UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM 8-K

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

Date of report (Date of earliest event reported): March 18, 2019 (March 18, 2019)



TECOGEN INC.

(Exact Name of Registrant as Specified in Charter)

Delaware (State or Other Jurisdiction of Incorporation)

001-36103 (Commission File Number) 04-3536131

(IRS Employer Identification No.)

45 First Avenue Waltham, Massachusetts (Address of Principal Executive Offices)

02451

(Zip Code)

(781) 622-1120 (Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:
☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter). Emerging growth company

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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.

Item 7.01 Regulation FD Disclosure.

On March 19, 2019, Tecogen Inc. (the "Company") intends to share the attached investor presentation with investors during the 2019 Roth Conference described in the attached press release. The press release and the investor presentation are being furnished as Exhibits 99.01 and 99.02 to this Current Report on Form 8-K.

The information is this Item 7.01 and Exhibits 99.01 and 99.02 to this Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibits relating to Item 7.01 shall be deemed to be furnished, and not filed:

<u>Exhibit</u>	<u>Description</u>
99.01	Press release dated March 18, 2019
99.02	2019 Roth Conference Presentation

SIGNATURES

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

TECOGEN INC.

By: /s/ Bonnie Brown

March 18, 2019 Bonnie Brown, Principal Financial & Accounting

Officer



Tecogen to Attend the 31st Annual Roth Conference on March 19, 2019

WALTHAM, MA, March 18, 2019 – <u>Tecogen Inc.</u> (NASDAQ: TGEN), a clean energy company providing ultra-efficient, clean, natural gas powered on-site power, heating and cooling equipment, is pleased to announce that the company will be attending the 31st Annual ROTH Conference held at The Ritz Carlton, Laguna Niguel in Orange County, CA. Benjamin Locke, Tecogen's CEO will be available to meet with investors on Tuesday, March 19, 2019 between the hours of 7:00 a.m. and 4:00 p.m. Pacific Time.

The company's presentation materials will be made available in the Investor Relations section of our website under Investor Relations.

This conference is for clients of ROTH and by invitation only. If you are interested in attending, please contact a ROTH Sales Representative at 800-678-9147. You can also e-mail registration@roth.com for more information.

About Tecogen

Tecogen Inc. designs, manufactures, sells, installs, and maintains high efficiency, ultra-clean, cogeneration products including natural gas engine-driven combined heat and power, air conditioning systems, and high-efficiency water heaters for residential, commercial, recreational and industrial use. The company is known for cost efficient, environmentally friendly and reliable products for energy production that, through patented technology, nearly eliminate criteria pollutants and significantly reduce a customer's carbon footprint.

In business for over 35 years, Tecogen has shipped more than 3,000 units, supported by an established network of engineering, sales, and service personnel across the United States. For more information, please visit www.tecogen.com or contact us for a free Site Assessment.

Tecogen, InVerde e+, Ilios, Tecochill, Tecopower, Tecofrost and Ultera are registered or pending trademarks of Tecogen Inc.

Forward Looking Statements

This press release contains "forward-looking statements" which may describe strategies, goals, outlooks or other non-historical matters, or projected revenues, income, returns or other financial measures, that may include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "project," "target," "potential," "will," "should," "could," "likely," or "may" and similar expressions intended to identify forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. Given these uncertainties, you should not

place undue reliance on these forward-looking statements. Forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update or revise any forward-looking statements.

Tecogen Inc.

45 First Avenue, Waltham, MA 02451 • ph: 781-466-6400 • fax: 781-466-6466 • www.tecogen.com

In addition to those factors described in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q under "Risk Factors", among the factors that could cause actual results to differ materially from past and projected future results are the following: fluctuations in demand for our products and services, competing technological developments, issues relating to research and development, the availability of incentives, rebates, and tax benefits relating to our products and services, changes in the regulatory environment relating to our products and services, integration of acquired business operations, and the ability to obtain financing on favorable terms to fund existing operations and anticipated growth.

Tecogen Media & Investor Relations Contact Information: Benjamin Locke, CEO

P: (781) 466-6402

E: Benjamin.Locke@Tecogen.com

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Safe Harbor Statement



This presentation and accompanying documents contain "forward-looking statements" which may describe strategies, goals, outlooks or other non-historical matters, or projected revenues, income, returns or other financial measures, that may include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "project," "target," "potential," "will," "should," "could," "likely," or "may" and similar expressions intended to identify forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update or revise any forward-looking statements.

