
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, 2022

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

Commission file number 001-36103



TECOGEN INC. (OTCQX:TGEN)

(Exact name of Registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

04-3536131

(IRS Employer Identification No.)

45 First Avenue

Waltham, Massachusetts 02451

(Address of Principal Executive Offices and Zip Code)

(781) 466-6402

(Registrant's telephone number, including area code)

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 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 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

Emerging Growth company

Smaller reporting 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

As of September 30, 2022, 24,850,261 shares of common stock, \$.001 par value per share, of the registrant were issued and outstanding.

**QUARTERLY REPORT ON FORM 10-Q
FOR THE PERIOD ENDED SEPTEMBER 30, 2022
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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.

TECOGEN INC.

PART I - FINANCIAL INFORMATION
Item 1 - Financial StatementsCONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited)

	September 30, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 2,880,160	\$ 3,614,463
Accounts receivable, net	8,598,302	8,482,286
Unbilled revenue	1,956,002	3,258,189
Employee retention credit receivable	713,269	1,276,021
Inventories, net	8,712,021	7,764,989
Prepaid and other current assets	507,996	578,801
Total current assets	23,367,750	24,974,749
Long-term assets:		
Property, plant and equipment, net	1,661,694	1,782,944
Right of use assets	1,404,034	1,869,210
Intangible assets, net	1,047,296	1,181,023
Goodwill	2,406,156	2,406,156
Other assets	184,393	148,140
TOTAL ASSETS	\$ 30,071,323	\$ 32,362,222
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 3,325,452	\$ 3,508,354
Accrued expenses	2,263,009	2,343,728
Deferred revenue	1,282,971	1,957,752
Lease obligations, current	676,974	641,002
Unfavorable contract liability, current	265,854	330,032
Total current liabilities	7,814,260	8,780,868
Long-term liabilities:		
Deferred revenue, net of current portion	395,561	208,456
Lease obligations, net of current portion	796,696	1,315,275
Unfavorable contract liability, net of current portion	706,667	929,474
Total liabilities	9,713,184	11,234,073
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Tecogen Inc. stockholders' equity:		
Common stock, \$0.001 par value; 100,000,000 shares authorized; 24,850,261 issued and outstanding at September 30, 2022 and December 31, 2021	24,850	24,850
Additional paid-in capital	57,271,577	57,016,859
Accumulated deficit	(36,857,142)	(35,833,621)
Total Tecogen Inc. stockholders' equity	20,439,285	21,208,088
Non-controlling interest	(81,146)	(79,939)
Total stockholders' equity	20,358,139	21,128,149
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 30,071,323	\$ 32,362,222

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

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three Months Ended	
	September 30, 2022	September 30, 2021
Revenues		
Products	\$ 3,206,732	\$ 1,871,332
Services	3,078,604	2,829,244
Energy production	332,774	315,292
Total revenues	<u>6,618,110</u>	<u>5,015,868</u>
Cost of sales		
Products	2,074,243	1,036,396
Services	1,482,355	1,467,019
Energy production	168,178	170,518
Total cost of sales	<u>3,724,776</u>	<u>2,673,933</u>
Gross profit	<u>2,893,334</u>	<u>2,341,935</u>
Operating expenses		
General and administrative	2,343,449	2,473,190
Selling	567,529	656,885
Research and development	202,138	122,031
Gain on disposition of assets	(5,486)	—
Total operating expenses	<u>3,107,630</u>	<u>3,252,106</u>
Loss from operations	<u>(214,296)</u>	<u>(910,171)</u>
Other income (expense)		
Other income (expense), net	(7,140)	(4,798)
Interest expense	(2,280)	(3,855)
Gain on extinguishment of debt	—	1,885,655
Employee retention credit	—	562,253
Unrealized loss on investment securities	—	(37,497)
Total other income (expense), net	<u>(9,420)</u>	<u>2,401,758</u>
Income (loss) before provision for state income taxes	<u>(223,716)</u>	<u>1,491,587</u>
Provision for state income taxes	5,922	3,000
Consolidated net income (loss)	<u>(229,638)</u>	<u>1,488,587</u>
Income attributable to the non-controlling interest	<u>(27,074)</u>	<u>(21,890)</u>
Net income (loss) attributable to Tecogen Inc.	<u>\$ (256,712)</u>	<u>\$ 1,466,697</u>
Net income (loss) per share - basic	<u>\$ (0.01)</u>	<u>\$ 0.06</u>
Net income (loss) per share - diluted	<u>\$ (0.01)</u>	<u>\$ 0.06</u>
Weighted average shares outstanding - basic	<u>24,850,261</u>	<u>24,850,261</u>
Weighted average shares outstanding - diluted	<u>24,850,261</u>	<u>25,154,905</u>

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

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Nine Months Ended	
	September 30, 2022	September 30, 2021
Revenues		
Products	\$ 10,156,328	\$ 6,439,981
Services	9,046,075	9,438,702
Energy production	1,268,623	1,339,448
Total revenues	<u>20,471,026</u>	<u>17,218,131</u>
Cost of sales		
Products	6,734,465	3,601,408
Services	4,322,693	4,684,008
Energy production	726,297	796,933
Total cost of sales	<u>11,783,455</u>	<u>9,082,349</u>
Gross profit	<u>8,687,571</u>	<u>8,135,782</u>
Operating expenses		
General and administrative	7,642,183	7,365,495
Selling	1,572,221	1,747,959
Research and development	537,126	381,064
Gain on disposition of assets	(41,931)	—
Gain on termination of unfavorable contract liability	(71,375)	—
Total operating expenses	<u>9,638,224</u>	<u>9,494,518</u>
Loss from operations	<u>(950,653)</u>	<u>(1,358,736)</u>
Other income (expense)		
Interest and other income (expense), net	(22,556)	(7,127)
Interest expense	(15,841)	(13,583)
Gain on extinguishment of debt	—	3,773,014
Employee retention credit	—	1,276,021
Gain on sale of investment securities	—	6,046
Unrealized gain on investment securities	37,497	18,749
Total other income (expense), net	<u>(900)</u>	<u>5,053,120</u>
Income (loss) before provision for state income taxes	<u>(951,553)</u>	<u>3,694,384</u>
Provision for state income taxes	<u>16,352</u>	<u>18,991</u>
Consolidated net income (loss)	<u>(967,905)</u>	<u>3,675,393</u>
Income attributable to non-controlling interest	<u>(55,616)</u>	<u>(42,358)</u>
Net income (loss) attributable to Tecogen Inc.	<u>\$ (1,023,521)</u>	<u>\$ 3,633,035</u>
Net income (loss) per share - basic	<u>\$ (0.04)</u>	<u>\$ 0.15</u>
Net income (loss) per share - diluted	<u>\$ (0.04)</u>	<u>\$ 0.14</u>
Weighted average shares outstanding - basic	<u>24,850,261</u>	<u>24,850,261</u>
Weighted average shares outstanding - diluted	<u>24,850,261</u>	<u>25,131,165</u>

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

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
For the Three and Nine Months September 30, 2022 and 2021
(unaudited)

	Common Stock Shares	Common Stock 0.001 Par Value	Additional Paid-In Capital	Accumulated Deficit	Non-controlling Interest	Total
Three months ended September 30, 2022						
Balance at June 30, 2022	24,850,261	\$ 24,850	\$ 57,202,459	\$ (36,600,430)	\$ (84,206)	\$ 20,542,673
Stock based compensation expense			69,118			69,118
Distributions to non-controlling interest					(24,014)	(24,014)
Net income (loss)				(256,712)	27,074	(229,638)
Balance at September 30, 2022	24,850,261	\$ 24,850	\$ 57,271,577	\$ (36,857,142)	\$ (81,146)	\$ 20,358,139
Nine months ended September 30, 2022						
Balance at December 31, 2021	24,850,261	\$ 24,850	\$ 57,016,859	\$ (35,833,621)	\$ (79,939)	\$ 21,128,149
Stock based compensation expense			254,718			254,718
Distributions to non-controlling interest					(56,823)	(56,823)
Net income (loss)				(1,023,521)	55,616	(967,905)
Balance at September 30, 2022	24,850,261	\$ 24,850	\$ 57,271,577	\$ (36,857,142)	\$ (81,146)	\$ 20,358,139
Three months ended September 30, 2021						
Balance at June 30, 2021	24,850,261	\$ 24,850	\$ 56,908,194	\$ (37,363,283)	\$ (55,667)	\$ 19,514,094
Stock based compensation expense	—	—	56,889	—	—	56,889
Distributions to non-controlling interest	—	—	—	—	(32,356)	(32,356)
Net income	—	—	—	1,466,697	21,890	1,488,587
Balance at September 30, 2021	24,850,261	24,850	56,965,083	\$ (35,896,586)	\$ (66,133)	\$ 21,027,214
Nine months ended September 30, 2021						
Balance at December 31, 2020	24,850,261	\$ 24,850	\$ 56,814,428	\$ (39,529,621)	\$ (42,323)	\$ 17,267,334
Stock based compensation expense	—	—	150,655	—	—	150,655
Distributions to non-controlling interest	—	—	—	—	(66,168)	(66,168)
Net income	—	—	—	3,633,035	42,358	3,675,393
Balance at September 30, 2021	24,850,261	\$ 24,850	\$ 56,965,083	\$ (35,896,586)	\$ (66,133)	\$ 21,027,214

