	122,812	3,079
Cash, cash equivalents and restricted cash, beginning of period	37,208	34,624
Cash, cash equivalents and restricted cash, end of period	$ 160,020	$ 37,703
Supplemental disclosure of cash flow information:		
Income taxes paid	$ 171	$ 36
Interest paid, net of approximately $169 and $391 capitalized, respectively	$ 9,182	$ 4,913

See accompanying notes to condensed consolidated financial statements.

Clean Energy Fuels Corp. and Subsidiaries

Notes to Condensed Consolidated Financial Statements

(Dollars in thousands, except per share and per gallon data; Unaudited)

Note 1—General

Nature of Business

Clean Energy Fuels Corp., together with its majority and wholly owned subsidiaries (hereinafter collectively referred to as the "Company," unless the context or the use of the term indicates or requires otherwise) is engaged in the business of selling natural gas as an alternative fuel for vehicle fleets and related natural gas fueling solutions to its customers, primarily in the United States and Canada.

The Company's principal business is supplying renewable natural gas ("RNG"), compressed natural gas ("CNG") and liquefied natural gas ("LNG") (RNG can be delivered in the form of CNG or LNG) for light, medium and heavy-duty vehicles and providing operation and maintenance ("O&M") services for public and private vehicle fleet customer stations. As a comprehensive solution provider, the Company also designs, builds, operates and maintains fueling stations; sells and services natural gas fueling compressors and other equipment used in CNG stations and LNG stations; offers assessment, design and modification solutions to provide operators with code-compliant service and maintenance facilities for natural gas vehicle fleets; transports and sells CNG and LNG via "virtual" natural gas pipelines and interconnects; procures and sells RNG; sells tradable credits it generates by selling RNG and conventional natural gas as a vehicle fuel, including Renewable Identification Numbers ("RIN Credits" or "RINs") under the federal Renewable Fuel Standard Phase 2 and credits under the California and the Oregon Low Carbon Fuel Standards (collectively, "LCFS Credits"); helps its customers acquire and finance natural gas vehicles; and obtains federal, state and local credits, grants and incentives.

Basis of Presentation

The accompanying interim unaudited condensed consolidated financial statements include the accounts of the Company and its subsidiaries, and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to state fairly the Company's consolidated financial position as of September 30, 2019, results of operations, comprehensive income (loss), and stockholders' equity for the three and nine months ended September 30, 2018 and 2019, and cash flows for the nine months ended September 30, 2018 and 2019. All intercompany accounts and transactions have been eliminated in consolidation. The results of operations for the three and nine month periods ended September 30, 2018 and 2019 are not necessarily indicative of the results to be expected for the year ending December 31, 2019 or for any other interim period or for any future year.

Certain information and disclosures normally included in the notes to consolidated financial statements have been condensed or omitted pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"), but the resultant disclosures contained herein are in accordance with accounting principles generally accepted in the United States of America ("US GAAP") as they apply to interim reporting. The accompanying condensed consolidated financial statements should be read in conjunction with the consolidated financial statements as of and for the year ended December 31, 2018 that are included in the Company's Annual Report on Form 10-K filed with the SEC on March 12, 2019.

Reclassifications

Certain prior period amounts have been reclassified in the condensed consolidated balance sheets, condensed consolidated statements of operations, and condensed consolidated statements of cash flows to conform to the current period presentation. These reclassifications had no material effect on the Company's consolidated financial position, results of operations, or cash flows as previously reported.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the amounts reported in the accompanying condensed consolidated financial statements and these notes. Actual results could differ from those estimates and may result in material effects on the Company's operating results and financial position. Significant estimates made in preparing the accompanying condensed consolidated financial statements include (but are not limited to) those related to revenue recognition, fair value measurements, goodwill and long-lived asset valuations and impairment assessments, income tax valuations and stock-based compensation expense.

Note 2—Revenue from Contracts with Customers

Revenue Recognition Overview

The Company recognizes revenue when control of the promised goods or services is transferred to its customers, in an amount that reflects the consideration to which it expects to be entitled in exchange for the goods or services. To achieve that core principle, a five-step approach is applied: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue allocated to each performance obligation when the Company satisfies the performance obligation. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account for revenue recognition.

The Company is generally the principal in its customer contracts because it has control over the goods and services prior to them being transferred to the customer, and as such, revenue is recognized on a gross basis. Sales and usage-based taxes are excluded from revenues. Revenue is recognized net of allowances for returns and any taxes collected from customers, which are subsequently remitted to governmental authorities. The table below presents the Company's revenue disaggregated by revenue source.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Volume -related [1]	$ 67,827	$ 67,869	$ 197,805	$ 208,667
Station construction sales	9,359	6,431	20,938	15,544
Alternative fuels excise tax credit ("AFTC")	—	—	26,863	—
Other	134	134	4,584	239
Total revenue	$ 77,320	$ 74,434	$ 250,190	$ 224,450

[1] Includes changes in fair value of derivative instruments related to the Company's commodity swap and customer fueling contracts. The amounts are classified as revenue because the Company's commodity swap contracts are used to economically offset the risk associated with the diesel-to-natural gas price spread resulting from customer fueling contracts under the Company's *Zero Now* truck financing program. See Note 6 for more information about these derivative instruments. For the three and nine months ended September 30, 2019, changes in the fair value of commodity swaps and customer fueling contracts amounted to a gain of $1,129 and a loss of $3,267, respectively.

Remaining Performance Obligations

Remaining performance obligations represent the transaction price of customer orders for which the work has not been performed. As of September 30, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations was $9,992, which related to the Company's station construction sale contracts. The Company expects to recognize revenue on the remaining performance obligations under these contracts over the next 12 to 24 months.

For volume -related revenue, the Company has elected to apply an optional exemption, which waives the requirement to disclose the remaining performance obligation for revenue recognized through the 'right to invoice' practical expedient.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) in the accompanying condensed consolidated balance sheets. Changes in the contract asset and liability balances during the nine months ended September 30, 2019, were not materially affected by any factors outside the normal course of business.

As of December 31, 2018 and September 30, 2019, the Company's contract balances were as follows:

	December 31, 2018	September 30, 2019
Accounts receivable, net	$ 68,865	$ 65,349
Contract Assets - Current	$ 656	$ 1,924
Contract Assets - Noncurrent	3,825	3,568
Contract Assets - Total	$ 4,481	$ 5,492
Contract Liabilities - Current	$ 5,513	$ 4,365
Contract Liabilities - Noncurrent	9,844	7,229
Contract Liabilities - Total	$ 15,357	$ 11,594

Accounts Receivable, Net

"Accounts receivable, net" in the accompanying condensed consolidated balance sheets include amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value. The Company maintains an allowance for doubtful accounts to provide for the estimated amount of receivables that will not be collected. The allowance is based upon an assessment of customer creditworthiness, historical payment experience, and the age of outstanding receivables.

Contract Assets

Contract assets include unbilled amounts typically resulting from the Company's station construction sale contracts, when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts may not exceed their net realizable value. Contract assets are classified as current or noncurrent based on the timing of billings. The current portion is included in "Prepaid expenses and other current assets" and the noncurrent portion is included in "Notes receivable and other long-term assets, net" in the accompanying condensed consolidated balance sheets.

Contract Liabilities

Contract liabilities consist of billings in excess of revenue recognized from the Company's station construction sale contracts and payments received primarily from a customer of NG Advantage, LLC ("NG Advantage") in advance of the performance obligations. Deferred revenue is classified as current or noncurrent based on when the revenue is expected to be recognized. The current portion and noncurrent portion of deferred revenue are included in "Deferred revenue" and "Other long -term liabilities," respectively, in the accompanying condensed consolidated balance sheets.

Revenue recognized during the nine months ended September 30, 2018 related to the Company's contract liability balances as of December 31, 2017 was $1,636. The decrease in the contract liability balances for the nine months ended September 30, 2019 is primarily driven by billings in excess of revenue recognized, offset by $4,418 of revenue recognized related to the Company's contract liability balances as of December 31, 2018.

Note 3— Investments in Other Entities and Noncontrolling Interest in a Subsidiary

SAFE&CEC S.r.l.

On November 26, 2017, the Company, through its former subsidiary IMW Industries Ltd. (formerly known as Clean Energy Compression Corp.) ("CEC"), entered into an investment agreement with Landi Renzo S.p.A. ("LR"), an alternative fuels company based in Italy. Pursuant to the investment agreement, the Company and LR agreed to combine their respective natural gas fueling compressor manufacturing subsidiaries, CEC and SAFE S.p.A, in a new company known as "SAFE&CEC S.r.l." (such combination transaction is referred to as the "CEC Combination"). SAFE&CEC S.r.l. is focused on manufacturing, selling and servicing natural gas fueling compressors and related equipment for the global natural gas fueling market. As of the closing of the CEC Combination on December 29, 2017, the Company owns 49% of SAFE&CEC S.r.l. and LR owns 51% of SAFE&CEC S.r.l.

The Company accounts for its interest in SAFE&CEC S.r.l. using the equity method of accounting because the Company does not control but has the ability to exercise significant influence over SAFE&CEC S.r.l.'s operations. The Company recorded a loss of $817 and income of $415 from this investment for the three months ended September 30, 2018 and 2019, respectively, and a loss of $2,964 and $31 for the nine months ended September 30, 2018 and 2019, respectively. The Company has an investment balance in SAFE&CEC S.r.l. of $23,372 and $23,255 as of December 31, 2018 and September 30, 2019, respectively.

NG Advantage

On October 14, 2014, the Company entered into a Common Unit Purchase Agreement ("UPA") with NG Advantage for a 53.3% controlling interest in NG Advantage. NG Advantage is engaged in the business of transporting CNG in high-capacity trailers to industrial and institutional energy users, such as hospitals, food processors, manufacturers and paper mills that do not have direct access to natural gas pipelines.

NG Advantage has entered into an arrangement with BP Products North America ("BP") for the supply, sale and reservation of a specified volume of CNG transportation capacity until March 2022. On February 28, 2018, the Company entered into a guaranty agreement with NG Advantage and BP pursuant to which the Company guarantees NG Advantage's payment obligations to BP in the event of default by NG Advantage under the supply arrangement, in an amount up to an aggregate of $30,000 plus related fees. This guaranty is in effect until thirty days following the Company's notice to BP of its termination. As initial consideration for the guaranty agreement, NG Advantage issued to the Company 19,660 common units, which increased the Company's controlling interest in NG Advantage from 53.3% to 53.5%.

On October 1, 2018, the Company purchased 1,000,001 common units from NG Advantage for an aggregate cash purchase price of $5,000. This purchase increased Clean Energy's controlling interest in NG Advantage from 53.5% to 61.7%.

In each month from November 2018 through February 2019, the Company was issued 100,000 additional common units of NG Advantage, for a total of 400,000 common units, pursuant to the guaranty agreement entered in February 2018. The issuance of 400,000 additional common units increased the Company's controlling interest in NG Advantage to 64.6% as of September 30, 2019.

On February 15, 2019, NG Advantage and the Company entered into a transaction pursuant to which the Company agreed to lend to NG Advantage up to $5,000 in accordance with the terms of a delayed draw convertible promissory note (the "2019 Note"). NG Advantage simultaneously drew $2,500 under the 2019 Note, and on April 15, 2019, NG Advantage drew the remaining $2,500 under the 2019 Note. As discussed below, on June 28, 2019, all unpaid principal and accrued interest under the 2019 Note was subsumed within the 2019 Convertible Note (as defined below).

On May 17, 2019, the Company agreed to lend to NG Advantage up to $500 in accordance with the terms of a promissory note (the "2019 Bridge Loan"). On June 11, 2019, NG Advantage drew $144 under the 2019 Bridge Loan. As discussed below, on June 28, 2019, all unpaid principal and accrued interest under the 2019 Bridge Loan was subsumed within the 2019 Convertible Note.

On June 28, 2019, the Company agreed to lend to NG Advantage up to $15,188 in accordance with the terms of a delayed draw convertible promissory note (the "2019 Convertible Note"). NG Advantage simultaneously drew $3,500 under the 2019 Convertible Note. The outstanding principal and accrued interest under the 2019 Note and 2019 Bridge Loan were incorporated into the 2019 Convertible Note, which resulted in the cancellation of the 2019 Note and 2019 Bridge Loan. All outstanding principal under the 2019 Convertible Note bears interest at a rate of 12.0% per annum, and all unpaid principal and accrued interest under the 2019 Convertible Note is due on the earlier of December 31, 2019, subject to extension at the Company's discretion, or the occurrence of an event of default (subject to notice requirements and cure periods in certain circumstances). In connection with the 2019 Convertible Note, NG Advantage issued to the Company a warrant to purchase 86,879 common units. During the three months ended September 30, 2019, NG Advantage drew an additional $4,400 under the 2019 Convertible Note. As of September 30, 2019, NG Advantage had an outstanding balance of $13,088 under the 2019 Convertible Note. This intercompany transaction has been eliminated in consolidation.

On October 1, 2019, NG Advantage drew an additional $1,000 under the 2019 Convertible Note.

The Company recorded a loss attributable to the noncontrolling interest in NG Advantage of $1,300 and $1,711 for the three months ended September 30, 2018 and 2019, respectively and $4,235 and $5,301 for the nine months ended September 30, 2018 and 2019, respectively. The value of the noncontrolling interest was $17,011 and $11,482 as of December 31, 2018 and September 30, 2019, respectively.

Note 4—Cash, Cash Equivalents, and Restricted Cash

Cash, cash equivalents and restricted cash as of December 31, 2018 and September 30, 2019 consisted of the following:

	December 31, 2018	September 30, 2019
Current assets:		
Cash and cash equivalents	$ 29,844	$ 32,074
Restricted cash - standby letter of credit	30	31
Restricted cash - held in escrow	750	750
Total cash, cash equivalents and current portion of restricted cash	$ 30,624	$ 32,855
Long-term assets:		
Restricted cash - standby letter of credit	$ 4,000	$ 4,000
Restricted cash - held in escrow	—	848
Total long-term portion of restricted cash	$ 4,000	$ 4,848
Total cash, cash equivalents and restricted cash	$ 34,624	$ 37,703

The Company considers all highly liquid investments with maturities of three months or less on the date of acquisition to be cash equivalents.

The Company places its cash and cash equivalents with high credit quality financial institutions. At times, such investments may be in excess of the Federal Deposit Insurance Corporation ("FDIC") and Canadian Deposit Insurance Corporation ("CDIC") limits. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash deposits. The amounts in excess of FDIC and CDIC limits were approximately $28,524 and $30,762 as of December 31, 2018 and September 30, 2019, respectively.

The Company classifies restricted cash as short-term and a current asset if the cash is expected to be used in operations within a year or to acquire a current asset. Otherwise, the restricted cash is classified as long-term.

Note 5—Short-term Investments

Short-term investments include available-for-sale debt securities and certificates of deposit. Available-for-sale debt securities are carried at fair value, inclusive of unrealized gains and losses. Unrealized gains and losses on available-for-sale debt securities are recognized in other comprehensive income, net of applicable income taxes. Gains or losses on sales of available-for-sale debt securities are recognized on the specific identification basis.

The Company reviews available-for-sale debt securities for other-than-temporary declines in fair value below their cost basis each quarter and whenever events or changes in circumstances indicate that the cost basis of an asset may not be recoverable. This evaluation is based on a number of factors, including the length of time and the extent to which the fair value has been below its cost basis and adverse conditions related specifically to the security, including any changes to the credit rating of the security. As of September 30, 2019, the Company believes the carrying values for its available-for-sale debt securities are properly recorded.

Short-term investments as of December 31, 2018 consisted of the following:

	Amortized Cost	Gross Unrealized Losses	Estimated Fair Value
Municipal bonds and notes	$ 9,210	$ (19)	$ 9,191
Zero coupon bonds	29,823	(28)	29,795
Corporate bonds	26,175	(22)	26,153
Certificates of deposit	507	—	507
Total short-term investments	$ 65,715	$ (69)	$ 65,646

Short-term investments as of September 30, 2019 consisted of the following:

	Amortized Cost	Gross Unrealized Gains (Losses)	Estimated Fair Value
Municipal bonds and notes	$ 2,986	$ —	$ 2,986
Zero coupon bonds	32,875	6	32,881
Corporate bonds	30,372	(2)	30,370
Certificates of deposit	518	—	518
Total short-term investments	$ 66,751	$ 4	$ 66,755

Note 6 - Derivative Instruments and Hedging Activities

In October 2018, the Company executed two commodity swap contracts with Total Gas & Power North America, an affiliate of TOTAL and THUSA (as defined in Notes 15 and 12, respectively), for a total of 5.0 million diesel gallons annually from April 1, 2019 to June 30, 2024. These commodity swap contracts are used to manage diesel price fluctuation risks related to the natural gas fuel supply commitments the Company makes in its fueling agreements with fleet operators that participate in the *Zero Now* truck financing program. These contracts are not designated as accounting hedges and as a result, changes in the fair value of these derivative instruments are recognized in "Product revenue" in the accompanying condensed consolidated statements of operations.

During the nine months ended September 30, 2019, the Company entered into fueling agreements with fleet operators under the *Zero Now* truck financing program. The fueling agreements contain a pricing feature indexed to diesel, which the Company determined to be embedded derivatives and recorded at fair value at the time of execution, with the changes in fair value of the embedded derivatives recognized as earnings in "Product revenue" in the accompanying condensed consolidated statements of operations.

Derivatives as of December 31, 2018 consisted of the following:

	Gross Amounts Recognized	Gross Amounts Offset	Net Amount Presented
Assets:			
Commodity swaps:			
Current portion of derivative assets, related party	$ 1,508	$ —	$ 1,508
Long-term portion of derivative assets, related party	8,824	—	8,824
Total derivative assets	$ 10,332	$ —	$ 10,332

Derivatives and embedded derivatives as of September 30, 2019 consisted of the following:

	Gross Amounts Recognized		Gross Amounts Offset		Net Amount Presented	
Assets:						
Commodity swaps:						
Current portion of derivative assets, related party	$	931	$	—	$	931
Long-term portion of derivative assets, related party		5,742		—		5,742
Fueling agreements:						
Prepaid expenses and other current assets		170		—		170
Notes receivable and other long-term assets, net		432		—		432
Total derivative assets	$	7,275	$	—	$	7,275

As of December 31, 2018 and September 30, 2019, the Company had a total volume on open commodity swap contracts of 25.0 million and 23.1 million diesel gallons at a weighted -average price of approximately $3.18 and $2.65 per gallon, respectively.

