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 March 31, 2019

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-36103

Tecogen®

Advanced Modular CHP Systems

TECOGEN INC. (NASDAQ:TGEN)
(Exact name of Registrant as specified in its charter)

Delaware	04-3536131
(State or Other Jurisdiction of Incorporation or Organization)	*(IRS Employer Identification No.)*
45 First Avenue	
Waltham, Massachusetts	02451
(Address of Principal Executive Offices)	*(Zip Code)*

Registrant's Telephone Number, Including Area Code: (781) 466-6402

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 ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ☒ No ☐

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 the 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 ☐	Accelerated filer ☐	Non –accelerated filer ☒	Smaller reporting company ☒
			Emerging Growth company ☐

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. ☐

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

Title of each class	Outstanding, April 30, 2019
Common Stock, $0.001 par value	24,839,746

TECOGEN INC.

QUARTERLY REPORT ON FORM 10-Q
FOR THE PERIOD ENDED MARCH 31, 2019
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References in this Form 10-Q to "we", "us", "our"', the "Company" and "Tecogen" refers to Tecogen Inc. and its consolidated subsidiaries, unless otherwise noted.

PART I - FINANCIAL INFORMATION
Item 1 - Financial Statements

CONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited)

	March 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,610,235	$ 272,552
Accounts receivable, net	11,676,654	14,176,452
Unbilled revenue	5,190,392	4,893,259
Inventory, net	6,667,567	6,294,862
Due from related party	—	9,405
Prepaid and other current assets	618,917	722,042
Total current assets	26,763,765	26,368,572
Property, plant and equipment, net	3,924,951	11,273,115
Right of use assets	2,546,588	—
Intangible assets, net	1,573,399	2,893,990
Goodwill	5,281,867	8,975,065
Other assets	314,652	393,651
TOTAL ASSETS	$ 40,405,222	$ 49,904,393
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Revolving line of credit, bank	$ —	$ 2,009,435
Accounts payable	5,914,089	7,153,330
Accrued expenses	2,222,527	1,528,014
Deferred revenue	1,874,794	2,507,541
Lease obligations, current	555,831	—
Total current liabilities	10,567,241	13,198,320
Long-term liabilities:		
Deferred revenue, net of current portion	295,510	2,375,700
Lease obligations, long-term	1,990,757	—
Unfavorable contract liability, net	2,870,339	6,292,599
Total liabilities	15,723,847	21,866,619
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Tecogen Inc. stockholders' equity:		
Common stock, $0.001 par value; 100,000,000 shares authorized; 24,834,746 and 24,824,746 issued and outstanding at March 31, 2019 and December 31, 2018, respectively	24,835	24,825
Additional paid-in capital	56,477,342	56,427,928
Accumulated deficit	(31,950,172)	(28,670,095)
Total Tecogen Inc. stockholders' equity	24,552,005	27,782,658
Noncontrolling interest	129,370	255,116
Total stockholders' equity	24,681,375	28,037,774
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 40,405,222	$ 49,904,393

The accompanying notes are an integral part of these consolidated financial statements.

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three Months Ended	
	March 31, 2019	March 31, 2018
Revenues		
Products	$ 3,024,526	$ 3,673,506
Services	3,911,296	4,719,386
Energy production	1,240,809	1,782,535
Total revenues	8,176,631	10,175,427
Cost of sales		
Products	1,943,462	2,409,115
Services	2,474,533	2,782,854
Energy production	799,877	1,145,655
Total cost of sales	5,217,872	6,337,624
Gross profit	2,958,759	3,837,803
Operating expenses		
General and administrative	2,655,411	2,789,549
Selling	693,253	675,118
Research and development	345,083	302,230
Gain on sale of assets	(1,081,049)	—
Goodwill impairment	3,693,198	—
Total operating expenses	6,305,896	3,766,897
Income (loss) from operations	(3,347,137)	70,906
Other income (expense)		
Interest income and other expense, net	532	(1,072)
Interest expense	(28,026)	(13,013)
Unrealized loss on investment securities	(39,361)	(19,681)
Total other income (expense), net	(66,855)	(33,766)
Income (loss) before provision for state income taxes	(3,413,992)	37,140
Benefit for state income taxes	(8,169)	—
Consolidated net income (loss)	(3,405,823)	37,140
(Income) loss attributable to the noncontrolling interest	125,746	(16,381)
Net income (loss) attributable to Tecogen Inc.	$ (3,280,077)	$ 20,759
Net income (loss) per share - basic and diluted	$ (0.13)	$ 0.00
Weighted average shares outstanding - basic	24,818,979	24,803,527
Weighted average shares outstanding - diluted	24,818,979	24,881,185

The accompanying notes are an integral part of these consolidated financial statements.

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
For the Three Months Ended March 31, 2019 and 2018
(unaudited)

	Tecogen Inc. Stockholders						
	Common Stock Shares	Common Stock 0.001 Par Value	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Noncontrolling Interest	Total
Balance at December 31, 2018	24,824,746	$ 24,825	$ 56,427,928	$ —	$ (28,670,095)	$ 255,116	$ 28,037,774
Exercise of stock options	10,000	10	11,990	—	—	—	12,000
Stock issuance costs	—	—	(611)	—	—	—	(611)
Stock based compensation expense	—	—	38,035	—	—	—	38,035
Net loss	—	—	—	—	(3,280,077)	(125,746)	(3,405,823)
Balance at March 31, 2019	24,834,746	24,835	56,477,342	$ —	$ (31,950,172)	$ 129,370	$ 24,681,375
Balance at December 31, 2017	24,766,892	$ 24,767	$ 56,176,330	$ (165,317)	$ (22,796,246)	$ 455,611	$ 33,695,145
Sale of common stock	—	—	—	—	—	—	—
Reclassification of Accumulated Other Comprehensive Loss	—	—	—	165,317	(165,317)	—	—
Exercise of stock options	40,204	40	48,205	—	—	—	48,245
Stock issuance costs	—	—	(553)	—	—	—	(553)
Distributions to Noncontrolling interests	—	—	—	—	—	(6,957)	(6,957)
Stock based compensation expense	—	—	40,416	—	—	—	40,416
Net income	—	—	—	—	20,759	—	20,759
Balance at March 31, 2018	24,807,096	$ 24,807	$ 56,264,398	$ —	$ (22,940,804)	$ 448,654	$ 33,797,055

The accompanying notes are an integral part of these consolidated financial statements.

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Three Months Ended	
	March 31, 2019	**March 31, 2018**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Consolidated net loss	$ (3,405,823)	$ 37,140
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, accretion and amortization, net	168,244	199,181
Provision on inventory reserve	—	1,000
Stock-based compensation	38,035	40,416
Goodwill impairment	3,693,198	—
(Gain) loss on sale of assets	(1,081,049)	4,120
Provision for losses on accounts receivable	—	4,600
Non-cash interest expense	12,499	—
Changes in operating assets and liabilities, net of effects of acquisitions		
(Increase) decrease in:		
Accounts receivable	2,499,798	(1,496,737)
Unbilled revenue	(297,133)	(549,647)
Inventory, net	(372,705)	33,782
Due from related party	9,405	—
Prepaid expenses and other current assets	6,317	(99,153)
Other non-current assets	78,999	19,681
Increase (decrease) in:		
Accounts payable	(1,239,241)	855,949
Accrued expenses and other current liabilities	4,154	288,913
Deferred revenue	(725,902)	(64,122)
Interest payable, related party	—	12,575
Net cash used in operating activities	(611,204)	(712,302)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(24,788)	(145,326)
Proceeds from sale of assets	5,000,000	3,606
Purchases of intangible assets	(15,780)	(83,856)
Cash acquired in asset acquisition	—	442,786
Payment of stock issuance costs	(611)	(553)
Distributions to noncontrolling interest	—	(23,338)
Net cash provided by investing activities	4,958,821	193,319
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on revolving line of credit, net	(2,021,934)	—
Proceeds from the exercise of stock options	12,000	48,245
Net cash provided by (used in) financing activities	(2,009,934)	48,245
Change in cash and cash equivalents	2,337,683	(470,738)
Cash and cash equivalents, beginning of the period	272,552	1,673,072
Cash and cash equivalents, end of the period	$ 2,610,235	$ 1,202,334
Supplemental disclosures of cash flows information:		
Cash paid for interest	$ 18,381	$ —
Cash paid for taxes	$ 12,324	$ —

The accompanying notes are an integral part of these consolidated financial statements.