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

TECOGEN INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Nine Months Ended	
	September 30, 2022	September 30, 2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Consolidated net income (loss)	\$ (967,905)	\$ 3,675,393
<i>Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:</i>		
Depreciation and amortization, net	324,968	357,636
Gain on extinguishment of debt	—	(3,773,014)
Employee retention credit	—	(1,276,021)
Stock-based compensation	254,718	150,655
Provision for doubtful accounts	(183,955)	52,000
Gain on disposition of assets	(41,931)	(9,787)
Gain on sale of investment securities	—	(6,046)
Unrealized gain on investment securities	(37,497)	(18,749)
Gain on termination of unfavorable contract liability	(71,375)	—
Impairment of intangible asset	—	7,400
<i>Changes in operating assets and liabilities</i>		
<i>(Increase) decrease in:</i>		
Accounts receivable	67,940	890,374
Employee retention credit receivable	562,752	—
Unbilled revenue	1,302,187	424,967
Inventory	(947,031)	(753,447)
Prepaid expenses and other current assets	70,806	24,361
Other assets	466,420	(387,847)
<i>Increase (decrease) in:</i>		
Accounts payable	(182,903)	(636,156)
Accrued expenses and other current liabilities	(80,720)	378,970
Deferred revenue	(487,676)	691,867
Other liabilities	(482,608)	379,440
Net cash (used in) provided by operating activities	<u>(433,810)</u>	<u>171,996</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(286,820)	(84,160)
Proceeds from the sale of investment securities	—	11,637
Purchases of intangible assets	(29,505)	(56,349)
Proceeds from disposition of assets	72,655	9,787
Distributions to non-controlling interest	(56,823)	(66,168)
Net cash used in investing activities	<u>(300,493)</u>	<u>(185,253)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from note payable	—	1,874,269
Net cash provided by financing activities	<u>—</u>	<u>1,874,269</u>
Change in cash and cash equivalents	(734,303)	1,861,012
Cash and cash equivalents, beginning of the period	3,614,463	1,490,219
Cash and cash equivalents, end of the period	<u>\$ 2,880,160</u>	<u>\$ 3,351,231</u>
Supplemental disclosures of cash flows information:		
Cash paid for interest	<u>\$ 14,597</u>	<u>\$ —</u>
Cash paid for taxes	<u>\$ 16,352</u>	<u>\$ 18,991</u>

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 we, our or us, produces commercial and industrial engine-driven, combined heat and power (CHP) products that reduce energy costs, decrease greenhouse gas emissions and alleviate congestion on the national power grid. Our products supply electric power or mechanical power for cooling, while heat from the engine is recovered and purposefully used at a facility. We also install, own, operate and maintain complete 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. The majority of our customers are located in regions with the highest utility rates, typically California, the Midwest and the Northeast.

On July 20, 2022, Tecogen announced the establishment of NetZero Greens, a new business unit focused on low carbon Controlled Environment Agriculture (CEA). Tecogen believes that CEA offers an exciting opportunity to apply the company's expertise in clean cooling, power generation, and greenhouse gas reduction to address critical issues affecting food and energy security.

Our common stock is quoted on OTC Markets Group, Inc.'s OTCQX Best Market tier and trades under the symbol "TGEN."

On May 18, 2017, we 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 nine months ended September 30, 2022 are not necessarily indicative of the results that may be expected for the year ending December 31, 2022.

The condensed consolidated balance sheet at December 31, 2021 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, 2021.

The accompanying unaudited condensed consolidated financial statements include our accounts and the accounts of entities in which we have a controlling financial interest. Those entities include our wholly-owned subsidiaries American DG Energy Inc., Tecogen CHP Solutions, Inc., 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 we do 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.

Our operations are comprised of three business segments. Our Products segment designs, manufactures and sells industrial and commercial cogeneration systems as described above. Our Services segment provides operation and maintenance services to customers for our products. Our Energy Production segment sells energy in the form of electricity, heat, hot water and cooling to our customers under long-term sales agreements.

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.

TECOGEN INC.
Notes to Condensed Consolidated Financial Statements

Employee Retention Credit

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law providing numerous tax provisions and other stimulus measures, including an employee retention credit ("ERC"), which is a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the ERC.

Section 2301(c)(2)(B) of the CARES Act permits an employer to use an alternative quarter to calculate gross receipts and the employer may determine if the decline in gross receipt tests is met for a calendar quarter in 2021 by comparing its gross receipts for the immediately preceding calendar quarter with those for the corresponding calendar quarter in 2019. Accordingly, for the first quarter of 2021, we elected to use our gross receipts for the fourth calendar quarter of 2020 compared to our gross receipts for the fourth calendar quarter of 2019. As a result of our election to use an alternative quarter, we qualified for the ERC in the first, second and third quarters of 2021 because our gross receipts decreased by more than 20% from the first, second and third quarters of 2019. As a result of averaging 100 or fewer full-time employees in 2019, all wages paid to employees in the first, second and third quarters of 2021, excluding the wages that were applied to the Paycheck Protection Loan Second Draw, were eligible for the ERC. Wages used towards PPP loan forgiveness cannot be used as qualified wages for purposes of the ERC.

Accounting Standards Codification 105, "Generally Accepted Accounting Principles," describes the decision-making framework when no guidance exists in US GAAP for a particular transaction. Specifically, ASC 105-10-05-2 instructs companies to look for guidance for a similar transaction within US GAAP and apply that guidance by analogy. As such, forms of government assistance, such as the ERC, provided to business entities would not be within the scope of ASC 958, but it may be applied by analogy under ASC 105-10-05-2. We accounted for the Employee Retention Credit as a government grant in accordance with Accounting Standards Update 2013-06, *Not-for-Profit Entities (Topic 958) ("ASU 2013-06")* by analogy under ASC 105-10-05-2. Under this standard, government grants are recognized when the conditions on which they depend are substantially met. The conditions for recognition of the ERC include, but are not limited to:

- An entity has been adversely affected by the COVID-19 pandemic
- We have not used qualifying payroll for both the Paycheck Protection Program and the ERC
- We incurred payroll costs to retain employees
- The process for filing for the credit is an administrative task and not a barrier to receiving the credits

A current receivable in the amount of \$713,269 is included in our condensed consolidated balance sheet as of September 30, 2022. On April 14, 2022, we received \$564,027 from the Internal Revenue Service representing the ERC claim for the third quarter of 2021 and \$1,275 of accrued interest. We are still awaiting payment from the Internal Revenue Service for the ERC claims from the first and second quarters of 2021.

TECOGEN INC.
Notes to 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. We have elected to exclude from revenue any value-added sales and other taxes which we collect concurrent with revenue-producing activities. These accounting policy elections are consistent with the manner in which we historically recorded shipping and handling fees and value-added taxes. Incremental costs incurred by us to obtain a contract with a customer are negligible, if any, and are expensed ratably in proportion to the related revenue recognized.

Disaggregated Revenue

In general, our business segmentation is aligned according to the nature and economic characteristics of our 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 and nine months ended September 30, 2022 and 2021.

Three Months Ended September 30, 2022				
	Products	Services	Energy Production	Total
Products	\$ 3,206,732	\$ —	\$ —	\$ 3,206,732
Installation services	—	—	—	—
Maintenance services	—	3,078,604	—	3,078,604
Energy production	—	—	332,774	332,774
Total revenue	\$ 3,206,732	\$ 3,078,604	\$ 332,774	\$ 6,618,110

Nine Months Ended September 30, 2022				
	Products	Services	Energy Production	Total
Products	\$ 10,156,328	\$ —	\$ —	\$ 10,156,328
Installation services	—	20,109	—	20,109
Maintenance services	—	9,025,966	—	9,025,966
Energy production	—	—	1,268,623	1,268,623
Total revenue	\$ 10,156,328	\$ 9,046,075	\$ 1,268,623	\$ 20,471,026

Three Months Ended September 30, 2021				
	Products	Services	Energy Production	Total
Products	\$ 1,871,332	\$ —	\$ —	\$ 1,871,332
Installation services	—	63,076	—	63,076
Maintenance services	—	2,766,168	—	2,766,168
Energy production	—	—	315,292	315,292
Total revenue	\$ 1,871,332	\$ 2,829,244	\$ 315,292	\$ 5,015,868

TECOGEN INC.
Notes to Condensed Consolidated Financial Statements

	Nine Months Ended September 30, 2021			
	Products	Services	Energy Production	Total
Products	\$ 6,439,981	\$ —	\$ —	\$ 6,439,981
Installation services	—	825,325	—	825,325
Maintenance services	—	8,613,377	—	8,613,377
Energy production	—	—	1,339,448	1,339,448
Total revenue	\$ 6,439,981	\$ 9,438,702	\$ 1,339,448	\$ 17,218,131

Products Segment

Products. Our Product revenues include cogeneration systems that supply electricity and hot water, chillers that provide air-conditioning and hot water, and engineered accessories, which consist of ancillary products and parts necessary to install a cogeneration unit including integration into the customers' existing electrical and mechanical systems. We refer to the package of engineered accessories and engineering and design services necessary for the customers' installation of a cogeneration unit as light installation services.