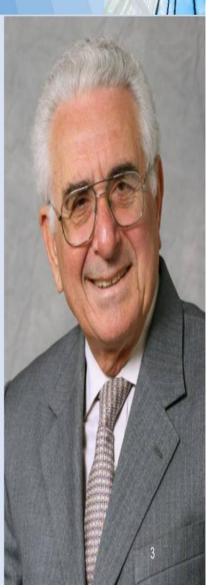
In addition to those factors described in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q under "Risk Factors", among the factors that could cause actual results to differ materially from past and projected future results are the following: fluctuations in demand for our products and services, competing technological developments, issues relating to research and development, the availability of incentives, rebates, and tax benefits relating to our products and services, changes in the regulatory environment relating to our products and services, integration of acquired business operations, and the ability to obtain financing on favorable terms to fund existing operations and anticipated growth.

In addition to GAAP financial measures, this presentation includes certain non-GAAP financial measures, including adjusted EBITDA which excludes certain expenses as described in the presentation. We use Adjusted EBITDA as an internal measure of business operating performance and believe that the presentation of non-GAAP financial measures provides a meaningful perspective of the underlying operating performance of our current business and enables investors to better understand and evaluate our historical and prospective operating performance by eliminating items that vary from period to period without correlation to our core operating performance and highlights trends in our business that may not otherwise be apparent when relying solely on GAAP financial measures.

John Hatsopoulos Co-Founder, Director

Tecogen:

- Retired President and Vice Chairman of the board of directors of Thermo Electron Corp. (now Thermo Fisher Scientific)
- Developed Thermo's famous 'spinout' strategy, resulting in the spinout of 24 public companies from the parent
- ☼ Raised nearly \$5B from 1990 1998 as Thermo's CFO for the parent company and it's various spinout subsidiaries
- Board of Directors of the American Stock Exchange from 1994 – 2000
- Former "Member of the Corporation" of Northeastern University



Benjamin Locke CEO, Director





- Joined company as General Manager in 2013
- Director of Business Development at Metabolix from 2001 to 2013
- Previously served as Vice President of Research at Innovative Imaging Systems
- Led Tecogen to profitability in 2017
- Enhanced Tecogen Product Offerings
- Expanded addressable markets for Tecogen systems
- Developing strategic partnerships and acquisitions for future growth

Tecogen Advanced Modular Energy Systems



Heat, Power, and/or Cooling that is:

- Cheaper
 - Industry leading efficiency and reduced exposure to expensive electricity
- Cleaner
 - Proprietary near-zero emissions technology, GHG reductions
- More reliable

Real-time monitoring, blackout protection, and improved grid resiliency

All of Tecogen's equipment is powered by efficient natural gas equipped with Tecogen's patented Ultera Emission Control

Clean Energy Products



Microgrid CHP Resiliency and Savings



Gas Chillers
Hot and Cold Water



Efficient CHP
Energy Savings



Emissions
Reduction
Criteria Pollutant Elimination



Clean Energy and
Resiliency From
Central Electric Utility

Energy
Production
On-site utility



Sustainable Competitive Advantage



Proprietary and patented technology

- Ultera Emission control
- Inverter microgrid architecture
- Proprietary PMG technology
- Natural gas engine optimization