Note 1. Description of Business and Basis of Presentation

Description of Business

Tecogen Inc., or the Company, we, our or us, produces commercial and industrial natural-gas-fueled engine-driven, combined heat and power (CHP) products that reduce energy costs, decrease greenhouse gas emissions and alleviate congestion on the national power grid. The Company's products supply electric power or mechanical power for cooling, while heat from the engine is recovered and purposefully used at a facility. The Company also installs, owns, operates and maintains complete energy systems and other complementary systems at customer sites and sells electricity, hot water, heat and cooling energy under long-term contracts at prices guaranteed to the customer to be below conventional utility rates.

The majority of the Company's customers are located in regions with the highest utility rates, typically California, the Midwest and the Northeast. The Company's common stock is listed on NASDAQ under the ticker symbol TGEN.

On May 18, 2017, the Company acquired 100% of the outstanding common stock of American DG Energy Inc., formerly a related entity, in a stock-for-stock merger.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, they do not include all the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. Operating results for the three months ended March 31, 2019 are not necessarily indicative of the results that may be expected for the year ending December 31, 2019.

The condensed consolidated balance sheet at December 31, 2018 has been derived from the audited consolidated financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

For further information, refer to the consolidated financial statements and footnotes thereto included in Tecogen's Annual Report on Form 10-K for the year ended December 31, 2018.

There have been certain changes in accounting principles as discussed below in the section entitled "Significant New Accounting Standards Adopted this Period."

The accompanying unaudited condensed consolidated financial statements include the accounts of the Company and entities in which it has a controlling financial interest. Those entities include the Company's wholly-owned subsidiaries American DG Energy Inc., TTcogen LLC, and a joint venture, American DG New York, LLC, in which American DG Energy Inc. holds a 51% interest. Investments in partnerships and companies in which the Company does not have a controlling financial interest but where we have significant influence are accounted for under the equity method. Any intercompany transactions have been eliminated in consolidation.

The Company's operations are comprised of two business segments. Our Products and Services segment designs, manufactures and sells industrial and commercial cogeneration systems as described above. Our Energy Production segment sells energy in the form of electricity, heat, hot water and cooling to our customers under long-term sales agreements.

Reclassification

Certain prior period amounts have been reclassified to conform with current year presentation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Income Taxes

The provisions for income taxes in the accompanying unaudited consolidated statements of operations differ from that which would be expected by applying the federal statutory tax rate primarily due to losses for which no benefit is recognized.

Significant New Accounting Standards Adopted this Period

Cloud Computing Arrangement. During the third quarter of 2018, the Company early adopted ASU 2018-15 "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract" as it is currently undertaking implementation of a new enterprise resource planning system (ERP). The Company opted to apply the provisions of ASU 2018-15 on a prospective basis. The primary effect of the provisions is to capitalize certain implementation costs amounting to $85,372 during the application development phase and to amortize those costs prospectively over the life of the agreement rather than expense them currently as general and administrative costs.

Leases. On January 1, 2019, we adopted the guidance under ASU No. 2016-02, "Leases" ("the new lease standard" or "ASC 842") under the cumulative-effect method of transition where comparative information has not been restated and continues to be reported under the standards in effect for those periods. The adoption did not result in any cumulative-effect adjustment to beginning retained earnings. The Company has elected certain practical expedients upon adoption and therefore has not reassessed whether any expired or existing contracts contain leases, has not reassessed the lease classification for any expired or existing leases and has not reassessed initial direct costs for any existing leases.

The new standard requires lessees to recognize most leases on their balance sheets as a right-of-use ("ROU") asset with a corresponding lease liability. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term.

As of March 31, 2019, $2.55 million was included in ROU assets $0.56 million in Lease obligations, current, and $1.99 million in Lease obligations, long-term, on the Condensed Consolidated Balance Sheets as a result of the new lease standard. There was no impact on our Condensed Consolidated Statements of Operations and Comprehensive Income or Condensed Consolidated Statements of Cash Flows. See Note 7. Leases for further discussion.

Significant New Accounting Standards or Updates Not Yet Effective

Measurement of Credit Losses on Financial Instruments. In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*. The main objective of ASU 2016-13 is to provide financial statement users with more decision-useful information about an entity's expected credit losses on financial instruments and other commitments to extend credit at each reporting date. To achieve this objective, the amendments in this update replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to develop credit loss estimates. Subsequent to issuing ASU 2016-13, the FASB issued ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses*, for the purpose of clarifying certain aspects of ASU 2016-13. ASU 2018-19 has the same effective date and transition requirements as ASU 2016-13. ASU 2016-13 will be effective for the Company's fiscal year beginning January 1, 2020, using a modified retrospective approach. Early adoption is permitted. The Company is currently assessing the impact this ASU will have on its condensed consolidated financial statements.

Note 2. Revenue

Revenue is recognized when performance obligations under the terms of a contract with our customer are satisfied; generally this occurs with the transfer of control of our products, services and energy production. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services or energy to customers.

Shipping and handling fees billed to customers in a sales transaction are recorded in revenue and shipping and handling costs incurred are recorded in cost of sales. The Company has elected to exclude from revenue any value add sales and other taxes which it collects concurrent with revenue-producing activities. These accounting policy elections are consistent with the manner in which the Company historically recorded shipping and handling fees and taxes. Incremental costs incurred by us in obtaining a contract with a customer are negligible, if any, and are expensed ratably in proportion to the related revenue recognized.

Disaggregated Revenue

In general, the Company's business segmentation is aligned according to the nature and economic characteristics of its products and customer relationships and provides meaningful disaggregation of each business segment's results of operations.

The following table further disaggregates our revenue by major source by segment for the three months ended March 31, 2019 and 2018.

Three Months Ended	March 31, 2019		
	Products and Services	Energy Production	Total
Products	$ 3,024,526	$ —	$ 3,024,526
Installation services	1,555,864	—	1,555,864
Maintenance services	2,355,432	—	2,355,432
Energy production	—	1,240,809	1,240,809
Total revenue	$ 6,935,822	$ 1,240,809	$ 8,176,631

Three Months Ended	March 31, 2018		
	Products and Services	Energy Production	Total
Products	$ 3,673,506	$ —	$ 3,673,506
Installation services	2,405,655	—	2,405,655
Maintenance services	2,313,731	—	2,313,731
Energy production		1,782,535	1,782,535
Total revenue	$ 8,392,892	$ 1,782,535	$ 10,175,427

Product and Services Segment

Products. We transfer control and generally recognize a sale when we ship a product from our manufacturing facility at which point a customer takes ownership of the product. Payment terms on product sales are generally 30 days.

We recognize revenue in certain circumstances before delivery to the customer has occurred (commonly referred to as bill and hold transactions). We recognize revenue related to such transactions once, among other things, the customer has made a written fixed commitment to purchase the product(s) under normal billing and credit terms, the customer has requested the product(s) be held for future delivery as scheduled and designated by them, risk of ownership has been assumed by the customer, and the product(s) are tagged as sold and segregated for storage awaiting further direction from the customer. Due to the infrequent nature and duration of bill and hold arrangements, the value associated with custodial storage services is deemed immaterial in the context of the contract and in total, and accordingly, none of the transaction price is allocated to such service.

Depending on the product and terms of the arrangement, we may defer the recognition of a portion of the transaction price received because we have to satisfy a future obligation (e.g., product start-up service). Amounts allocated to product start-up services are recognized as revenue when the start-up service has been completed. We use an observable selling price to determine standalone selling prices where available and either a combination of an adjusted market assessment approach, an expected cost plus a margin approach, and/or a residual approach to determine the standalone selling prices for separate performance obligations as a basis for allocating contract consideration when an observable selling price is not available. Amounts received but not recognized pending completion of performance are recognized as contract liabilities and are recorded as deferred revenue along with deposits by customers.