We transfer control and generally recognize a sale when we ship a product from our manufacturing facility at which point the 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.

Services Segment

Installation Services. We provide installation services typically including all necessary engineering and design, labor, subcontract labor and service to install a cogeneration unit including integration into the customers' existing electrical and mechanical systems.

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 a cost-based input method which we believe appropriately measures and is the most accurate 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.

TECOGEN INC.
Notes to Condensed Consolidated Financial Statements

Maintenance Services. Maintenance services are provided under either long-term maintenance contracts or time and material maintenance contracts. Revenue under time and material 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 the amount we have the right to invoice the customer under the contract. Payment terms for maintenance services are generally 30 days.

Energy Production Segment

Energy Production. Revenue from energy contracts is recognized when electricity, heat, hot and/or chilled water is produced by our owned on-site cogeneration systems. Each month we invoice the customer and recognize revenue for the various forms of energy delivered, based on actual 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 the amount that 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 condensed consolidated balance sheets.

We did not recognize any revenue during the nine months ended September 30, 2022 that was included in unbilled revenue at the end of the period. Approximately \$1,302,727 was billed in this period that had been recognized as revenue in previous periods.

Revenue recognized during the nine months ended September 30, 2022 that was included in deferred revenue at the beginning of the period was approximately \$,620,128.

Remaining Performance Obligations

Remaining performance obligations related to ASC 606 represent the aggregate transaction price allocated to performance obligations with an original contract term of 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 invoice customers. Remaining performance obligations therefore consist of unsatisfied or partially satisfied performance obligations related to fixed price maintenance contracts and installation contracts.

As of September 30, 2022, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately \$0.8 million. We expect to recognize revenue of approximately 78.2% of the remaining performance obligations over the next 24 months, 53.0% recognized in the first 12 months and 25.2% recognized over the subsequent 12 months, and the remainder recognized thereafter.

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Notes to Condensed Consolidated Financial Statements

Note 3. Income Per Common Share

Basic and diluted income (loss) per share for the three and nine months ended September 30, 2022 and 2021, respectively, were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Numerator:				
Net income (loss) available to stockholders	\$ (256,712)	\$ 1,466,697	\$ (1,023,521)	\$ 3,633,035
Denominator:				
Weighted average shares outstanding - Basic	24,850,261	24,850,261	24,850,261	24,850,261
Effect of dilutive securities:				
Stock options	—	304,644	—	280,904
Weighted average shares outstanding - Diluted	24,850,261	25,154,905	24,850,261	25,131,165
Basic income (loss) per share	\$ (0.01)	\$ 0.06	\$ (0.04)	\$ 0.15
Diluted income (loss) per share	\$ (0.01)	\$ 0.06	\$ (0.04)	\$ 0.14
Anti-dilutive shares underlying stock options outstanding	971,001	777,296	836,001	777,296

Note 4. Inventories, net

Inventories at September 30, 2022 and December 31, 2021 consisted of the following:

	September 30, 2022	December 31, 2021
Raw materials	\$ 8,118,001	\$ 7,072,991
Less: reserves	(335,121)	(381,000)
Raw materials, net	\$ 7,782,880	\$ 6,691,991
Work-in-process	341,485	549,802
Finished goods	587,656	523,196
Total inventories, net	\$ 8,712,021	\$ 7,764,989

Note 5. Property, Plant and Equipment, net

Property, plant and equipment at September 30, 2022 and December 31, 2021 consisted of the following:

	Estimated Useful Life (in Years)	September 30, 2022	December 31, 2021
Energy systems	1 - 15 years	\$ 3,478,824	\$ 3,556,488
Machinery and equipment	5 - 7 years	1,596,827	1,463,153
Furniture and fixtures	5 years	196,006	193,698
Computer software	3 - 5 years	192,865	192,865
Leasehold improvements	*	466,789	466,789
		5,931,311	5,872,993
Less - accumulated depreciation and amortization		(4,269,617)	(4,090,049)
		\$ 1,661,694	\$ 1,782,944

* Lesser of estimated useful life of asset or lease term

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Depreciation and amortization expense on property and equipment for the three and nine months ended September 30, 2022 and 2021 was \$125,755 and \$376,365, and \$144,181 and \$450,195, respectively. During the nine months ended September 30, 2022, we received proceeds of \$72,655 from the disposition of certain assets, realizing a gain of \$41,931 and disposed of machinery and equipment with a cost of \$93,988 and no net book value.

Note 6. Intangible Assets and Liabilities Other Than Goodwill

As of September 30, 2022 and December 31, 2021 we had the following amounts related to intangible assets and liabilities other than goodwill:

Intangible assets	September 30, 2022			December 31, 2021		
	Cost	Accumulated Amortization	Total	Cost	Accumulated Amortization	Total
Product certifications	\$ 777,465	\$ (572,230)	\$ 205,235	\$ 765,850	\$ (532,676)	\$ 233,174
Patents	888,911	(382,765)	506,146	871,021	(314,997)	556,024
Developed technology	240,000	(152,000)	88,000	240,000	(140,000)	100,000
Trademarks	26,896	—	26,896	26,896	—	26,896
In Process R&D	263,936	(56,558)	207,378	263,936	(28,279)	235,657
Favorable contract asset	384,465	(370,824)	13,641	384,465	(355,193)	29,272
	<u>\$ 2,581,673</u>	<u>\$ (1,534,377)</u>	<u>\$ 1,047,296</u>	<u>\$ 2,552,168</u>	<u>\$ (1,371,145)</u>	<u>\$ 1,181,023</u>
Intangible liability						
Unfavorable contract liability	<u>\$ 2,903,419</u>	<u>\$ (1,930,898)</u>	<u>\$ 972,521</u>	<u>\$ 3,056,655</u>	<u>\$ (1,797,149)</u>	<u>\$ 1,259,506</u>

The aggregate amortization expense related to intangible assets and liabilities exclusive of contract related intangibles for the three and nine months ended September 30, 2022 and 2021 was \$49,885 and \$150,376, and \$51,229 and \$145,306, respectively. The net credit to cost of sales related to the amortization of the contract related intangible asset and liability for the three and nine months ended September 30, 2022 and 2021 was \$69,370 and \$202,753, and \$79,570 and \$238,192, respectively. During the nine months ended September 30, 2021 we abandoned certain patent applications amounting to \$7,400 and recorded an impairment charge in general and administrative expenses in the period.

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 us 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 and thereafter as of September 30, 2022 is estimated to be as follows:

	Non-contract Related Intangibles	Contract Related Intangibles	Total
Year 1	\$ 201,568	\$ (265,854)	\$ (64,286)
Year 2	187,551	(217,757)	(30,206)
Year 3	178,984	(120,464)	58,520
Year 4	174,968	(90,035)	84,933
Year 5	172,545	(78,261)	94,284
Thereafter	104,784	(200,150)	(95,366)
Total	<u>\$ 1,020,400</u>	<u>(972,521)</u>	<u>\$ 47,879</u>

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We recognized a gain on termination of unfavorable contract liability of \$71,375 in the nine months ended September 30, 2022 due to the closing of certain energy production sites.

Note 7. Sale of Energy Producing Assets and Goodwill Impairment

During the first quarter of 2019 we 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.

In connection with these assets sales, we 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 maintenance and operating fees. These agreements contain provisions whereby we have guaranteed to the purchaser a minimum level or threshold of cash flows from the associated energy production contracts. In October 2021 the minimum guarantee with respect to one of the energy purchase agreements was modified by reducing the guaranteed minimum collections by \$35,000 per year, the guaranteed minimum collection amount associated with one site that was sold by the customer. Actual results are compared to the minimum threshold bi-annually and we are contractually obligated to reimburse any shortfall to the purchaser. To the extent actual cash flow results exceed the minimum threshold, we are entitled to fifty percent of such excess under the agreements. Based upon an analysis of these energy producing assets expected future performance, as of September 30, 2022 we do not expect to make any material payments under the guarantee. At September 30, 2022, our obligation under the energy production contracts was \$7,236.

The foregoing agreements also contain provisions whereby we have 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 we be required to make whole the purchaser under such provisions, we 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.

We are 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.

Note 8. Leases

Our leases principally consist of operating leases related to our corporate office, field offices, and our research, manufacturing and storage facilities.

At inception, we determine if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. Some of our lease agreements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. maintenance, labor charges, etc.). We account 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 and using an incremental borrowing rate consistent with the lease terms or implicit rates, when readily determinable. For those leases where it is reasonably certain at the commencement date that we will exercise the option to extend the lease, then the lease term will include the lease extension term. 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 consist of fixed payments for base rent, is recognized on a straight-line basis over the lease term. Lease expense for the three and nine months ended September 30, 2022 and 2021 was \$201,578 and \$608,652, and \$197,651 and \$591,867, respectively.