The following table reflects the weighted-average price of open commodity swap contracts as of December 31, 2018 and September 30, 2019, by year with associated volumes, respectively:

	December 31, 2018			September 30, 2019		
Year	Volumes (Diesel Gallons)	Weighted-Average Price per Diesel Gallon		Volumes (Diesel Gallons)	Weighted-Average Price per Diesel Gallon	
2019	3,125,000	$	3.18	1,250,000	$	2.73
2020	5,000,000	$	3.18	4,986,000	$	2.68
2021	5,000,000	$	3.18	5,000,000	$	2.68
2022	5,000,000	$	3.18	5,000,000	$	2.68
2023	5,000,000	$	3.18	5,000,000	$	2.68
2024	1,875,000	$	3.18	1,870,000	$	2.38

Note 7—Fair Value Measurements

The Company follows the authoritative guidance for fair value measurements with respect to assets and liabilities that are measured at fair value on a recurring basis and non-recurring basis. Under the standard, fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants, as of the measurement date. The standard also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The hierarchy consists of the following three levels: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly; Level 3 inputs are unobservable inputs for the asset or liability. Categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company's available-for-sale debt securities and certificate of deposits are classified within Level 2 because they are valued using the most recent quoted prices for identical assets in markets that are not active and quoted prices for similar assets in active markets.

The Company used the income approach to value its outstanding commodity swap contracts and embedded derivatives in its fueling agreements under the *Zero Now* truck financing program (see Note 6). Under the income approach, the Company used a discounted cash flow ("DCF") model in which cash flows anticipated over the term of the contracts are discounted to their present value using an expected discount rate. The discount rate used for cash flows reflects the specific risks in spot and forward rates and credit valuation adjustments. This valuation approach is considered a Level 3 fair value measurement. The significant unobservable inputs used in the fair value measurement of the Company's derivative instruments are Ultra-Low Sulfur Diesel ("ULSD") forward prices and differentials from ULSD to Petroleum Administration for Defense District ("PADD") regions. Significant increases (decreases) in any of those inputs in isolation would result in a significantly lower (higher) fair value measurement. Generally, a change in the ULSD forward prices is accompanied by a directionally opposite but less extreme change in the ULSD-PADD differential.

The Company estimated the fair value of its outstanding commodity swap contracts based on the following inputs as of December 31, 2018 and September 30, 2019, respectively:

	December 31, 2018		September 30, 2019	
Significant Unobservable Inputs	**Input Range**	**Weighted Average**	**Input Range**	**Weighted Average**
ULSD Gulf Coast Forward Curve	\$1.71 - \$1.79	\$1.75	\$1.69 - \$1.75	\$1.72
Historical Differential to PADD 3 Diesel	\$0.76 - \$1.16	\$0.89	\$0.76 - \$1.16	\$0.91
Historical Differential to PADD 5 Diesel	\$1.22 - \$2.12	\$1.55	\$1.25 - \$2.30	\$1.72

The Company estimated the fair value of embedded derivatives in its fueling agreements under the *Zero Now* truck financing program based on the following inputs as of September 30, 2019:

	September 30, 2019	
Significant Unobservable Inputs	**Input Range**	**Weighted Average**
ULSD Gulf Coast Forward Curve	\$1.69 - \$1.75	\$1.72
Historical Differential to PADD 5 Diesel	\$1.25 - \$2.30	\$1.72
Historical Differential to PADD 1B Diesel	\$1.00 - \$1.60	\$1.28

The Company's liability-classified warrants (or "derivative warrants"), which were all issued by NG Advantage, are classified within Level 3 because the Company uses the Black-Scholes option pricing model to estimate the fair value based on inputs that are not observable in any market.

There were no transfers of assets or liabilities between Level 1, Level 2, or Level 3 of the fair value hierarchy as of December 31, 2018 or September 30, 2019.

The following tables provide information by level for assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2018 and September 30, 2019, respectively:

	December 31, 2018	Level 1	Level 2	Level 3
Assets:				
Available-for-sale securities [1]:				
Municipal bonds and notes	\$ 9,191	\$ —	\$ 9,191	\$ —
Zero coupon bonds	29,795	—	29,795	—
Corporate bonds	26,153	—	26,153	—
Certificates of deposit [1]	507	—	507	—
Commodity swap contracts [2]	10,332	—	—	10,332
Embedded derivatives [3]	—	—	—	—
Liabilities:				
Warrants [4]	\$ 1,079	\$ —	\$ —	\$ 1,079

	September 30, 2019	Level 1	Level 2	Level 3
Assets:				
Available-for-sale debt securities [1]:				
Municipal bonds and notes	$ 2,986	$ —	$ 2,986	$ —
Zero coupon bonds	32,881	—	32,881	—
Corporate bonds	30,370	—	30,370	—
Certificates of deposit [1]	518	—	518	—
Commodity swap contracts [2]	6,673	—	—	6,673
Embedded derivatives [3]	602	—	—	602
Liabilities:				
Warrants [4]	$ 2,666	$ —	$ —	$ 2,666

[1] Included in "Short-term investments" in the accompanying condensed consolidated balance sheets. See Note 5 for more information.

[2] Included in "Derivative assets, related party" and "Long-term portion of derivative assets, related party" in the accompanying condensed consolidated balance sheets. See Note 6 for more information.

[3] Included in "Prepaid expenses and other current assets" and "Notes receivable and other long-term assets, net" in the accompanying condensed consolidated balance sheets. See Note 6 for more information.

[4] Included in "Other long-term liabilities" in the accompanying condensed consolidated balance sheets.

The following table provides a reconciliation of the beginning and ending balances of items measured at fair value on a recurring basis as shown in the tables above that used significant unobservable inputs (Level 3):

	Assets: Commodity Swap Contracts	Assets: Embedded Derivatives	Liabilities: Warrants
Balance as of December 31, 2017	$ —	$ —	$ (536)
Gain (loss) included in earnings	—	—	101
Balance as of September 30, 2018	$ —	$ —	$ (435)
Balance as of December 31, 2018	$ 10,332	$ —	$ (1,079)
Settlements, net	210	—	—
Gain (loss) included in earnings	(3,869)	602	(1,587)
Balance as of September 30, 2019	$ 6,673	$ 602	$ (2,666)

Other Financial Assets and Liabilities

The carrying amounts of the Company’s cash, cash equivalents and restricted cash, receivables and payables approximate fair value due to the short-term nature of those instruments. The carrying amounts of the Company’s debt instruments approximated their respective fair values as of December 31, 2018 and September 30, 2019. The fair values of these debt instruments were estimated using a DCF analysis based on interest rates offered on loans with similar terms to borrowers of similar credit quality, which are Level 3 inputs. See Note 12 for more information about the Company’s debt instruments.

Note 8—Other Receivables

Other receivables as of December 31, 2018 and September 30, 2019 consisted of the following:

	December 31, 2018	September 30, 2019
Loans to customers to finance vehicle purchases	$ 276	$ 1,587
Accrued customer billings	6,261	6,757
Fuel tax credits	434	169
Other	8,573	597
Total other receivables	$ 15,544	$ 9,110

Note 9—Inventory

Inventory consists of raw materials and spare parts, work in process and finished goods and is stated at the lower of cost (first-in, first-out) or net realizable value. The Company evaluates inventory balances for excess quantities and obsolescence by analyzing estimated demand, inventory on hand, sales levels and other information, and reduces inventory balances to net realizable value for excess and obsolete inventory based on this analysis.

Inventory as of December 31, 2018 and September 30, 2019 consisted of the following:

	December 31, 2018	September 30, 2019
Raw materials and spare parts	$ 34,890	$ 31,040
Finished goods	85	—
Total inventory	$ 34,975	$ 31,040

Note 10—Land, Property and Equipment

Land, property and equipment as of December 31, 2018 and September 30, 2019 consisted of the following:

	December 31, 2018	September 30, 2019
Land	$ 3,681	$ 3,595
LNG liquefaction plants	94,633	94,633
Station equipment	319,119	314,457
Trailers	75,901	75,317
Other equipment	97,268	99,235
Construction in progress	73,485	80,998
	664,087	668,235
Less: accumulated depreciation	(313,519)	(345,365)
Total land, property and equipment, net	$ 350,568	$ 322,870

Included in "Land, property and equipment, net" are capitalized software costs of $29,344 and $30,315 as of December 31, 2018 and September 30, 2019, respectively. Accumulated amortization of the capitalized software costs is $22,472 and $25,529 as of December 31, 2018 and September 30, 2019, respectively.

The Company recorded amortization expense related to the capitalized software costs of $1,026 and $961 for the three months ended September 30, 2018 and 2019, respectively, and $2,699 and $3,057 for the nine months ended September 30, 2018 and 2019, respectively.

As of September 30, 2018 and 2019, $1,660 and $2,181, respectively, are included in "Accounts payable" and "Accrued liabilities," which amounts are related to purchases of property and equipment. These amounts are excluded from the accompanying condensed consolidated statements of cash flows as they are non-cash investing activities.

Note 11—Accrued Liabilities

Accrued liabilities as of December 31, 2018 and September 30, 2019 consisted of the following:

	December 31, 2018	September 30, 2019
Accrued alternative fuels incentives	$ 6,923	$ 7,041
Accrued employee benefits	2,248	3,158
Accrued interest	78	190
Accrued gas and equipment purchases	12,833	9,205
Accrued property and other taxes	3,397	3,982
Accrued salaries and wages	8,609	6,624
Other	14,381	11,199
Total accrued liabilities	$ 48,469	$ 41,399

Note 12—Debt

Debt obligations as of December 31, 2018 and September 30, 2019 consisted of the following and are further discussed below:

	December 31, 2018		
	Principal Balances	Unamortized Debt Financing Costs	Balance, Net of Financing Costs
7.5% Notes	$ 50,000	$ 58	$ 49,942
NG Advantage debt	28,904	155	28,749
Other debt	1,024	—	1,024
Total debt	79,928	213	79,715
Less amounts due within one year	(4,811)	(99)	(4,712)
Total long-term debt	$ 75,117	$ 114	$ 75,003

	September 30, 2019		
	Principal Balances	Unamortized Debt Financing Costs	Balance Net of Financing Costs
7.5% Notes	$ 50,000	$ 27	$ 49,973
NG Advantage debt	28,426	112	28,314
SG Facility	300	—	300
Other debt	854	—	854
Total debt	79,580	139	79,441
Less amounts due within one year	(55,482)	(85)	(55,397)
Total long-term debt	$ 24,098	$ 54	$ 24,044

7.5% Notes

In June 2013, the Company issued notes (the “7.5% Notes”) to T. Boone Pickens and Green Energy Investment Holdings, LLC (“GEIH”) in the amount of $150,000. The 7.5% Notes bear interest at the rate of 7.5% per annum and are convertible at the option of the holder into shares of the Company’s common stock at a conversion price of $15.80 per share (the “7.5% Notes Conversion Price”). Upon written notice to the Company, each holder of a 7.5% Note has the right to exchange all or any portion of the principal and accrued and unpaid interest under its 7.5% Notes for shares of the Company's common stock at the 7.5% Notes Conversion Price. Additionally, subject to certain restrictions, the Company can force conversion of each 7.5% Note into shares of its common stock if such shares trade at a 40% premium to the 7.5% Notes Conversion Price for at least 20 trading days in any consecutive 30 trading day period.

The entire principal balance of each 7.5% Note is due and payable seven years following its original issuance and the Company may repay each 7.5% Note at maturity in shares of its common stock (provided that the Company may not issue more than 13,993,630 shares of its common stock to holders of 7.5% Notes) or cash. All of the shares issuable upon conversion of the 7.5% Notes have been registered for resale by their holders pursuant to a registration statement that has been filed with and declared effective by the SEC.

The 7.5% Notes include customary events of default which, if any of them occurs, would permit or require the principal of, and accrued interest on, the 7.5% Notes to become, or to be declared, due and payable. No events of default under the 7.5% Notes had occurred as of September 30, 2019.

Prior to January 1, 2018, (i) the Company purchased $25,000 of the 7.5% Notes from Mr. Pickens, (ii) Mr. Pickens transferred all remaining balance of his 7.5% Notes to third parties, and (iii) GEIH transferred $16,800 in principal amount of its 7.5% Notes to third parties.

On June 29, 2018, and pursuant to the consent of the holders of the 7.5% Notes to the Company's payments of amounts owed thereunder before maturity, the Company paid to the holders, in cash, an aggregate of $25,000 in principal amount and $505 in accrued and unpaid interest owed under all outstanding 7.5% Notes due July 2018. Upon such payment, the purchased 7.5% Notes were canceled in full.

On December 4, 2018, the Company purchased from the holders thereof all outstanding 7.5% Notes due July 2019, having an aggregate outstanding principal amount of $50,000, for a cash purchase price of $50,500. Upon such purchase, the purchased 7.5% Notes were canceled in full.

As a result of the foregoing transactions, as of September 30, 2019, (i) GEIH held 7.5% Notes in an aggregate principal amount of $32,906, and (ii) other third parties held 7.5% Notes in an aggregate principal amount of $17,094, all of which are due June 2020.

Plains Credit Facility

On February 29, 2016, the Company entered into a Loan and Security Agreement (the "Plains LSA") with PlainsCapital Bank ("Plains"), which, as amended on December 6, 2017, had a maturity date of September 30, 2019. Pursuant to the Plains LSA, Plains agreed to lend the Company up to $50,000 on a revolving basis from time to time (the "Credit Facility"). There was no activity or borrowings under this Credit Facility during the nine months ended September 30, 2018 and 2019, and there were no amounts outstanding under the Credit Facility as of September 30, 2019. The Credit Facility matured and was canceled on September 30, 2019.

Interest on the Plains Note was payable monthly and accrued at a rate equal to the greater of (i) the then-current LIBOR rate plus 2.30% or (ii) 2.70%. As collateral security for the prompt payment in full when due of the Company's obligations to Plains under the Plains LSA and the Plains Note, the Company pledged to and granted Plains a security interest in all of its right, title and interest in the cash and corporate and municipal bonds that the Company holds in an account at Plains. There were certain covenants and events of default associated with the Plains LSA. No events of default under the Plains LSA had occurred as of September 30, 2019.

SG Credit Agreement

On January 2, 2019, the Company entered into a term credit agreement (the "Credit Agreement") with Société Générale, a company incorporated as a société anonyme under the laws of France ("SG"). The Credit Agreement provides for a term loan facility (the "SG Facility") pursuant to which the Company may obtain, subject to certain conditions, up to $100,000 of loans ("SG Loans") in support of its *Zero Now* truck financing program. Under the Credit Agreement, the Company is permitted to use the proceeds from the SG Loans solely to fund the incremental cost of trucks purchased or financed under the *Zero Now* truck financing program and related fees and expenses incurred by the Company in connection therewith. Interest on outstanding SG Loans accrues at a rate equal to LIBOR plus 1.30% per annum, and a commitment fee on any unused portion of the SG Facility accrues at a rate equal to 0.39% per annum. Interest and commitment fees are payable quarterly.

The Credit Agreement does not include financial covenants, and the Company has not provided SG with any security for its obligations under the Credit Agreement. As described below, THUSA has entered into the Guaranty to guarantee the Company's payment obligations to SG under the Credit Agreement. As of September 30, 2019, the Company had $300 outstanding on the SG Facility and no events of defaults had occurred.

On October 31, 2019, the Company drew an additional $1,000 on the SG Facility.

TOTAL Credit Support Agreement

On January 2, 2019, the Company entered into a credit support agreement ("CSA") with Total Holdings USA Inc. ("THUSA"), a wholly owned subsidiary of TOTAL (as defined in Note 15). Under the CSA, THUSA agreed to enter into a guaranty agreement ("Guaranty") pursuant to which it has guaranteed the Company's obligation to repay to SG up to $100,000 in SG Loans and interest thereon in accordance with the Credit Agreement. In consideration for the commitments of THUSA under the CSA, the Company is required to pay THUSA a quarterly guaranty fee at a rate per quarter equal to 2.5% of the average aggregate Loan amount for the preceding calendar quarter.

As security for the Company's obligations under the CSA, on January 2, 2019, the Company entered into a pledge and security agreement with THUSA and delivered a collateral assignment of contracts to THUSA, pursuant to which the Company collaterally assigned to THUSA all fueling agreements it enters into with participants in the *Zero Now* truck financing program. In addition, on January 2, 2019, the Company entered into a lockbox agreement with THUSA and Plains, under which the Company granted THUSA a security interest in the cash flow generated by the fueling agreements the Company enters into with participants in the *Zero Now* truck financing program.

The CSA will terminate following the later of: the payment in full of all of the Company's obligations under the CSA; and the termination or expiration of the Guaranty following the maturity date of the last outstanding Loan or December 31, 2023, whichever is earlier.

NG Advantage Debt

On May 12, 2016 and January 24, 2017, respectively, NG Advantage entered into a Loan and Security Agreement (the "Commerce LSA") with Commerce Bank & Trust Company ("Commerce"), pursuant to which Commerce agreed to lend NG Advantage $6,300 and $6,150, respectively. The proceeds were primarily used to fund the purchases of CNG trailers and equipment. Interest and principal for both loans are payable monthly in 84 equal monthly installments at an annual rate of 4.41% and 5.0%, respectively. As collateral security for the prompt payment in full when due of NG Advantage's obligations to Commerce under the Commerce LSA, NG Advantage pledged to and granted Commerce a security interest in all of its right, title and interest in the CNG trailers and equipment purchased with the proceeds received under the Commerce LSA.

On November 30, 2016, NG Advantage entered into a Loan and Security Agreement (the "Wintrust LSA") with Wintrust Commercial Finance ("Wintrust"), pursuant to which Wintrust agreed to lend NG Advantage $4,695. The proceeds were primarily used to fund the purchases of CNG trailers and equipment. Interest and principal is payable monthly in 72 equal monthly installments at an annual rate of 5.17%. As collateral security for the prompt payment in full when due of NG Advantage's obligations to Wintrust under the Wintrust LSA, NG Advantage pledged to and granted Wintrust a security interest in all of its right, title and interest in the CNG trailers and equipment purchased with the proceeds received under the Wintrust LSA.

Financing Obligations

NG Advantage has entered into sale and leaseback transactions with various lessors as described below. In each instance, the sale and leaseback transaction does not qualify for sale-leaseback accounting because of NG Advantage's continuing involvement with the buyer-lessor due to a fixed price repurchase option. As a result, the transactions are recorded under the financing method, in which the assets remain on the accompanying condensed consolidated balance sheets and the proceeds from the transactions are recorded as financing liabilities.

On December 18, 2017, NG Advantage entered into a sale-leaseback arrangement through a Master Lease Agreement (the "BoA MLA") with Bank of America Leasing & Capital, LLC ("BoA"). Pursuant to the BoA MLA, NG Advantage received $2,117 in cash for CNG trailers and simultaneously leased them back from BoA for five years commencing January 1, 2018 with interest and principal payable in 60 equal monthly installments.

On March 1, 2018, NG Advantage entered into a sale-leaseback arrangement through a Master Lease Agreement (the "First National MLA") with First National Capital, LLC ("First National"). Pursuant to the First National MLA, NG Advantage received $6,261 in cash, net of fees and the first month's lease payment for CNG trailers and simultaneously leased them back from First National for six years commencing March 1, 2018 with interest and principal payable in 72 equal monthly installments.