Installation Services. We provide both complete turnkey installation services and what we refer to as light installation services. Complete turnkey installation services typically include all necessary engineering and design, labor, subcontract labor and service, and ancillary products and parts necessary to install a cogeneration unit including integration into the customers' existing electrical and mechanical systems. Light installation services typically include some engineering and design as well as certain ancillary products and parts necessary for the customers' installation of a cogeneration unit.

Under light installation contracts, revenue related to ancillary products and parts is recognized when we transfer control of such items to the customer, generally when we ship them from our manufacturing facility, with revenue related to engineering and design services being recognized at the point where the customer can benefit from the service, generally as completed. Generally billings under light installation contracts are made when shipped and/or completed, with payment terms generally being 30 days.

Under complete turnkey installation service contracts revenue is recognized over time using the percentage-of-completion method determined on a cost to cost basis. Our performance obligation under such contracts is satisfied progressively over time as enhancements are made to customer owned and controlled properties. We measure progress towards satisfaction of the performance obligation based on an input method based on cost which we believe is the most faithful depiction of the transfer of products and services to the customer under these contracts. When the financial metrics of a contract indicate a loss, our policy is to record the entire expected loss as soon as it is known. Contract costs and profit recognized to date under the percentage-of-completion method in excess of billings are recognized as contract assets and are recorded as unbilled revenue. Billings in excess of contract costs and profit are recognized as contract liabilities and are recorded as deferred revenue. Generally billings under complete turnkey installation contracts are made when contractually determined milestones of progress have been achieved, with payment terms generally being 30 days.

Maintenance Services. Maintenance services are provided under either long-term maintenance contracts or one-time maintenance contracts. Revenue under one-time maintenance contracts is recognized when the maintenance service is completed. Revenue under long-term maintenance contracts is recognized either ratably over the term of the contract where the contract price is fixed or when the periodic maintenance activities are completed where the invoiced cost to the customer is based on run hours or kilowatts produced in a given period. We use an output method to measure progress towards completion of our performance obligation which results in the recognition of revenue on the basis of a direct measurement of the value to the customer of the services transferred to date relative to the remaining services promised under the contract. We use the practical expedient at ASC 606-10-55-18 of recognizing revenue in an amount equal to that amount to which we have the right to invoice the customer under the contract.

Energy Production Segment

Energy Production. Revenue from energy contracts is recognized when electricity, heat, hot and/or chilled water is produced by the Company owned on-site cogeneration systems. Each month we bill the customer and recognize revenue for the various forms of energy delivered, based on meter readings which capture the quantity of the various forms of energy delivered in a given month, under a contractually defined formula which takes into account the current month's cost of energy from the local power utility.

As the various forms of energy delivered by us under energy production contracts are simultaneously delivered and consumed by the customer, our performance obligation under these contracts is considered to be satisfied over time. We use an output method to measure progress towards completion of our performance obligation which results in the recognition of revenue on the basis of a direct measurement of the value to the customer of the services transferred to date relative to the remaining services promised under the contract. We use the practical expedient at ASC 606-10-55-18 of recognizing revenue in an amount equal to that amount to which we have the right to invoice the customer under the contract. Payment terms on invoices under these contracts are generally 30 days.

Contract Balances

The timing of revenue recognition, billings and cash collections result in billed accounts receivable, unbilled revenue (contract assets) and deferred revenue, consisting of customer deposits and billings in excess of revenue recognized (contract liabilities) on the Consolidated Condensed Balance Sheets.

Revenue recognized during the quarter ended March 31, 2019 that was included in unbilled revenue at the beginning of the period was approximately $3.4 million. Approximately $3.5 million of revenue was billed in this period that had been recognized in previous periods.

Revenue recognized during the quarter ended March 31, 2019 that was included in deferred revenue at the beginning of the period was approximately $0.7 million.

The decrease in the deferred revenue balance during the quarter ended March 31, 2019 is primarily a result of $0.7 million of revenue recognized during the period that was included in the deferred revenue balance at the beginning of the quarter, offset by cash payments of $1.0 million received in advance of satisfying performance obligations.

Remaining Performance Obligations

Remaining performance obligations related to ASC 606 represent the aggregate transaction price allocated to performance obligations with an original contract term greater than one year, excluding certain maintenance contracts and all energy production contracts where a direct measurement of the value to the customer is used as a method of measuring progress towards completion of our performance obligation. Exclusion of these remaining performance obligations is due in part to the inability to quantify values based on unknown future levels of delivery and in some cases rates used to bill customers. Remaining performance obligations therefore consist of unsatisfied or partially satisfied performance obligations related to fixed price maintenance contracts and installation contracts.

As of March 31, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately $20.4 million. The Company expects to recognize revenue of approximately 16% of the remaining performance obligations over the next 24 months, 77% recognized in the first 12 months and 7% recognized over the subsequent 12 months, and the remainder recognized thereafter.

Note 3. Income (loss) Per Common Share

Basic and diluted income (loss) per share for the three months ended March 31, 2019 and 2018, respectively, were as follows:

	Three months ended March 31,	
	2019	2018
Net income (loss) attributable to stockholders	$ (3,280,077)	$ 20,759
Weighted average shares outstanding - Basic	24,818,979	24,803,527
Basic income (loss) per share	$ (0.13)	$ 0.00
Weighted average shares outstanding - Diluted	24,818,979	24,881,185
Diluted income (loss) per share	$ (0.13)	$ 0.00
Anti-dilutive shares underlying stock options outstanding	—	77,658

Note 4. Property, Plant and Equipment

Property, plant and equipment at March 31, 2019 and December 31, 2018 consisted of the following:

	Estimated Useful Life (in Years)	March 31, 2019	December 31, 2018
Energy systems	1 - 15 years	$ 4,372,638	$ 12,709,990
Machinery and equipment	5 - 7 years	1,391,354	1,355,617
Furniture and fixtures	5 years	222,542	222,542
Computer software	3 - 5 years	192,865	200,626
Leasehold improvements	*	450,792	450,792
		6,630,191	14,939,567
Less - accumulated depreciation and amortization		(2,705,240)	(3,666,452)
		$ 3,924,951	$ 11,273,115

* Lesser of estimated useful life of asset or lease term

Depreciation and amortization expense on property and equipment for the three months ended March 31, 2019 and 2018 was $341,862 and $402,336, respectively.

In March 2019, the Company sold certain energy systems related assets and related energy production contracts. See Note 6. Sale of Energy Producing Assets and Goodwill Impairment for further discussion.

Note 5. Intangible Assets and Liabilities Other Than Goodwill

As of March 31, 2019 and December 31, 2018 the Company had the following amounts related to intangible assets and liabilities other than goodwill:

	March 31, 2019			December 31, 2018		
Intangible assets	Cost	Accumulated Amortization	Total	Cost	Accumulated Amortization	Total
Product certifications	$ 726,159	$ (359,221)	$ 366,938	$ 726,159	$ (345,658)	$ 380,501
Patents	923,849	(193,524)	730,325	910,569	(188,239)	722,330
Developed technology	240,000	(96,000)	144,000	240,000	(92,000)	148,000
Trademarks	25,252	—	25,252	22,752	—	22,752
In Process R&D	263,936	—	263,936	263,936	—	263,936
Favorable contract asset	274,858	(257,817)	17,041	1,561,739	(232,099)	1,329,640
TTcogen intangible assets	29,607	(925)	28,682	—	—	—
	$ 2,483,661	$ (910,262)	$ 1,573,399	$ 3,754,762	$ (860,772)	$ 2,893,990
Intangible liability						
Unfavorable contract liability	$ 4,689,025	$ (1,818,686)	$ 2,870,339	$ 8,341,922	$ (876,972)	$ 7,464,950

The aggregate amortization expense related to intangible assets and liabilities exclusive of contract related intangibles for the three months ended March 31, 2019 and 2018 was $24,099 and $24,903, respectively. The net credit to cost of sales related to the amortization of contract related intangible assets and liabilities for the three months ended March 31, 2019 and 2018 was $173,292, and $228,059, respectively.