Supplemental information related to leases for the nine months ended September 30, 2022 was as follows:

	Nine Months Ended September 30,	
	2022	2021
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 549,402	\$ 534,073
Right-of-use assets obtained in exchange for operating lease liabilities	\$ —	\$ 825,848
Weighted-average remaining lease term - operating leases	3.61 years	4.10 years
Weighted-average discount rate - operating leases	6 %	6 %

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Supplemental information related to operating leases as of September 30, 2022 and December 31, 2021 was as follows:

	September 30, 2022	December 31, 2021
Operating leases		
Right-of-use assets	\$ 1,404,034	\$ 1,869,210
Operating lease liability, current	\$ 676,974	\$ 641,002
Operating lease liability, long-term	796,696	1,315,275
Total operating lease liability	\$ 1,473,670	\$ 1,956,277

Future minimum lease commitments under non-cancellable operating leases as of September 30, 2022 were as follows:

	Operating Leases
Year 1	\$ 741,510
Year 2	398,383
Year 3	115,015
Year 4	102,768
Year 5	61,044
Thereafter	184,304
Total lease payments	1,603,024
Less: imputed interest	129,354
Total	\$ 1,473,670

Note 9. Stock-Based Compensation

Stock-Based Compensation

We 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. 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 September 30, 2022, and in June 2017 stockholders approved an amendment to extend the termination date of the Plan to January 1, 2026 and ratified all of our option grants issued after January 1, 2016 (the "Amended Plan").

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 September 30, 2022 was 210,793.

During the nine months ended September 30, 2022, we granted nonqualified options to purchase an aggregate of 761,650 shares of common stock at a weighted-average price of \$1.11 per share to certain officers and employees. These options have a vesting schedule of two years and expire in ten years. The fair value of the options issued in 2022 was \$321,910. The weighted-average grant date fair value of stock options granted during 2022 was \$0.42 per share.

We adopted the 2022 Stock Incentive Plan (the "2022 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. We have reserved 3,800,000 shares of our common stock for issuance pursuant to awards under the 2022 Plan. The adoption of the 2022 Plan was approved by our shareholders on June 9, 2022.

Under the 2022 Plan, 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 2022 Plan. The options are not transferable except by will or domestic relations order. The option price per share under the 2022 Plan cannot be less than the fair market value of the underlying shares on the date of the grant.

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During the nine months ended September 30, 2022, we granted nonqualified options to purchase an aggregate of 175,000 shares of common stock at a weighted-average price of \$1.14 per share to certain directors and a consultant. These options have a vesting schedule of four years and expire in ten years. The fair value of the options issued in 2022 was \$84,600. The weighted-average grant date fair value of stock options granted during 2022 was \$0.48 per share. The number of shares remaining available for future issuance under the 2022 Plan as of September 30, 2022 was 3,650,000.

Stock option activity for the nine months ended September 30, 2022 was as follows:

Common Stock Options	Number of Options	Exercise Price Per Share	Weighted Average Exercise Price	Weighted Average Remaining Life	Aggregate Intrinsic Value
December 31, 2021	2,386,842	\$0.71-\$10.33	\$ 1.81	7.56 years	\$ 697,935
Granted	936,650	\$1.10-\$1.20	\$ 1.11		
Exercised	—				
Canceled and forfeited	(242,795)	\$0.71-\$6.74	\$ 1.37		
Outstanding, September 30, 2022	3,080,697	\$0.71-\$10.33	\$ 1.63	7.44 years	\$ 310,073
Exercisable, September 30, 2022	1,366,947		\$ 2.36		\$ 157,123
Vested and expected to vest, September 30, 2022	2,823,635		\$ 1.68		\$ 287,131

Consolidated stock-based compensation expense for the three and nine months ended September 30, 2022 and 2021 was \$69,118 and \$254,718, and \$56,889 and \$150,655, respectively. No tax benefit was recognized related to the stock-based compensation recorded during the period.

At September 30, 2022 the total compensation cost related to unvested stock option awards not yet recognized is \$29,087 and this amount will be recognized over a weighted average period of 1.61 years.

Note 10. 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. We currently do 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. We have 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. We do not currently have any Level 3 financial assets or liabilities.

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The following tables presents the asset reported in "other assets" in the consolidated balance sheet measured at its fair value on a recurring basis as of September 30, 2022 and 2021 by level within the fair value hierarchy.

September 30, 2022					
Description	Total	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3	Unrealized Gains
Recurring fair value measurements					
Marketable equity securities					
EuroSite Power Inc.	\$ 112,492	\$ —	\$ 112,492	\$ —	\$ 37,497
Total recurring fair value measurements	\$ 112,492	\$ —	\$ 112,492	\$ —	\$ 37,497

September 30, 2021					
Description	Total	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3	Unrealized Gains
Recurring fair value measurements					
Marketable equity securities					
EuroSite Power Inc.	\$ 131,242	\$ —	\$ 131,242	\$ —	\$ 18,749
Total recurring fair value measurements	\$ 131,242	\$ —	\$ 131,242	\$ —	\$ 18,749

We utilize a Level 2 category fair value measurement to value our investment in EuroSite Power, Inc. 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 we classify it as Level 2.

The following table summarizes changes in Level 2 assets which are comprised of marketable equity securities for the nine months ended September 30, 2022 and 2021:

Fair value at December 31, 2021	\$ 74,995
Unrealized gains	37,497
Fair value at September 30, 2022	\$ 112,492
Fair value at December 31, 2020	\$ 118,084
Sale of 93,187 shares	(5,591)
Unrealized gains	18,749
Fair value at September 30, 2021	\$ 131,242

Note 11. Notes Payable

Paycheck Protection Program Loan

On April 17, 2020, we obtained an unsecured loan through Webster Bank, N.A. in the amount of \$,874,200 in connection with the Paycheck Protection Program pursuant to the Coronavirus Aid, Relief, and Economic Security Act, as amended ("CARES Act") administered by the United States Small Business Administration ("SBA").

On January 19, 2021, we received a letter dated January 12, 2021 from Webster Bank, NA confirming that the Paycheck Protection Program Loan issued to us pursuant to the CARES Act, in the original principal amount of \$1,874,200 together with accrued interest of \$13,659 was forgiven in full as of January 11, 2021. We have accounted for the loan forgiveness of \$1,887,859 as debt extinguishment in accordance with Accounting Standards Update 2020-09, *Debt (Topic 470) ("ASU 2020-09")* and reported it as a separate component of other income (expense), net in the condensed consolidated

TECOGEN INC.
Notes to Condensed Consolidated Financial Statements

statements of operations for the nine months ended September 30, 2021. The loan forgiveness is nontaxable for both state and federal purposes and has been treated accordingly in our condensed consolidated financial statements.

Paycheck Protection Program Second Draw Loan

On February 5, 2021, we obtained a Paycheck Protection Program Second Draw unsecured loan through Webster Bank, N.A. in the amount of \$,874,269 pursuant to the CARES Act.

On September 20, 2021, we received a letter dated September 13, 2021 from Webster Bank, NA confirming that the Paycheck Protection Program Second Draw Loan issued to us pursuant to the CARES Act, in the original principal amount of \$1,874,269 together with accrued interest of \$11,386 was forgiven in full as of September 8, 2021. We have accounted for the loan forgiveness of \$1,885,655 as debt extinguishment in accordance with Accounting Standards Update 2020-09, *Debt (Topic 470) ("ASU 2020-09")* and reported it as a separate component of other income (expense), net in the condensed consolidated statements of operations for the nine months ended September 30, 2021. The loan forgiveness is nontaxable for both state and federal purposes and has been treated accordingly in our condensed consolidated financial statements.

Note 12. Commitments and Contingencies

We guaranteed certain obligations of a former subsidiary of ADGE, 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. In October 2021, the loan was paid in full. We have no further obligation to Eurosite Power Inc. under this guarantee.