In-house engineering and installation

Fully integrated on-site service and maintenance

Creates value proposition for customers that drives

- √ Revenue Growth
- √ Robust Gross Margins
- ✓ Repeat Business





Born to Innovate









2016: Roll out of dramatically upgraded InVerde e+

2017: Acquisition of American DG Energy

2018: ETL certification to ANSI/UL 1741 SA for smart inverters





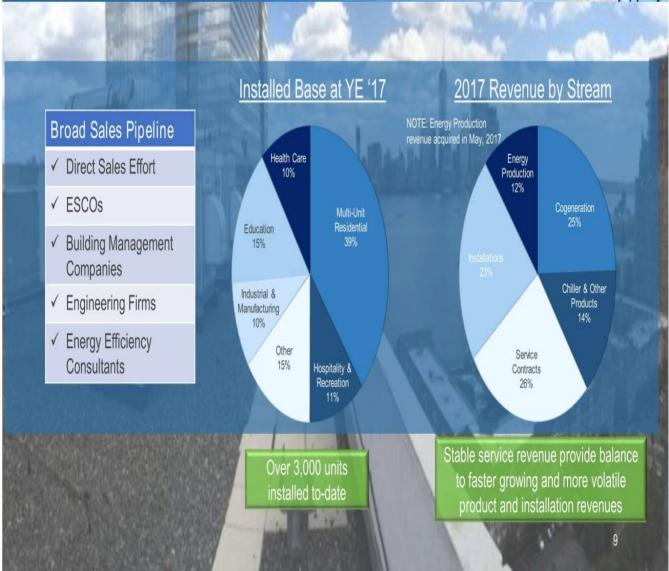
2003: First (and only) engine driven CHP module to obtain full California Electric Rule 21 Certification

2008: Roll out of original InVerde cogeneration unit

Originally founded as an energy technology R&D center within Thermo Electron Corp. (now Thermo Fisher Scientific)

Diverse Core Customer Base





Substantial Core Business Growth Opportunities

Improving

regulatory environment

Direct cash

incentives



Inexpensive and abundant natural gas

Grid resiliency and blackout protection

response incentives

and demand

charge avoidance Evolving market conditions encourage adoption

> Federal investment tax credit

Global Market Insights: Global Combined Heat and Power Market Report, April 2017 \$40+ billion market for clean, reliable CHP systems







Cogeneration (CHP): Electricity and Heat Teogener



Modular and scalable

- Best in class electrical efficiency
- \$ 60-125 kW, scalable to 1MW+
- Remote monitoring





- ✓ Proprietary inverter
- ✓ CERTS certified microgrid system
- ✓ Blackout protection

Ideal for

- Locations with many beds and showers: hotels, dormitories, apartment buildings, prisons
- Light manufacturing and industrial facilities with hot water requirements
- Fitness centers







Mechanical CHP: Tecochill



The only natural gas engine driven chiller on the market

- 30-60% cheaper to operate than equivalent electric chillers
- 50-400 tons of cooling capacity
- "Free" waste heat and clean carbon dioxide emissions stream may be repurposed for indoor agriculture applications
- Eligible for similar incentives as CHP
- Sales cycle more transactional and predictable



Ideal for

- Hospitals
- · Indoor agriculture
- Light manufacturing and industrial facilities with both cooling and heating requirements
- Sports facilities: Swimming pools, ice rinks



Indoor Agriculture



Poised for Exponential Growth

- 5x growth over five years (Agrilyst)
- Cannabis is primary near-term driver
- Leafy greens, herbs, and tomatoes are also attracting capital
- Typically located near urban centers, high electric rates, available natural gas
- Tecochill chillers eliminates need to upgrade electrical infrastructure
- Heat recovery for dehumidification
- Substantial capital investment in grow facilities



Unique Value Proposition for Indoor Farming



Mechanical CHP: TecoFrost



Natural Gas Engine Ammonia Refrigeration System

- Successful product in '80s, '90s
- Manufacturing partner Emerson/Vilter
- Industrial refrigeration market \$24.5 billion by 2024
- 2019 Sales rollout in US at IIAR
- Substantial international sales opportunity with Tecogen/Vilter partners, reps
- Less factory service requirements for operation



Ideal for

- Cold storage
- Food processing (Dairy, meat, poultry)
- · Fermentation, wineries, bottling
- Typical hybrid installation with existing electric systems
- Substantial savings in areas with high electric rates



Ultera Emissions: Eliminates Criteria Pollutants





Non-invasive emissions system

- Reduces criteria pollutants (NOx, NMOG, CO) to <u>near zero</u> fuel-cell equivalent levels
- Substantial and growing patent portfolio on core technology
- Installed on virtually all Tecogen equipment
- Simple retrofit to existing engines with no performance loss
- Proven in many engine systems: Tecogen, Ford, GM, Caterpillar, Generac, etc.