Favorable/Unfavorable Contract Assets and Liabilities

The favorable contract asset and unfavorable contract liability in the foregoing table represent the estimated fair value of American DG Energy's customer contracts (both positive for favorable contracts and negative for unfavorable contracts) which were acquired by the Company in May 2017.

Amortization of intangibles including contract related amounts is calculated using the straight-line method over the remaining useful life or contract term. Aggregate future amortization over the next five years is estimated to be as follows:

Year 1	$ (179,760)
Year 2	(190,417)
Year 3	(214,440)
Year 4	(176,316)
Year 5	(116,609)

Note 6. Sale of Energy Producing Assets and Goodwill Impairment

During the first quarter of 2019, the Company recognized two individual sales of energy producing assets, for a total of eight power purchase agreements, including the associated energy production contracts for total consideration of $7 million, which resulted in a combined gain on sale of assets of $1,081,049 included in the accompanying statement of operations. The first sale was agreed to in December 2018 and closed in 2019, with recognition of the sale having been deferred pending amendment of the associated sales contract to eliminate a repurchase option.

In connection with the sales, the Company entered into agreements with the purchaser to maintain and operate the assets over the remaining periods of the associated energy production contracts (through August 2033 and January 2034, respectively) in exchange for monthly fees for both maintenance and operation. These agreements contain provisions whereby the Company has guaranteed to the purchaser a minimum level or threshold of cash flows from the associated energy production contracts.

Actual results are compared to the minimum threshold bi-annually, with the Company making up any shortfall. To the extent actual results are in excess of the minimum threshold, the Company is entitled to forty percent of such excess under the agreements.

The foregoing agreements also contain provisions whereby the Company has agreed to make whole the purchaser in the event the counterparty to the energy production contract(s) defaults on or otherwise terminates before the stated expiration of the energy production contract. Should the Company be required to make whole the purchaser under such provisions, the Company would be entitled to seek recovery from the counterparty to the energy production contract(s) under a similar provision contained in those contracts in respect of early termination.

The Company is also responsible under the agreements for site decommissioning costs, if any, in excess of certain threshold amounts by site. Decommissioning of site assets is performed when, if and as requested by the counterparty to the energy production contract upon termination of the energy production contract.

The combined gain on sale of these assets of$1,081,049 was determined after deducting from the gross proceeds the remaining net book value of the assets sold and an estimate of the remaining costs to complete installation of certain of the site assets as well as deducting an estimate of amounts which the Company believes it will be required to pay under the minimum cash flow guarantee described above. In determining the $1,081,049 combined gain on the sale of these assets, no amount of goodwill assigned to the energy production segment and reporting unit was included as individual sites and related site energy producing assets are not considered businesses. The aggregate of the assets sold represents a significant portion of the energy production segment and reporting unit's assets and cash flows which is the basis for determination of the fair value of the energy production reporting unit as used for goodwill impairment determinations. Accordingly, the sale of these assets caused the Company to assess the impact of the sales on the valuation of remaining goodwill assigned to the energy production reporting unit. That assessment included a determination of whether the remaining carrying value of the energy production reporting unit including goodwill exceeded its fair value. Following a goodwill impairment charge in 2018 which reduced the carrying value of the energy production reporting unit including goodwill to fair value based on discounted cash flows, exclusion of the discounted cash flows related to the assets sold resulted in impairment of the remaining goodwill assigned to the energy production reporting unit in an amount proportionate to the discounted cash flows related to the assets sold to the total discounted cash flows of the energy production reporting unit before the sales. The goodwill impairment as a result of the sales and recognized in the first quarter of 2019 totaled approximately $3.7 million, reducing the remaining carrying value of the energy production reporting unit, including goodwill to the discounted cash flow of the remaining sites or fair value.

Note 7. Leases

Our leases principally consist of operating leases related to our corporate office, field offices, and our research, manufacturing and storage facilities. Our lease terms do not include options to extend or terminate the lease until we are reasonably certain that we will exercise that option.

At inception, the Company determines if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of the Company's lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. maintenance, labor charges, etc.). The Company generally accounts for each component separately based on the estimated standalone price of each component.

Operating leases are included in Right-of-use assets, Lease obligations, current and Lease obligations, long term on the Condensed Consolidated Balance Sheets. These assets and liabilities are recognized at the commencement date based on the present value of remaining lease payments over the lease term using an incremental borrowing rate consistent with the lease terms or implicit rates, when readily determinable. Short-term operating leases, which have an initial term of 12 months or less, are not recorded on the balance sheet.

Lease expense for operating leases, which principally consists of fixed payments for base rent, is recognized on a straight-line basis over the lease term. Lease expense for the three months ended March 31, 2019 was $179,697.

Supplemental information related to leases for thethree months ended March 31, 2019 was as follows:

Cash paid for amounts included in the measurement of operating lease liabilities	$	158,729
Right-of-use assets obtained in exchange for operating lease liabilities	$	2,628,299
Weighted-average remaining lease term - operating leases		4.7 years
Weighted-average discount rate - operating leases		6 %

Future minimum lease commitments under non-cancellable operating leases as of March 31, 2019 were as follows:

	Operating Leases
Q2 through Q4 2019	$ 482,561
2020	649,801
2021	576,698
2022	529,115
2023	536,863
Thereafter	134,700
Total lease payments	2,909,738
Less: imputed interest	363,150
Total	$ 2,546,588

Note 8. Stock-Based Compensation

Stock-Based Compensation

The Company adopted a 2006 Stock Option and Incentive Plan, or the Plan, under which the Board of Directors may grant incentive or non-qualified stock options and stock grants to key employees, directors, advisors and consultants of the Company. The Plan was amended at various dates by the Board of Directors to increase the reserved shares of common stock issuable under the Amended Plan to 3,838,750 as of March 31, 2019.

Stock options vest based upon the terms within the individual option grants, with an acceleration of the unvested portion of such options upon a change in control event, as defined in the Amended Plan. The options are not transferable except by will or domestic relations order. The option price per share under the Amended Plan cannot be less than the fair market value of the underlying shares on the date of the grant. The number of shares remaining available for future issuance under the Amended Plan as of March 31, 2019 was 1,963,680.

Stock option activity for the three months ended March 31, 2019 was as follows:

Common Stock Options	Number of Options	Exercise Price Per Share	Weighted Average Exercise Price	Weighted Average Remaining Life	Aggregate Intrinsic Value
Outstanding, December 31, 2018	1,292,589	$0.79-$10.33	$ 3.52	5.93 years	$ 671,331
Granted	28,000	$3.62-$3.80	$ 3.64		
Exercised	(10,000)	$1.20	$ 1.20		
Canceled and forfeited	(700)	$4.50	$ 4.50		
Outstanding, March 31, 2019	1,309,889	$0.79-$10.33	$ 3.54	5.81 years	$ 948,892
Exercisable, March 31, 2019	854,639		$ 3.47		$ 786,297
Vested and expected to vest, March 31, 2019	1,241,602		$ 3.53		$ 924,502

Consolidated stock-based compensation expense for the three months ended March 31, 2019 and 2018 was $38,035 and $40,416, respectively. No tax benefit was recognized related to the stock-based compensation recorded during the periods.

Note 9. Fair Value Measurements

The fair value topic of the FASB Accounting Standards Codification defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The accounting guidance also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value. There are three levels of inputs that may be used to measure fair value:

Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities. The Company currently does not have any Level 1 financial assets or liabilities.

Level 2 - Observable inputs other than quoted prices included in Level 1. Level 2 inputs include quoted prices for identical assets or liabilities in non-active markets, quoted prices for similar assets or liabilities in active markets and inputs other than quoted prices that are observable for substantially the full term of the asset or liability. The Company has Level 2 financial assets and liabilities as provided below.

Level 3 - Unobservable inputs reflecting management's own assumptions about the input used in pricing the asset or liability. The Company does not currently have any Level 3 financial assets or liabilities.