Note 13. Segments

As of September 30, 2022, we were organized into three operating segments through which senior management evaluates our business. These segments, as described in more detail in Note 1, are organized around the products and services provided to customers and represent our reportable segments. The following table presents information by reportable segment for the three and nine months ended September 30, 2022 and 2021:

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	Products	Services	Energy Production	Corporate, other and elimination (1)	Total
Three months ended September 30, 2022					
external customers	\$ 3,206,732	\$ 3,078,604	\$ 332,774	\$ —	\$ 6,618,110
Intersegment revenue	—	41,390	—	(41,390)	—
revenue Total	<u>\$ 3,206,732</u>	<u>\$ 3,119,994</u>	<u>\$ 332,774</u>	<u>\$ (41,390)</u>	<u>\$ 6,618,110</u>
Gross profit	<u>\$ 1,132,489</u>	<u>\$ 1,596,249</u>	<u>\$ 164,596</u>	<u>\$ —</u>	<u>\$ 2,893,334</u>
Identifiable assets	<u>\$ 10,639,810</u>	<u>\$ 10,308,988</u>	<u>\$ 3,754,321</u>	<u>\$ 5,368,204</u>	<u>\$ 30,071,323</u>

Nine months ended September 30, 2022					
external customers	\$ 10,156,328	\$ 9,046,075	\$ 1,268,623	\$ —	\$ 20,471,026
Intersegment revenue	—	199,059	—	(199,059)	—
revenue Total	<u>\$ 10,156,328</u>	<u>\$ 9,245,134</u>	<u>\$ 1,268,623</u>	<u>\$ (199,059)</u>	<u>\$ 20,471,026</u>
Gross profit	<u>\$ 3,421,863</u>	<u>\$ 4,723,382</u>	<u>\$ 542,326</u>	<u>\$ —</u>	<u>\$ 8,687,571</u>
Identifiable assets	<u>\$ 10,639,810</u>	<u>\$ 10,308,988</u>	<u>\$ 3,754,321</u>	<u>\$ 5,368,204</u>	<u>\$ 30,071,323</u>

Three months ended September 30, 2021					
external customers	\$ 1,871,332	\$ 2,829,244	\$ 315,292	\$ —	\$ 5,015,868
Intersegment revenue	—	48,111	—	(48,111)	—
revenue Total	<u>\$ 1,871,332</u>	<u>\$ 2,877,355</u>	<u>\$ 315,292</u>	<u>\$ (48,111)</u>	<u>\$ 5,015,868</u>
Gross profit	<u>\$ 834,936</u>	<u>\$ 1,362,225</u>	<u>\$ 144,774</u>	<u>\$ —</u>	<u>\$ 2,341,935</u>
Identifiable assets	<u>\$ 10,549,992</u>	<u>\$ 10,951,838</u>	<u>\$ 4,273,936</u>	<u>\$ 6,704,984</u>	<u>\$ 32,480,750</u>

Nine months ended September 30, 2021					
external customers	\$ 6,439,981	\$ 9,438,702	\$ 1,339,448	\$ —	\$ 17,218,131
Intersegment revenue	—	236,155	—	(236,155)	—
revenue Total	<u>\$ 6,439,981</u>	<u>\$ 9,674,857</u>	<u>\$ 1,339,448</u>	<u>\$ (236,155)</u>	<u>\$ 17,218,131</u>
Gross profit	<u>\$ 2,838,573</u>	<u>\$ 4,754,694</u>	<u>\$ 542,515</u>	<u>\$ —</u>	<u>\$ 8,135,782</u>
Identifiable assets	<u>\$ 10,549,992</u>	<u>\$ 10,951,838</u>	<u>\$ 4,273,936</u>	<u>\$ 6,704,984</u>	<u>\$ 32,480,750</u>

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

Note 14. Subsequent Events

We have 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

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other parts of this Quarterly Report on Form 10-Q ("Form 10-Q") contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. For example, statements in this Form 10-Q regarding the potential future impact of the COVID-19 pandemic on our business and results of operations are forward-looking statements. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and our actual results may differ significantly from the results discussed in the forward-looking statements. Such forward-looking statements include, among other things, statements regarding the impact of the coronavirus pandemic on demand for our products and services, the availability of incentives, rebates, and tax benefits relating to our products, changes in the regulatory environment relating to our products, competing technological developments, and the availability of financing to fund our operations and growth. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021 ("2021 Form 10-K"), as supplemented, and Part II, Item 1A of this Form 10-Q, in each case under the heading "Risk Factors." The following discussion should be read in conjunction with the 2021 Form 10-K filed with the Securities and Exchange Commission ("SEC") and the condensed consolidated financial statements and accompanying notes included in Part I, Item 1 of this Form 10-Q. Each of the terms "Tecogen," "we," "our," and "us" as used herein refer collectively to Tecogen Inc. and our wholly owned subsidiaries, unless otherwise stated. While we may elect to update forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and you should not rely on those forward-looking statements as representing our views as of any date subsequent to the date of the filing of this Form 10-Q.

Recent Developments

Controlled Environment Agriculture: NetZero Greens

On July 20, 2022, Tecogen announced the establishment of NetZero Greens, a new business unit focused on low carbon Controlled Environment Agriculture (CEA). Tecogen believes that CEA offers an exciting opportunity to apply the company's expertise in clean cooling, power generation, and greenhouse gas reduction to address critical issues affecting food and energy security. Tecogen proposes to address this challenge by developing a highly efficient energy solution for CEA grown produce using Tecogen's cogeneration products in conjunction with solar energy generation, energy storage, and other technologies.

CEA facilities enable multiple crop cycles (15 to 20 cycles) in one year compared to one or two crop cycles in conventional farming. In addition, growing produce close to the point of sale reduces food spoilage during transportation. Food crops grown in greenhouses typically have lower yields per square foot than in CEA facilities, and the push to situate facilities close to consumers in cities requires minimizing land area and maximizing yield per square foot. Yields are increased in CEA facilities by supplementing or replacing natural light with grow lights in a climate-controlled environment - which requires significant energy use.

In recent years our cogeneration equipment has been used in numerous cannabis cultivation facilities because our systems significantly reduce operating costs, reduce the facility GHG footprint and offer resiliency to grid outages. Tecogen's experience providing clean energy solutions to cannabis cultivation facilities has given Tecogen significant insight into requirements relating to energy-intensive indoor agriculture applications that we expect to be transferable to CEA facilities for food production. Further information can be found in our CEA presentation on the investor relations section of our website.

Employee Retention Credit

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law providing numerous tax provisions and other stimulus measures, including an employee retention credit ("ERC"), which is a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the ERC.

TECOGEN INC.
Management's Discussion and Analysis

As a result of our election to use an alternative quarter, we qualified for the ERC in the first, second and third quarters of 2021 because our gross receipts decreased by more than 20% from the first, second and third quarters of 2019. As a result of averaging 100 or fewer full-time employees in 2019, all wages paid to employees in the first, second and third quarters of 2021 were eligible for the ERC. Wages used towards PPP loan forgiveness cannot be used as qualified wages for purposes of the ERC

A current receivable in the amount of \$713,269 is included in our condensed consolidated balance sheet as of September 30, 2022. On April 14, 2022, we received \$564,027 from the Internal Revenue Service representing the ERC claim for the third quarter of 2021 and \$1,275 of accrued interest. We are still awaiting payment from the Internal Revenue Service for the ERC claim from the first and second quarters of 2021.

Air Cooled Chiller Development

During the third quarter of 2021 we began development of a hybrid air-cooled chiller. We recognized that there were many applications where the customer wanted an easy to install roof top chiller. Using the inverter design from our InVerde e+ cogeneration module, the system can simultaneously take two inputs, one from the grid or a renewable energy source and one from our natural gas engine. This allows a customer to seek the optimum blend of operational cost savings and greenhouse gas benefits while providing added resiliency from two power sources. We expect to have a prototype completed by the first quarter of 2023, and expect to see incremental revenue in 2024. A patent application based on this concept has been filed with the US Patent and Trademark Office.

COVID-19 Update

During the first quarter of fiscal 2020, a novel strain of coronavirus ("COVID-19") began spreading rapidly throughout the world, prompting governments and businesses to take unprecedented measures in response. Such measures included restrictions on travel and business operations, temporary closures of businesses, and quarantines and shelter-in-place orders. The COVID-19 pandemic has significantly impacted supply chains, curtailed global economic activity, and caused significant volatility and disruption in global markets. The COVID-19 pandemic and the measures taken by U.S. Federal, state and local governments in response have materially adversely affected and could in the future materially impact our business, results of operations, financial condition and stock price. The impact of the pandemic remains uncertain and will depend on the growth in the number of infections, fatalities, the duration of the pandemic, steps taken to combat the pandemic, and the development and availability of effective treatments. We have made every effort to keep our employees who operate our business safe and minimize unnecessary risk of exposure to the virus.

Impact of the Russian Invasion of Ukraine

Presently the company has no operations or customers in Russia or the Ukraine. The higher energy prices for natural gas as a result of the war may affect the performance of our Energy Production Segment. However, we have also seen higher electricity prices as much of the electricity production in the United States is generated from fossil fuels. If the electricity prices continue to rise, the economic savings generated by our products are likely to increase. In addition to the direct result of changes in natural gas and electricity prices, the war in Ukraine may result in higher cybersecurity risks, increased or ongoing supply chain challenges, and volatility related to the trading prices of commodities.

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 us 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 potable 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 Engine driven chillers (cooling plus heat).

TECOGEN INC.
Management's Discussion and Analysis

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 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.

Our operations are comprised of three business segments. Our Products segment designs, manufactures and sells industrial and commercial cogeneration systems as described above. Our Services segment provides operation and maintenance services for our products under long term service contracts. Our Energy Production segment sells energy in the form of electricity, heat, hot water and cooling to our customers under long-term sales agreements.