On December 20, 2018 (the "Closing Date"), NG Advantage entered into a purchase agreement to sell a compression station for a purchase price of $7,000 to an entity whose member owners are noncontrolling interest member owners of NG Advantage. On the Closing Date and immediately following the consummation of the sale of the compression station, NG Advantage entered into a lease agreement with the buyer of the station (the "Lease") pursuant to which the station was leased back to NG Advantage for a term of five years with monthly rent payments equal to $70. Of the purchase price, NG Advantage received $4,730 in cash, net of fees, the first month's lease payment, and the repayment of a $2,000 promissory note from one of the member owners of the buyer, which was issued on November 19, 2018.

On January 17, 2019, NG Advantage entered into a sale-leaseback arrangement through a Master Lease Agreement (the "Nations MLA") with Nations Fund I, LLC ("Nations"). Pursuant to the Nations MLA, NG Advantage received $3,358 in cash, net of the first month's lease payment, for CNG trailers and simultaneously leased them back from Nations for four years commencing February 1, 2019 with interest and principal payable in 48 equal monthly installments.

Other Debt

The Company has other debt due at various dates through 2023 bearing interest at rates up to 5.02%, with weighted-average interest rates of 4.78% and 4.78% as of December 31, 2018 and September 30, 2019, respectively.

Note 13—Net Income (Loss) Per Share

Basic net income (loss) per share is computed by dividing the net income (loss) attributable to Clean Energy Fuels Corp. by the weighted-average number of common shares outstanding and common shares issuable for little or no cash consideration during the period. Diluted net income (loss) per share is computed by dividing the net income (loss) attributable to Clean Energy Fuels Corp. by the weighted-average number of common shares outstanding and common shares issuable for little or no cash consideration during the period and potentially dilutive securities outstanding during the period, and therefore reflects the dilution from common shares that may be issued upon exercise or conversion of these potentially dilutive securities, such as stock options, warrants, convertible notes and restricted stock units. The dilutive effect of stock awards and warrants is computed under the treasury stock method. The dilutive effect of convertible notes and restricted stock units is computed under the if-converted method. Potentially dilutive securities are excluded from the computations of diluted net income (loss) per share if their effect would be antidilutive.

The information required to compute basic and diluted net income (loss) per share is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Weighted-average common shares outstanding	203,469,222	204,712,888	172,946,896	204,522,984
Dilutive effect of potential common shares from restricted stock units and stock options	—	—	—	—
Weighted-average common shares outstanding - diluted	203,469,222	204,712,888	172,946,896	204,522,984

The following potentially dilutive securities have been excluded from the diluted net income (loss) per share calculations because their effect would have been antidilutive. Although these securities were antidilutive for these periods, they could be dilutive in future periods.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Stock options	9,417,492	10,051,402	9,417,492	10,051,402
Convertible notes	13,409,242	3,164,557	13,409,242	3,164,557
Restricted stock units	2,428,731	1,257,873	2,428,731	1,257,873
Total	25,255,465	14,473,832	25,255,465	14,473,832

Note 14—Stock-Based Compensation

The following table summarizes the compensation expense and related income tax benefit related to the Company's stock-based compensation arrangements recognized in the accompanying condensed consolidated statements of operations during the periods:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2019	2018	2019
Stock-based compensation expense, net of $0 tax in 2018 and 2019	$ 1,206	$ 892	$ 4,312	$ 3,056

As of September 30, 2019, there was $3,616 of total unrecognized compensation costs related to unvested shares subject to outstanding stock options and restricted stock units, which is expected to be expensed over a weighted-average period of approximately 1.51 years.

Note 15—Stockholders' Equity

Issuance of Common Stock

On May 9, 2018, the Company entered into a stock purchase agreement (the "Purchase Agreement") with Total Marketing Services, S.A. ("Total"), a wholly owned subsidiary of Total S.A. ("TOTAL"). Pursuant to the Purchase Agreement, the Company agreed to sell and issue, and Total agreed to purchase, up to 50,856,296 shares of the Company's common stock at a purchase price of $1.64 per share, in a private placement (the "Total Private Placement"). The purchase price per share was the volume-weighted average price for the Company's common stock between March 23, 2018 (the day on which discussions began between the Company and Total) and May 3, 2018 (the day on which the Company agreed in principle with Total regarding the structure and basic terms of its investment). As of the date of the Purchase Agreement, Total did not hold or otherwise beneficially own any shares of the Company's common stock, and Total has agreed, until the later of May 9, 2020 or such date when it ceases to hold more than 5.0% of the Company's common stock then outstanding, among other similar undertakings and subject to customary conditions and exceptions, to not purchase shares of the Company's common stock or otherwise pursue transactions that would result in Total beneficially owning more than 30.0% of the Company's equity securities without the approval of the Company's board of directors.

On June 13, 2018, the Company and Total closed the Total Private Placement, in which: (1) the Company issued to Total all of the 50,856,296 shares of its common stock issuable under the Purchase Agreement, resulting in Total holding approximately 25.0% of the outstanding shares of the Company's common stock and the largest ownership position of the Company as of September 30, 2019; (2) Total paid to the Company an aggregate of $83,404 in gross proceeds, which the Company has used and expects to continue to use for working capital and general corporate purposes, which may include executing its business plans, pursuing opportunities for further growth, and retiring a portion of its outstanding indebtedness; and (3) the Company and Total entered into a registration rights agreement, described below. In connection with the issuance of common stock, the Company incurred transaction fees of $1,909.

Pursuant to the Purchase Agreement, the Company and Total also entered into a registration rights agreement on June 13, 2018, upon the closing under the Purchase Agreement. Pursuant to the registration rights agreement, the Company filed a registration statement with the SEC to cover the resale of the shares issued and sold under the Purchase Agreement, which was declared effective on August 16, 2018, and is obligated to use its commercially reasonable efforts to maintain the effectiveness of such registration statement until all such shares are sold or may be sold without restriction under Rule 144 under the Securities Act of 1933, as amended. As of September 30, 2019, the Company was in compliance with all of its registration covenants set forth in the registration rights agreement.

Note 16—Income Taxes

The provision for income taxes for interim periods is determined using an estimate of the Company's annual effective tax rate, adjusted for discrete items, if any, that are taken into account in the relevant period. Each quarter, the Company updates the estimate of the annual effective tax rate, and if the estimated tax rate changes, a cumulative adjustment is recorded.

The Company's income tax expense was $89 and $68 for the three months ended September 30, 2018 and 2019, respectively, and $266 and $194 for the nine months ended September 30, 2018 and 2019, respectively. Tax expense for all periods was comprised of taxes due on the Company's U.S. and foreign operations. The decrease in the Company's income tax expense for the three and nine months ended September 30, 2019 as compared to the three and nine months ended September 30, 2018 was primarily due to a reduction in the Company's expected state tax expense. The effective tax rates for the three and nine months ended September 30, 2018 and 2019 are different from the federal statutory tax rate primarily due to losses for which no tax benefit has been recognized.

The Company increased its liability for unrecognized tax benefits in the nine months ended September 30, 2018 by $2,178. This increase is the portion of AFTC revenue recognized in the period attributed to the federal fuel tax the Company collected from its customers during the year ended December 31, 2017. The net interest incurred was immaterial for both the three and nine months ended September 30, 2018 and 2019, respectively.

Note 17—Commitments and Contingencies

Environmental Matters

The Company is subject to federal, state, local and foreign environmental laws and regulations. The Company does not anticipate any expenditures to comply with such laws and regulations that would have a material effect on the Company's consolidated financial position, results of operations or liquidity. The Company believes that its operations comply, in all material respects, with applicable federal, state, local and foreign environmental laws and regulations.

Litigation, Claims and Contingencies

The Company may become party to various legal actions that arise in the ordinary course of its business. The Company is also subject to audit by tax and other authorities for varying periods in various federal, state, local and foreign jurisdictions, and disputes may arise during the course of these audits. It is impossible to determine the ultimate liabilities that the Company may incur resulting from any of these lawsuits, claims, proceedings, audits, commitments, contingencies and related matters or the timing of these liabilities, if any. If these matters were to ultimately be resolved unfavorably, it is possible that such an outcome could have a material adverse effect upon the Company's consolidated financial position, results of operations, or liquidity. The Company does not, however, anticipate such an outcome and believes the ultimate resolution of these matters will not have a material adverse effect on the Company's consolidated financial position, results of operations, or liquidity.

Note 18—Leases

New Lease Accounting Standard (Topic 842)

On January 1, 2019, the Company adopted the new lease accounting standard (see Note 20 for more information on the standard and the effect of the adoption) whereby leases are now classified as either operating leases or finance leases. The Company's operating leases are comprised of real estate for fueling stations, office spaces, warehouses, a LNG liquefaction plant, and office equipment, and its finance leases are comprised of vehicles.

At the inception of a contract the Company assesses whether the contract is, or contains, a lease. The Company's assessment is based on: (1) whether the contract involves the use of a distinct identified asset, (2) whether the Company obtains the right to substantially all the economic benefit from the use of the asset throughout the period, and (3) whether the Company has the right to direct the use of the asset. The commencement date of the contract is the date the lessor makes the underlying asset available for use by the lessee.

Right-of-use ("ROU") assets represent the Company's right to use an underlying asset during the lease term and lease liabilities represent obligations to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date based on the net present value of fixed lease payments over the lease term. ROU assets also include any initial direct costs and advance lease payments made, and exclude lease incentives. Lease liabilities also include terminal purchase options when deemed reasonably certain to exercise. The Company's lease term includes options to extend when it is reasonably certain that it will exercise that option. The Company has elected not to recognize ROU assets and lease liabilities for short-term leases that have a term of 12 months or less; the Company recognizes lease expense for these leases on a straight-line basis over the lease term.

As most of the Company's operating leases do not have an implicit rate that can be readily determined, the Company uses its secured incremental borrowing rate for the same term as the underlying lease based on information available at lease commencement. For finance leases, the Company uses the rate implicit in the lease.

The lease classification affects the expense recognition on the condensed consolidated statements of operations. Operating lease charges are recorded in "Cost of sales, exclusive of depreciation and amortization," and "Selling, general and administrative" expense. Finance lease charges are split, whereby depreciation on assets under finance leases is recorded in "Depreciation and amortization" expense and an implied interest component is recorded in "Interest expense." The expense recognition for operating leases and finance leases is substantially consistent with legacy accounting.

The Company leased office space from the estate of T. Boone Pickens in Dallas, Texas. The lease, which expired in October 2019, called for monthly rental payments of $12.

NG Advantage has provided residual value guarantees on leases of certain vehicles aggregating $1,381 to the lessors. NG Advantage expects to owe these amounts in full and therefore they have been included in the measurement of the lease liabilities and ROU assets.

Certain of the Company's real estate leases contain variable lease payments, including payments based on a change in the index or gasoline gallon equivalents of natural gas dispensed at fueling stations. These variable lease payments cannot be determined at the commencement of the lease, are not included in the ROU assets and lease liabilities and are recorded as a period expense when incurred.

Lessee Accounting

As of September 30, 2019, the Company's finance and operating lease asset and liability balances were as follows:

		September 30, 2019
Finance leases:		
Land, property and equipment, gross	$	6,035
Accumulated depreciation		(2,072)
Land, property and equipment, net	$	3,963
Current portion of finance lease obligations	$	642
Long-term portion of finance lease obligations		3,140
Total finance lease liabilities	$	3,782
Operating leases:		
Operating lease right-of-use assets (1)	$	24,043
Current portion of operating lease obligations	$	3,176
Long-term portion of operating lease obligations		21,901
Total operating lease liabilities	$	25,077

(1) The Company's operating lease ROU assets are comprised of the following:

	September 30, 2019			
		Assets		Liabilities
Real estate for fueling stations	$	18,161	$	18,161
LNG plant, office spaces and warehouses		5,874		6,908
Office equipment		8		8
Total operating lease right-of-use assets	$	24,043	$	25,077

The components of lease expense for finance and operating leases consisted of the following:

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Finance leases:		
Depreciation on assets under finance leases	$ 146	$ 437
Interest on lease liabilities	44	143
Total finance leases expense	$ 190	$ 580
Operating leases:		
Lease expense	$ 1,557	$ 4,657
Lease expense on short-term leases	62	1,649
Variable lease expense	712	2,041
Sublease income	(52)	(155)
Total operating leases expense	$ 2,279	$ 8,192

Supplemental information on finance and operating leases is as follows:

	Nine Months Ended September 30, 2019
Operating cash outflows from finance leases	$ (143)
Operating cash outflows from operating leases	$ (4,109)
Financing cash outflows from finance leases	$ (1,024)
Assets obtained in exchange for new finance lease liabilities (1)	$ 330
ROU assets obtained in exchange for operating lease liabilities (1)	$ 26,640

	September 30, 2019
Weighted-average remaining lease term - finance leases	4.70 years
Weighted-average remaining lease term - operating leases	11.36 years
Weighted-average discount rate - finance leases	4.73%
Weighted-average discount rate - operating leases	8.24%

(1) These amounts are excluded from the accompanying condensed consolidated statements of cash flows as they are non-cash investing and financing activities.

The following schedule represents the Company’s maturities of finance and operating lease liabilities as of September 30, 2019:

	Finance Leases	Operating Leases
Fiscal year:		
2019	$ 223	$ 1,239
2020	771	4,721
2021	686	3,822
2022	571	2,900
2023	493	2,875
Thereafter	1,609	24,311
Total minimum lease payments	4,353	39,868
Less amount representing interest	(571)	(14,791)
Present value of lease liabilities	$ 3,782	$ 25,077

Lessor Accounting

The Company leases fueling station equipment to customers that contain an option to extend and an end-of-term purchase option. Receivables from these leases are accounted for as finance leases, specifically sales-type leases, and are included in “Other receivables” and “Notes receivable and other long-term assets, net” in the accompanying condensed consolidated balance sheets.

The Company recognizes the net investment in the lease as the sum of the lease receivable and the unguaranteed residual value, both of which are measured at the present value using the interest rate implicit in the lease.

During the three and nine months ended September 30, 2019, the Company recognized $36 and $109, respectively, in “Interest income” on its lease receivables.

The following schedule represents the Company’s maturities of lease receivables as of September 30, 2019:

Fiscal year:		
2019	$	47
2020		186
2021		186
2022		186
2023		186
Thereafter		1,240
Total minimum lease payments		2,031
Less amount representing interest		(971)
Present value of lease receivables	$	1,060

Legacy Lease Disclosures (Topic 840)

As required by the new lease accounting standard, certain legacy lease disclosures are provided below as of December 31, 2018, prior to adoption of the new standard.

Operating Lease Commitments

The Company leases facilities, including the land for its LNG production plant in Boron, California and certain equipment under noncancelable operating leases expiring at various dates through 2038. If a lease has a fixed and determinable escalation clause, or periods of rent holidays, the difference between rental expense and rent paid is included in “Accrued liabilities” and “Other long-term liabilities” in the accompanying condensed consolidated balance sheets.

The following schedule represents the Company’s future minimum lease obligations under all noncancelable operating leases as of December 31, 2018:

Fiscal year:		
2019	$	6,340
2020		4,332
2021		3,311
2022		2,409
2023		2,300
Thereafter		13,214
Total future minimum lease payments	$	31,906

Rent expense totaled $1,431 and $4,656 for the three and nine months ended September 30, 2018, respectively.

Capital Lease Obligations and Receivables

The Company leases equipment under capital leases with a weighted-average interest rate of 4.48%. As of December 31, 2018, future payments under these capital leases are as follows:

Fiscal year:		
2019	$	883
2020		742
2021		656
2022		540
2023		529
Thereafter		1,868
Total minimum lease payments		5,218
Less amount representing interest		(749)
Capital lease obligations		4,469
Less current portion		(693)
Capital lease obligations, less current portion	$	3,776

The value of the equipment under capital leases as of December 31, 2018 was $6,143, with related accumulated amortization of $1,832, respectively.

The Company also leases fueling station equipment to customers under sales-type leases with a weighted-average interest rate of 13.5%.

As of December 31, 2018, future receipts under this lease are as follows:

Fiscal year:		
2019	$	186
2020		186
2021		186
2022		186
2023		186
Thereafter		1,240
Capital lease receivables		2,170
Less amount representing interest		(1,080)
Capital lease receivables, less current portion	$	1,090

Note 19—Alternative Fuels Excise Tax Credit

Under separate pieces of U.S. federal legislation, the Company has been eligible to receive the AFTC tax credit for its natural gas vehicle fuel sales made between October 1, 2006 and December 31, 2017. The AFTC, which had previously expired on December 31, 2016, was reinstated on February 9, 2018 to apply to vehicle fuel sales made from January 1, 2017 through December 31, 2017. The AFTC credit was equal to $0.50 per gasoline gallon equivalent of CNG that the Company sold as vehicle fuel and $0.50 per diesel gallon of LNG that the Company sold as vehicle fuel in 2016 and 2017.

Based on the service relationship with its customers, either the Company or its customers claims the credit. The Company records its AFTC credits, if any, as revenue in its condensed consolidated statements of operations because the credits are fully payable to the Company and do not offset income tax liabilities. As such, the credits are not deemed income tax credits under the accounting guidance applicable to income taxes.

As a result of the most recent legislation authorizing AFTC being signed into law on February 9, 2018, all AFTC revenue for vehicle fuel the Company sold in the 2017 calendar year, totaling $25,481, was recognized during the three months ended March 31, 2018 and was collected subsequent to that date. In addition, during the nine months ended September 30, 2018, the Internal Revenue Service approved, and the Company recognized as revenue, $1,382 of AFTC credit claims related to prior years. AFTC is not currently available, and may not be reinstated, for vehicle fuel sales made after December 31, 2017.

Note 20—Recently Adopted Accounting Changes

In February 2016, the Financial Accounting Standards Board issued Accounting Standards Update ("ASU") 2016-02, *Leases (Topic 842)* (“ASC 842”), which amends the guidance in former Accounting Standards Codification Topic 840, *Leases* (“ASC 840”). The new standard requires most leases to be recognized on the balance sheet, which will increase reported assets and liabilities. Accounting for lessors and capital leases (now known as finance leases) is substantially similar to ASC 840. The new standard is effective for annual and interim periods in fiscal years beginning after December 15, 2018, which for the Company is the first quarter of 2019.

The Company adopted this standard using the modified retrospective transition method. Results for reporting periods beginning after January 1, 2019 are presented under ASC 842, while prior period amounts are not adjusted. This adoption had a material effect on the Company’s condensed consolidated balance sheets as a result of recording ROU assets and lease liabilities for existing operating leases on the condensed consolidated balance sheets. The adoption did not have a material effect on the Company’s condensed consolidated statements of operations or its condensed consolidated statements of cash flows.