The following table presents the asset reported in the consolidated balance sheet measured at its fair value on a recurring basis as ofMarch 31, 2019 by level within the fair value hierarchy.

March 31, 2019		Quoted prices in active markets for identical assets	Significant other observable inputs	Significant unobservable inputs	
	Total	Level 1	Level 2	Level 3	Total gains (losses)
Recurring fair value measurements					
Marketable equity securities					
EuroSite Power Inc.	$ 196,806	$ —	$ 196,806	$ —	$ (322,762)
Total recurring fair value measurements	$ 196,806	$ —	$ 196,806	$ —	$ (322,762)

The Company utilizes a Level 2 category fair value measurement to value its investment in EuroSite Power as a marketable equity security at period end. That measurement is equal to the quoted market closing price at period end. Since this security is not actively traded the Company classifies it as Level 2.

Note 10. Revolving Line of Credit, Bank

On May 4, 2018 ("Closing Date") the Company, and its wholly owned subsidiaries, American DG Energy Inc. and TTcogen LLC (collectively, the "Borrowers"), entered into a Credit Agreement with Webster Business Credit Corporation (the "Lender") that matures in May 2021 and provides Borrowers a line of credit of up to $10 million on a revolving and secured basis, with availability based on certain accounts receivables, raw materials, and finished goods.

Borrowings under the Credit Agreement bear interest at a rate equal to, at the Borrower's option, either (1) One Month LIBOR, plus3.00%, or (2) Lender's Base Rate, plus 1.5%. Lender's Base Rate is defined as the highest of (a) the Federal Funds rate plus 0.5%, (b) Lender's Prime Rate as adjusted by Lender from time to time, and (c) One Month LIBOR, plus 2.75%.

The Credit Agreement contains certain affirmative and negative covenants applicable to the Company and its subsidiaries, which include, among other things, restrictions on their ability to (i) incur additional indebtedness, (ii) make certain investments, (iii) acquire other entities, (iv) dispose of assets and (v) make certain payments including those related to dividends or repurchase of equity. The Credit Agreement also contains financial covenants including maintaining a fixed charge coverage ratio of not less than 1.10:1.00 and the Company may not make any financed capital expenditures in excess of$500,000 in the aggregate in any fiscal year. As ofMarch 31, 2019, the Company believes it is in compliance with all of the covenants.

The $145,011 of costs incurred in connection with the issuance of the revolving credit facility were capitalized and are being amortized to interest expense on a straight-line basis over three years based on the contractual term of the Agreement. As ofMarch 31, 2019, the outstanding balance on the line of credit was$0 and the unamortized portion of debt issuance cost related to the Credit Agreement was $100,702 and is included in prepaid and other current assets in the accompanying Condensed Consolidated Balance Sheet.

Note 11. Commitments and Contingencies

The Company guarantees certain obligations of a former subsidiary of American DG Energy, EuroSite Power Inc. These guarantees include a payment performance guarantee in respect of collateralized equipment financing loans, with a remaining principal amount outstanding subject to the guarantee at March 31, 2019 of approximately $190,000 due ratably in equal installments through September 2021, and certain guarantees of performance in respect of certain customer contracts. Based on current conditions, the Company does not believe there to be any amounts probable of payment by the Company under any of the guarantees and has estimated the value associated with the non-contingent aspect of the guarantees is approximately $7,000 which is recorded as a liability in the accompanying financial statements.

In connection with the sale of energy producing assets, the Company made certain guarantees to the purchaser as discussed in Note 6. Sale of Energy Producing Assets and Goodwill Impairment. The Company has recorded a reduction on the gain on sale and a corresponding liability of $350,000 in the accompanying financial statements to reserve for such future costs.

Note 12. Related Party Transactions

In connection with the acquisition of American DG Energy, the Company assumed a loan from John N. Hatsopoulos, the Company's former Co-Chief Executive Officer and a Company Director. The loan was in the amount of $850,000 and bore interest at 6%, payable quarterly. On May 4, 2018, the Company, through payment of $919,590, terminated the loan and all obligations under the loan.

TTcogen LLC

On May 19, 2016, the Company along with Tedom a.s., a corporation incorporated in the Czech Republic and a European combined heat and power product manufacturer ("Tedom"), entered into a joint venture, where the Company held a 50% participating interest and the remaining 50% interest was held by Tedom. As part of the joint venture, the parties agreed to create a Delaware limited liability company, TTcogen LLC ("TTcogen"), to carry out the business of the venture. Tedom granted TTcogen the sole and exclusive right to market, sell, offer for sale, and distribute certain products as agreed to by the parties throughout the United States. The product offerings of the joint venture expanded the current Tecogen product offerings to the MicroCHP for 35kW to large 4,000kW plants. Tecogen agreed to refer all appropriate sale leads to TTcogen regarding certain products and Tecogen would have the first right to repair and maintain the products sold by TTcogen.

Until the Company acquired the assets of TTcogen, the Company accounted for its interest in TTcogen's operations using the equity method of accounting. Any initial operating losses of TTcogen were borne and funded by Tedom. To the extent any such losses were borne and funded solely by Tedom, the Company did not recognize any portion of such losses given the Company did not guarantee the obligations of the joint venture nor was it committed to provide funding to the joint venture.

On September 22, 2017, the Company provided written notice to Tedom and Tedom USA Inc., a Delaware subsidiary of Tedom (“Tedom USA”) that the Company terminated the Joint Venture Agreement dated May 19, 2016 ("JVA") and the TTcogen LLC Operating Agreement ("LLC Operating Agreement"). This notice began the dissolution process under the LLC Operating Agreement.

On March 27, 2018, the Company entered into a Membership Interest Purchase and Wind-Down Agreement (the “Purchase Agreement”) among the Company, Tedom, Tedom USA, and TTcogen. The Purchase Agreement followed the mutual agreement of the parties to terminate the joint venture between the Company and Tedom that resulted in the creation of TTcogen, and implemented the acquisition by the Company of Tedom USA’s 50% membership interest in TTcogen for a purchase price of one dollar, plus $72,597, which represents a portion of Tedom USA's initial investment in TTcogen, minus certain adjustments.

The Purchase Agreement also granted TTcogen and the Company the exclusive right to market, sell, and distribute Tedom’s Micro T35 combined heat and power equipment within an agreed territory in the northeastern United States under certain conditions, and limited the Company’s right to sell certain competing products. The Company will provide services for Tedom equipment sold by TTcogen or the Company.

The acquisition of Tedom's 50% membership interest for $72,598 was accounted for as an acquisition of assets, and not a business combination, due to the lack of an assembled workforce. The Company adopted the provisions of ASU 2017-01 "Business Combinations - Clarifying the Definition of a Business" at the beginning of 2018, which require, at a minimum, the presence of an input and substantive process that together significantly contribute to the ability to create an output. The lack of an assembled workforce results in the non presence of a substantive process. The following represents the consideration for and the fair value of assets acquired and liabilities assumed recognized at the acquisition date:

Cash	$	442,786
Accounts receivable		176,235
Unbilled revenue		232,540
Fixed assets		47,508
Intangible assets		29,607
Accounts payable		(811,468)
Deferred revenue		(44,610)
Cash payable	$	72,598

The intangible asset represents contract backlog related to acquired contracts. The value assigned to contract backlog was determined based on the result of a discounted cash flow analysis, which resultant value was capped so as to preclude recognition of any amount in excess of cost after considering the fair values assigned to other assets acquired and liabilities assumed.