South Coast Air Quality Management District (SCAQMD) of southern California has reset its Best Available Control Technology (BACT) standard for non-emergency engine-driven generators to a level that rich-burn engines can only achieve when equipped with Ultera

Ultera Emissions Technology Expansion into Vehicle Markets









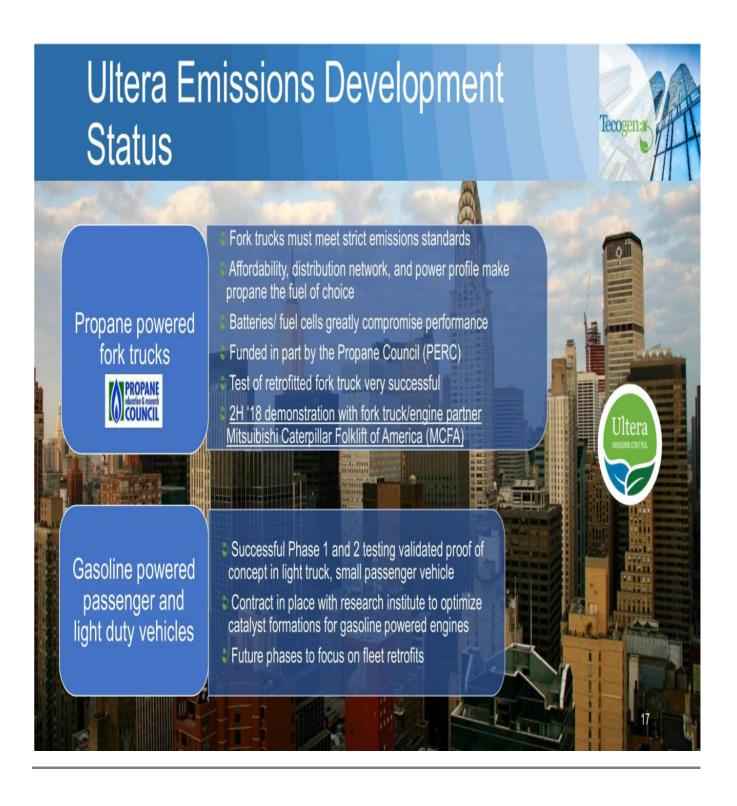
Significant upside for Ultera emissions technology to automotive, truck and fork truck industries











Sustained Positive Financial Results



- 3Q '18 Revenues of \$7.9 million
- T4Q revenue of \$37 million
- Revenue growth on T4Q basis year over year of 23%
- T4Q gross profit of \$13.7 million
- Sustained step change to profitability originally achieved in 3Q'16
- T4Q Adjusted EBITDA* of \$248K for 3Q'18

*Adjusted EBITDA is defined as net income (loss) attributable to Tecogen Inc., adjusted for interest, depreciation and amortization, unrealized gain or loss on securities, stock based compensation expense, and one-time merger related expenses.

T4Q Adjusted EBITDA Quarterly with T4Q Average (green line) - \$Thousands



3Q'18 Summary of Results



\$ in thousands	3Q'18	3Q'17	YoY Increase (Decrease)		Comments
Revenue	\(\frac{1}{2}\)				
Products	\$ 2,765,094	\$ 2,425,616	\$ 339,478 (14.0%	Highlighted by chiller sales
Service	3,713,770	4,519,467	(805,697)	-17.8%	Decrease in turnkey installations
Energy Production	1,459,820	1,556,115	(96,295)	-6.2%	
Total Revenue	7,938,684	8,501,198	(562,514)	-9.7%	
Gross Profit					
Products	\$1,069,747	\$ 887,101	\$ 182,646		Additional gross profit from increased product sales
Service	1,196,560	1,538,013	(341,453)		
Energy Production	616,791	832,917	(216,126)		Energy production was higher than expected in 3Q'17
Total Gross Profit	2,883,098	3,258,031	(374,933)	-11.5%	
Gross Margin: %					
Products	38.7%	36.6%	2.1%		Stronger margins seen in both cogen and chiller sales
Service	32.2%	34.0%	-1.8%		Installation business brings tighter profit than contract maintenance
Energy Production	42.3%	53.5%	-11.3%		Energy production margin is in line with long term expectations
Total Gross Margin	36.3%	38.3%	-2.0%		
Operating Expenses	ili		X		
General & administrative	\$ 2,582,600	\$ 2,427,352	\$ 155,248		Merger related expenses accounts for about half of this increase
Selling	581,716	503,415	78,301		Additional selling efforts
Research and development	281,094	241,725	39,369		R&D activities in connection with the forklift project
Total Operating Expenses	3,445,410	3,172,492	272,918	8.6%	Additional R&D and selling expenses account for some of this difference
Gain (loss) on marketable securities	19,681		19,681		
Adjusted EBITDA (see reconciliation)	\$ (258,655)	\$ 295,755	\$(554,410)		See detailed reconciliation