As permitted under ASC 842, the Company elected the package of practical expedients that permit it to not reassess (1) whether an existing contract is or contains a lease, (2) the classification of existing leases, and (3) whether previously capitalized costs continue to qualify as initial indirect costs. The Company also elected the practical expedient allowing it to use hindsight in determining the lease term and in assessing the likelihood a purchase option will be exercised.

The effect of adopting ASC 842 was as follows:

	Balance as of December 31, 2018	Adjustments Due to ASC 842	Balance as of January 1, 2019
Operating lease right-of-use assets	$ —	$ 24,453	$ 24,453
Operating lease obligations	$ —	$ 25,943	$ 25,943
Accrued liabilities	$ 48,469	$ (496)	$ 47,973
Other long-term liabilities	$ 15,035	$ (994)	$ 14,041

Note 21—Subsequent Events

In October 2019, NG Advantage entered into a sale-leaseback agreement, pursuant to which it sold compression equipment for a purchase price of $7,500 and simultaneously leased it back for a term of five years with monthly rent payments of $162. Of the purchase price, NG Advantage received $5,250 in cash and $2,250 is held as a security deposit.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management's Discussion and Analysis of Financial Condition and Results of Operations (this discussion, as well as discussions under the same heading in our other periodic reports, are referred to as the "MD&A") should be read together with our unaudited condensed consolidated financial statements and the related notes included in this report, and all cross references to notes included in this MD&A refer to the identified note in such condensed consolidated financial statements. For additional context with which to understand our financial condition and results of operations, refer to the MD&A included in our Annual Report on Form 10-K for our fiscal year ended December 31, 2018, which was filed with the Securities and Exchange Commission ("SEC") on March 12, 2019, as well as the audited consolidated financial statements and notes included therein (collectively, our "2018 Form 10-K"). Pursuant to Instruction 2 to paragraph (b) of Item 303 of Regulation S-K promulgated by the SEC, in preparing this MD&A, we have presumed that readers have access to and have read the MD&A contained in our 2018 Form 10-K.

Cautionary Note Regarding Forward-Looking Statements

This MD&A and the other disclosures in this report contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act")*, and Section 21E of the Securities Exchange Act of 1934, as amended* (the "Exchange Act")*. Forward-looking statements are statements other than historical facts. These statements relate to future events or circumstances or our future performance, and they are based on our current assumptions, expectations and beliefs concerning future developments and their potential effect on our business. In some cases, you can identify forward-looking statements by the following words: "if," "may," "might," "shall," "will," "can," "could," "would," "should," "expect," "intend," "plan," "goal," "objective," "initiative," "anticipate," "believe," "estimate," "predict," "project," "forecast," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although the absence of these words does not mean that a statement is not forward-looking. The forward-looking statements we make in this discussion include statements about, among other things, our future financial and operating performance, our growth strategies and anticipated trends in our industry and our business. Although the forward-looking statements we make reflect our good faith judgment based on available information, they are only predictions and involve known and unknown risks, uncertainties and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Factors that might cause or contribute to such differences include, among others, those discussed under "Risk Factors" in this report and in our 2018 Form 10-K. In addition, we operate in a competitive and rapidly evolving industry in which new risks emerge from time to time, and it is not possible for us to predict all of the risks we may face, nor can we assess the effect of all factors on our business or the extent to which any factor or combination of factors could cause actual results to differ from our expectations. As a result of these and other potential risks and uncertainties, our forward-looking statements should not be relied on or viewed as guarantees of future events. All of our forward-looking statements in this report are made only as of the date of this document and, except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason, including to conform these statements to actual results or to changes in our expectations.*

Overview

We are the leading provider of natural gas as an alternative fuel for vehicle fleets in the United States and Canada, based on the number of stations operated and the amount of gasoline gallon equivalents ("GGEs") of renewable natural gas ("RNG"), compressed natural gas ("CNG") and liquefied natural gas ("LNG") delivered.

Our principal business is supplying RNG, CNG and LNG (RNG can be delivered in the form of CNG or LNG) for light, medium and heavy-duty vehicles and providing operation and maintenance ("O&M") services for public and private vehicle fleet customer stations. As a comprehensive solution provider, we also design, build, operate and maintain fueling stations; sell and service natural gas fueling compressors and other equipment used in CNG stations and LNG stations; offer assessment, design and modification solutions to provide operators with code-compliant service and maintenance facilities for natural gas vehicle fleets; transport and sell CNG and LNG via "virtual" natural gas pipelines and interconnects; procure and sell RNG; sell tradable credits we generate by selling RNG and conventional natural gas as a vehicle fuel, including Renewable Identification Numbers ("RIN Credits" or "RINs") under the federal Renewable Fuel Standard Phase 2 and credits under the California and the Oregon Low Carbon Fuel Standards (collectively "LCFS Credits"); help our customers acquire and finance natural gas vehicles; and obtain federal, state and local credits, grants and incentives. In addition, before March 31, 2017, we produced RNG at our own production facilities (which we sold, along with certain of our other RNG production assets to BP Products North America ("BP"), in a transaction we refer to as the "BP Transaction"), and before December 29, 2017, we manufactured natural gas fueling compressors and other equipment used in CNG stations (which we combined with Landi Renzo S.p.A.'s natural gas fueling compressor manufacturing business in a newly formed company, SAFE&CEC S.r.l., in a transaction we refer to as the "CEC Combination").

We serve fleet vehicle operators in a variety of markets, including heavy-duty trucking, airports, refuse, public transit, industrial and institutional energy users, and government fleets. We believe these fleet markets will continue to present a growth opportunity for natural gas vehicle fuel for the foreseeable future. As of September 30, 2019, we served over 1,000 fleet customers operating over 47,000 natural gas vehicles, and we currently own, operate or supply approximately 540 natural gas fueling stations in 41 states in the United States and four provinces in Canada.

Performance Overview

This performance overview discusses matters on which our management focuses in evaluating our financial condition and our operating results.

Sources of Revenue

The following table represents our sources of revenue:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Revenue (in millions)	**2018**	**2019**	**2018**	**2019**
Volume -related (1)	$ 67.8	$ 67.9	$ 197.8	$ 208.7
Station construction sales	9.4	6.4	20.9	15.5
AFTC (2)	—	—	26.9	—
Other	0.1	0.1	4.6	0.3
Total revenue	$ 77.3	$ 74.4	$ 250.2	$ 224.5

(1) Our volume-related revenue primarily consists of sales of RNG, CNG and LNG fuel, performance of O&M services, and sales of RINs and LCFS Credits in addition to changes in fair value of our derivative instruments. More information about our volume of fuel and O&M services delivered in the periods is included below under "Key Operating Data," and our derivative instruments consist of commodity swap contracts (see Note 6 for more information). The following table summarizes our volume-related revenue in the periods:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Revenue (in millions)	**2018**	**2019**	**2018**	**2019**
Fuel sales and performance of O&M services	$ 61.2	$ 59.8	$ 180.8	$ 186.9
Change in fair value of derivative instruments	—	1.1	—	(3.3)
RIN Credits	4.0	4.1	10.5	15.3
LCFS Credits	2.6	2.9	6.5	9.8
Total volume -related revenue	$ 67.8	$ 67.9	$ 197.8	$ 208.7

(2) Represents a federal alternative fuels excise tax credit that we refer to as "AFTC," which expired on December 31, 2016 but on February 9, 2018 was retroactively reinstated for vehicle fuel sales made in 2017. AFTC is not currently available, and may not be reinstated, for vehicle fuel sales made after December 31, 2017.

(3) Revenue for the nine months ended September 30, 2018 comprised of sales of used natural gas heavy-duty trucks we purchased in 2017 and 2018.

Key Operating Data

In evaluating our operating performance, our management focuses primarily on: (1) the amount of RNG, CNG and LNG gasoline gallon equivalents delivered (which we define as (i) the volume of gasoline gallon equivalents we sell to our customers as fuel, plus (ii) the volume of gasoline gallon equivalents dispensed at facilities we do not own but where we provide O&M services on a per-gallon or fixed fee basis, plus (iii) our proportionate share of the gasoline gallon equivalents sold as CNG by our joint venture with Mansfield Ventures, LLC called Mansfield Clean Energy Partners, LLC ("MCEP"), plus (iv) for periods before completion of the BP Transaction, our proportionate share (as applicable) of the gasoline gallon equivalents of RNG produced and sold by our former RNG production facilities, which we sold in the BP Transaction), (2) our station construction cost of sales, (3) our gross margin (which we define as revenue minus cost of sales), and (4) net loss attributable to us. The following tables present our key operating data for the years ended December 31, 2016, 2017, and 2018 and for the three and nine months ended September 30, 2018 and 2019:

Gasoline gallon equivalents delivered (in millions)	**Year Ended December 31, 2016**	**Year Ended December 31, 2017**	**Year Ended December 31, 2018**	**Three Months Ended September 30, 2018**	**Three Months Ended September 30, 2019**	**Nine Months Ended September 30, 2018**	**Nine Months Ended September 30, 2019**
CNG (1)	259.2	283.4	299.5	75.4	86.1	220.0	248.5
LNG	66.8	66.1	66.0	16.9	16.6	46.8	49.0
RNG (non-vehicle) (2)	3.0	1.9	—	—	—	—	—
Total	329.0	351.4	365.5	92.3	102.7	266.8	297.5

Gasoline gallon equivalents delivered (in millions)	Year Ended December 31, 2016	Year Ended December 31, 2017	Year Ended December 31, 2018	Three Months Ended September 30, 2018	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2019
O&M services	176.6	199.5	206.1	53.4	54.9	154.6	158.1
Fuel (1)	128.5	127.3	133.6	32.2	40.6	92.8	119.5
Fuel and O&M services (3)	23.9	24.6	25.8	6.7	7.2	19.4	19.9
Total	329.0	351.4	365.5	92.3	102.7	266.8	297.5

Other operating data (in millions)	Year Ended December 31, 2016	Year Ended December 31, 2017	Year Ended December 31, 2018	Three Months Ended September 30, 2018	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2019
Station construction cost of sales	$ 57.0	$ 47.0	$ 25.1	$ 8.7	$ 6.2	$ 20.7	$ 16.3
Gross margin (4)	$ 147.1	$ 85.8	$ 133.5	$ 24.5	$ 24.5	$ 96.9	$ 68.1
Net loss attributable to Clean Energy Fuels. Corp (4)	$ (12.2)	$ (79.2)	$ (3.8)	$ (10.9)	$ (4.3)	$ (10.7)	$ (20.7)

(1) As noted above, amounts include our proportionate share of the GGEs sold as CNG by our joint venture MCEP. GGEs sold by this joint venture were 0.5 million for each of the years ended December 31, 2016, 2017, and 2018, 0.2 million and 0.1 million for the three months ended September 30, 2018 and 2019, respectively, and 0.4 million and 0.3 million for the nine months ended September 30, 2018 and 2019, respectively.

(2) Represents RNG sold as non-vehicle fuel. RNG sold as vehicle fuel is sold under the brand name Redeem™ and is included in this table in the CNG or LNG amounts as applicable based on the form in which it was sold. GGEs of Redeem sold were 58.6 million, 78.5 million, and 110.1 million for the years ended December 31, 2016, 2017, and 2018, respectively, 28.3 million and 37.4 million for the three months ended September 30, 2018 and 2019, respectively, and 70.8 million and 111.1 million for the nine months ended September 30, 2018 and 2019, respectively.

(3) Represents gasoline gallon equivalents at stations where we provide both fuel and O&M services.

(4) Includes the following amounts of AFTC revenue: $26.6 million, $0.0 million, and $26.7 million for the years ended December 31, 2016, 2017, and 2018, respectively, and $0.0 million and $26.9 million for the three and nine months ended September 30, 2018, respectively.

Recent Developments

NG Advantage. From February 15, 2019 through September 30, 2019, we have loaned to our subsidiary NG Advantage, LLC (“NG Advantage”) an aggregate of $13.1 million, all of which remained outstanding as of September 30, 2019. All such debt is governed by the terms of a delayed draw convertible note that permits NG Advantage to draw up to $15.2 million, subject to certain conditions. All outstanding principal under the note bears interest at a rate of 12.0% per annum, and all unpaid principal and accrued interest under the note is due on the earlier of December 31, 2019, subject to extension at the Company's discretion, or the occurrence of an event of default (subject to notice requirements and cure periods in certain circumstances). In connection with this debt, on June 28, 2019, NG Advantage issued us a warrant to purchase 86,879 common units.

On October 1, 2019, NG Advantage drew an additional $1.0 million under the 2019 Convertible Note.

In October 2019, NG Advantage entered into a sale-leaseback agreement, pursuant to which it sold compression equipment for a purchase price of $7.5 million and simultaneously leased it back for a term of five years with monthly rent payments of $0.2 million. Of the purchase price, NG Advantage received $5.3 million in cash and $2.2 million is held as a security deposit.

Business Risks and Uncertainties and Other Trends

Our business and prospects are exposed to numerous risks and uncertainties. For more information, see “Risk Factors” in Part II, Item 1A of this report. In addition, our performance in any period may be affected by various trends in our business and our industry, including certain seasonality trends. See the description of the key trends in our past performance and anticipated future trends included in the MD&A contained in our 2018 Form 10-K. Except as set forth below, there have been no material changes to such trends as described in the MD&A contained in our 2018 Form 10-K.

The market for natural gas as a vehicle fuel is a relatively new and developing market, and has experienced slow, volatile or unpredictable growth in many sectors. For example, to date, adoption and deployment of natural gas vehicles, both in general and in certain of our key customer markets, including heavy-duty trucking, have been slower and more limited than we anticipated. Also, other important markets, including airports, refuse and public transit, had slower volume and customer growth in 2018 and the nine months ended September 30, 2019 that may continue. Moreover, adoption of and demand for the different types of natural gas vehicle fuel, including RNG, CNG and LNG, are subject to significant risks, including decreased LNG volumes in some markets in recent periods that may continue and may not be sufficiently offset by any increase in demand for RNG or CNG.

Market prices for RINs and LCFS Credits can be volatile and unpredictable, and the prices for such credits can be subject to significant fluctuations. The value of RINs and LCFS Credits (derived from market prices) can materially affect our revenue.

Since approximately the beginning of June 2019, market prices for RINs have trended to historical lows, and this may continue. We estimate that our revenue from our RIN credits was lower by approximately $2.0 million and $2.1 million for the three and nine months ended September 30, 2019, respectively, as a result of the recent decline in market prices.

The market price of our common stock can be volatile and unpredictable. During the third quarter of 2019, our stock price declined. If the decline of our market capitalization continues and is sustained we may need to perform goodwill impairment tests more frequently and it is possible that our goodwill could become impaired which could result in a material charge and adversely affect our results of operations.

Debt Compliance

Certain of the agreements governing our outstanding debt, which are discussed in Note 12, have certain non-financial covenants with which we must comply. As of September 30, 2019, we were in compliance with all of these covenants.

Risk Management Activities

Our risk management activities are discussed in the MD&A contained in our 2018 Form 10-K. In the nine months ended September 30, 2019, there were no material changes to these activities.

Critical Accounting Policies and Estimates

The preparation of our condensed consolidated financial statements in conformity with accounting principles generally accepted in the Unites States of America requires the appropriate application of accounting policies, some of which require us to make estimates and assumptions that affect the amounts reported and related disclosures in our condensed consolidated financial statements. We base our estimates on historical experience and various assumptions that we believe are reasonable under the circumstances. To the extent there are differences between these estimates and actual results, our financial condition or results of operations could be materially affected.

Our critical accounting policies and the related judgments and estimates are discussed in the MD&A contained in our 2018 Form 10-K, except for certain updates regarding our goodwill impairment assessments, which are described below, and our adoption of new guidance for lease accounting effective January 1, 2019, which is described in Notes 18 and 20. There have been no other material changes to our critical accounting policies as described in the MD&A contained in our 2018 Form 10-K.

Impairment of Goodwill

Goodwill represents the excess of costs incurred over the fair value of the net assets of acquired businesses. We assess our goodwill using either a qualitative or quantitative approach to determine whether it is more likely than not that the fair value of our reporting unit is less than its carrying value. We are required to use judgment when applying the goodwill impairment test, including, among other considerations, the identification of reporting unit(s), the assessment of qualitative factors, and the estimation of fair value of a reporting unit in the quantitative approach. We determined that we are a single reporting unit for the purpose of goodwill impairment tests. We perform the impairment test annually on October 1, or more frequently if facts or circumstances change that would indicate that the carrying amount may be impaired.

The qualitative goodwill assessment includes the potential effect on a reporting unit's fair value of certain events and circumstances, including its enterprise value, macroeconomic conditions, industry and market considerations, cost factors, and other relevant entity-specific events. If it is determined, based upon the qualitative assessment, that it is more likely than not that the reporting unit's fair value is less than its carrying amount, then a quantitative impairment test is performed. Alternatively, we may bypass the qualitative assessment for a reporting unit and directly perform the quantitative assessment.

The quantitative assessment estimates the reporting unit's fair value based on its enterprise value plus an assumed control premium as evidence of fair value. The estimates used to determine the fair value of the reporting unit may change based on results of operations, macroeconomic conditions stock price fluctuations or other factors. Changes in these estimates could materially affect our assessment of the fair value and goodwill impairment for the reporting unit.

For our most recent goodwill impairment test, which was our annual test performed on October 1, 2018, we performed a quantitative impairment assessment for our reporting unit as described above. In this test, the fair value of our reporting unit substantially exceeded its carrying value and therefore was not considered to be at risk of failing step one of the goodwill impairment test.

We evaluated the recent decline in the market price of our common stock and considered whether there were any other events or circumstances that would more likely than not reduce the fair value of our reporting unit below its carrying value on a sustained basis, and concluded it was not more likely than not that the fair value of our reporting unit decreased below its carrying value, on a sustained basis. As a result, an interim impairment test was not considered necessary during the three and nine months ended September 30, 2019.

If the decline in the market price of our common stock and our market capitalization continues, or if other events or circumstances change that would more likely than not reduce the fair value of our reporting unit below its carrying value, on a sustained basis, then we may perform impairment tests more frequently and it is possible that our goodwill could become impaired, which could result in a material charge and adversely affect our results of operations.

Recently Adopted Accounting Standards

See Note 20 for a description of recently issued and adopted accounting standards.

Results of Operations

The tables below present, for each period indicated, each line item of our statements of operations data as a percentage of our total revenue for the period. Additionally, the narrative that follows provides a comparative discussion of certain of these line items between the periods indicated. Historical results are not indicative of the results to be expected in the current period or any future period.