Note 13. Segments

As of March 31, 2019, the Company was organized into two operating segments through which senior management evaluates the Company's business. These segments, as described in more detail in Note 1, are organized around the products and services provided to customers and represent the Company's reportable segments. The following table presents information by reportable segment for the three months ended March 31, 2019 and 2018:

	Products and Services	Energy Production	Corporate, other and elimination (1)	Total
Three months ended March 31, 2019				
Revenue - external customers	$ 6,935,822	$ 1,240,809	$ —	$ 8,176,631
Intersegment revenue	273,512	—	(273,512)	—
Total revenue	$ 7,209,334	$ 1,240,809	$ (273,512)	$ 8,176,631
Gross profit	$ 2,517,827	$ 440,932	$ —	$ 2,958,759
Identifiable assets	$ 22,924,848	$ 4,854,412	$ 12,625,962	$ 40,405,222
Three months ended March 31, 2018				
Revenue - external customers	$ 8,392,892	$ 1,782,535	$ —	$ 10,175,427
Intersegment revenue	355,169	—	(355,169)	—
Total revenue	$ 8,748,061	$ 1,782,535	$ (355,169)	$ 10,175,427
Gross profit	$ 3,200,923	$ 636,880	$ —	$ 3,837,803
Identifiable assets	$ 20,828,118	$ 13,394,893	$ 18,307,250	$ 52,530,261

(1) Corporate, intersegment revenue, other and elimination includes various corporate assets.

Note 14. Subsequent Events

The Company has evaluated subsequent events through the date of this filing and determined that no material subsequent events occurred that would require recognition in the consolidated financial statements or disclosure in the notes thereto.

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

Forward-looking statements are made throughout this Management’s Discussion and Analysis of Financial Condition and Results of Operations. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words “believes,” “anticipates,” “plans,” “expects,” “seeks,” “estimates” and similar expressions are intended to identify forward-looking statements. Such forward-looking statements include, among other things, statements regarding our current and future cash requirements, our expectations regarding suppliers of cogeneration units, and statements regarding potential financing activities in the future. While the Company may elect to update forward-looking statements in the future, it specifically disclaims any obligation to do so, even if the Company’s estimates change, and readers should not rely on those forward-looking statements as representing the Company’s views as of any date subsequent to the date of the filing of this Quarterly Report. There are a number of important factors that could cause the actual results of the Company to differ materially from those indicated by such forward-looking statements, including those detailed under the heading “Risk Factors” in our Annual Report on Form 10-K for our fiscal year ended December 31, 2018

Overview

Tecogen designs, manufactures and sells industrial and commercial cogeneration systems that produce combinations of electricity, hot water and air conditioning using automotive engines that have been adapted to run on natural gas. In some cases, our customers may choose to have the Company engineer and install the system for them rather than simply purchase the cogeneration and/or chiller units, which we refer to as "turnkey" projects. Cogeneration systems are efficient because, in addition to supplying mechanical energy to power electric generators or compressors – displacing utility supplied electricity – they provide an opportunity for the facility to incorporate the engine’s waste heat into onsite processes, such as space and portable water heating. We produce standardized, modular, small-scale products, with a limited number of product configurations that are adaptable to multiple applications. We refer to these combined heat and power products as CHP (electricity plus heat) and MCHP (mechanical power plus heat).

Our products are sold directly to end-users by our in-house marketing team and by established sales agents and representatives. We have agreements in place with distributors and sales representatives. Our existing customers include hospitals and nursing homes, colleges and universities, health clubs and spas, hotels and motels, office and retail buildings, food and beverage processors, multi-unit residential buildings, laundries, ice rinks, swimming pools, factories, municipal buildings, military installations and indoor growing facilities. We have an installed base of more than 3,000 units. Our products have long useful lives with proper maintenance. Some of our units have been operating for over 35 years.

With the acquisition of American DG Energy Inc. ("ADGE") in May 2017, we added an additional source of revenue. Through ADGE, we install, own, operate and maintain complete distributed generation of electricity systems, or DG systems or energy systems, and other complementary systems at customer sites, and sell electricity, hot water, heat and cooling energy under long-term contracts at prices guaranteed to the customer to be below conventional utility rates. Each month we obtain readings from our energy meters to determine the amount of energy produced for each customer. We use a contractually defined formula to multiply these readings by the appropriate published price of energy (electricity, natural gas or oil) from each customer's local energy utility, to derive the value of our monthly energy sale, which includes a negotiated discount. Our revenues per customer on a monthly basis vary based on the amount of energy produced by our energy systems and the published price of energy (electricity, natural gas or oil) from our customer's local energy utility that month.

The Company’s operations are comprised of two business segments. Our Products and Services segment ("Segment 1") designs, manufactures and sells industrial and commercial cogeneration systems as described above. Our Energy Production segment ("Segment 2") sells energy in the form of electricity, heat, hot water and cooling to our customers under long-term sales agreements.

Results of Operations

First Quarter of 2019 Compared to First Quarter of 2018

Revenues

Total revenues in the first quarter of 2019 were $8,176,631 compared to $10,175,427 for the same period in 2018, a decrease of $1,998,796 or 19.6%.

Segment 1 - Products and Services

Product revenues in the first quarter of 2019 were $3,024,526 compared to $3,673,506 for the same period in 2018, a decrease of $648,980 or 17.7%. This decrease was the net of an increase in cogeneration sales of $54,788 and a decrease in chiller sales of $703,768, year over year. The first quarter of 2018 saw a marked increase in chiller interest due, in part, to the indoor agriculture market which drove sales of this product line to record highs in 2018. Service revenues in the first quarter of 2019 were $3,911,296 compared to $4,719,386 for the same period in 2018, a decrease of $808,090 or 17.1%. This decrease in the first quarter is due to a decrease in installation activity of $849,791 and an increase of $41,701 in service contract revenues. While service contract revenue remains relatively constant, installation activity can vary widely depending on the status of various projects.

Segment 2 - Energy Production

Energy production revenues in the first quarter of 2019 were $1,240,809, compared to $1,782,535 for the same period in 2018, a decrease of $541,726 or 30.4%. Energy production revenue represents energy revenues earned during the quarter by our American DG Energy sites. This decrease is representative of the reduction in energy producing assets owned due to the sales of a portion of these assets as discussed in Note 6. Sale of Energy Producing Assets and Goodwill Impairment.

Cost of Sales

Cost of sales in the first quarter of 2019 was $5,217,872 compared to $6,337,624 for the same period in 2018, a decrease of $1,119,752, or 17.7% due to the decrease in revenue. Overall gross margin for the first quarter of 2019 was 36.2% compared to 37.7% for the same period in 2018.

Segment 1 - Products and Services

Cost of sales for products and services in the first quarter of 2019 was $4,417,995 compared to $5,191,969 for the same period in 2018, a decrease of $773,974 or 14.9%. During the first quarter our overall gross margin for our product and services segment was 36.3% compared to 38.1% for the same period in 2018. The decrease is primarily due to installation projects which sometimes carry lower margins than service as a whole.

Segment 2 - Energy Production

Cost of sales for energy production in the first quarter of 2019 was $799,877 compared to $1,145,655 for the same period in 2018, a decrease of $345,778 or 30.2%. Gross margin for this segment was 35.5% for the first quarter of 2019 compared to 35.7% for the same period in 2018, a slight decrease.

Operating Expenses

General and administrative expenses consist of executive staff, accounting and legal expenses, office space, general insurance and other administrative expenses. General and administrative expenses for the quarter ended March 31, 2019 were $2,655,411 compared to $2,789,549 for the same period in 2018, a decrease of $134,138 or 4.8%. The decrease was primarily due to a reduction in general and administrative salaries and related costs and benefits.

Selling expenses consist of sales staff, commissions, marketing, travel and other selling related expenses. Selling expenses for the first quarter of 2019 were $693,253 compared to $675,118 for the same period in 2018, an increase of $18,135 or 2.7% which tends to vary quarter to quarter depending on timing of certain activities.

Research and development expenses consist of engineering and technical staff, materials, outside consulting and other related expenses. Research and development expenses in the quarter ended March 31, 2019 were $345,083 compared to $302,230 for the same period in 2018, an increase of $42,853 or 14.2%. This increase was due to the Company's continued efforts in connection with the Tecofrost and projects relating to industrial refrigeration and potential commercialization of the Company's Ultera emissions technology for certain non-stationary applications.

A gain on the sale of assets of $1,081,049 was recognized in the quarter in connection with the sale of certain energy producing assets. See discussion in Note 6.Sale of Energy Producing Assets and Goodwill Impairment in the accompanying consolidated financial statements.