TECOGEN INC.
Management's Discussion and Analysis

Results of Operations

Third Quarter of 2022 Compared to Third Quarter of 2021

The following table sets forth for the periods indicated, the percentage of net sales represented by certain items reflected in our condensed consolidated statements of operations:

	Three Months Ended	
	September 30, 2022	September 30, 2021
Revenues	100.0%	100.0%
Cost of sales	56.3%	53.3%
Gross profit	43.7%	46.7%
Operating expenses		
General and administrative	35.4%	49.3%
Selling	8.6%	13.1%
Research and development	3.1%	2.4%
Gain on disposition of assets	(0.1) %	—%
Total operating expenses	47.0 %	64.8 %
Loss from operations	(3.2) %	(18.1) %
Total other income (expense), net	(0.1) %	47.9 %
Consolidated net income (loss)	(3.5) %	29.7 %
Income attributable to the non-controlling interest	(0.4) %	(0.4) %
Net income (loss) attributable to Tecogen, Inc.	(3.9) %	29.2 %

Revenues

Total revenues for the three months ended September 30, 2022 were \$6,618,110 compared to \$5,015,868 for the same period in 2021, an increase of \$1,602,242 or 31.9% year over year.

The following table presents revenue for the periods indicated, by segment and the change from the prior year:

	Three Months Ended		Increase (Decrease) \$	Increase (Decrease) %
	September 30, 2022	September 30, 2021		
REVENUES:				
Products				
Cogeneration	\$ 1,547,761	\$ 1,446,001	\$ 101,760	7.0 %
Chiller	1,642,478	383,100	1,259,378	328.7 %
Engineered accessories	16,493	42,231	(25,738)	(60.9) %
Total Product revenues	3,206,732	1,871,332	1,335,400	71.4 %
Services				
Maintenance services	3,078,604	2,766,168	312,436	11.3 %
Installation services	—	63,076	(63,076)	(100.0) %
Total Service revenues	3,078,604	2,829,244	249,360	8.8 %
Products and Services	6,285,336	4,700,576	1,584,760	33.7 %
Energy Production revenues	332,774	315,292	17,482	5.5 %
Total revenues	\$ 6,618,110	\$ 5,015,868	\$ 1,602,242	31.9 %

TECOGEN INC.
Management's Discussion and Analysis

Products

Product revenues in the three months ended September 30, 2022 were \$3,206,732 compared to \$1,871,332 for the same period in 2021, an increase of \$1,335,400, or 71.4%. The increase in revenue during the three months ended September 30, 2022 is due to an increase in chiller sales of \$1,259,378 and by an increase of \$101,760 in cogeneration sales, offset partially by a decrease in sales of engineered accessories of \$25,738. Our product sales mix, as well as product revenue, can vary significantly from period to period as our products are high dollar, low volume sales.

Services

Service revenues in the three months ended September 30, 2022 were \$3,078,604, compared to \$2,829,244 for the same period in 2021, an increase of \$249,360, or 8.8%. The increase in revenue during the three months ended September 30, 2022 is due primarily due to an increase of \$312,436, or 11.3%, in service contract revenues, offset partially by a decrease in installation revenues of \$63,076. While service contract revenue generally remains relatively constant, installation activity is likely to remain low due to our strategy of focusing on higher margin segments of our business.

Energy Production

Energy production revenues in the three months ended September 30, 2022 were \$332,774, compared to \$315,292 for the same period in 2021, an increase of \$17,482, or 5.5%. The increase in energy production revenue is due to increased runtimes

Cost of Sales

Cost of sales in the three months ended September 30, 2022 was \$3,724,776 compared to \$2,673,933 for the same period in 2021, an increase of \$1,050,843, or 39.3%. The increase in cost of sales is due to increased product revenue volume and the impact of inflation on material costs. During the three months ended September 30, 2022 our gross margin decreased to 43.7% compared to 46.7% for the same period in 2021, a 3.0% percentage point decrease due to higher material costs.

Products

Cost of sales for products in the three months ended September 30, 2022 was \$2,074,243 compared to \$1,036,396 for the same period in 2021, an increase of \$1,037,847, or 100.1% due to increased product revenue volume and higher material costs. During the three months ended September 30, 2022, our products gross margin was 35.3% compared to 44.6% for the same period in 2021, an 9.3% percentage point decrease. The decrease in margin is primarily a function of increased material costs.

Services

Cost of sales for services in the three months ended September 30, 2022 was \$1,482,355 compared to \$1,467,019 for the same period in 2021, an increase of \$15,336, or 1.0%. During the three months ended September 30, 2022, our services gross margin increased to 51.8% compared to 48.1% for the same period in 2021, a 3.7% percentage point increase due to price increases on service contracts and lower installation revenues.

Energy Production

Cost of sales for energy production in the three months ended September 30, 2022 was \$168,178 compared to \$170,518 for the same period in 2021, a decrease of \$2,340, or 1.4%. During the three months ended September 30, 2022 our energy production gross margin was 49.5% compared to 45.9% for the same period in 2021, a 3.6% percentage point increase.

Operating Expenses

Operating expenses decreased \$144,476, or 4.4%, to \$3,107,630 in the three months ended September 30, 2022 compared to \$3,252,106 in the same period in 2021. The total operating expenses were lower primarily due to a \$281,955 reduction in the bad debt expense and lower sales commissions, partially offset by an increase in R&D expense associated with the air-cooled chiller development.

TECOGEN INC.
Management's Discussion and Analysis

Operating Expenses	Three Months Ended		Increase (Decrease) \$	Increase (Decrease) %
	September 30, 2022	September 30, 2021		
General and Administrative	\$ 2,343,449	\$ 2,473,190	\$ (129,741)	(5.2) %
Selling	567,529	656,885	(89,356)	(13.6) %
Research and Development	202,138	122,031	80,107	65.6 %
Gain on disposition of assets	(5,486)	—	(5,486)	
Total	\$ 3,107,630	\$ 3,252,106	\$ (144,476)	(4.4) %

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 three months ended September 30, 2022 were \$2,343,449 compared to \$2,473,190 for the same period in 2021, a decrease of \$129,741 or 5.2% due primarily to a \$281,995 decrease in bad debt expense in the three months ended September 30, 2022, partially offset by an increase in payroll costs, stock compensation costs and franchise taxes.

Selling expenses consist of sales staff, commissions, marketing, travel and other selling related expenses. Selling expenses for the three months ended September 30, 2022 were \$567,529 compared to \$656,885 for the same period in 2021, a decrease of \$89,356 or 13.6% due to lower payroll costs and reduced sales commissions.

Research and development expenses consist of engineering and technical staff, materials, outside consulting and other related expenses. Research and development expenses for the three months ended September 30, 2022 were \$202,138 compared to \$122,031 for the same period in 2021, an increase of \$80,107 or 65.6% due to increased payroll costs and costs incurred in the development of a hybrid air-cooled chiller.

Loss from Operations

Loss from operations for the three months ended September 30, 2022 was \$214,296 compared to a loss of \$910,171 for the same period in 2021, a decrease of \$695,875. The decrease in loss from operations is due primarily to higher revenues and a \$144,476 decrease in operating expenses.

Other Income (Expense), net

Other expense, net for the three months ended September 30, 2022 was \$9,420 compared to other income of \$2,401,758 for the same period in 2021, a decrease of \$2,411,178. The decrease in other income is due primarily to the gain on extinguishment of debt of \$1,885,655 as a result of the Paycheck Protection Program Second Draw Loan forgiveness and the recognition of the Employee Retention Credit of \$562,253 for the third calendar quarter of 2021 recognized in the three months ended September 30, 2021.

Provision for State Income Taxes

The provision for state income taxes for the three months ended September 30, 2022 and 2021 was \$5,922 and \$3,000, respectively, and represents estimated income tax payments, net of refunds, to various states.

Non-controlling Interest

Income attributable to the non-controlling interest was \$27,074 for the three months ended September 30, 2022 which represents the non-controlling interest portion of American DG Energy's 51% owned subsidiary, American DG New York, LLC. For the same period in 2021, income attributable to the non-controlling interest was \$21,890.

Net Income (Loss) Attributable to Tecogen Inc

The net loss attributable to Tecogen for the three months ended September 30, 2022 was \$256,712 compared to a net income of \$1,466,697 for the same period in 2021, a decrease of \$1,723,409, or 117.5%. The decrease in other income is due primarily to the gain on extinguishment of debt of \$1,885,655 as a result of the Paycheck Protection Program Second Draw Loan forgiveness and the recognition of the Employee Retention Credit of \$562,253 for the third calendar quarter of 2021

TECOGEN INC.
Management's Discussion and Analysis

recognized in the three months ended September 30, 2021, offset partially by higher gross profit for our Products and Services Segments and decreased operating expenses.