Three Months Ended September 30, 2019 Compared to Three Months Ended September 30, 2018

	Three Months Ended September 30,	
	2018	2019
Statements of Operations Data:		
Revenue:		
Product revenue	87.2 %	84.4 %
Service revenue	12.8	15.6
Total revenue	100.0	100.0
Operating expenses:		
Cost of sales (exclusive of depreciation and amortization shown separately below):		
Product cost of sales	62.2	58.0
Service cost of sales	6.1	9.1
Change in fair value of derivative warrants	—	—
Selling, general and administrative	23.8	23.7
Depreciation and amortization	17.3	16.5
Total operating expenses	109.4	107.3
Operating income (loss)	(9.4)	(7.3)
Interest expense	(5.3)	(2.3)
Interest income	1.5	0.8
Other income (expense), net	(0.2)	0.2
(Loss) income from equity method investments	(0.7)	0.5
Loss from formation of equity method investment	(1.5)	—
Loss before income taxes	(15.6)	(8.1)
Income tax expense	(0.1)	(0.1)
Net loss	(15.7)	(8.2)
Loss attributable to noncontrolling interest	1.7	2.3
Net loss attributable to Clean Energy Fuels Corp.	(14.0)%	(5.9)%

Revenue. Revenue decreased by $2.9 million to $74.4 million in the three months ended September 30, 2019, from $77.3 million in the three months ended September 30, 2018. This decrease was due to lower station construction sales.

Volume-related revenue increased by $0.1 million between periods, primarily due to a $1.1 million increase in fair value of our commodity swap and customer contracts related to our *Zero Now* truck financing program (see Note 6 for more information) and continuing high prices for LCFS Credits, partially offset by lower effective price per gallon and historically low prices for RINs. Our effective price per gallon for the three months ended September 30, 2019 was $0.65 (excluding a $1.1 million change in fair value of derivative instruments discussed above), a $0.08 per gallon decrease from $0.73 per gallon for the three months ended September 30, 2018. Our effective price per gallon is defined as revenue generated from selling RNG, CNG, LNG, and any related RINs and LCFS Credits and providing O&M services to our vehicle fleet customers at stations we do not own and for which we receive a per-gallon or fixed fee, all divided by the total GGEs delivered less GGEs delivered by non-consolidated entities, such as entities that are accounted for under the equity method. The decrease in our effective price per gallon was due to a decrease in natural gas prices and fuel price mix.

Station construction sales decreased by $2.9 million between periods due to decreased construction activities.

Cost of sales. Cost of sales decreased by $2.9 million to $49.9 million in the three months ended September 30, 2019, from $52.8 million in the three months ended September 30, 2018. This decrease was primarily due to a decrease in construction activities and a $0.3 million decrease in costs to purchase used heavy-duty trucks that we sold to our customers, partially offset by a $0.5 million increase in gas commodity costs due to the increase in gallons delivered.

Our effective cost per gallon decreased by $0.04 per gallon between periods, to $0.43 per gallon in the three months ended September 30, 2019 from $0.47 per gallon in the three months ended September 30, 2018. Our effective cost per gallon is defined as the total costs associated with delivering natural gas, including gas commodity costs, transportation fees, liquefaction charges, and other site operating costs, plus the total cost of providing O&M services at stations that we do not own and for which we receive a per-gallon or fixed fee, including direct technician labor, indirect supervisor and management labor, repair parts and other direct maintenance costs, all divided by the total GGEs delivered less GGEs delivered by non-consolidated entities, such as entities that are accounted for under the equity method. The decrease in our effective cost per gallon was due to decreases in natural gas prices and transportation costs.

Selling, general and administrative. Selling, general and administrative expenses decreased by $0.8 million to $17.6 million in the three months ended September 30, 2019, from $18.4 million in the three months ended September 30, 2018. This decrease was primarily driven by continued cost reduction efforts.

Depreciation and amortization. Depreciation and amortization decreased by $1.1 million to $12.2 million in the three months ended September 30, 2019, from $13.4 million in the three months ended September 30, 2018, primarily due to lower capital expenditures and a lower amount of depreciable assets.

Interest expense. Interest expense decreased by $2.4 million to $1.7 million in the three months ended September 30, 2019, from $4.1 million in the three months ended September 30, 2018. This decrease was primarily due to a reduction of outstanding indebtedness between periods.

Other income (expense), net. Other income (expense), net changed from an expense of $0.2 million in the three months ended September 30, 2018 to income of $0.2 million in the three months ended September 30, 2019.

(Loss) income from equity method investments. (Loss) income from equity method investments changed from a loss of $0.5 million in the three months ended September 30, 2018 to income of $0.4 million in the three months ended September 30, 2019, primarily due to improved operating results from SAFE&CEC S.r.l.

Loss from formation of equity method investment. During the three months ended September 30, 2018, we recorded a loss from formation of equity method investment of $1.2 million related to funding for certain commitments incurred as a result of the CEC Combination. There was no comparable loss in the three months ended September 30, 2019.

Income tax expense. Income tax expense decreased between periods, primarily due to a reduction in the Company's expected state tax expense.

Loss attributable to noncontrolling interest. During the three months ended September 30, 2018 and 2019, we recorded a $1.3 million and $1.7 million reversal of loss, respectively, for the noncontrolling interest in the net loss of NG Advantage. The noncontrolling interest in NG Advantage represents a 46.5% and 35.4% minority interest that was held by third parties during the 2018 and 2019 periods, respectively.

Nine Months Ended September 30, 2019 Compared to Nine Months Ended September 30, 2018

	Nine Months Ended September 30,	
	2018	2019
Statements of Operations Data:		
Revenue:		
Product revenue	88.3 %	85.1 %
Service revenue	11.7	14.9
Total revenue	100.0	100.0
Operating expenses:		
Cost of sales (exclusive of depreciation and amortization shown separately below):		
Product cost of sales	55.8	61.3
Service cost of sales	5.4	8.3
Change in fair value of derivative warrants	—	0.7
Selling, general and administrative	22.9	24.1
Depreciation and amortization	15.8	16.6
Total operating expenses	99.9	111.0
Operating income (loss)	0.1	(11.0)
Interest expense	(5.2)	(2.4)
Interest income	0.9	0.8
Other income (expense), net	(0.1)	1.3
(Loss) income from equity method investments	(1.1)	(0.1)
Loss from formation of equity method investment	(0.5)	—
Loss before income taxes	(5.9)	(11.4)
Income tax expense	(0.1)	(0.1)
Net loss	(6.0)	(11.5)
Loss attributable to noncontrolling interest	1.7	2.4
Net loss attributable to Clean Energy Fuels Corp.	(4.3)%	(9.1)%

Revenue. Revenue decreased by $25.7 million to $224.5 million in the nine months ended September 30, 2019, from $250.2 million in the nine months ended September 30, 2018. This decrease was due to the absence in the first nine months of 2019 of AFTC revenue and sales of used natural gas heavy-duty trucks, as well as lower station construction sales in the period. These decreases were partially offset by increased volume-related revenue in the first nine months of 2019 due to higher volumes and increased sales of RINs and LCFS Credits.

Volume-related revenue increased by $10.9 million between periods, primarily due to increases in gallons delivered, as well as an associated increase in sales of RINs and LCFS Credits. These increases were partially offset by a $3.3 million decrease in fair value of our commodity swap and customer contracts related to our *Zero Now* truck financing program (see Note 6 for more information). Our effective price per gallon for the nine months ended September 30, 2019 was $0.71 (excluding a $3.3 million decrease in fair value of derivative instruments discussed above), a $0.03 per gallon decrease from $0.74 per gallon for the nine months ended September 30, 2018. The decrease in our effective price per gallon was due to a decrease in natural gas prices and fuel price mix.

Station construction sales decreased by $5.4 million between periods, principally due to fewer full station projects in process.

AFTC revenue decreased by $26.9 million between periods due to the absence of AFTC in 2019 and our recognition in 2018 of AFTC revenue for all of the vehicle fuel we sold in 2017.

Cost of sales. Cost of sales increased by $3.1 million to $156.4 million in the nine months ended September 30, 2019, from $153.3 million in the nine months ended September 30, 2018. This increase was due to a $15.1 million increase in gas commodity costs due to the increase in gallons delivered, partially offset by a lower effective cost per gallon, a $4.7 million decrease in costs to purchase used heavy-duty trucks that we sold to our customers and a $4.3 million decrease in station construction costs due to lower station construction activity.

Our effective cost per gallon decreased by $0.01 per gallon between periods, to $0.47 per gallon in the nine months ended September 30, 2019 from $0.48 per gallon in the nine months ended September 30, 2018. The decrease in our effective cost per gallon was due to decreases in natural gas prices and transportation costs.

C*hange in fair value of derivative warrants.* Change in fair value of derivative warrants, all of which have been issued by our subsidiary, NG Advantage, increased to $1.6 million of expense in the nine months ended September 30, 2019, from an immaterial amount of income in the nine months ended September 30, 2018, due to the majority of the warrants being in-the-money during 2019 and additional warrant issuances.

Selling, general and administrative. Selling, general and administrative expenses decreased by $3.2 million to $54.0 million in the nine months ended September 30, 2019, from $57.2 million in the nine months ended September 30, 2018. This decrease was primarily driven by continued cost reduction efforts.

Depreciation and amortization. Depreciation and amortization decreased by $2.2 million to $37.3 million in the nine months ended September 30, 2019, from $39.5 million in the nine months ended September 30, 2018, primarily due to lower capital expenditures and a lower amount of depreciable assets.

Interest expense. Interest expense decreased by $7.7 million to $5.4 million in the nine months ended September 30, 2019, from $13.1 million in the nine months ended September 30, 2018. This decrease was primarily due to a reduction of outstanding indebtedness between periods.

Other income (expense), net. Other income (expense), net changed from an expense of $0.1 million in the nine months ended September 30, 2018 to income of $2.9 million in the nine months ended September 30, 2019, due to gains recorded from disposals of certain assets.

(Loss) income from equity method investments. Loss from equity method investments decreased by $2.6 million between periods, which was primarily attributable to improved operating results from SAFE&CEC S.r.l.

Loss from formation of equity method investment. During the nine months ended September 30, 2018 we recorded a loss from formation of equity method investment of $1.2 million related to funding for certain commitments incurred as a result of the CEC Combination. There was no comparable loss in the nine months ended September 30, 2019.

Income tax expense. Income tax expense decreased between periods, primarily due to a reduction in the Company’s expected state tax expense.

Loss attributable to noncontrolling interest. During the nine months ended September 30, 2018 and 2019, we recorded a $4.2 million and $5.3 million reversal of loss, respectively, for the noncontrolling interest in the net loss of our subsidiary, NG Advantage. The noncontrolling interest in NG Advantage represents a 46.5% and 35.4% minority interest that was held by third parties during the 2018 and 2019 periods, respectively.

Liquidity and Capital Resources

Liquidity

Liquidity is the ability to meet present and future financial obligations through operating cash flows, the sale or maturity of investments or the acquisition of additional funds through capital management. Our financial position and liquidity are, and will continue to be, influenced by a variety of factors, including the level of our outstanding indebtedness and the principal and interest we are obligated to pay on our indebtedness, which could be influenced by the potential discontinuance of LIBOR for certain of our debt instruments that tie interest rates to this metric; the amount and timing of any additional debt or equity financing we may pursue; our capital expenditure requirements; any merger, divestiture or acquisition activity; and our ability to generate cash flows from our operations. We expect cash provided by our operating activities to fluctuate as a result of a number of factors, including our operating results and the factors that affect these results, including the amount and timing of our natural gas vehicle fuel sales, station construction sales, sales of RINs and LCFS Credits and recognition of government credits, grants and incentives, if any; fluctuations in commodity, station construction and labor costs and natural gas, RIN and LCFS Credit prices; variations in the fair value of certain of our derivative instruments that are recorded in revenue; and the amount and timing of our billing, collections and liability payments.

Cash Flows

Cash provided by operating activities was $4.6 million in the nine months ended September 30, 2019, compared to $29.0 million provided by operating activities in the comparable 2018 period. The decrease in cash provided by operating activities was primarily attributable to the AFTC revenue collected in 2018 and changes in working capital resulting from the timing of receipts and payments of cash.

Cash used in investing activities was $0.5 million in the nine months ended September 30, 2019, compared to $34.3 million provided by investing activities in the comparable 2018 period. The decrease in cash provided by investing activities was attributable to a decrease in maturities and sales of short-term investments from the comparable period in 2018, partially offset by proceeds from property and equipment disposals and an increase in earn-out proceeds received in connection with the BP Transaction in the nine months ended September 30, 2019.

Cash used in financing activities was $1.1 million in the nine months ended September 30, 2019, compared to $59.6 million provided by financing activities in the comparable 2018 period. The decrease in cash provided by financing activities was primarily attributable to proceeds, net of fees, from our issuance of our common stock to Total Marketing Services, S.A. (“Total”), a wholly owned subsidiary of TOTAL, in a private placement completed in 2018 (the "Total Private Placement"), and lower proceeds from debt issued by NG Advantage in the nine months ended September 30, 2019.

Capital Expenditures and Other Uses of Cash

We require cash to fund our capital expenditures, operating expenses and working capital and other requirements, including costs associated with fuel sales; outlays for the design and construction of new fueling stations; additions or other modifications to existing fueling stations; debt repayments and repurchases and potential repurchases of other securities; purchases of CNG tanker trailers and natural gas heavy-duty trucks; maintenance of LNG production facilities; supporting our operations, including maintenance and improvements of our infrastructure; supporting our sales and marketing activities, including support of legislative and regulatory initiatives; financing natural gas vehicles for our customers; any investments in other entities; any mergers or acquisitions; pursuing market expansion as opportunities arise, including geographically and to new customer markets; and to fund other activities or pursuits and for other general corporate purposes.

Our business plan called for approximately $18.5 million in capital expenditures for all of 2019. These planned capital expenditures primarily relate to the construction of CNG fueling stations, IT software and equipment and LNG plant maintenance costs. For the nine months ended September 30, 2019, our capital expenditures were approximately $5.4 million, and we may not spend the full $18.5 million in 2019.

In addition, NG Advantage may spend as much as $28.0 million in 2019 to purchase additional CNG trailers and equipment in support of its operations and customer contracts; although NG Advantage has sought financing from third parties for these capital expenditures; we have provided and may continue to provide financing for these capital expenditures. For the nine months ended September 30, 2019, NG Advantage’s capital expenditures were approximately $6.9 million, and NG Advantage may not spend the full $28.0 million in 2019.

We had total indebtedness, consisting of our debt and finance leases, of approximately $83.4 million in principal amount as of September 30, 2019, of which approximately $1.6 million, $55.9 million, $5.5 million, $5.5 million, $10.2 million and $4.7 million is expected to become due in 2019, 2020, 2021, 2022, 2023 and thereafter, respectively. We expect our total interest payment obligations relating to this indebtedness to be approximately $7.2 million in 2019, $5.3 million of which had been paid when due as of September 30, 2019.

We also have indebtedness, including the amount representing interest, from our operating leases of approximately $39.9 million as of September 30, 2019, of which approximately $1.2 million, $4.7 million, $3.8 million, $2.9 million, $2.9 million and $24.3 million is expected to become due in 2019, 2020, 2021, 2022, 2023 and thereafter, respectively.

In addition, in connection with implementing our *Zero Now* truck financing program, we have entered into agreements that permit us to incur a material amount of additional debt on a delayed draw basis and obligate us to make interest and other fee payments that vary in amount depending on the outstanding principal of this debt and certain other factors; none of this potential debt nor the related interest and other payments are included in the foregoing estimates, other than the principal amount of $0.3 million drawn as of September 30, 2019.

Although we believe we have sufficient liquidity and capital resources to repay our debt coming due in the next 12 months, we may elect to pursue alternatives, such as refinancing or debt or equity offerings, to increase our cash management flexibility. Additionally, as of September 30, 2019, we are permitted to issue up to 14.0 million shares of common stock to repay part of the outstanding principal amount of certain of our convertible notes.

We intend to make payments under our various debt instruments when due and pursue opportunities for earlier repayment and/or refinancing if and when these opportunities arise.

Sources of Cash

Historically, our principal sources of liquidity have consisted of cash on hand; cash provided by our operations, including, if available, AFTC and other government credits, grants and incentives; cash provided by financing activities; and sales of assets. As of September 30, 2019, we had total cash and cash equivalents and short-term investments of $98.8 million, compared to $95.5 million as of December 31, 2018.

We expect cash provided by our operating activities to fluctuate depending on our operating results, which can be affected by the factors described above, as well as the other factors described in this MD&A and Part II, Item 1A. Risk Factors of this report.

In October 2018 and January 2019, we entered into agreements to implement our *Zero Now* truck financing program, which permit us to incur up to an additional $100.0 million of indebtedness through the beginning of January 2022, obligate us to make certain interest and other fee payments in connection with this debt and THUSA's related guaranty (which payments will vary in amount but will be owed by us regardless of the revenue we may receive from the program), and subject us to potential additional payments in connection with related commodity swap arrangements. We are permitted to use any proceeds we receive under these agreements solely to fund the incremental cost of trucks purchased or financed by operators that participate in the *Zero Now* program. See Note 12 for more information.

On June 13, 2018, we completed the Total Private Placement and received $83.4 million of gross cash proceeds from the transaction. See Note 15 for more information.

On February 29, 2016, we entered into a loan and security agreement with, and issued a related promissory note to, PlainsCapital Bank ("Plains"), pursuant to which Plains agreed to lend us up to $50.0 million on a revolving basis with a maturity date of September 30, 2019 (the "Credit Facility"). The Company had no amounts outstanding under the Credit Facility during the nine months ended September 30, 2018 and 2019. The Credit Facility matured and was canceled on September 30, 2019.

See Notes 12 and 18 for more information about all of our outstanding debt and leases.

We believe our cash and cash equivalents and short-term investments and anticipated cash provided by our operating and financing activities will satisfy our expected business requirements for at least the 12 months following the date of this report. Subsequent to that period, we may need to raise additional capital to fund any planned or unanticipated capital expenditures, investments, debt repayments or other expenses that we cannot fund through cash on-hand, cash provided by our operations or other sources. Moreover, we may use our cash resources faster than we predict due to unexpected expenditures or higher-than-expected expenses, in which case we may need to seek capital from alternative sources sooner than we presently anticipate.

The timing and necessity of any future capital raise would depend on various factors, including our rate and volume of. and prices for, natural gas sales and other volume-related activity, new station construction, debt repayments (either before or at maturity) and any potential mergers, acquisitions, investments, divestitures or other strategic relationships we may pursue, as well as the other factors that affect our revenue and expense levels as described in this MD&A and elsewhere in this report.

We may seek to raise additional capital through one or more sources, including, among others, selling assets, obtaining new or restructuring existing debt, obtaining equity capital, or any combination of these or other potential sources of capital. We may not be able to raise capital when needed, on terms that are favorable to us or our stockholders or at all. Any inability to raise necessary capital may impair our ability to develop and maintain natural gas fueling infrastructure, invest in strategic transactions or acquisitions or repay our outstanding indebtedness and may reduce our ability to support and build our business and generate sustained or increased revenue.