Goodwill impairment relating to the ADG sites of $3,693,198 was recognized during the quarter. See Note 6. Sale of Energy Producing Assets and Goodwill Impairment to the accompanying consolidated financial statements for further discussion of this charge.

Income (Loss) from Operations

Loss from operations for the first quarter of 2019 was $3,347,137 compared to income of $70,906 for the same period in 2018, a difference of $3,418,043. The decrease was a result of increased operating expenses due to the goodwill impairment charge of $3,693,198 and lower gross profit as discussed above.

Other Income (Expense), net

Other income, net for the three months ended March 31, 2019 was $66,855 compared to expense of $33,766 for the same period in 2018. Other income (expense) includes interest and other income and expense of $532, interest expense of $28,026 and an unrealized loss from market value fluctuation of our investment in EuroSite Power Inc.'s common stock of $39,361 for the first quarter of 2019. For the same period in 2018, interest and other income and expense was $1,072, unrealized loss from market fluctuation of $19,681 and interest expense was $13,013.

Provision for state income taxes

The provision for state income taxes in the first quarter of 2019 was $8,169 and represents estimated income tax payments net of refunds to various states for 2019.

Noncontrolling Interest

The loss attributable to the noncontrolling interest was $125,746 and income of $16,381 for the three months ended March 31, 2019 and 2018, which represents the noncontrolling interest portion of American DG Energy's 51% owned subsidiary, ADGNY, LLC.

Net Income (Loss) Attributable to Tecogen Inc.

Net loss attributable to Tecogen Inc. for the three months ended March 31, 2019 was $3,280,077 compared to income of $20,759 for the same period in 2018, a difference of $3,300,836, year over year. The net loss for the three months ended March 31, 2019 is due to the non-cash goodwill impairment charge of $3,693,198 as discussed above.

Liquidity and Capital Resources

Consolidated working capital at March 31, 2019 was $16,196,524 compared to $13,170,252 at December 31, 2018, an increase of $3,026,272. Included in working capital were cash and cash equivalents of $2,610,235 at March 31, 2019, compared to $272,552 at December 31, 2018, an increase of $2,337,683. The increase in working capital and cash was the result of the cash received upon the sale of certain energy production assets.

Cash used in operating activities for the three months ended March 31, 2019 was $611,204 compared to $712,302 for the same period in 2018. Our accounts receivable balance decreased to $11,676,654 at March 31, 2019 compared to $14,176,452 at December 31, 2018, providing $2,499,798 of cash due to timing of billing, shipments, and collections. In addition, inventory and unbilled revenue increased using $372,705 and $297,133, respectively.

Accounts payable decreased to $5,914,089 as of March 31, 2019 from $7,153,330 at December 31, 2018, using $1,239,241, in cash flow from operations. Deferred revenue decreased as of March 31, 2019 compared to December 31, 2018, using $725,902 of cash from operations. The Company expects accounts payable and deferred revenue to fluctuate with routine changes in operations.

During the first three months of 2019, our investing activities provided $4,958,821 of cash and the proceeds from the sale of energy producing assets of $5.0 million, offset by purchases of property and equipment of $24,788, and expenditures related to purchases of intangible assets of $15,780.

During the first three months of 2019, our financing activities used $2,009,934 compared to cash provided financing activities of $48,245 for the same period in 2018. Financing activities for the first three months of 2019 included net payments on this line of credit of $2,021,934 as well as proceeds from the exercise of stock options of $12,000.

As of March 31, 2019, the Company's backlog of product and installation projects, excluding service contracts, was $26.2 million, consisting of $17.9 million of purchase orders received by us and $8.4 million of projects in which the customer's internal approval process is complete, financial resources have been allocated and the customer has made a firm verbal commitment that the order is in the process of execution. Backlog at the beginning of any period is not necessarily indicative of future performance. Our presentation of backlog may differ from other companies in our industry.

Significant Accounting Policies and Critical Estimates

The Company’s significant accounting policies are discussed in the Notes to its respective Consolidated Financial Statements in its Annual Report on Form 10-K. The accounting policies and estimates that can have a significant impact upon the operating results, financial position and footnote disclosures of the Company are described in the above notes and in the respective Annual Report.

Significant New Accounting Standards or Updates Not Yet Effective

Except for the updates to the Company's lease accounting policy for the adoption of ASU No. 2016-02, “Leases” (“the new lease standard” or “ASC 842”,)the Company's critical accounting policies have remained consistent as discussed in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on March 29, 2019.

See Note 1, *Description of Business and Basis of Presentation*, to the Condensed Consolidated Financial Statements included elsewhere in this Quarterly Report on Form 10-Q.

Seasonality

We expect that the majority of our heating systems sold will be operational for the winter and the majority of our chilling systems sold will be operational for the summer. Our cogeneration sales are not generally affected by the seasons. Our service team does experience higher demand in the warmer months when cooling is required. These chiller units are generally shut down in the winter and started up again in the spring. This chiller "busy season' for the service team generally runs from May through the end of September.

Off-Balance Sheet Arrangements

Currently, we do not have any material off-balance sheet arrangements, including any outstanding derivative financial instruments, off-balance sheet guarantees, interest rate swap transactions or foreign currency contracts. We do not engage in trading activities involving non-exchange traded contracts.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Not applicable.

Item 4. Controls and Procedures.

Management’s Evaluation of Disclosure Controls and Procedures:

The Company maintains "disclosure controls and procedures,” as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are designed to provide reasonable assurance that information required to be disclosed by the Company in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to the Company's management, including our principal executive officers and principal accounting officer, as appropriate, to allow timely decisions regarding required disclosure.

Our disclosure controls and procedures are designed to provide reasonable assurance that the control system’s objectives will be met. Our management, including our Chief Executive Officer and Chief Accounting Officer, after evaluating the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report, have concluded that our disclosure controls and procedures were not effective due to a material weakness with respect to a small number of individuals dealing with general controls over information technology. Management will continue to evaluate the above weaknesses. The Company is taking certain steps to remediate the weaknesses as resources become available.

Changes in Internal Control over Financial Reporting:

The Company has been in the process of implementing a new computer system to remediate its material weakness with respect to the small number of individuals dealing with general controls over information technology. Management had the system partially implemented as of year end 2018 and continues to work on its implementation.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

The Company was previously a party to an action in the United States District Court for the District of Massachusetts, described below, related to the acquisition of American DG Energy Inc. through merging with and into a subsidiary of the Company (the "Merger"). All claims in the litigation relating to the Merger have been dismissed.

On November 16, 2018, the US District Court for the District of Massachusetts dismissed all remaining claims against all defendants in the litigation against Tecogen Inc. and its affiliates, including American DG Energy Inc., and their directors and certain officers, relating to the Merger in a case filed on May 15, 2017 titled Vardakas v. American DG. Energy, Inc., Case No. 17-CV-1024(LTS).

The case was originally filed in February 2017 in Massachusetts state court by William C. May ("May"), individually and on behalf of the other shareholders of American DG Energy Inc. as a class in the Business Litigation Session of the Superior Court of the Commonwealth of Massachusetts, Civil Action N. 17-0390. Plaintiff May voluntarily dismissed the state court case on May 31, 2017 and consolidated that case with the case filed by plaintiff Lee Vardakas on May 15, 2017 in US District Court for the District of Massachusetts, alleging violations of federal securities laws and breaches of fiduciary duties to minority shareholders of American DG Energy Inc. in connection with the Merger . The US District Court dismissed all federal securities law claims in the case on March 2, 2018. On November 16, 2018 the remaining state law claims alleging breach of fiduciary duties to minority stockholders, and aiding and abetting breaches of fiduciary duties, were dismissed on the basis of the defendants' Motion for Judgment on the Pleadings. Plaintiff's motion for class certification was also dismissed on November 16, 2018.