Nine Months Ended September 30, 2022 compared to the Nine Months Ended September 30, 2021

The following table sets forth for the periods indicated, the percentage of net sales represented by certain items reflected in our condensed consolidated statements of operations:

	Nine Months Ended	
	September 30, 2022	September 30, 2021
Revenues	100.0%	100.0%
Cost of sales	57.6%	52.7%
Gross profit	42.4%	47.3%
Operating expenses		
General and administrative	37.3%	42.8%
Selling	7.7%	10.2%
Research and development	2.6%	2.2%
Gain on disposition of assets	(0.2) %	—%
Gain on termination of unfavorable contract liability	(0.3) %	—%
Total operating expenses	47.1 %	55.1 %
Loss from operations	(4.6) %	(7.9) %
Total other income (expense), net	— %	29.3 %
Consolidated net income (loss)	(4.7) %	21.3 %
Income attributable to the non-controlling interest	(0.3) %	(0.2) %
Net income (loss) attributable to Tecogen, Inc.	(5.0) %	21.1 %

Revenues

Total revenues for the nine months ended September 30, 2022 were \$20,471,026 compared to \$17,218,131 for the same period in 2021, an increase of \$3,252,895 or 18.9% year over year.

The following table presents revenue for the periods indicated, by segment and the change from the prior year:

TECOGEN INC.
Management's Discussion and Analysis

	Nine Months Ended		Increase (Decrease) \$	Increase (Decrease) %
	September 30, 2022	September 30, 2021		
REVENUES:				
Products				
Cogeneration	\$ 4,675,629	\$ 2,542,962	\$ 2,132,667	83.9 %
Chiller	4,987,937	2,929,411	2,058,526	70.3 %
Engineered accessories	492,762	967,608	(474,846)	(49.1) %
Total Product revenues	10,156,328	6,439,981	3,716,347	57.7 %
Services				
Maintenance services	9,025,966	8,613,377	412,589	4.8 %
Installation services	20,109	825,325	(805,216)	(97.6) %
Total Service revenues	9,046,075	9,438,702	(392,627)	(4.2) %
Services and Energy Production revenues	19,202,403	15,878,683	3,323,720	20.9 %
Energy Production revenues	1,268,623	1,339,448	(70,825)	(5.3) %
Total revenues	\$ 20,471,026	\$ 17,218,131	\$ 3,252,895	18.9 %

Products

Product revenues in the nine months ended September 30, 2022 were \$10,156,328 compared to \$6,439,981 for the same period in 2021, an increase of \$3,716,347, or 57.7%. The increase in revenue during the nine months ended September 30, 2022 is due to an increase in cogeneration sales of \$2,132,667 and an increase in chiller sales of \$2,058,526, offset partially by a \$474,846 decrease in sales of engineered accessories. Our product sales mix, as well as product revenue, can vary significantly from period to period as our products are high dollar, low volume sales.

Services

Service revenues in the nine months ended September 30, 2022 were \$9,046,075, compared to \$9,438,702 for the same period in 2021, a decrease of \$392,627, or 4.2%. The decrease in revenue during the nine months ended September 30, 2022 is due primarily to a decrease in installation revenues of \$805,216, offset partially by an increase of \$412,589, or 4.8%, in service contract revenues. While service contract revenue generally remains relatively constant, installation activity is likely to remain low due to our strategy of focusing on higher margin segments of our business.

Energy Production

Energy production revenues in the nine months ended September 30, 2022 were \$1,268,623, compared to \$1,339,448 for the same period in 2021, a decrease of \$70,825, or 5.3%. The decrease in energy production revenue is a consequence of certain energy production sites that have permanently closed and seasonality.

Cost of Sales

Cost of sales in the nine months ended September 30, 2022 was \$11,783,455 compared to \$9,082,349 for the same period in 2021, an increase of \$2,701,106, or 29.7%. The increase in cost of sales is due to increased product revenue volume and the impact of inflation on material costs. During the nine months ended September 30, 2022 our gross margin decreased to 42.4% compared to 47.3% for the same period in 2021, a 4.9% percentage point decrease due to higher material costs.

TECOGEN INC.
Management's Discussion and Analysis

Products

Cost of sales for products in the nine months ended September 30, 2022 was \$6,734,465 compared to \$3,601,408 for the same period in 2021, an increase of \$3,133,057, or 87.0% due to increased product revenue volume and higher material costs. During the nine months ended September 30, 2022, our Products Segment gross margin was 33.7% compared to 44.1% for the same period in 2021, an 10.4% percentage point decrease. The decrease in margin is primarily a function of increased material costs.

Services

Cost of sales for services in the nine months ended September 30, 2022 was \$4,322,693 compared to \$4,684,008 for the same period in 2021, a decrease of \$361,315, or 7.7%. During the nine months ended September 30, 2022, our Services Segment gross margin increased to 52.2% compared to 50.4% for the same period in 2021, a 1.8% percentage point increase due to lower installation activity.

Energy Production

Cost of sales for energy production in the nine months ended September 30, 2022 was \$726,297 compared to \$796,933 for the same period in 2021, a decrease of \$70,636, or 8.9%. During the nine months ended September 30, 2022 our energy production gross margin was 42.8% compared to 40.5% for the same period in 2021, a 2.3% percentage point increase.

Operating Expenses

Operating expenses increased \$143,706, or 1.5%, to \$9,638,224 in the nine months ended September 30, 2022 compared to \$9,494,518 in the same period in 2021. The total operating expenses were higher primarily due to higher salary costs, taxes and costs related to the air-cooled chiller development, offset partially by a reduction in bad debt expense and lower sales commissions.

Operating Expenses	Nine Months Ended		Increase (Decrease) \$	Increase (Decrease) %	
	September 30, 2022	September 30, 2021			
General and Administrative	\$ 7,642,183	\$ 7,365,495	\$ 276,688	3.8	%
Selling	1,572,221	1,747,959	(175,738)	(10.1)	%
Research and Development	537,126	381,064	156,062	41.0	%
Gain on disposition of assets	(41,931)	—	(41,931)	—	%
Gain on termination of unfavorable contract liability	(71,375)	—	(71,375)	—	%
Total	<u>\$ 9,638,224</u>	<u>\$ 9,494,518</u>	<u>\$ 143,706</u>	1.5	%

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 nine months ended September 30, 2022 were \$7,642,183 compared to \$7,365,495 for the same period in 2021, an increase of \$276,688 or 3.8% due primarily to a \$235,955 decrease in bad debt expense.

Selling expenses consist of sales staff, commissions, marketing, travel and other selling related expenses. Selling expenses for the nine months ended September 30, 2022 were \$1,572,221 compared to \$1,747,959 for the same period in 2021, a decrease of \$175,738 or 10.1% due primarily to lower payroll costs and reduced sales commissions.

Research and development expenses consist of engineering and technical staff, materials, outside consulting and other related expenses. Research and development expenses for the nine months ended September 30, 2022 were \$537,126 compared to \$381,064 for the same period in 2021, an increase of \$156,062 or 41.0% due to increased payroll costs and costs incurred in the development of a hybrid air-cooled chiller.

TECOGEN INC.
Management's Discussion and Analysis

Loss from Operations

Loss from operations for the nine months ended September 30, 2022 was \$950,653 compared to a loss of \$1,358,736 for the same period in 2021, a decrease of \$408,083. The decrease in the loss from operations is due primarily to higher Products Segment gross profit and a \$143,706 decrease in operating expenses.

Other Income (Expense), net

Other expense, net for the nine months ended September 30, 2022 was \$900 compared to other income of \$5,053,120 for the same period in 2021, a decrease of \$5,054,020. The decrease in other income is due primarily to the gain on extinguishment of debt of \$3,773,014 as a result of the Paycheck Protection Program Loan forgiveness and the recognition of the Employee Retention Credit of \$1,276,021 for the three calendar quarters of 2021 recognized in the nine months ended September 30, 2021.

Provision for State Income Taxes

The provision for state income taxes for the nine months ended September 30, 2022 and 2021 was \$16,352 and \$18,991, respectively and represents estimated income tax payments, net of refunds, to various states.

Non-controlling Interest

Income attributable to the non-controlling interest was \$55,616 for the nine months ended September 30, 2022 which represents the non-controlling interest portion of American DG Energy's 51% owned subsidiary, American DG New York, LLC. For the same period in 2021, income attributable to the non-controlling interest was \$42,358.

Net Income (Loss) Attributable to Tecogen Inc

The net loss attributable to Tecogen for the nine months ended September 30, 2022 was \$1,023,521 compared to a net income of \$3,633,035 for the same period in 2021, a decrease of \$4,656,556, or 128.2%. The decrease is due primarily to the gain on extinguishment of debt of as a result of the Paycheck Protection Program Loan forgiveness and the recognition of the Employee Retention Credit in the nine months ended September 30, 2021, offset partially by higher gross profit margins for our Products Segment and the decrease in operating expenses.