Off-Balance Sheet Arrangements

As of September 30, 2019, we had the following off-balance sheet arrangements that have had, or are reasonably likely to have, a material current or future effect on our financial condition, changes in financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources:

- Outstanding surety bonds for construction contracts and general corporate purposes totaling $30.7 million;
- Two long-term natural gas purchase contracts with a take-or-pay commitment;
- One long-term natural gas sale contract with a fixed supply commitment along with a guaranty agreement; and
- One long-term natural gas sale contract with a fixed supply commitment.

We provide surety bonds primarily for construction contracts in the ordinary course of our business, as a form of guarantee. No liability has been recorded in connection with our surety bonds because, based on historical experience and available information, we do not believe it is probable that any amounts will be required to be paid under these arrangements for which we will not be reimbursed.

As of September 30, 2019, we had two long-term natural gas purchase contracts with a take-or-pay commitment, which require us to purchase minimum volumes of natural gas at index based prices and expire in December 2020 and June 2022, respectively.

NG Advantage has entered into an arrangement with BP for the supply, sale and reservation of a specified volume of CNG transportation capacity until March 2022. In connection with the arrangement, on February 28, 2018, we entered into a guaranty agreement with NG Advantage and BP in which we guarantee NG Advantage's payment obligations to BP in the event of a default by NG Advantage under the supply arrangement, in an aggregate amount of up to $30.0 million plus related fees. Our guaranty is in effect until thirty days following our notice to BP of termination.

In addition, as of September 30, 2019, we had a fixed supply arrangement with UPS for the supply and sale of 170.0 million GGEs of RNG through March 2026.

Item 3.—Quantitative and Qualitative Disclosures about Market Risk

In the ordinary course of our business, we are exposed to various market risks, including commodity price risks and risks related to foreign currency exchange rates.

Commodity Price Risk

We are subject to market risk with respect to our sales of natural gas, which have historically been subject to volatile market conditions. Our exposure to market risk is heightened when we have a fixed-price sales contract with a customer that is not covered by a futures contract, or when we are otherwise unable to pass through natural gas price increases to customers. Natural gas prices and availability are affected by many factors, including, among others, drilling activity, supply, weather conditions, the global trade environment, overall economic conditions and foreign and domestic government regulations.

Natural gas costs represented $94.9 million of our cost of sales in 2018 and $70.4 million of our cost of sales for the nine months ended September 30, 2019.

In October 2018, in support of our *Zero Now* truck financing program, we entered into two commodity swap contracts with Total Gas & Power North America, an affiliate of TOTAL and THUSA, for a total of five million diesel gallons annually from April 1, 2019 to June 30, 2024. These commodity swap contracts are intended to manage risks related to the diesel-to-natural gas price spread in connection with the natural gas fuel supply commitments we make in our fueling agreements with fleet operators that participate in the *Zero Now* truck financing program.

We have prepared a sensitivity analysis to estimate our exposure to price risk with respect to our commodity swap contracts. If the diesel-to-natural gas price spread were to fluctuate by 10% as of September 30, 2019, we would expect a corresponding fluctuation in the fair value of our commodity swap contracts of approximately $6.3 million.

Foreign Currency Exchange Rate Risk

For the nine months ended September 30, 2019, our primary exposure to foreign currency exchange rates related to our Canadian operations that had certain outstanding accounts receivable and accounts payable denominated in the U.S. dollar, which were not hedged.

We have prepared a sensitivity analysis to estimate our exposure to market risk with respect to our monetary transactions denominated in a foreign currency. If the exchange rates on these assets and liabilities were to fluctuate by 10% from the rates as of September 30, 2019, we would expect a corresponding fluctuation in the value of the assets and liabilities of approximately $0.3 million, net.

Interest Rate Risk

As of September 30, 2019, we had $0.3 million of debt that bears interest at a rate equal to LIBOR plus 1.30% per annum. Thus, our interest expense would fluctuate with a change in LIBOR. If LIBOR were to increase or decrease by 1% for the year, our annual interest expense would increase or decrease by approximately $3,000.

The Credit Agreement permits the Company to draw loans from time to time through the beginning of January 2022. These loans are subject to an interest rate indexed to LIBOR which is expected to be discontinued after 2021. We intend to monitor the developments with respect to the potential discontinuance of LIBOR after 2021 and work with our lenders under the Credit Agreement and any other indebtedness with an interest rate tied to LIBOR in order to minimize the effect of such a discontinuance on our financial condition and results of operations; however, the actual effect of the anticipated discontinuance of LIBOR on us and our debt instruments remains uncertain.

Item 4.—Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Our management carried out an evaluation, with the participation of our Chief Executive Officer and Chief Financial Officer (our principal executive and principal financial officers, respectively), of the effectiveness of our disclosure controls and procedures as of September 30, 2019. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

We regularly review and evaluate our internal control over financial reporting, and from time to time we may make changes to our processes and systems to improve controls or increase efficiencies. Such changes may include, among others, implementing new and more efficient systems, consolidating activities, and migrating processes.

There were no changes in our internal control over financial reporting that occurred during our most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Procedures and Internal Control Over Financial Reporting

In designing our disclosure controls and procedures and internal control over financial reporting, management recognizes that any controls and procedures, no matter how well-designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of our controls and procedures must reflect the fact that there are resource constraints, and management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Because of these inherent limitations, our disclosure and internal controls may not prevent or detect all instances of fraud, misstatements or other control issues. In addition, projections of any evaluation of the effectiveness of disclosure or internal controls to future periods are subject to risks, including, among others, that controls may become inadequate because of changes in conditions or that compliance with policies or procedures may deteriorate.

PART II.—OTHER INFORMATION

Item 1. —Legal Proceedings

From time to time, we may become involved in various legal proceedings that arise in the ordinary course of our business, including lawsuits, claims, audits, government enforcement actions and related matters. It is not possible to predict when or if these proceedings may arise, nor is it possible to predict the outcome of any proceedings that do arise, including, among other things, the amount or timing of any liabilities we may incur, and any such proceedings could have a material effect on us regardless of outcome. In the opinion of management, however, we are not a party, and our properties are not subject, to any pending legal proceedings that are material to us.

Item 1A.—Risk Factors

An investment in our Company involves a high degree of risk of loss. You should carefully consider the risk factors discussed below and all of the other information included in this report and our 2018 Form 10-K before you make any investment decision regarding our securities. We believe the risks and uncertainties described below are the most significant we face, but additional risks and uncertainties not known to us or that we currently deem immaterial could also be or become significant. The occurrence of any of these risks could harm our business, financial condition, results of operations, prospects and reputation and could cause the trading price of our common stock to decline.

Risks Related to Our Business

We have a history of losses and may incur additional losses in the future.

We incurred pre-tax losses in 2016, 2017, 2018 and the nine months ended September 30, 2019. We may continue to incur losses, the amount of our losses may increase, and we may never achieve or sustain profitability, any of which would adversely affect our business, prospects and financial condition and may cause the price of our common stock to fall. In addition, to try to achieve or sustain profitability, we may choose or be forced to take actions that result in material costs or material asset or goodwill impairments. For instance, in the third and fourth quarters of 2017, we recorded significant charges in connection with our former natural gas fueling compressor manufacturing business (which we subsequently combined with another company's natural gas fueling compressor manufacturing business in the CEC Combination), our closure of certain fueling stations, our determination that certain assets were impaired as a result of the foregoing, and other actions. We review our assets for impairment whenever events or changes in circumstances indicate that the carrying value of an asset or asset group may not be recoverable and we perform a goodwill impairment test on an annual basis and between annual tests in certain circumstances, in each case in accordance with applicable accounting guidance and as described in the financial statements and related notes included in this report and in the 2018 Form 10-K. Changes to the use of our assets, divestitures, changes to the structure of our business, significant negative industry or economic trends, disruptions to our operations, inability to effectively integrate any acquired businesses, further market capitalization declines, or other similar actions or conditions could result in additional asset impairment or goodwill impairment charges or other adverse consequences, any of which could have material negative effects on our financial condition, our results of operations and the trading price of our common stock.

Our success is dependent on the willingness of fleets and other consumers to adopt natural gas as a vehicle fuel, which may not occur in a timely manner, at expected levels or at all.

Our success is highly dependent on the adoption by fleets and other consumers of natural gas as a vehicle fuel. The market for natural gas as a vehicle fuel has experienced slow, volatile and unpredictable growth in many sectors. For example, adoption and deployment of natural gas vehicles, both in general and in certain of our key customer markets, including heavy-duty trucking, have been slower and more limited than we anticipated. Also, other important fleet markets, including airports, refuse and public transit, had slower volume and customer growth in 2018 and the nine months ended September 30, 2019 that may continue. Moreover, adoption of and demand for the different types of natural gas vehicle fuel, including CNG, LNG and RNG (which can be delivered in the form of CNG or LNG), are subject to significant risks, including decreased LNG volumes in some markets in recent periods that may continue and may not be sufficiently offset by any increase in demand for RNG or CNG. If the market for natural gas as a vehicle fuel does not develop at improved rates or levels, or if a market develops but we are not able to capture a significant share of the market or the market subsequently declines, our business, prospects, financial condition and operating results would be harmed.

Factors that may influence the adoption of natural gas as a vehicle fuel, many of which are beyond our control, include, among others:

- Increases, decreases or volatility in the supply, demand, use and prices of crude oil, gasoline, diesel, natural gas and other vehicle fuels, such as electricity, hydrogen, renewable diesel, biodiesel and ethanol;

- Perceptions about the benefits of renewable and conventional natural gas relative to gasoline and diesel and other alternative vehicle fuels, including with respect to factors such as supply, cost savings, environmental benefits and safety;
- Inertia among fleets and fleet vehicle operators, who may be unable or unwilling to prioritize converting a vehicle fleet to natural gas over an operator’s other general business concerns, particularly if the operator lacks sufficient incentive to convert from emissions regulations or other requirements or lacks demand for the conversion from its customers or drivers;
- Natural gas vehicle cost, fuel usage, availability, quality, safety, convenience (to fuel and service), design, performance and residual value, as well as operator perception with respect to these factors, generally and in our key customer markets and relative to comparable vehicles powered by other fuels;
- The development, production, cost, availability, performance, sales and marketing and reputation of natural gas engines that are well-suited for the vehicles used in our key customer markets, including heavy-duty trucks and other fleets;
- Increasing competition in the market for vehicle fuels generally, and the nature and effect of competitive developments in this market, including improvements in or perceived advantages of non-natural gas vehicle fuels or engines powered by these fuels;
- The availability and effect of environmental, tax or other government regulations, programs or incentives that promote natural gas or other alternatives as a vehicle fuel, including certain programs under which we generate credits by selling conventional and renewable natural gas as a vehicle fuel, as well as the market prices for such credits;
- Adoption of government policies or programs or increased publicity or popular sentiment in favor of vehicles or vehicle fuels other than natural gas, including long-standing support for gasoline and diesel-powered vehicles and growing support for electric and hydrogen-powered vehicles;
- The effect of, or potential for changes to, emissions requirements applicable to vehicles powered by gasoline, diesel, natural gas or other vehicle fuels;
- Emissions and other environmental regulations and pressures on crude oil and natural gas fueling stations and drilling, production, importing and transportation methods for these fuels; and
- The other risks discussed in these risk factors.

Increases, decreases and general volatility in oil, gasoline, diesel and natural gas prices could adversely affect our business.

Gasoline and diesel are today's most prevalent vehicle fuels. Prices for crude oil, which is the commodity used to make gasoline and diesel, have been low in recent years, due in part to over-production and increased supply without a corresponding increase in demand. If the prices of crude oil, gasoline and diesel continue to be low or decline further, or if the price of natural gas increases without corresponding increases in the prices of crude oil, gasoline and diesel, then market adoption of natural gas as a vehicle fuel could be slowed or limited. Further, any of these circumstances could decrease the market's perception of a need for alternative vehicle fuels generally, which could cause the prospects for and success of our industry and our business to materially suffer. In addition, under these pricing conditions, we may not be able to offer our customers an attractive price advantage for CNG and LNG and maintain an acceptable margin on our sales. Any such failure could result in an inability to attract new customers or a loss of demand from existing customers, or could directly and negatively affect our results of operations if we are forced to reduce the prices at which we sell natural gas to try to avoid such an effect. Conversely, if prices of gasoline and diesel increase or the price of natural gas decreases, we may not be able to capture a material portion of any increase in the demand for natural gas vehicle fuel that could result from favorable pricing conditions, due to increased competition from new entrants in the natural gas vehicle fuels market, expanded programs by existing competitors, or other factors.

Pricing conditions may also exacerbate the cost differential between natural gas vehicles and gasoline or diesel-powered vehicles, which may lead operators to delay or refrain from purchasing or converting to natural gas vehicles. Generally, natural gas vehicles cost more initially than gasoline or diesel-powered vehicles, because the components needed for a vehicle to use natural gas add to the vehicle’s base cost. Operators then seek to recover the additional base cost over time, through the lower cost to fuel a natural gas vehicle. Operators may, however, perceive an inability to timely recover these additional initial costs if CNG and LNG fuel are not available at prices sufficiently lower than gasoline and diesel. Such an outcome could decrease our potential customer base and harm our business prospects.

Additionally, the prices of natural gas, crude oil, gasoline and diesel have been volatile in recent years, and this volatility may continue. Factors that may cause this volatility to continue include, among others, changes in supply and availability of crude oil and natural gas, government regulations, inventory levels, consumer demand, price and availability of alternatives, weather conditions, negative publicity about crude oil or natural gas drilling, production or importing techniques and methods, economic and political conditions, transportation costs and the price of foreign imports. Fluctuations in natural gas prices affect the cost to us of the natural gas commodity. High natural gas prices adversely affect our operating margins when we cannot pass the increased costs through to our customers. Conversely, lower natural gas prices reduce our revenue when the commodity cost is passed through to our customers. As a result, continued fluctuations in natural gas prices could have a significant effect on our operating results.

We are dependent on the production of natural gas vehicles and engines in our key customer and geographic markets by vehicle and engine manufacturers, over which we have no control.

Natural gas vehicle and engine manufacturers control the development, production, quality assurance, cost and sales and marketing of their products, which shapes the performance, availability and reputation of these products in the marketplace. Although we are dependent on these manufacturers to succeed in our target markets, we have no influence over their activities. For example, Cummins Westport is the only natural gas engine manufacturer for the heavy-duty truck market in the United States, and this and other original equipment manufacturers currently produce a relatively small number of natural gas engines and vehicles for the U.S. and Canadian markets. These manufacturers may not decide to expand or maintain, or may decide to discontinue or curtail, their natural gas engine or vehicle product lines. The limited production of natural gas engines and vehicles increases their cost and limits availability, which restricts large-scale adoption, and may reduce resale value, which may contribute to operator reluctance to convert their vehicles to natural gas. In addition, some operators have communicated to us that the first generation models of natural gas engines for heavy-duty trucks have a reputation for unsatisfactory performance, and that this reputation or their first-hand experiences of such performance may be a factor in operator decisions regarding whether or not to convert their fleets to natural gas. The success of our business strategies and initiatives depends on sufficient availability and adoption of high-performing natural gas vehicles, and as a result, any production failures by the third-party manufacturers of these vehicles or their engines could harm our results of operations, business and prospects.

If there are improvements in or perceived advantages of non-natural gas vehicle fuels or engines powered by these fuels, demand for natural gas vehicles may decline.

Use of electric heavy-duty trucks, buses and refuse trucks, which are key customer markets for our business, or the perception that electric vehicles providing satisfactory performance at an acceptable cost may soon be widely available for these or other applications, could reduce demand for natural gas vehicles generally and in these key markets. In addition, hydrogen, renewable diesel and other alternative fuels in development may prove to be, or may be perceived to be, cleaner, more cost-effective, more readily available or otherwise more beneficial alternatives to gasoline and diesel than conventional or renewable natural gas. Further, technological advances in the production, delivery and use of gasoline, diesel or other alternative vehicle fuels, or the failure of natural gas vehicle fuel technology to advance at an equal pace, could slow or limit adoption of natural gas vehicles. For example, advances in gasoline and diesel engine technology, including efficiency improvements and further development of hybrid engines, may offer a more cost-effective way for operators to use a cleaner vehicle fuel, which could reduce the likelihood that fleet customers purchase natural gas vehicles or convert their existing vehicles to natural gas. If any of these risks occur, our industry, prospects and results could materially suffer.

Our business is influenced by environmental, tax and other government regulations, programs and incentives that promote natural gas or other alternatives as a vehicle fuel, and their adoption, modification or repeal could negatively affect our business.

Our business is influenced by federal, state and local tax credits, rebates, grants and other government programs and incentives that promote the use of RNG, CNG and LNG as a vehicle fuel. These include various government programs that make grant funds available for the purchase of natural gas vehicles and construction of natural gas fueling stations, as well as the AFTC tax credit under which we generated revenue for our natural gas vehicle fuel sales made through the end of 2017 but which is not available for vehicle fuel sales made after that date and may not be reinstated for 2019 or future periods, particularly if other legislative priorities result in insufficient focus on this program during upcoming congressional sessions. Additionally, our business is influenced by laws, rules and regulations that require reductions in carbon emissions and/or the use of renewable fuels, such as the programs under which we generate RINs and LCFS Credits by selling RNG, CNG and LNG as a vehicle fuel.

These programs and regulations, which have the effect of encouraging the use of RNG, CNG or LNG as a vehicle fuel, could expire or be repealed or amended for a variety of reasons. For example, parties with an interest in gasoline and diesel, electric or other alternative vehicles or vehicle fuels, including lawmakers, regulators, policymakers, environmental or advocacy organizations or other powerful groups, may invest significant time and money in efforts to delay, repeal or otherwise negatively influence regulations and programs that promote natural gas. Many of these parties have substantially greater resources and influence than we have. Further, changes in federal, state or local political, social or economic conditions, including a lack of legislative focus on these programs and regulations, could result in their modification, delayed adoption or repeal. Any failure to adopt, delay in implementing, expiration, repeal or modification of these programs and regulations, or the adoption of any programs or regulations that encourage the use of other alternative fuels or alternative vehicles over natural gas, could reduce the market for natural gas as a vehicle fuel and harm our operating results, liquidity and financial condition. For instance, California lawmakers and regulators have implemented various measures designed to increase the use of electric, hydrogen and other zero-emission vehicles, including establishing firm goals for the number of these vehicles operating on state roads by specified dates and enacting various laws and other programs in support of these goals. Although the influence of these or similar measures on our business and natural gas vehicle adoption in general remains uncertain, a focus by these groups on zero-emission vehicles over vehicles operating on natural gas adversely affects the market for natural gas vehicles and our business prospects.

We face increasing competition from a variety of businesses, many of which have far greater resources, experience, customer bases and brand awareness than we have, and we may not be able to compete effectively with these businesses.