Strong Q3 product revenue growth

Consistently strong gross margin

Investing in our future

Recent Financial Updates



Site Sale with SDCL: 3/8/19

- Sustainable Development Capital LLP
- \$7 mm for 8 agreements
- Proceeds for continued product expansion
- Strengthens balance sheet, eliminates debt

Financial stability to execute on company goals

- √ Expand chiller product sales
- √ Grow revenue, profitability
- ✓ Ultera value creation

Contact Information





Energy Efficiency Reimagined

Company Information

Tecogen, Inc. 45 First Ave Waltham, MA 02451 NASDAQ: TGEN

www.tecogen.com

Contact

Benjamin Locke, CEO 781.466.6402 Benjamin.Locke@Tecogen.com

John Hatsopoulos, Chairman Emeritus 781.622.1120

John.Hatsopoulos@Tecogen.com

Appendix



- Management team
- Board of Directors
- Detailed financial information
- Cogeneration InVerde e+ data
- Cogeneration savings case study
- Tecochill chiller data
- Indoor agriculture
- Ilios water heater data
- Ultera emission technology diagram
- Emission reduction comparison chart
- Standby generator emissions test results
- AVL car emissions test results
- Fork truck emissions test results

Tecogen Inc Company Information

NASDAQ Ticker	TGEN
Recent Stock Price	~\$3.85/sh
52-week Range	\$2.30 - \$4.00/sh
Shares Outstanding (06/30/18)	24.82 million
Market Capitalization	~\$96 million
Ownership of Directors, Officers, and their family trusts (06/30/18)	19.6%
Total Assets (06/30/18)	\$51.5 million

Membership: Russell Microcap® Index

Management Team



Benjamin Locke

Chief Executive Officer

- Joined company as general manager in 2013
- Director of Business
 Development at Metabolix
 from 2001 to 2013
- Previously served as Vice President of Research at Innovative Imaging Systems
- Responsible for Tecogen growth and profitability

Robert Panora

President, COO

- General Manager of Tecogen's product group since 1990
- Manager of Product Development, Engineering, and Operations since 1984

Bonnie Brown

Chief Accounting Officer

- CFO of American DG Energy from 2015 to merger
- Previously CFO of Tecogen from 2007 to 2014
- Joined Tecogen in 2005 as Controller
- Partner at Sullivan, Bille,
 PC, a regional accounting firm prior to joining Tecogen

Jack Whiting

General Counsel

- Prior to joining Tecogen in 2018, was VP, General Counsel & Secretary of GeNO LLC (2012-2017), Levitronix LLC (2009-2011), and American Renal Associates (2002-2008)
- Associate General Counsel of Thermo Electron from 1996 to 2002

Board of Directors



Angelina Galiteva Director, Board Chairwoman

- Chair of the Company since 2005
- Founder and Chair of the Board for the Renewables 100 Policy Institute, a nonprofit entity dedicated to the global advancement of renewable energy solutions since 2008
- Chairperson at the World Council for Renewable Energy and Board member of the Governors of the California ISO

Charles Maxwell Director, Chair of Audit Committee

- Company Director since 2001
- 40 years of energy sector specific experience with major oil companies and investment banking firms
- Former Senior Energy Analyst with Weeden & Co.
- Board Chairman of American DG Energy, Inc.

Deanna Peterson Director

- Company Director since 2017
- Chief Business Officer of AVROBIO since 2016
- Vice President of Business Development at Shire Pharmaceuticals from 2009 to 2015
- Led development, priorization and execution of Shire's overall corporate and business development strategies

John Hatsopoulos Director

- Chairmain Emeritus, Retired CEO and Director of the Company organization in 2000 to 2018
- Co-Founder for Thermo Electron Corp., now Thermo Fisher Scientific (NYSE: TMO)
- As Thermo Electron CFO, grew company from a market capitalization of ~\$100 million in 1980 to over \$2.5 billion

Ahmed Ghoniem Director

- Company Director since 2008
- Ronald C. Crane Professor of Mechanical Engineering at MIT
- Director of the Center for 21st Century Energy and Head of Energy Science and Engineering at MIT
- Associate Fellow of the American Institute of Aeronautics and Astronautics