Except as set forth above, as of the date of this filing the Company is currently not a party to any legal or administrative proceedings material to the Company's financial statements and is not aware of any pending or threatened legal or administrative proceeding that is material to the Company's financial statement.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed under “Risk Factors” in our Annual Report on Form 10-K for our fiscal year ended December 31, 2018. The risks discussed in our Annual Report on Form 10-K could materially affect our business, financial condition and future results. The risks described in our Annual Report on Form 10-K are not the only risks facing us. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially and adversely affect our business, financial condition or operating results.

TECOGEN INC.

Item 6. Exhibits

Exhibit No.	Description of Exhibit
2.1	Agreement and Plan of Merger, dated as of November 1, 2016, by and among Tecogen Inc., American DG Energy Inc., and ADGE.Tecogen Merger Sub Inc. (Incorporated by reference to exhibit 2.1 to the registrant's Current Report on Form 8-K, as filed with the SEC on November 2, 2016).
2.2	Amendment No. 1 to the Agreement and Plan of Merger, dated as of March 23, 2017, by and among Tecogen Inc., American DG Energy Inc. and ADGE.Tecogen Merger Sub Inc. (Incorporated by reference to exhibit 2.2 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 24, 2017).
3.1	Amended and Restated Certificate of Incorporation (Incorporated by reference to exhibit 3.1 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
3.2	Amended and Restated Bylaws (Incorporated by reference to exhibit 3.2 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
4.1	Specimen Stock Certificate of Tecogen, Inc. (Incorporated by reference to exhibit 4.1 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
4.3+	Form of Stock Option Agreement (Incorporated by reference to exhibit 4.3 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
10.1+	Tecogen Inc. 2006 Stock Incentive Plan, as amended and restated on November 1, 2016 with stockholder approval on June 29, 2017 (Incorporated by reference to exhibit 10.1 to the registrant's Annual Report on Form 10-K, as filed with the SEC on March 21, 2018).
10.7	Lease Agreement between Atlantic-Waltham Investment II, LLC, and Tecogen Inc., dated May 14, 2008 (Incorporated by reference to exhibit 10.7 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
10.8	Second Amendment to Lease between Atlantic-Waltham Investment II, LLC, and Tecogen Inc., dated January 16, 2013 (Incorporated by reference to exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, as filed with the SEC on May 15, 2014).
10.13	Exclusive License Agreement between Tecogen Inc. and the Wisconsin Alumni Research Foundation, dated February 5, 2007 (Incorporated by reference to exhibit 10.13 to the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-193791), filed with the SEC on June 27, 2014).
10.40+	Employment Agreement dated December 1, 2016 between registrant and David A. Garrison (Incorporated by reference to exhibit 99.1 from the registrant's Current Report on Form 8-K, as filed with the SEC on December 2, 2016).
10.41	Promissory Note-Line of Credit issued on December 22, 2016 by American DG Energy Inc. to John Hatsopoulos (Incorporated by reference to American DG Energy Inc.'s Current Report on Form 8-K (No. 001-34493), as filed with the SEC on December 28, 2016).
10.42+	Advisory Agreement, dated January 3, 2018, between Tecogen Inc. and John N. Hatsopoulos (Incorporated by reference to exhibit 10.1 to the registrant's Current Report on Form 8-K, as filed with the SEC on January 8, 2018).
10.43	Research and Development Contract between Southwest Research Institute and Tecogen Inc. (Incorporated by reference to exhibit 10.1 to the registrant's Current Report on Form 8-K, as filed with the SEC on January 9, 2018).
10.44	Membership Interest and Wind-Down Agreement between Tedom USA Inc., Tedom a.s., TTcogen LLC and Tecogen Inc. dated as of March 27, 2018 (Incorporated by reference to exhibit 10.1 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 30, 2018).
10.45	Credit Agreement with Webster Business Credit Corporation, dated as of May 4, 2018 (Incorporated by reference to exhibit 10.45 to the registrant's Quarterly Report on Form 10-Q, as filed with the SEC on August 14, 2018).
10.46	Amendment No. 1 to, and Waiver No. 1 under, Credit Agreement, dated as of December 14, 2018 (Incorporated by reference to exhibit 99.01 to the registrant's Current Report on Form 8-K, as filed with the SEC on December 17, 2018).
10.47	Waiver No. 2 under Credit Agreement, dated as of December 27, 2018 (Incorporated by reference to Exhibit 10.47 to the registrant's Annual Report on Form 10-K, as filed with the SEC on March 29, 2019).
10.48	Amendment No. 2 to, and Waiver No. 3 under, Credit Agreement, dated as of March 5, 2019 (Incorporated by reference to exhibit 10.47 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
10.49	Membership Interest Purchase Agreement by and among SDCL TG Cogen LLC, as Purchaser, and American DG Energy Inc., as Seller, and Tecogen Inc. dated as of December 14, 2018 (Incorporated by reference to exhibit 10.48 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).

10.50	Guaranty Agreement by Tecogen Inc. in favor of CogenOne LLC and SDCL TG Cogen LLC dated December 14, 2018 (Incorporated by reference to exhibit 10.49 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
10.51	Membership Interest Purchase Agreement by and among SDCL TG Cogen LLC, as Purchaser, and American DG Energy Inc., as Seller, and Tecogen Inc. dated as of March 5, 2019 (Incorporated by reference to exhibit 10.50 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
10.52	Guaranty Agreement by Tecogen Inc. in favor of CogenTwo LLC and SDCL TG Cogen LLC dated March 5, 2019 (Incorporated by reference to exhibit 10.51 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
10.53	Billing and Asset Management Agreement by and between CogenTwo LLC and Tecogen Inc. dated as of March 5, 2019 (Incorporated by reference to exhibit 10.52 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
10.54	Billing and Asset Management Agreement by and between CogenOne LLC and Tecogen Inc. as amended and restated as of March 5, 2019 (Incorporated by reference to exhibit 10.53 to the registrant's Current Report on Form 8-K, as filed with the SEC on March 8, 2019).
31.1*	Rule 13a-14(a) Certification of Chief Executive Officer
31.2*	Rule 13a-14(a) Certification of Chief Accounting Officer
32.1*	Section 1350 Certifications of Chief Executive Officer and Chief Accounting Officer
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema
100.CAL**	XBRL Taxonomy Extension Calculation Linkbase
100.DEF**	XBRL Taxonomy Extension Definition Linkbase
101.LAB**	XBRL Taxonomy Extension Label Linkbase
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase

* Filed herewith
** Furnished herewith
\+ Compensatory plan or arrangement

TECOGEN INC.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, on May 14, 2019.

TECOGEN INC.
(Registrant)

By: /s/ Benjamin M. Locke
Chief Executive Officer
(Principal Executive Officer)

By: /s/ Bonnie J. Brown
Chief Accounting Officer, Treasurer and Secretary
(Principal Accounting Officer)

EXHIBIT 31.1

TECOGEN INC.
CERTIFICATION REQUIRED BY EXCHANGE ACT RULES 13a-14(a) and 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Benjamin M. Locke, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Tecogen Inc.;

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.

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: May 14, 2019

/s/ Benjamin M. Locke
Benjamin M. Locke
Chief Executive Officer

EXHIBIT 31.2

TECOGEN INC.
CERTIFICATION REQUIRED BY EXCHANGE ACT RULES 13a-14(a) and 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bonnie J. Brown, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Tecogen Inc.;

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.

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: May 14, 2019

/s/ Bonnie J. Brown
Bonnie J. Brown
Principal Financial & Accounting Officer

EXHIBIT 32.1

TECOGEN INC.
CERTIFICATION REQUIRED BY EXCHANGE ACT RULES 13a-14(b) and 15d-14(b),
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Each of, Benjamin M. Locke, Chief Executive Officer, and Bonnie J. Brown, Chief Accounting Officer, of Tecogen Inc., or the Company, certify, pursuant to Section 1350, Chapter 63 of Title 18, United States Code that, to his knowledge:

1. The Quarterly Report on Form 10-Q of the Company for the quarter endedMarch 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78 m or 78o(d)); and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 14, 2019

/s/ Benjamin M. Locke
Benjamin M. Locke
Chief Executive Officer

/s/ Bonnie J. Brown
Bonnie J. Brown
Principal Financial & Accounting Officer