The market for vehicle fuels is highly competitive. The biggest competition for CNG and LNG use as a vehicle fuel is gasoline and diesel because the vast majority of vehicles in our key markets are powered by these fuels. We also compete with suppliers of other alternative vehicle fuels, including renewable diesel, biodiesel and ethanol, as well as producers and fuelers of alternative vehicles, including hybrid, electric and hydrogen-powered vehicles. Additionally, our stations compete directly with other natural gas fueling stations and indirectly with electric vehicle charging stations and fueling stations for other vehicle fuels. We also face high levels of competition with respect to our other business activities, including our procurement and sale of RNG and our transport and sale of CNG through the virtual natural gas pipelines and interconnects of our subsidiary, NG Advantage.

A number of businesses are in the market for natural gas and other alternatives for use as vehicle fuel, including alternative vehicle and alternative fuel companies, refuse collectors, industrial gas companies, truck stop and fuel station owners, fuel providers, utilities and their affiliates and other organizations. If the alternative vehicle fuel market grows, then the number and type of participants in this market and their level of capital and other commitments to alternative vehicle fuel programs could increase. Many of our competitors have substantially greater experience, customer bases, brand awareness and financial, marketing and other resources than we have. As a result, these competitors may be able to respond more quickly to changes in customer preferences, legal requirements or other industry or regulatory trends; devote greater resources to the development, promotion and sale of their products; adopt more aggressive pricing policies; dedicate more effort to infrastructure and systems development in support of their business or product development activities; implement more robust or creative initiatives to advance consumer acceptance of their products; or exert more influence on the regulatory landscape that affects the vehicle fuels market.

We expect competition to increase in the vehicle fuels market generally. In addition, if the demand for natural gas vehicle fuel increases, then we expect competition in the market for natural gas vehicle fuel would also increase. Any such increased competition may reduce our customer base and revenue and may lead to increased pricing pressure, reduced operating margins and fewer expansion opportunities.

Our Zero Now heavy-duty truck financing initiative subjects us to material risks, and if this program is not successful, our financial results and business could be materially adversely affected.

One of our key strategic objectives is to fuel more natural gas heavy-duty trucks. As part of our efforts to achieve this goal, we have launched the *Zero Now* truck financing program, which is intended to facilitate and increase the deployment of natural gas heavy-duty trucks in the United States and encourage these operators to fuel their trucks at our stations. The *Zero Now* program is unique and complex and subjects us to a variety of risks. See the discussion under “Customer Markets-Trucking” in Part I, Item 1. Business of our 2018 Form 10-K for information about the structure of the program and certain agreements we have established in connection with its launch.

The *Zero Now* program may not be successful for a variety of reasons, including continued slow or limited adoption of natural gas trucks by fleet operators or the occurrence of any of the other risks described in these risk factors. For example, some operators have communicated to us that their reluctance to convert to natural gas trucks stems from insufficient incentive to convert due to emissions regulations or other requirements, lack of demand for the conversion from customers and drivers, experiences or reputation of unsatisfactory performance by the first generation models of heavy-duty truck engines, actual or perceived insufficiencies in the financial incentives to convert, concern regarding the residual value of heavy-duty trucks and prioritization of other competing business concerns. If a sufficient number of truck operators do not participate in the *Zero Now* program, then it will not achieve its intended benefits and we will have expended substantial resources on an initiative that does not produce results.

In addition, the structure and terms of the program subject us to certain additional risks. For example, the term credit agreement we have established to implement the program permits us to incur substantial additional debt, and the related credit support agreement obligates us to make quarterly payments in amounts that will vary depending on the outstanding principal under the term credit agreement. These commitments are subject to, and will amplify, the risks associated with our outstanding indebtedness, which are discussed elsewhere in these risk factors. In addition, the amounts owed under the term credit agreement and the credit support agreement use LIBOR as a benchmark for establishing the rate at which interest accrues. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to disappear entirely or to perform differently than in the past. The consequences of these developments are uncertain, but could include an increase in the cost of this indebtedness. Further, the commodity swap arrangements we established with an affiliate of TOTAL and THUSA in connection with launching the program introduce additional risks related to volatility in crude oil prices. These arrangements are designed to protect us from fluctuations in the price of crude oil; however, we may be subject to payment obligations if truck operators participating in the program do not use all of the fuel volume covered by the arrangements and we are not able to fully and timely sell the excess fuel volume to our other customers. Any obligation to make payments under our commodity swap arrangements would increase our operating expenses and decrease our available cash flow, and any efforts to sell additional gallons to our other customers to avoid such payment obligations could result in lower margins and revenues.

Moreover, even if the *Zero Now* program achieves its intended goal of facilitating growth in the U.S. heavy-duty truck market, such growth may not positively affect our results for a variety of reasons. For example, if trucks purchased or financed in the program do not meet the minimum fuel purchase obligations under their supply agreements with us for any reason, including an operator experiencing lower-than-anticipated fuel demand or failing to comply with its payment obligations under its supply agreement, then the program would not result in the intended growth in our fuel sales volume and consequent increase in our revenues. Although we have built America's Natural Gas Highway, orANGH, our nationwide network of natural gas truck-friendly fueling stations, some operators may choose to fuel their natural gas vehicles elsewhere due to lack of convenient access, fuel prices or other factors. In that event, we would remain obligated to make payments under the debt agreements we have established in connection with the *Zero Now* program, which are based on the cost of the trucks purchased or financed in the program and not the amount of fuel volume we actually sell. As a result, we could become subject to significant payments under these debt agreements without a corresponding increase in revenues, in which case our performance and liquidity would be materially adversely affected.

We must effectively manage these risks to obtain the anticipated benefits from our *Zero Now* truck financing program and achieve our objective of fueling additional natural gas heavy-duty trucks. If we are not successful in meeting these objectives, our business, financial condition and operating results would be materially and adversely affected.

We may not generate sufficient cash flow from our business to pay our debt.

We have material indebtedness, and we are permitted to incur significant additional debt under the agreements we established in connection with our *Zero Now* truck financing program. Our outstanding and permitted indebtedness could make us more vulnerable to adverse changes in general U.S. and worldwide economic, regulatory and competitive conditions, limit our flexibility to plan for or react to changes in our business or industry, place us at a disadvantage compared to our competitors that have less debt or limit our ability to borrow or otherwise raise additional capital as needed.

Our payments of amounts owed under our agreements related to our *Zero Now* program and various other debt instruments will reduce our cash resources available for other purposes, including pursuing strategic initiatives, transactions or other opportunities, satisfying our other commitments and generally supporting our operations. Moreover, our ability to make these payments depends on our future performance, which is subject to economic, financial, competitive and other factors, including those described in these risk factors, and many of which are beyond our control. Our business may not generate sufficient cash from operations to service our debt.

If we cannot meet our debt obligations from our operating cash flows, we may pursue one or more alternative measures. For instance, we are permitted to issue up to 14.0 million shares of our common stock to repay part of the outstanding principal amount of our outstanding convertible notes due June 2020. Any repayment of our debt with equity, however, would dilute the ownership interests of our existing stockholders. Additionally, because the agreements governing much of our existing indebtedness contain minimal restrictions on our ability to incur additional debt and do not require us to maintain financial ratios or specified levels of net worth or liquidity, we may seek capital from other sources to service our debt, such as selling assets, restructuring or refinancing our existing debt or obtaining additional equity or debt financing. Our ability to engage in any of these activities, if we decide to do so, would depend on the capital markets and the state of our industry, business and financial condition at the time, and could also subject us to significant risks, which are discussed elsewhere in these risk factors. Moreover, we may not be able to obtain any additional capital we may pursue on desirable terms, at a desirable time or at all. Any failure to pay our debts when due could result in a default on our debt obligations. In addition, certain of our debt agreements contain restrictive covenants, and any failure by us to comply with these covenants could also cause us to be in default under these agreements.

In the event of any default on our debt obligations, the holders of the indebtedness could, among other things, declare all amounts owed immediately due and payable. Additionally, with respect to any amounts owed under our term credit agreement that are paid by THUSA pursuant to its guaranty rather than by us, THUSA would be permitted to take direct possession of funds paid by fleet operators under any fuel supply agreements we establish in connection with our Zero Now truck financing program. Any such declaration or possession of funds could deplete all or a large portion of our available cash flow, and thereby reduce the amount of cash available to pursue our business plans or force us into bankruptcy or liquidation.

We may need to raise additional capital to continue to fund our business or repay our debt, which could have negative effects and may not be available when needed, on acceptable terms or at all.

We require capital to make principal and interest payments on our indebtedness, and to pay for capital expenditures (including NG Advantage's capital expenditures), our other operating expenses, and any mergers, acquisitions or strategic investments, transactions or relationships we may pursue. If we cannot fund any of these activities with capital on-hand or cash provided by our operations, we may seek to obtain additional capital from other sources, such as by selling assets or pursuing debt or equity financing.

Asset sales and equity or debt financing may not be available when needed, on terms favorable to us or at all. Any sale of our assets to generate cash proceeds may limit our operational capacity and could limit or eliminate any revenue streams or business plans that are dependent on the sold assets. Any issuances of our common stock or securities convertible into our common stock to raise capital would dilute the ownership interest of our existing stockholders. Any debt financing we may pursue could require us to make significant interest or other payments and to pledge some or all of our assets as security. In addition, higher levels of indebtedness could increase our risk of non-repayment, adversely affect our creditworthiness and amplify the other risks associated with our existing debt, which are discussed elsewhere in these risk factors. Further, we may incur substantial costs in pursuing any capital-raising transactions, including investment banking, legal and accounting fees. On the other hand, if we are unable to obtain capital in amounts sufficient to fund our obligations, expenses and strategic initiatives, we could be forced to suspend, delay or curtail our business plans or operating activities or could default on our contractual commitments. Any such outcome could negatively affect our business, performance, liquidity and prospects.

Compliance with greenhouse gas emissions regulations may prove costly and negatively affect our performance and financial condition.

California has enacted laws and regulations that require specified greenhouse gas emissions reductions, and the federal government and several other state governments are considering similar measures. These regulations could affect several areas of our operations, including our sales of conventional and renewable natural gas and the operation of our CNG and LNG fueling stations and our LNG production plants. For instance, California's AB 32 law, which regulates greenhouse gas emissions from transportation fuels, including emissions associated with the CNG and LNG vehicle fuel we sell, imposes increased compliance costs on utilities, suppliers and/or users of CNG and LNG fuel. See the discussion under "Government Regulation and Environmental Matters - Sale of Natural Gas Vehicle Fuel, Operation of Fueling Stations and Production of LNG: Greenhouse Gas Emissions Regulation" in Part I, Item 1. Business of our 2018 Form 10-K for information about the implementation of AB 32.

The increased costs of CNG and LNG vehicle fuel as a result of AB 32 could diminish the attractiveness of these fuels for existing and prospective customers in California, which could reduce our customer base and fuel sales in one of our key geographic markets. Additionally, to the extent we are not able to pass these increased costs through to our customers, we could experience increased expenses and reduced margins. Any of these outcomes could cause our performance to suffer, impair our ability to fulfill customer contracts and reduce our cash available for other aspects of our business. Moreover, if similar laws or regulations are adopted and implemented by other states or by the federal government, or if existing laws are amended to make them more stringent, any compliance costs associated with the new or amended laws could amplify these effects. Further, any such new or more stringent laws or regulations could require us to undertake or incur significant additional capital expenditures or other costs to, among other things, buy emissions or other environmental credits or invest in costly new emissions prevention technologies. We cannot estimate the expenses we may incur to comply with potential new laws or changes to existing laws, or the other potential effects these laws may have on our business, and these unknown costs and effects are not contemplated by our existing customer agreements or our budgets and cost estimates.

In addition, any failure by us to comply with existing or any future emissions laws or regulations could result in monetary penalties or a variety of other administrative, civil and criminal enforcement measures, any of which could have a material adverse effect on our business, reputation, financial condition, liquidity and results of operations.

Our RNG business may not be successful.

Our RNG business consists of purchasing RNG from third-party producers, including BP, and reselling this RNG through our natural gas fueling infrastructure as Redeem, our RNG vehicle fuel.

The success of our RNG business depends on our ability to secure, on acceptable terms, a sufficient supply of RNG from BP and other third parties; to sell this RNG in adequate volumes and at prices that are attractive to customers and produce acceptable margins for us; and to sell, at favorable prices, credits we may generate under applicable federal or state programs from our sale of RNG as a vehicle fuel, including RINs and LCFS Credits. If we are not successful at one or more of these activities, our RNG business could fail and our performance and financial condition could be materially harmed.

Our ability to maintain an adequate supply of RNG is subject to risks affecting RNG production. Projects that produce pipeline-quality RNG often experience unpredictable production levels or other difficulties due to a variety of factors, including, among others, problems with equipment, severe weather, construction delays, technical difficulties, high operating costs, limited availability or unfavorable composition of collected feedstock gas, and plant shutdowns caused by upgrades, expansion or required maintenance. In addition, increasing demand for RNG could result in more robust competition for supplies of RNG, including from other vehicle fuel providers, gas utilities (which may have distinct advantages in accessing RNG supply, including potential use of ratepayer funds to fund RNG purchases if approved by a utility's regulatory commission) and other users and providers. If any of our RNG suppliers experience these or other difficulties in their RNG production processes, or if competition for RNG supply materially increases, then our supply of RNG and our ability to resell it as a vehicle fuel could be jeopardized.

Our ability to generate revenue from our sale of RNG or our generation and sale of RINs and LCFS Credits depends on a number of factors, including the markets for RNG as a vehicle fuel and for these credits. The market for RNG as a vehicle fuel is subject to the same fluctuations and unpredictability that affect the market for natural gas vehicle fuel generally, which is discussed elsewhere in these risk factors. The markets for RINs and LCFS Credits have been volatile and unpredictable in recent periods, and the prices for these credits have been subject to fluctuations, including significantly lower market prices for RINs since June 2019 that may continue. Additionally, the value of RINs and LCFS Credits, and consequently the revenue levels we may receive from our sale of these credits, may be adversely affected by changes to the federal and state programs under which these credits are generated and sold or other market conditions. Further, our ability to generate revenue from sales of these credits depends on our strict compliance with these federal and state programs, which are complex and can involve a significant degree of judgment. If the agencies that administer and enforce these programs disagree with our judgments, otherwise determine we are not in compliance, conduct reviews of our activities or make changes to the programs, then our ability to generate or sell these credits could be temporarily restricted pending completion of reviews or as a penalty, permanently limited or lost entirely, and we could also be subject to fines or other sanctions. Any of these outcomes could force us to purchase credits in the open market to cover any credits we have contracted to sell, retire credits we may have generated but not yet sold, reduce or eliminate a significant revenue stream or incur substantial additional and unplanned expenses. We experienced many of these effects in connection with the administrative review by the California Air Resources Board of our sales of LCFS Credits in the third and fourth quarters of 2017, during which we were restricted from selling and transferring accumulated LCFS Credits, we were required to make cash payments to third parties to settle preexisting commitments to transfer LCFS Credits, and certain of our LCFS Credits were invalidated. See the discussion under "Key Trends" in the MD&A in our 2018 Form 10-K for more information about this administrative review and its effects. Moreover, in the absence of these programs that allow us to generate and sell RINs and LCFS Credits or other federal and state programs that support the RNG vehicle fuel market, or if our customers are not willing to pay a premium for RNG, we may be unable to operate our RNG business profitably or at all. Any such failure of our RNG business could have a significant negative effect on our performance, cash position and prospects.

NG Advantage may not be successful.

NG Advantage's business consists of transporting and selling CNG for non-vehicle purposes via virtual natural gas pipelines and interconnects. It transports CNG to industrial and institutional energy users that do not have direct access to natural gas pipelines. NG Advantage also transports CNG between pipelines for customers that desire to take advantage of commodity price differences. NG Advantage faces unique risks, including among others:

- It has a history of net losses and has incurred substantial indebtedness;
- NG Advantage will need to raise additional capital, which may not be available, may only be available on onerous terms, or may only be available from us. Recently, we have been the sole source of financing for NG Advantage, consisting of loans of $13.1 million in the nine months ended September 30, 2019 and a $5.0 million equity purchase in the year ended December 31, 2018. If NG Advantage is not able to source financing from external sources, we may be forced to provide additional debt or equity capital to allow the company to satisfy its commitments and maintain operations;
- It has considerable obligations under its arrangements with BP and other customers, and if NG Advantage fails to perform under such arrangements it would be subject to significant liquidated damages and we could be subject to significant cash liability pursuant to the terms of our guaranty agreement with NG Advantage and BP (see the disclosure under "Off-Balance Sheet Arrangements" in the MD&A in this report for more information about this guaranty agreement);
- The labor market for truck drivers is very competitive, which increases NG Advantage's difficulty in meeting its delivery obligations;
- NG Advantage often transports CNG in trailers over long distances and these trailers may be involved in accidents;
- NG Advantage has been targeted by environmental groups that may disrupt its activities; and
- Many of the other risks discussed in these risk factors.

If NG Advantage fails to manage any of these risks, our business, financial condition, liquidity results of operations, prospects and reputation may be harmed.

Our station construction activities subject us to a number of business and operational risks.

As part of our business activities, we design and construct natural gas fueling stations that we either own and operate ourselves or sell to our customers. These activities require a significant amount of judgment in determining where to build and open fueling stations, including predictions about fuel demand that may not be accurate for any of the locations we target. As a result, we have built stations that we may not open for fueling operations and we may open stations that fail to generate the volume or profitability levels we anticipate, either or both of which could occur due to a lack of sufficient customer demand at the station locations or for other reasons. For any stations that are completed but unopened, we would have substantial investments in assets that do not produce revenue, and for any stations that are open and underperforming, we may decide to close the stations. We determined to close a number of underperforming stations in the third and fourth quarters of 2017 and recorded impairment charges in connection with these closures and other related actions, and any further station closures could result in substantial additional costs and non-cash asset impairments or other charges and could harm our reputation and reduce our potential customer base.

We also face a number of operational challenges in connection with our station design and construction activities. For example, we may not be able to identify suitable locations for the stations we or our customers seek to build. Additionally, even if preferred sites can be located, we may encounter land use or zoning difficulties, challenges obtaining and retaining required permits and approvals or local resistance, any of which could prevent us or our customers from building new stations on these sites or limit or restrict the use of new or existing stations. Any such difficulties, resistance or limitations or any failure to comply with local permit, land use or zoning requirements could restrict our activities or expose us to fines, reputational damage or other liabilities, which would harm our business and results of operations. In addition, we act as the general contractor and construction manager for new station construction and facility modification projects, and we typically rely on licensed subcontractors to perform the construction work. We may be liable for any damage we or our subcontractors cause or for injuries suffered by our employees or our subcontractors' employees during the course of work on our projects. Additionally, shortages of skilled subcontractor labor could significantly delay a project or otherwise increase our costs. Further, our expected profit from a project is based in part on assumptions about the cost of the project, and cost overruns, delays or other execution issues may, in the case of projects we complete and sell to customers, result in our failure to achieve our expected margins or cover our costs, and in the case of projects we build and own, result in our failure to achieve an acceptable rate of return. If any of these events occur, our business, operating results and liquidity could be negatively affected.