Keith Davidson Director

- Company Director since 2016
- President of DE Solutions, a consulting and engineering firm serving the distributed energy markets
- Former Director of the Gas Research Institute and past President of the American Cogeneration Association
- 25 years of experience in energy and environmental technology development and implementation

Benjamin Locke

- Company Director since 2018
- Joined company as general manager in 2013
- Director of Business Development at Metabolix from 2001 to 2013
- Former Vice President of Research at Innovative Imaging Systems
- Responsible for Tecogen growth and profitability

3Q '18 Financial Metrics: Revenues, Margins, Growth



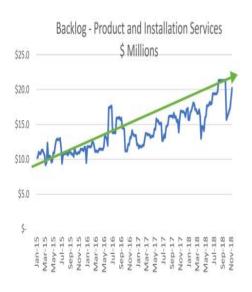
- Four diverse revenue streams providing a mix of transactional and annuity like revenue streams
 - Product revenue grew 14%, with chillers gaining 89%, year over year
 - Product gross margin improved 6% year over year
 - Turnkey installation included in service operations facilitates both product and service revenue
 - Energy production revenue provided \$1.5 million of stable cash flow with gross margin of 42.3%, exceeding expectations
- Overall gross margin of 36.3%, down by 2% year over year
- Overall gross margin on a T4Q basis of 37.1%
- Total revenue growth on a T4Q basis of 23%

	Qua	rter Ende	d Sep	tember		
\$ in thousands	2018		2017		YoY Growth	% of Total Rev
Revenue						
Cogeneration	\$	1,664	\$	1,842	-9.7%	21.0%
Chiller		1,101		583	88.7%	13.9%
Total Product Revenue		2,765		2,426	14.0%	34.8%
Service Contracts and Parts		2,066		2,110	-2.1%	26.0%
Installation Services		1,648		2,410	-31.6%	20.8%
Total Service Revenue		3,714		4,519	-17.8%	46.8%
Energy Production		1,460		1,556	-6.2%	18.4%
Total Revenue	\$	7,939	\$	8,501	-6.6%	100.0%
Cost of Sales						
Products	\$	1,695	\$	1,539	10.2%	
Services		2,517		2,981	-15.6%	
Energy Production		843		723	16.6%	
Total Cost of Sales	\$	5,056	\$	5,243	-3.6%	
Gross Profit	\$	2,883	\$	3,258	-11.5%	36.3%
Net loss attributable to Tecogen Inc.	\$	(603)	\$	27		
Gross Margin						
Products	38.7%		36.6%			
Services	32.2%		34.0%			
Aggregate Products and Services	35.0%		34.9%			
Energy Production			53.5%			
Overall		36.3%	- 3	38.3%		25

Consistent Financial Progress



ADJUSTED EBITDA* 3Q '18 Compared to 3Q '17



Adjusted EBITDA		Q'18	3Q'17			
Non-GAAP financial disclosure						
Net income (loss) attributable to Tecogen Inc.	\$	(603,037)	\$	27,211		
Interest expense & other expense, net		9,531		30,393		
Income tax expense		3,815				
Depreciation & amortization, net		199,938		160,061		
EBITDA		(389,753)		217,665		
Stock based compensation		55,330		40,645		
Merger related expenses		75,768		37,445		
Adjusted EBITDA	\$	(258,655)	\$	295,755		

Steady growth in the backlog translates to revenue growth

*Adjusted EBITDA is defined as net income (loss) attributable to Tecogen Inc., adjusted for interest, depreciation and amortization, stock based compensation expense, unrealized gain or loss on equity securities and merger related expenses.

Consistent Financial Progress





Energy production revenue acquired in May, 2017

Declining operating expenses as a percentage of revenue demonstrates scalability with revenue growth 27

InVerde e+ Data



Best in class efficiency: 33% electrical, 94% overall (LHV)

- Udeal for markets with commercial electric rates over \$0.12/kWh
- Variable speed operation from 10kW to 125 kW with superior part-load efficiency
- 5 Fully scalable to multi-MW system
- Cloud-based real-time performance monitoring
- Indoor and outdoor installation
- Dimensions (indoor 7'6"x4'0"x5'9" / outdoor 7'10"x4'11"x6'4")
- Weight (indoor 4,300 lbs / outdoor 4,800 lbs)
- Acoustic Level: 69 dBa @ 20'
- Operating Temperature Range: -4° to 104° F (-20° to 40° C)