Liquidity and Capital Resources

The following table presents a summary of our net cash flows from operating, investing and financing activities:

Cash Provided by (Used in)	Nine Months Ended		Increase (Decrease)
	September 30, 2022	September 30, 2021	
Operating activities	\$ (433,810)	\$ 171,996	\$ (605,806)
Investing activities	(300,493)	(185,253)	(115,240)
Financing activities	—	1,874,269	(1,874,269)
Change in cash and cash equivalents	\$ (734,303)	\$ 1,861,012	\$ (2,595,315)

Consolidated working capital at September 30, 2022 was \$15,553,490 compared to \$16,193,881 at December 31, 2021, a decrease of \$640,391. Included in working capital were cash and cash equivalents of \$2,880,160 at September 30, 2022, compared to \$3,614,463 at December 31, 2021, a decrease of \$734,303, or 20.3%.

Cash Flows from Operating Activities

TECOGEN INC.
Management's Discussion and Analysis

Cash used by operating activities for the nine months ended September 30, 2022 was \$433,810 compared to \$171,996 of cash provided by operating activities for the same period in 2021, a decrease of \$605,806, or 352.2%. Our accounts receivable and unbilled revenue balances were \$8,598,302 and \$1,956,002, respectively, at September 30, 2022 compared to \$8,482,286 and \$3,258,189 at December 31, 2021, providing \$67,940 and \$1,302,187 of cash respectively. Inventories increased \$947,031 during the nine months ended September 30, 2022 due to increased safety stock.

Accounts payable decreased to \$3,325,452 as of September 30, 2022 from \$3,508,354 at December 31, 2021, using \$182,903 in cash flow from operations. The decrease in accounts payable was due to vendor payment timing. Deferred revenue decreased as of September 30, 2022 compared to December 31, 2021, using \$487,676 of cash from operations. We expect accounts payable and deferred revenue to fluctuate with routine changes in operations.

Cash Flows from Investing Activities

During the nine months ended September 30, 2022 we used \$300,493 in cash from investing activities. We used \$286,820 of cash to purchase property, plant and equipment, \$29,505 to acquire intangible assets, and distributed \$56,823 to the 49% non-controlling interest holders of American DG New York LLC, partially offset by the receipt of \$72,655 in insurance and other proceeds from the disposition of assets.

For the nine months ended September 30, 2021 cash used in investing activities was \$185,253. We used \$84,160 of cash to purchase property, plant and equipment, \$56,349 to acquire intangible assets and, distributed \$66,168 to the non-controlling interest holders of American DG New York LLC, partially offset by receipt of \$11,637 in proceeds from the sale of investment securities and proceeds of \$9,787 from the disposition of assets.

Cash Flows from Financing Activities

During the nine months ended September 30, 2022 our financing activities provided \$0 compared to \$1,874,269 for the same period in 2021. Financing activities for the nine months ended September 30, 2021 included the proceeds of \$1,874,269 received under the Paycheck Protection Program Second Draw Loan.

Backlog

As of September 30, 2022, our backlog of product and installation projects, excluding service contracts, was \$6.9 million, consisting of \$2.7 million of purchase orders received by us and \$4.2 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.

Paycheck Protection Program Loan

On April 17, 2020, we obtained an unsecured loan in the principal amount of \$1,874,200 from Webster Bank, NA ("Webster") under the Paycheck Protection Program adopted pursuant to the Coronavirus Aid, Relief and Economic Recovery Act, as amended ("CARES Act"). On January 19, 2021 we received confirmation from Webster that the Paycheck Protection Program Loan in the original principal amount of \$1,874,200 together with accrued interest of \$13,659 was forgiven in full effective as of January 11, 2021. The loan forgiveness of \$1,887,859 was accounted for as a debt extinguishment and is reported as a separate component of other income (expense), net in the condensed consolidated statements of earnings for the nine months ended September 30, 2021.

Paycheck Protection Program Second Draw Loan

On February 5, 2021, we obtained a Paycheck Protection Program Second Draw unsecured loan through Webster in the amount of \$1,874,269 in connection with the Paycheck Protection Program pursuant to the CARES Act. On September 20, 2021, we received a letter dated September 13, 2021 from Webster Bank, NA confirming that the Paycheck Protection Program Second Draw Loan issued to us pursuant to the CARES Act, as amended, in the original principal amount of \$1,874,269 together with accrued interest of \$11,386 was forgiven in full as of September 8, 2021. The loan forgiveness of \$1,885,655 was accounted for as debt extinguishment and is reported as a separate component of other income (expense), net in the condensed consolidated statements of earnings for the nine months ended September 30, 2021.

TECOGEN INC.
Management's Discussion and Analysis

Employee Retention Credit

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law providing numerous tax provisions and other stimulus measures, including an employee retention credit ("ERC"), which is a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the ERC.

As a result of our election to use an alternative quarter, we qualified for the ERC in the first, second and third quarters of 2021 because our gross receipts decreased by more than 20% from the first, second and third quarters of 2019. As a result of averaging 100 or fewer full-time employees in 2019, all wages paid to employees in the first, second and third quarters of 2021, excluding the wages applied to the Paycheck Protection Program Second Draw Loan, were eligible for the ERC.

A current receivable in the amount of \$713,269 is included in our condensed consolidated balance sheet as of September 30, 2022. On April 14, 2022, we received \$564,027 from the Internal Revenue Service representing the ERC claim for the third quarter of 2021 and \$1,275 of accrued interest. We are still awaiting payment from the Internal Revenue Service for the ERC claim from the first and second quarters of 2021.

Liquidity

At September 30, 2022, we had cash and cash equivalents of \$2,880,160, a decrease of \$734,303 or 20.3% from the cash and cash equivalents balance at December 31, 2021. During the nine months ended September 30, 2022, our revenues continued to be negatively impacted due to the aftermath of COVID-19, including supply chain disruption resulting in customer order delays or deferrals; service delays due to parts shortages, in some cases for extended periods, and a reduction in our energy production revenues due to business closures and increased remote work and learning environments. The extent to which the coronavirus will continue to impact our business, our financial results, and our cash flows will depend on future developments which are highly uncertain and cannot be predicted.

Based on our current operating plan, we believe existing resources, including cash and cash flows from operations, together with anticipated Employee Retention Credit will be sufficient to meet our working capital requirements for the next twelve months. The funds made available to us through the Paycheck Protection Program have provided liquidity for our business, and there can be no assurance that additional financing on such favorable terms will be available to us in the future. We will need to generate sufficient cash from operations to finance the company during the periods beyond twelve months in the future. If sufficient funds from operating activities are not available to finance our business, we may need to raise additional capital through debt financing or an equity offering to meet our operating and capital needs.

Significant Accounting Policies and Critical Estimates

Our significant accounting policies are discussed in the Notes to our Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2021. The accounting policies and estimates that can have a significant impact upon our operating results, financial position and footnote disclosures are described in the above notes and in the Annual Report.

Significant New Accounting Standards or Updates Not Yet Effective

The Company's critical accounting policies have remained consistent as discussed in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 10, 2022.

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

The majority of our chilling systems sold will be operational for the summer. Demand for our service team is higher in the warmer months when cooling is required. Chiller units are generally shut down in the winter and started up again in the spring. The chiller 'busy season' for the service team generally runs from May through the end of September. Our cogeneration sales are not generally affected by seasonality.

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:

As of the end of the period covered by this Report, our Chief Executive Officer and Chief Financial Officer ("Certifying Officers") conducted evaluations of our disclosure controls and procedures. As defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Securities Exchange Act"), the term "disclosure controls and procedures" means controls and procedures of an issuer that are designed to ensure the information required to be disclosed by the issuer in the reports that it files or submits under the Section 13(a) or 15(d) is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's ("SEC") rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under Section 13(a) or 15(d) of the Securities Exchange Act is accumulated and communicated to the issuer's management, including the Certifying Officers, 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 Financial 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 and we are taking steps to remediate the weaknesses as resources become available.

Changes in Internal Control over Financial Reporting:

There were no changes in our internal controls over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) during the period covered by this Report that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

As of the date of the filing of this Report, we are not a party to any material pending legal proceedings and know of no contemplated governmental proceeding involving us. However, from time to time, we may be involved in ordinary routine litigation incidental to our business.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed under "Item 1A - Risk Factors" in our Annual Report on Form 10-K for our fiscal year ended December 31, 2021 ("2021 Form 10-K") The risks discussed in our 2021 Form 10-K could materially affect our business, financial condition and future results. The risks described in our 2021 Form 10-K are not the only risks we face. 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.

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

None.

Item 3. Defaults in Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description of Exhibit
31.1*	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
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.

TECOGEN INC.
(Registrant)

Dated: November 10, 2022

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

Dated: November 10, 2022

By: /s/ Abinand Rangesh
Abinand Rangesh
Chief Financial Officer
(Principal Financial Officer)

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 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: November 10, 2022

/s/ Benjamin Locke
Benjamin Locke
Chief Executive Officer

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, Abinand Rangesh, 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: November 10, 2022

/s/ Abinand Rangesh
Abinand Rangesh
Chief Financial Officer

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 Locke, Chief Executive Officer, and Abinand Rangesh, Chief Financial 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 ended September 30, 2022 (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: November 10, 2022

/s/ Benjamin Locke
Benjamin Locke
Chief Executive Officer

/s/ Abinand Rangesh
Abinand Rangesh
Chief Financial Officer