We have significant contracts with government entities, which are subject to unique risks.

We have, and expect to continue to seek, long-term RNG, CNG and LNG station construction, maintenance and fuel sale contracts with various government bodies, which accounted for material portions of our revenue in 2016, 2017, 2018, and the nine months ended September 30, 2019. In addition to normal business risks, including the other risks discussed in these risk factors, our contracts with government entities are often subject to unique risks, some of which are beyond our control. For example, long-term government contracts and related orders are subject to cancellation if adequate appropriations for subsequent performance periods are not made. Further, the termination of funding for a government program supporting any of our government contracts could result in the loss of anticipated future revenue attributable to the contract. Moreover, government entities with which we contract are often able to modify, curtail or terminate contracts with us at their convenience and without prior notice, and would only be required to pay for work completed and commitments made at or prior to the time of termination.

In addition, government contracts are frequently awarded only after competitive bidding processes, which are often protracted. In many cases, unsuccessful bidders for government contracts are provided the opportunity to formally protest the contract awards through various agencies or other administrative and judicial channels. The protest process may substantially delay a successful bidder's contract performance, result in cancellation of the contract award entirely and distract management. As a result, we may not be awarded contracts for which we bid, and substantial delays or cancellation of contracts may follow any successful bids as a result of any protests by other bidders. The occurrence of any of these risks would have a material adverse effect on our results of operations and financial condition.

Our operations entail inherent safety and environmental risks, which may result in substantial liability to us.

Our operations entail inherent safety risks, including risks associated with equipment defects, malfunctions, failures and misuses. For example, operation of LNG pumps requires special training because of the extremely low temperatures of LNG. Also, LNG tanker trailers and CNG fuel tanks and trailers could rupture if involved in accidents or improper maintenance or installation. Further, improper refueling of natural gas vehicles or operation of natural gas vehicle fueling stations could result in sudden releases of pressure that could cause explosions or the venting of methane, a potent greenhouse gas. These safety and environmental risks could result in uncontrollable flows of natural gas, fires, explosions, death or serious injury, any of which may expose us to liability for personal injury, wrongful death, property damage, pollution and other environmental damage. We may incur substantial liability and costs if any such damages are not covered by insurance or are in excess of policy limits, or if environmental damage causes us to violate applicable greenhouse gas emissions or other environmental laws. Additionally, the occurrence of any of these events with respect to our fueling stations or our other operations could materially harm our business and reputation. Moreover, the occurrence of any of these events to any other organization in the natural gas vehicle fuel business could harm our industry generally by negatively affecting perceptions about, and adoption levels of, natural gas as a vehicle fuel.

Our business is subject to a variety of government regulations, which may restrict our operations and result in costs and penalties.

We are subject to a variety of federal, state and local laws and regulations relating to the environment, health and safety, labor and employment, building codes and construction, zoning and land use, the government procurement process, any political activities or lobbying in which we may engage, public reporting and taxation, among others. It is difficult and costly to manage the requirements of every authority having jurisdiction over our various activities and to comply with their varying standards. Many of these laws and regulations are complex, change frequently, involve significant judgment and have become more stringent over time. Any changes to existing regulations or adoption of new regulations may result in significant additional expense to us or our customers. Further, from time to time, as part of the regular evaluation of our operations, including newly acquired or developing operations, we may be subject to compliance audits by regulatory authorities, which may distract management from our revenue-generating activities and involve significant costs and use of other resources. Also, we often need to obtain facility permits or licenses to address, among other things, storm water or wastewater discharges, waste handling and air emissions in connection with our operations, which may subject us to onerous or costly permitting conditions or delays if permits cannot be timely obtained.

Our failure to comply with any applicable laws and regulations could result in a variety of administrative, civil and criminal enforcement measures, including, among others, assessment of monetary penalties, imposition of corrective requirements or prohibition from providing services to government entities. If any of these enforcement measures were imposed on us, our business, financial condition and performance could be negatively affected.

We may from time to time pursue acquisitions, divestitures, investments or other strategic relationships or transactions, which could fail to meet expectations or otherwise harm our business.

We may acquire or invest in other companies or businesses or pursue other strategic transactions or relationships, such as joint ventures, collaborations, divestitures or other similar arrangements. For example, in March 2017 we completed the BP Transaction, in December 2017 we completed the CEC Combination, and in October 2018 and January 2019 we established arrangements with THUSA and others to launch the *Zero Now* truck financing program.

These strategic transactions and relationships and any others we may pursue in the future involve numerous risks, any of which could harm our business, performance and liquidity, including, among others:

- Difficulties integrating the operations, personnel, contracts, service providers and technologies of an acquired company or partner;
- Diversion of financial and management resources from existing operations or alternative acquisition, investment, strategic or other opportunities;
- Failure to realize the anticipated synergies or other benefits of a transaction or relationship;
- Failure to identify all of the operating problems, liabilities, shortcomings or other challenges associated with a company or asset we may partner with, invest in or acquire, including issues related to regulatory compliance practices, revenue recognition or other accounting policies, intellectual property rights, employee, customer or vendor relationships, or differing business strategies, approaches, cultures or goals;
- Risks of entering new customer or geographic markets in which we may have limited or no experience, including, among others, challenges satisfying differing customer demands and preferences and complying with differing laws and regulations, as well as risks related to political and economic instability in some regions, trade restrictions or barriers and currency exchange or repatriation uncertainties;
- Potential loss of an acquired company's or partner's key employees, customers or vendors in the event of an acquisition or investment, or potential loss of our assets (and their associated revenue streams), employees or customers in the event of a divestiture or other strategic transaction;
- Risks associated with any joint venture or other collaboration relationship we may pursue, including as a result of our relinquishing of some degree of control over the assets, technologies or businesses that are the subject of the joint venture

or collaboration, or as a result of our partners having business goals and interests that are not aligned with ours or being unable or unwilling to fulfill their obligations in the relationship;

- Incurrence of substantial costs or debt or equity dilution to fund an acquisition, investment or other transaction or relationship, and any inability to generate sufficient revenue from the transaction or relationship to offset such costs;
- Possible write-offs or impairment charges relating to any businesses we partner with, invest in or acquire; and
- The occurrence of many of the risks described above if we fail to accurately predict trends in our key markets, which could lead us to neglect opportunities that ultimately capitalize on these trends or, conversely, pursue transactions that do not best serve our markets or customers over the long term.

Our results of operations fluctuate significantly and are difficult to predict.

Our results of operations have historically experienced, and may continue to experience, significant fluctuations as a result of a variety of factors, including, among others, the amount and timing of our natural gas vehicle fuel sales, station construction sales, sales of RINs and LCFS Credits and recognition of government credits, grants and incentives, such as AFTC (for example, we received no AFTC revenue in 2017, but we received all of the AFTC revenue associated with our vehicle fuel sales made in 2017 during the first quarter of 2018); fluctuations in commodity, station construction and labor costs and natural gas, RIN and LCFS Credit prices; variations in the fair value of certain of our derivative instruments that are recorded in revenue; the amount and timing of our billing, collections and liability payments; and the other factors described in these risk factors.

Our performance in certain periods has also been affected by transactions or events that have resulted in significant cash or non-cash gains or losses. For example, our results for 2017 were positively affected by gains related to repurchases or retirements of our outstanding convertible debt at a discount and by a gain related to the BP Transaction, but were also negatively affected by significant charges in connection with our closure of certain fueling stations, the decreased operating performance of our former natural gas fueling compressor manufacturing business, our determination of an impairment of assets as a result of the foregoing, and certain other actions. These or other similar gains or losses may not recur regularly, in the same amounts or at all in future periods.

These significant fluctuations in our operating results may render period-to-period comparisons less meaningful, and investors in our securities should not rely on the results of one period as an indicator of performance in any other period. Additionally, these fluctuations in our operating results could cause our performance in any period to fall below the financial guidance we may have provided to the public or the estimates and projections of the investment community, which could negatively affect the price of our common stock.

We depend on key people to generate and oversee our strategies and operate our business, and our business could be harmed if we are unable to retain these key people.

We believe our future success is dependent on the contributions of certain key people, including our executive officers and directors. In many cases, we believe these individuals' knowledge of our business and experience in our industry would be difficult to replace. As a result, and due to the high levels of competition for talent in our industry, we may incur significant costs to try to retain these key people. All of our employees, however, including our management team, are permitted to terminate their employment relationships with us at any time, and any of our directors could resign at any time or fail to be re-elected by our stockholders on an annual basis. If we are unable to retain our key people, or if these individuals leave our Company and we are unable to attract and successfully integrate quality replacements in a timely manner and on reasonable terms, our business, operating results and financial condition could be harmed.

Natural gas purchase and sale commitments may exceed demand or supply, as applicable, which could cause our costs relative to our revenue to increase.

We are a party to two long-term natural gas purchase agreements with a take-or-pay commitment, and we may enter into additional similar contracts in the future. These take-or-pay commitments require us to pay for the natural gas we have agreed to purchase, irrespective of whether we sell the gas. If the market for natural gas as a vehicle fuel declines or fails to develop as we anticipate, if we lose natural gas vehicle fueling customers, or if demand under any existing or future sales contract diminishes, these take-or-pay commitments may exceed our natural gas demand. In addition, we are involved in various firm commitment natural gas supply arrangements, and we may establish additional similar arrangements in the future. These arrangements require us to supply certain volumes of natural gas over specified periods of time, and subject us to deficiency payments or other penalties if we are unable to deliver the committed volumes as and when required. If we fail to generate sufficient demand for our take-or-pay purchase commitments or satisfy our firm supply commitments, our supply costs or operating expenses could increase without a corresponding increase in revenue, which could negatively affect our margins, performance and liquidity.

We provide financing to fleet customers for natural gas vehicles, which exposes our business to credit risks.

We directly lend to certain qualifying customers a portion, and occasionally all, of the purchase price of natural gas vehicles they agree to buy. This direct financing is in addition to our funding of the incremental cost of natural gas heavy-duty trucks purchased or leased in our *Zero Now* truck financing program. These financing activities involve a number of risks, including general credit risks associated with equipment finance relationships. For example, financed equipment often consists mostly of vehicles, which are mobile and easily damaged, lost or stolen. In addition, the borrower may default on payments, enter bankruptcy proceedings or liquidate. The materialization of any of these risks could harm our vehicle finance business and our results of operations and liquidity.

Our warranty reserves may not adequately cover our warranty obligations, which could result in unexpected costs.

We provide product warranties with varying terms and durations for the stations we build and sell, and we establish reserves for the estimated liability associated with these warranties. Our warranty reserves are based on historical trends and any specifically identified warranty issues known to us, and the amounts estimated for these reserves could differ materially from the warranty costs we may actually incur. We would be adversely affected by an increase in the rate or volume of warranty claims or the amounts involved in warranty claims, any of which could increase our costs beyond our established reserves and cause our cash position and financial condition to suffer.

Increased global IT security threats and more sophisticated and targeted computer crime pose a risk to our systems, networks, products, and services.

Increased global IT security threats and more sophisticated and targeted computer crime pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data. There have been several recent, highly publicized cases in which organizations of various types and sizes have reported the unauthorized disclosure of customer or other confidential information, as well as cyberattacks involving the dissemination, theft and destruction of corporate information, intellectual property, cash or other valuable assets. There have also been several highly publicized cases in which hackers have requested “ransom” payments in exchange for not disclosing customer or other confidential information or for not disabling the target company’s computer or other systems. Implementing security measures designed to prevent, detect, mitigate or correct these or other IT security threats involves significant costs, and any such measures we have implemented or may implement in the future could be inadequate or could fail, especially because cyberattack techniques are increasingly sophisticated, change frequently and are often not recognized until launched. Any IT security threats that are successful against our security measures could, depending on their nature and scope, lead to the compromise of confidential information, improper use of our systems and networks, manipulation and destruction of data, operational disruptions and substantial financial outlays. Further, a cyberattack could occur and persist for an extended period of time without detection, and an investigation of any successful cyberattack would likely require significant time, costs and other resources to complete. The occurrence of any of these risks could materially harm our business, reputation and performance.

Global climate change may increase the frequency and severity of weather events and the losses resulting from these events, which could have a material adverse effect on our business and the markets in which we operate.

Over the past several years, changing weather patterns and climatic conditions have added to the unpredictability and frequency of natural disasters in certain parts of the world and have created additional uncertainty as to future trends. We cannot predict whether or to what extent natural disasters may occur or increase, nor can we predict the effect such events will have on our operations or the geographic markets in which we operate; however, any increased frequency or severity of these events could increase their overall negative effect on economic conditions in these regions and could also directly affect our operations if our fueling stations, our LNG plants or our customers’ operations are damaged or otherwise subjected to limited operations as a result of such an event. The occurrence of any of these risks could negatively affect our business, performance and liquidity, and could also cause the price of our common stock to decline.

Risks Related to Our Common Stock

A significant portion of our common stock is beneficially owned by a single stockholder that may have interests that differ from yours and that is able to exert significant influence over our corporate decisions, including a change of control.

Following our issuance and sale of our common stock to Total in June 2018, Total holds approximately 25% of our outstanding shares of common stock and the largest ownership position of our Company. In addition, TOTAL was granted certain special rights that our other stockholders do not have in connection with its acquisition of this ownership position, including the right to designate two individuals to serve as directors of our Company and a third individual to serve as an observer on certain of our board committees. TOTAL or other large stockholders may be able to influence or control matters requiring approval by our stockholders, including the election of directors and mergers, acquisitions or other extraordinary transactions. TOTAL, however, may have interests that differ from yours and may vote or otherwise act in ways with which you disagree or that may be adverse to your interests. A concentration of stock ownership may also have the effect of delaying, preventing or deterring a change of control of our Company, which could deprive our stockholders of an opportunity to receive a premium for their shares of our common stock as part of a sale of our Company and could affect the market price of our common stock. Conversely, such a concentration of stock ownership may facilitate a change of control under terms you and other stockholders may not find favorable or at a time when you and other stockholders may prefer not to sell.

Sales of our common stock, or the perception that such sales may occur, could cause the market price of our stock to drop significantly, regardless of the state of our business.

All outstanding shares of our common stock are eligible for sale in the public market, subject in certain cases to the requirements of Rule 144 under the Securities Act. Also, shares of our common stock that may be issued upon the exercise, vesting or conversion of our outstanding stock options, restricted stock units and convertible notes may be eligible for sale in the public market, to the extent permitted by Rule 144 and the provisions of the applicable stock option, restricted stock unit and convertible note agreements or if such shares have been registered under the Securities Act. If these shares are sold, or if it is perceived that they may be sold, in the public market, the trading price of our common stock could decline.

The price of our common stock may continue to fluctuate significantly, and you could lose all or part of your investment.

The market price of our common stock has experienced, and may continue to experience, significant volatility. Factors that may cause volatility in the price of our common stock, many of which are beyond our control, include, among others:

- The factors that may influence the adoption of natural gas as a vehicle fuel, as discussed elsewhere in these risk factors;
- Our ability to implement our business plans and initiatives, such as our *Zero Now* truck financing program, and their anticipated, perceived or actual level of success;
- Failure to meet or exceed any financial guidance we have provided to the public or the estimates and projections of the investment community;
- The market's perception of the success and importance of any of our acquisitions, divestitures, investments or other strategic relationships or transactions;
- The amount of and timing of sales of, and prices for, RINs and LCFS Credits;
- Changes in political, regulatory, economic and market conditions;
- Changes to our management, including officer or director departures, replacements or other changes;
- Our issuance of additional shares of our common stock (or securities convertible into or exchangeable for our common stock);
- A change in the trading volume of our common stock; and
- The other risks described in these risk factors.

In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies, but which have affected the market prices of these companies' securities. These market fluctuations may also materially and adversely affect the market price of our common stock.

Volatility or declines in the market price of our common stock could have other negative consequences, including, among others, further impairments to our assets (following the asset impairment charges we recorded in the third and fourth quarters of 2017 related to our former natural gas fueling compressor manufacturing business and our closure of certain fueling stations), potential impairments to our goodwill and a reduced ability to use our common stock for capital-raising, acquisitions or other purposes. The occurrence of any of these risks could materially and adversely affect our financial condition, results of operations and liquidity and could cause further declines in the market price of our common stock.

Item 2.—Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3.—Defaults Upon Senior Securities

None.

Item 4.—Mine Safety Disclosures

None.

Item 5.—Other Information

None.

Item 6.—Exhibits

The information required by this Item 6 is set forth on the Exhibit Index that immediately precedes the signature page to this report and is incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description
31.1*	Certification of Andrew J. Littlefair, President and Chief Executive Officer, pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Robert M. Vreeland, Chief Financial Officer, pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by Andrew J. Littlefair, President and Chief Executive Officer, and Robert M. Vreeland, Chief Financial Officer.
101*	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets as of December 31, 2018 and September 30, 2019; (ii) Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2018 and 2019; (iii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the Three and Nine Months Ended September 30, 2018 and 2019; (iv) Condensed Consolidated Statements of Stockholders' Equity for the Three and Nine Months Ended September 30, 2018 and 2019; (v) Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2018 and 2019; and (vi) Notes to Condensed Consolidated Financial Statements.

* Filed herewith.
** Furnished herewith.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CLEAN ENERGY FUELS CORP.

Date: November 12, 2019	By:	/s/ ROBERT M. VREELAND
		Robert M. Vreeland
		Chief Financial Officer
		(Principal financial officer and duly authorized to sign on behalf of the registrant)

Exhibit 31.1

Certification

I, Andrew J. Littlefair, certify that:

1. I have reviewed this Form 10-Q of Clean Energy Fuels Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2019

/s/ ANDREW J. LITTLEFAIR

Andrew J. Littlefair,
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification

I, Robert M. Vreeland, certify that:

1. I have reviewed this Form 10-Q of Clean Energy Fuels Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2019

/s/ ROBERT M. VREELAND

Robert M. Vreeland,
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION REQUIRED BY
SECTION 1350 OF TITLE 18 OF THE UNITED STATES CODE

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, each of the undersigned hereby certifies in his capacity as the specified officer of Clean Energy Fuels Corp. (the "Company") that, to the best of his knowledge, the quarterly report of the Company on Form 10-Q for the fiscal quarter ended September 30, 2019 fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods presented in the financial statements included in such report.

Dated: November 12, 2019

/s/ ANDREW J. LITTLEFAIR

Name:	Andrew J. Littlefair
Title:	*President and Chief Executive Officer* *(Principal Executive Officer)*

Dated: November 12, 2019

/s/ ROBERT M. VREELAND

Name:	Robert M. Vreeland
Title:	*Chief Financial Officer* *(Principal Financial Officer)*

This certification accompanies this quarterly report on Form 10-Q pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Exchange Act. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.