Smart Inverter Technology

- UL 1741 and UL 2200 certified
- Unique CERTS-Microgrid capability enables grid-independent operation
- Only inverter-based CHP system that meets NFPA's Type 10 Emergency Power Supply System rapid blackstart standard
- Demand Response capable for automatic dispatching





Energy savings can pay back initial investment in as few as 2-5 years

Cogeneration Case Study



Location: 205 West End Ave, New York City

- What: Two InVerde's that went into service in April, 2016
- Cumulative Savings: \$300 thousand over first 24 months of operation
- Expected Payback Period: 4 to 6 years
- ☼ Total Electric Generation: 2,219 MW-Hours
- Average Electrical Efficiency: 27.1%
- ☼ Total Efficiency: 63.3% with 51.5% of captured heat utilized

Source of Operational Data: NYSERDA DG Integrated Data System



Tecochill Data



Only natural gas engine driven chiller available

- Widely deployed across North America
- Utilizes less than 1% of the electricity of competing electric chillers, which can be supplied by small retail generator (<3kW)
- Eliminates exposure to on-peak electric demand charges
- Cloud-based real-time performance monitoring and system control
- Variable engine speed operation for excellent part load performance and longer life

	RT Series	STx Series	DTx Series
Cooling Capacity (tons)	50	150-200	300-400
Dimensions			
Length	18'4"	13'10"	14'3"
Height	7'11"	4'4"	7'0"
Width	5'6"	6'9"	7'7"
Operational Weight (lbs)	8,300	11,750	23,650





Ultera Emission Technology



Fuel Cell Slayer: Enables internal combustion engine to achieve emissions similar to a fuel cell

Design fits well within existing fork truck architecture and does not require significant reengineering

Ultera on roof of outdoor InVerde



/erde

Internal Combustion Engine

Engine tuned to run slightly rich

First Stage Catalyst

First stage eliminates NOx

Exchanger

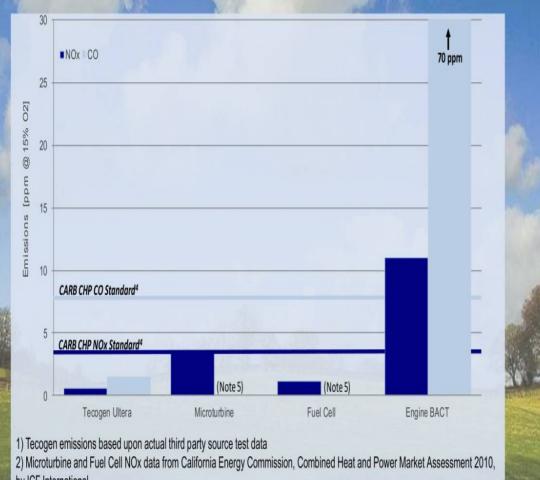
Lowering exhaust temperature prevents reformation of NOx in second stage

Second stage eliminates CO Second Stage Catalyst

Clean CO2 Stream

Stationary Emissions Reduction Comparison



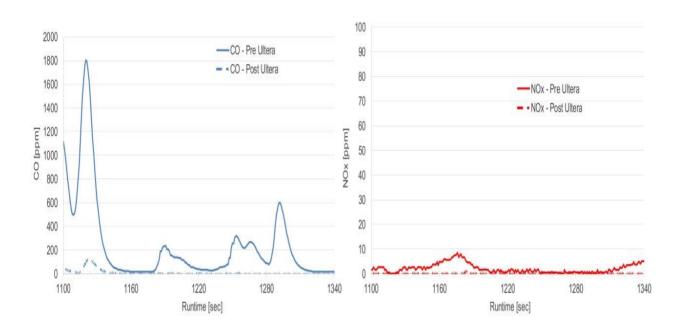


- 3) Stationary engine BACT as defined by SCAQMD prior to reset of BACT to Rule 1110.2 standard on 2/2/18.
- 4) Limits represent CARB 2007 emission standard for Distributed Generation with a 60% (HHV) Overall Efficiency credit
- 5) CO data not available for microturbine and fuel cell

Forklift Truck Emissions Test Results



Low NOx Tuning Test (low loading)



Near-zero NOx levels achieved with simple engine control tuning (reprogramming)